



City of Franklin

109 3rd Ave S
Franklin, TN 37064
(615)791-3217

Meeting Agenda

Work Session

Tuesday, October 11, 2016

5:00 PM

Board Room

Call to Order

Citizen Comments

WORKSESSION DISCUSSION ITEMS

1. [16-0839](#) Presentation from Ms. Ellie Westman Chin on Economic Impact of Tourism in the City of Franklin and Williamson County.

Attachments: [Ellie Oct BOMA presentation.pdf](#)

2. [16-0838](#) Consideration of Retail Liquor License application for Happy Ours Wine and Spirits (Nicole Barclay, Managing Agent), 327 Independence Square, Franklin, Tennessee, 37064.

Sponsors: Lanaii Benne
Attachments: [2016 Certificate Barclay Happy Ours.pdf](#)

3. [16-0843](#) *Consideration Of Certificate Of Compliance For Wine In Grocery Stores For Herban Market, LLC, Located At 3078 Maddux Way, Suite 300, Franklin, TN, 37069 (Ashlea Hogancamp, Owner and Managing Agent; Matthew Hogancamp, Owner and Managing Agent) 10/11/16 WS

Sponsors: Lanaii Benne
Attachments: [Herban market WIGS Certificate.pdf](#)

4. [16-0689](#) Consideration Of Ordinance 2016-33, To Be Entitled, "An Ordinance To Rezone 5.195 Acres From General Office District To Specific Development Residential 27.33 District For The Property Located North Of Mallory Station Road And East Of Franklin Road, 222 Mallory Station Road."; [AVENIDA] (09/22/16 FMPC 9-0 and 10/11/16 WS & 1st Reading 8-0; 2nd Reading 7-0, 1 Recusal) THIRD AND FINAL READING

Sponsors: Ald. Ann Petersen

Attachments: [ORD 2016-33 Avenida Rezoning_with Map Law Approved 2](#)
[MAP_6190AvenidaVer2](#)
[Avenida_PlanSet.pdf](#)
[16001 Avenida - Certified Mailing Addresses letter labels.pdf](#)
[16001 Rezoning and PUD Development Plan Public Notification.pdf](#)
[PUBLIC NOTICE AFFIDAVIT_signed.pdf](#)
[Avenida of Cool Springs Deferral Letter](#)

Legislative History

8/25/16	Franklin Municipal Planning Commission	referred to the Franklin Municipal Planning Commission
9/22/16	Franklin Municipal Planning Commission	recommended favorably to the Board of Alderman and to the Work Session

5. [16-0690](#) PUBLIC HEARING: Consideration of Resolution 2016-47, To Be Entitled: "A Resolution Approving A Development Plan For Avenida Of Cool Springs PUD Subdivision, For The Property Located North Of Mallory Station Road And East Of Franklin Road, 222 Mallory Station Road." (09/22/16 FMPC 9-0; 10/11/16 WS)

Sponsors: Ald. Ann Petersen

Attachments: [MAP_AvenidaofCoolSprings_DevPlan.pdf](#)
[RES_2016-47 Avenida DevPlan_with Map.pdf](#)
[6191_AvenidaofCoolSprings_Conditions of Approval_01.pdf](#)
[AvenidaofCoolSpringsDevPlan.pdf](#)
[Layout_Avenida.pdf](#)
[AvenidaElevations.pdf](#)
[TIS Review2_Avenida_20160810 CB appr.pdf](#)
[PUBLIC NOTICE AFFIDAVIT_signed.pdf](#)

Legislative History

8/25/16	Franklin Municipal Planning Commission	referred to the Franklin Municipal Planning Commission
9/22/16	Franklin Municipal Planning Commission	recommended favorably to the Board of Alderman and to the Work Session

6. [16-0795](#) Consideration Of Ordinance 2016-37, To Be Entitled, "An Ordinance To Rezone 3.66 Acres From Specific Development Residential (SD-R 8.03) District To Specific Development Residential (SD-R 8.70) District And Rezone 0.48 Acres From Detached Residential 3 (R-3) District To Specific Development Residential (SD-R 8.70) District For The Property Located North Of West Main Street And West Of Rucker Avenue, 117 Rucker Avenue." (09/22/16 FMPC 9-0 and 10/11/16 WS and 1st BOMA Reading 8-0; 11/08/16 2nd Reading 8-0) THIRD AND FINAL READING

Sponsors:

Ald. Ann Petersen

Attachments:[Ordinance 2016-37 Rucker Park PUD Subd. with Map.Law Approved](#)[Ord-2016-37 Rucker Park Rezoning Map](#)[6226 Rucker Park Rezoning Plan Set](#)**Legislative History**

9/22/16	Franklin Municipal Planning Commission	recommended favorably to the Board of Alderman and to the Work Session
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7. [16-0796](#) PUBLIC HEARING: Consideration Of Resolution 2016-57, To Be Entitled: "A Resolution Approving A Revised Development Plan For Rucker Park PUD Subdivision, For The Property Located North Of West Main Street And West Of Rucker Avenue, 117 Rucker Avenue." (09/22/16 FMPC 9-0, 10/11/16 WS)

Sponsors:

Ald. Ann Petersen

Attachments:[Res-2016-57 Rucker Park DP Rev 1 Map](#)[2016-57 RES Rucker Park PUD Dev Plan. with Map.Law Approved](#)[6227 Rucker Park DP Rev 1 COA](#)[6227 Rucker Park DP Rev 1 Plan Set](#)[6227 Rucker Park DP Rev 1 Architecture](#)**Legislative History**

9/22/16	Franklin Municipal Planning Commission	recommended favorably to the Board of Alderman and to the Work Session
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8. [16-0693](#) PUBLIC HEARING: Consideration Of Resolution 2016-41, To Be Entitled: "A Resolution Adopting A Plan Of Services For The Annexation Of Property Located South Of Murfreesboro Road And North Of South Carothers Road And Adjoining The City Limits Within The East Part Of The Franklin Urban Growth Boundary (UGB), By The City Of Franklin, Tennessee."; [ASHCROFT] (09-22-16 FMPC 7-2 to approve; 10/11/16 WS)

Sponsors:

Ald. Ann Petersen and Josh King

Attachments:[AshcroftValleyPOS.pdf](#)[RES 2016-41 Final_AshcroftValley_PlanofService Law Approved.pdf](#)[Susan and Brian Caplen letter - 9-15-16](#)**Legislative History**

9/22/16 Franklin Municipal Planning Commission recommended favorably to the Board of Alderman and to the Work Session

9. [16-0692](#) Consideration of Resolution 2016-40/Ordinance 2016-27, To Be Entitled, "A Resolution And Ordinance To Annex Property, Consisting Of 204.081 Acres, Property Located South Of Murfreesboro Road And North Of South Carothers Road And Adjoining The City Limits Within The East Part Of The Franklin Urban Growth Boundary (UGB)." [ASHCROFT] (09-22-16 FMPC 7-2 to approve; 10/11/16 WS; 10/25/16 1st Reading BOMA 8-0; 11/22/16 2ND Reading 6-2) THIRD AND FINAL READING

Sponsors: Ald. Ann Petersen and Josh King

Attachments: [Res 2016-40 and Ord 2016-27 Ashcroft Valley to annex with Map.Law Approv](#)
[MAP_AshcroftValley_Annexation.pdf](#)
[Susan and Brian Caplen letter - 9-15-16](#)

Legislative History

9/22/16 Franklin Municipal Planning Commission recommended favorably to the Board of Alderman and to the Work Session

10. [16-0691](#) Consideration Of Ordinance 2016-28 AS AMENDED, To Be Entitled, "An Ordinance To Zone 204.081 Acres Detached Residential 1 District (R-1), McEwen Character Area Overlay District (MECO-6), Seward Hall Character Area Overlay District (SWCO-3), And Designate As Conventional Area Standards, For The Property Located South Of Murfreesboro Road And North Of South Carothers Road."; [ASHCROFT] (09-22-16 FMPC 6-3 to approve; 10/11/16 WS; 1st BOMA Reading 10-25-16 8-0; 11/22/16 2ND READING 7-1) THIRD AND FINAL READING

Sponsors: Ald. Ann Petersen and Josh King

Attachments: [AshcroftRezoning.pdf](#)
[BOMARevised \(3\) Ord2016-28 AshcroftZone rezone with Map.Law Approved](#)
[MAP_BOMArevision_AshcroftValleyAnnexation.pdf](#)
[Public Notice.pdf](#)
[Ashcroft Valley Rez Req Set 9.1.2016](#)
[Susan and Brian Caplen letter - 9-15-16](#)
[Connectivity Presentation - Ashcroft Valley 11-8-2016](#)

Legislative History

9/22/16 Franklin Municipal Planning Commission recommended favorably to the Board of Alderman and to the Work Session

11. [15-1094](#) PUBLIC HEARING: Consideration Of Resolution 2016-42, To Be Entitled: "A Resolution Approving A Development Plan For Ashcroft Valley PUD Subdivision With 6 Modifications Of Development Standards (Character Area Lot Size, Warren Road Connection, Beacon Hill Drive Street Connection, Internal Street Connection, Cross Creek Drive Street Connection, And Biltmore Court Street Connection, For The Property Located South Of Murfreesboro Road And North Of South Carothers Drive." (09-22-16 FMPC 6-3; 10/11/16 WS, 11/08/16 WS; 11-22-16 BOMA Deferred to 12-13-16)

Sponsors:

Ald. Ann Petersen and Josh King

Attachments:

[Letter to BOMA 12 2016 for Ashcroft Development plan WITHDRAWAL.pdf](#)

[AshcroftValleyDevPlan.pdf](#)

[Res2016-42 AshcroftValleyDevPlan with Map Law Approved 2..pdf](#)

[Conditions of Approval_02.pdf](#)

[AshcroftLayout.pdf](#)

[ASHcroftElevations.pdf](#)

[Full PlanSet Ashcroft Valley Dev Plan Set Resubmittal 9.1.2016.pdf](#)

[TIA_Ashcroft\(9.1.16\).pdf](#)

[Ashcroft Valley Public Notice Affidavit 8.9.2016.pdf](#)

[AshcroftValleyMOSMap.pdf](#)

[Susan and Brian Caplen letter - 9-15-16](#)

[citizen comment letter](#)

[Connectivity Presentation - Ashcroft Valley 11-8-2016](#)

[Ashcroft Valley Memo 11-15-2016](#)

Legislative History

9/22/16	Franklin Municipal Planning Commission	recommended favorably to the Board of Alderman and to the Work Session
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12. [16-0811](#) Consideration of Ordinance 2016-39, To Be Entitled: "An Ordinance To Amend Chapters 3 And 5 Of The Zoning Ordinance Of The City Of Franklin, Tennessee, To Adopt The New FEMA Flood Insurance Rate Maps, And Amend The City Of Franklin Zoning Map To Update The Boundaries Of The Floodway Fringe (FFO) And Floodway (FWO) Overlay Districts Accordingly." (09/22/16 FMPC 9-0 and 10/11/16 WS & 1st BOMA Reading 8-0; 11/08/16 2nd Reading 8-0) THIRD AND FINAL READING

Sponsors:

Ald. Ann Petersen

Attachments:

[Ordinance 2016-39 Amend ZO to adopt new FEMA Flood Maps and FWO and](#)

[FEMA Final Flood Hazard Determination Letter 6-22-16](#)

[Staff Report Exhibit - Item 22 - Ordinance 2016-39](#)

Legislative History

- | | | | |
|--|---------|--|--|
| | 9/22/16 | Franklin Municipal Planning Commission | recommended favorably to the Board of Alderman and to the Work Session |
|--|---------|--|--|
13. [16-0823](#) *Consideration of COF Contract No. 2016-0274: Grant Contract for Select Burial Marker Restoration at City Cemetery (10/11/16 WS)
- Sponsors:** Lisa Clayton, Emily Hunter and Amanda Rose
- Attachments:** [2016-0274 TN Historic Commission City Cemetery marker restoration.Law App](#)
14. [16-0824](#) *Consideration of COF Contract No. 2016-0273: Grant Contract for Franklin Historic District NR Listing Update (10/11/16 WS)
- Sponsors:** Emily Hunter and Amanda Rose
- Attachments:** [COF 2016-0273 TN Historical Commission Grant Law Approved 9.16](#)
15. [16-0819](#) Consideration Of Resolution 2016-67 For Amendments To The Historic District Design Guidelines (10/11/16 WS)
- Sponsors:** Emily Hunter and Amanda Rose
- Attachments:** [2016-67 RES amend Historic District Design Guidelines](#)
16. [16-0833](#) PUBLIC HEARING: Consideration Of Initiating The Annexation Process and Draft Plan Of Services, Resolution 2016-45, For The Annexation of Certain Areas on Franklin Road, Specifically 459, 463, and 467 Franklin Road; (10/11/16 Work Session)
- Sponsors:** Emily Hunter
- Attachments:** [2016-45 RES Revised Draft POS_with map_459 463 467 Franklin Rd.Law Appr](#)
[459 463 467 Franklin Rd Annexation Map](#)
17. [16-0844](#) Consideration of COF Contract No. 2016-0278, Interlocal Agreement Between the City of Franklin and Williamson County Concerning Performance Bonds (10/11/16 WS)
- Sponsors:** Emily Hunter
- Attachments:** [2016-0278 Interlocal agreement_performance bond issues Law Approved 2](#)
[2011-0111 Interlocal with County-Performance Agreements](#)
18. [16-0785](#) Consideration of Resolution 2016-61, A Resolution Funding the Design, Right-of-Way Acquisition and Construction for the Mallory Lane, North Royal Oaks Blvd and Liberty Pike Intersection Project.
- Sponsors:** Paul Holzen
- Attachments:** [Res 2016-61 - Memo Exhibits](#)
[Res 2016-61 - Resolution to fund improvements to Liberty Pike and Mallory Lan](#)
- Legislative History**
- | | | | |
|--|---------|--------------|------------------------------|
| | 9/13/16 | Work Session | referred to the Work Session |
|--|---------|--------------|------------------------------|

19. [16-0867](#) Consideration of Road Impact Fee Offset Agreement (COF Contract No 2016-0299) with Embrey Partners, Ltd. for Arterial Roadway Improvements to Franklin Road at the Mallory Station Road Intersection (Iron Horse Development) (10/11/16 WS; 10/25/16 BOMA Referred to November 22nd 7:00 meeting, 7-1)

Sponsors: Paul Holzen

Attachments: [COF 2016-0299 Iron Horse_Road Impact Fee Offset Agreement2_with attachm](#)

20. [16-0842](#) *Consideration of Resolution 2016-69, A Resolution to Adopt the Project List for Phase I of the FY 2017-2026 CIP (Capital Investment Program) (Continued from 10/11/16 WS)

Sponsors: Eric Stuckey and Paul Holzen

Attachments: [RESOLUTION 2016-69 - CIP- Second Draft.pdf](#)
[9-30-2016 Phase I Projects](#)
[Capital Funding Model - September 2016 09 09-16](#)
[CIP Funding Model -BOMA - 09132016 09-09-16](#)
[Franklin Debt Capacity Update 8 12 2016](#)

Legislative History

10/3/16 Work Session referred to the Work Session

Other Business

Adjournment

Anyone requesting accommodations due to disabilities should contact ADA coordinator at 791-3277.



#FRANKLINTN

2015 Statistics

1.31 Million

Visitors to Williamson County in 2015



25%

**Increase in visitors
since 2012**

Economic Impact

\$410.69 Million

**in economic impact for travel-related
spending**



No. 6

**Ranking among
Tennessee's 95 counties**

Economic Impact

Tennessee's Top 10



Davidson – \$5.6 Billion

Shelby – \$3.1 Billion

Sevier – \$2.0 Billion

Hamilton – \$1.016 Billion

Knox – \$1.014 Billion

Williamson – \$410.69 Million

Sullivan – \$356 Million

Blount – \$346 Million

Rutherford – \$316 Million

Montgomery – \$205 Million

Economic Impact

\$487.82

The amount saved by every Williamson County household as a result of tourism-related spending



3,000 Jobs

Hospitality industry related jobs generated

Economic Impact

Williamson County Hotels

2015 Occupancy
74.6%

2015 Average Daily Rate
\$114.47



2015 Revenue Per Available Room
\$85.34

Visitor Center

41,890

Visitors in 2015





FRANKLIN
WILLIAMSON CO TN

Tourism 2020

**“Attract the world to
Williamson County, Tennessee”**



Tourism 2020



The mission of the Williamson County Convention & Visitors Bureau (WCCVB) is to positively impact the local economy by increasing travel related spending in the county, provide quality services to the visitor and the local hospitality industry, and assist in the development, preservation and expansion of the county's tourism product.

Tourism 2020

Strategic Priority:

Maximize the effectiveness of WCCVB's strategy and branding to drive visitor spending.

Key Performance Indicator:

Grow the number of annual visitors to Williamson County from 1.31 million in 2015 to 2 million in 2020.

Tourism 2020

Strategic Priority:

Assume a leadership role and be a key CVB partner in Middle Tennessee and beyond.

Key Performance Indicator:

By 2020, expand the WCCVB role on two regional committees and create a minimum of two new major partnership opportunities.

Tourism 2020

Strategic Priority:

Promote Williamson County as a premier destination for youth and amateur sporting events regionally and nationally.

Key Performance Indicator:

Increase the number of annual room nights in the sports market by 40 percent in 2020.

Tourism 2020

Strategic Priority:

Educate the community on the importance and the impact of tourism.

Key Performance Indicator:

Train 500 new ambassadors for the Visit Franklin's Ambassador Program by 2020.



FRANKLIN
WILLIAMSONCO**TN**



HISTORIC
FRANKLIN
TENNESSEE

RETAILER'S CERTIFICATE

Pursuant to T.C.A. §57-3-208, the City of Franklin hereby certifies the following facts concerning applicant in the name of Happy Ours, owned by the managing agent, Nicole Barclay, who has made application for a retailer's license to handle alcoholic beverages at 327 Independence Square, which is within the corporate limits of the City of Franklin, Williamson County, Tennessee:

1. The owner who is to be in actual charge of the business has not been convicted of any violation of the laws against possession, sale, manufacture, or transportation of beer or other alcoholic beverages, or of any felony, or of any crime involving moral turpitude, within the past ten (10) years immediately preceding the date of application, and will not violate any of the provisions of Tennessee Code Annotated, Title 57, Chapter 3;
2. The applicant has secured a location for the business which complies with all restrictions of local law, ordinances, or resolutions, duly adopted by the local authorities as to location.
3. The applicant (by and through one or more of its owners) meets all residency requirements established by local authority under Franklin Municipal Code Section 2-108A.
4. The applicant has complied with local laws, ordinances, and resolutions duly adopted by the local authority regulating the number of retail licenses to be issued within the jurisdiction.

This the _____ Day of October, 2016.

Dr. Ken Moore
Mayor

HISTORIC
FRANKLIN
TENNESSEE**CERTIFICATE OF COMPLIANCE**
RETAIL FOOD STORE WINE
(Herban Market) – (3078 Maddux Way, Suite 300)

The City of Franklin hereby certifies the following facts concerning application in the name of Ashlea Hogancamp and Matthew Hogancamp with Herban Market, LLC at 3078 Maddux Way, Suite 300, Franklin, TN 37069, who has made application for a Certificate of Compliance to sell retail food store wine at 3078 Maddux Way, Suite 300, which is within the corporate limits of the City of Franklin, Williamson, County, Tennessee:

1. An investigation has been undertaken of the applicant's felony criminal record and of the location of said business, and from said investigation the undersigned certify that the applicant or applicants who are to be in actual charge of the business have not been convicted of a felony within a ten-year period immediately preceding the date of application and, if a corporation, that the executive officers or those in control have not been convicted of a felony within a ten-year period immediately preceding the date of the application;

2. The applicant or applicants have secured a location which lies within the city limits of the City of Franklin which complies with all applicable zoning laws adopted therein by the City.

This the ____ day of _____, 2016

Dr. Ken Moore, Mayor
City of Franklin

ATTEST: _____
Eric Stuckey, City Administrator/Recorder

ORDINANCE 2016-33

TO BE ENTITLED, "AN ORDINANCE TO REZONE 5.195 ACRES FROM GENERAL OFFICE DISTRICT TO SPECIFIC DEVELOPMENT RESIDENTIAL 27.33 DISTRICT FOR THE PROPERTY LOCATED NORTH OF MALLORY STATION ROAD AND EAST OF FRANKLIN ROAD, 222 MALLORY STATION ROAD."

WHEREAS, the City of Franklin, Tennessee, encourages responsible growth and the sensible transition of land uses and densities; and

WHEREAS, the General Office district provides zoning for land uses compatible with both the Franklin Land Use Plan and surrounding development; and

WHEREAS, the Board of Mayor and Aldermen (BOMA) of the City of Franklin, Tennessee, adopted Resolution 2016-47, approving a Plan Unit Development (PUD) Development Plan as required by the Franklin Zoning Ordinance; and

WHEREAS, the zoning has been reviewed and approved by BOMA after a public hearing and a recommendation by the Franklin Municipal Planning Commission.

NOW THEREFORE BE IT ORDAINED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS:

SECTION I. That the following described property shall be, and is hereby, rezoned from its present zoning classification of General Office District to Specific Development 27.63 District:

PREMISES CONSIDERED

Map-Parcel	Acres
053 --- 10400	5.195
Total	5.195

BEING A CERTAIN PARCEL OF LAND SITUATED THE IN THE 8TH CIVIL DISTRICT OF WILLIAMSON COUNTY TENNESSEE AND BEING IN THE CITY OF FRANKLIN. ALSO BEING THE SAME LAND AS DESCRIBED IN DEED BOOK 424 PAGE 910 AS RECORDED IN THE REGISTERS OFFICE OF WILLIAMSON COUNTY TENNESSEE (R.O.W.C.) AND IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF THIS PARCEL AS RECORDED IN DEED BOOK 424, PAGE 910 (R.O.W.C) AND THE SOUTHWEST CORNER OF LOT 1 OF PATTON STATION BUSINESS PARK AS RECORDED IN PLAT BOOK 25 PAGE 21 (R.O.W.C); SAID POINT BEING ON THE NORTHERLY RIGHT OF WAY OF MALLORY STATION ROAD (60' R.O.W.);

THENCE LEAVING SAID BUSINESS PARK AND ALONG THE NORTHERLY RIGHT-OF-WAY LINE OF MALLORY STATION ROAD, NORTH 81°59'07" WEST, 480.07 FEET TO A POINT AT THE SOUTHEAST CORNER OF MARGARET WHITE (DB 171 PAGE 53);

THENCE, LEAVING SAID NORTH RIGHT OF WAY LINE AND WITH THE EASTERLY LINE OF WHITE, NORTH 09°22'57" EAST, 473.08 FEET TO THE NORTHEAST CORNER OF WHITE AND

A SOUTHERLY CORNER OF THE MORNINGSIDE P.U.D. AS RECORDED IN PLAT BOOK 30
PAGE 6;

THENCE LEAVING WHITE AND WITH THE SOUTH LINE OF SAID MORNINGSIDE P.U.D.
SOUTH 81°37'03" EAST, 480.00 TO AN IRON REBAR WITH CAP IN THE WESTERLY LINE OF
THE AFORESAID PLAT OF PATTON STATION BUSINESS PARK.

THENCE, WITH THE WESTERLY LINE OF SAID PLAT SOUTH 09°22'52" WEST, 470.00 TO THE
POINT OF BEGINNING.

CONTAINING 226,305 SQUARE FEET OR 5.195 ACRES.

SECTION II. That the attached Location Map shall serve the purpose of further delimiting the
geographical boundaries as described by this Ordinance.

SECTION III. BE IT FINALLY ORDAINED by the Board of Mayor and Aldermen of the City
of Franklin, Tennessee, that this Ordinance shall take effect from and after its passage on third and final
reading, the health, safety, and welfare of the citizens requiring it.

ATTEST:

CITY OF FRANKLIN, TENNESSEE:

By: _____
Eric Stuckey
City Administrator/Recorder

By: _____
Dr. Ken Moore
Mayor

Approved as to form by:

Shauna R. Billingsley
City Attorney

PLANNING COMMISSION RECOMMENDED:

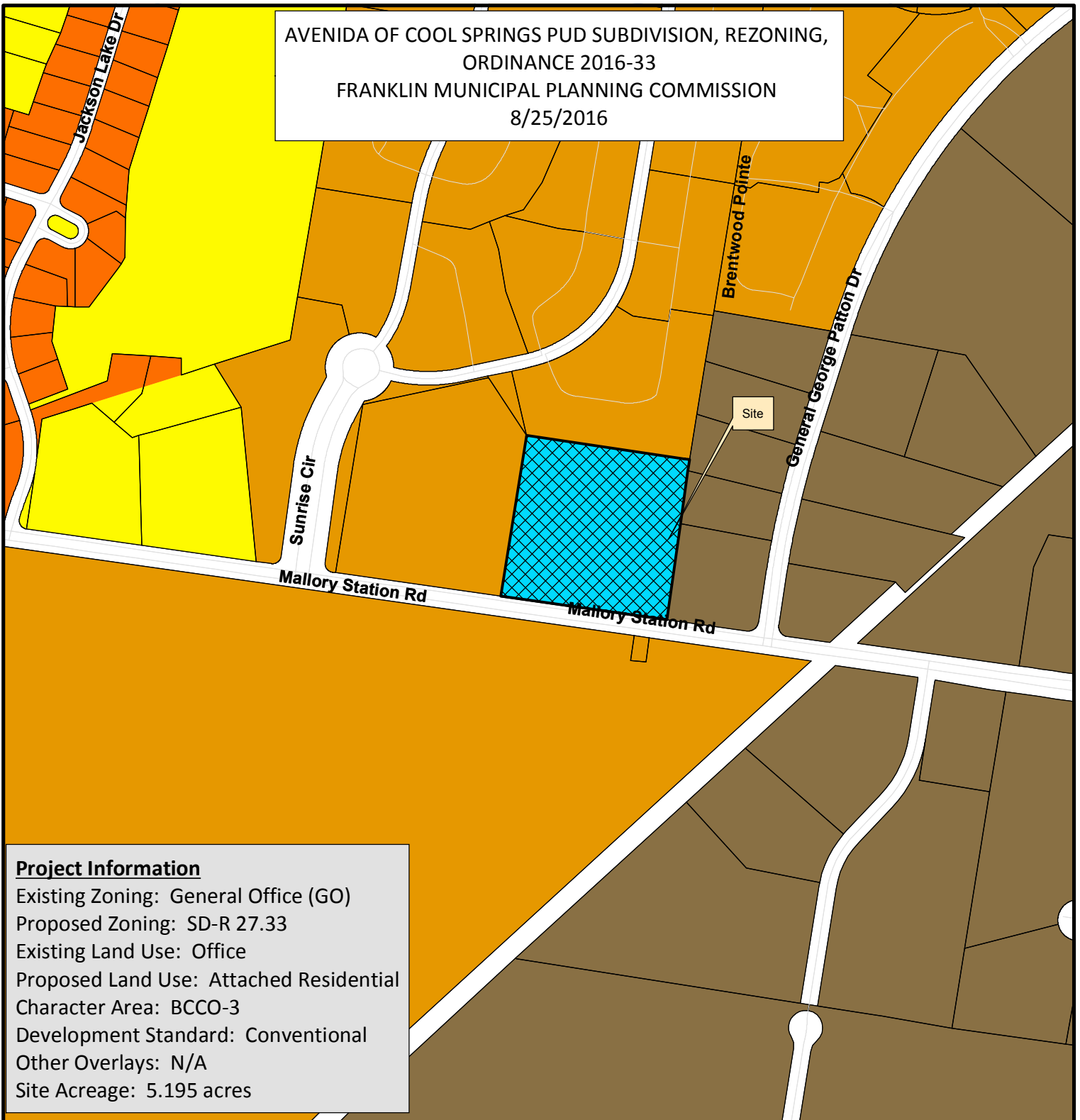
PASSED FIRST READING:

PUBLIC HEARING HELD:

PASSED SECOND READING:

PASSED THIRD READING:

AVENIDA OF COOL SPRINGS PUD SUBDIVISION, REZONING,
ORDINANCE 2016-33
FRANKLIN MUNICIPAL PLANNING COMMISSION
8/25/2016



Project Information

Existing Zoning: General Office (GO)
Proposed Zoning: SD-R 27.33
Existing Land Use: Office
Proposed Land Use: Attached Residential
Character Area: BCCO-3
Development Standard: Conventional
Other Overlays: N/A
Site Acreage: 5.195 acres

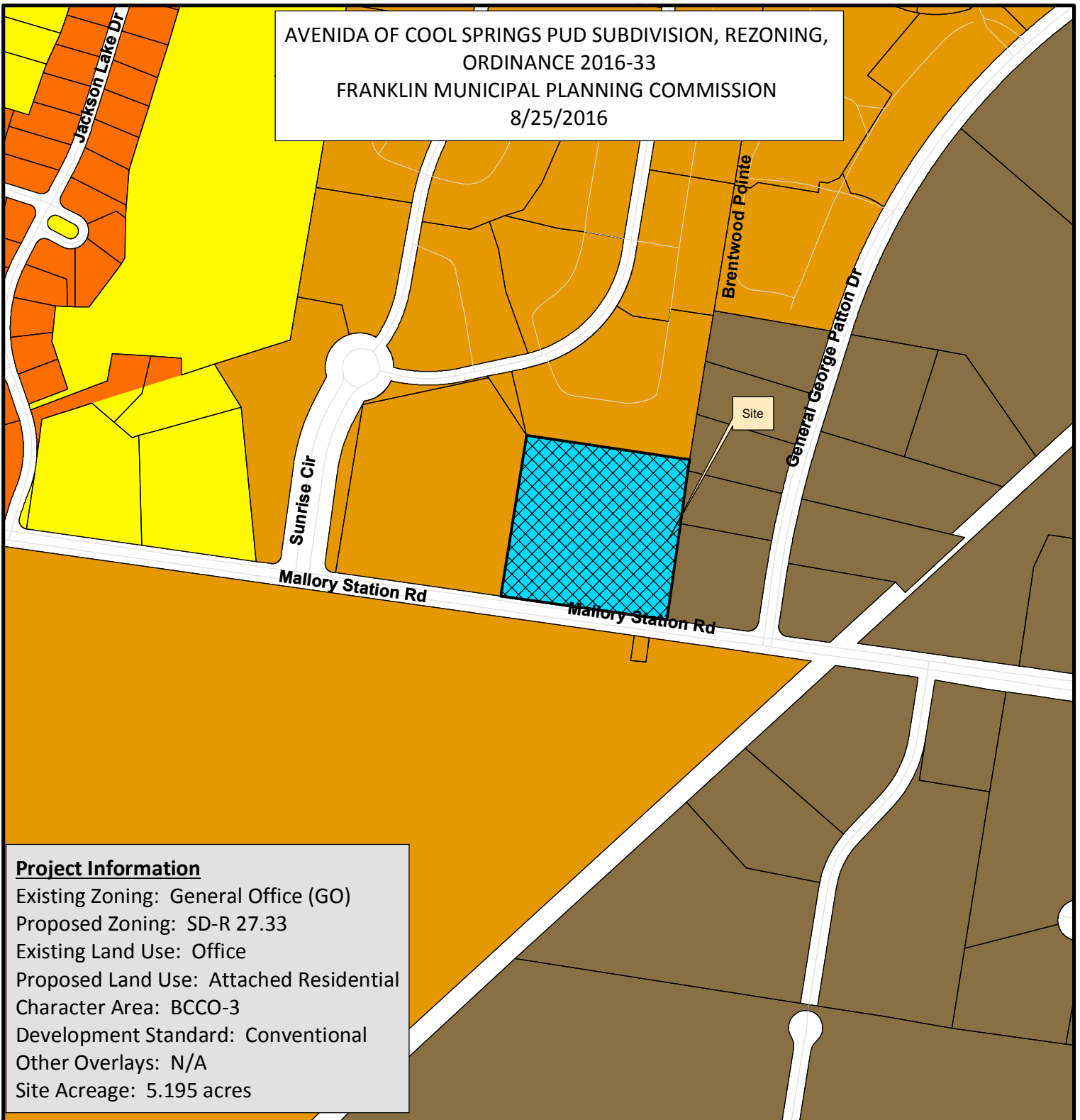
Avenida of Cool Springs	SD-R Specific Development-Residential
AG Agricultural District	SD-X Specific Development-Variety
ER Estate Residential	OR Office Residential District
R-1 Residential District	GO General Office District
R-2 Residential District	CC Central Commercial District
R-3 Residential District	NC Neighborhood Commercial District
R-6 Residential District	GC General Commercial District
RM-10 Attached 10 Residential District	LI Light Industrial District
RM-15 Attached 15 Residential District	HI Heavy Industrial District
RM-20 Attached 20 Residential District	CI Civic and Institutional District



0 250 500 1,000
Feet

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AVENIDA OF COOL SPRINGS PUD SUBDIVISION, REZONING,
ORDINANCE 2016-33
FRANKLIN MUNICIPAL PLANNING COMMISSION
8/25/2016



Project Information

Existing Zoning: General Office (GO)
Proposed Zoning: SD-R 27.33
Existing Land Use: Office
Proposed Land Use: Attached Residential
Character Area: BCCO-3
Development Standard: Conventional
Other Overlays: N/A
Site Acreage: 5.195 acres

Avenida of Cool Springs	SD-R Specific Development-Residential
AG Agricultural District	SD-X Specific Development-Variety
ER Estate Residential	OR Office Residential District
R-1 Residential District	GO General Office District
R-2 Residential District	CC Central Commercial District
R-3 Residential District	NC Neighborhood Commercial District
R-6 Residential District	GC General Commercial District
RM-10 Attached 10 Residential District	LI Light Industrial District
RM-15 Attached 15 Residential District	HI Heavy Industrial District
RM-20 Attached 20 Residential District	CI Civic and Institutional District



0 250 500 1,000
Feet

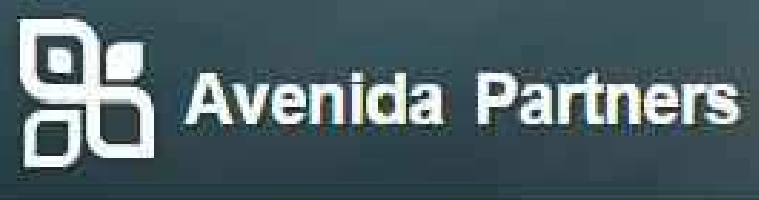
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The City is not responsible for any errors or omissions contained hereon.
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AVENIDA OF COOL SPRINGS
REZONING PLAN
INITIAL RESUBMITTAL
TAX MAP 53, PARCEL 10400
COF #6190
222 MALLORY STATION ROAD
FRANKLIN, WILLIAMSON CO., TN

OWNER

Franklin Radio Associates, Inc
222 Mallory Station Road
Franklin, TN 37067
Contact: Charles Dribell
615.794.1594

DEVELOPER



Avenida Partners
19700 Fairchild Road
Suite 170
Irvine, Ca. 92612
Contact: Robert May
949.298.4540

LANDSCAPE ARCHITECT
/ APPLICANT



Kiser+Vogrin Design
5005 Meridian Blvd
Suite 100
Franklin, TN 37067
Contact: Christopher Wood
615.719.1943

ARCHITECT



LordAeck Sargent
1175 Peachtree St NE
Atlanta, GA. 30361
Contact: Neil Weekley
404.253.1431

CIVIL ENGINEER

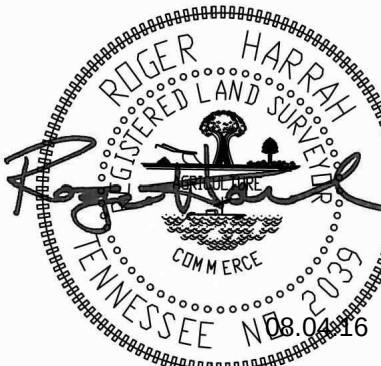


Fulmer Engineering
2612 Sunset Place
Nashville, TN 37212
Contact: Jay Fulmer
615.516.8477

SURVEYOR

Harrah & Associates
504 Autumn Spring Court
Suite B-15
Franklin, Tn. 37067
Contact: Roger Harrah
615.778.0863

SHEET INDEX:	Sheet Number	Preapp Submittal	Initial Submittal	Initial Resubmittal	Post PC Submittal
COVER	C0.0	06-13-2016	07-11-2016	08-04-2016	
EXISTING CONDITIONS PLAN	C1.0	06-13-2016	07-11-2016	08-04-2016	
EXISTING CONDITIONS w/ AERIAL	C1.1	06-13-2016	07-11-2016	08-04-2016	
DEVELOPMENT PLAN	C2.0	06-13-2016	07-11-2016	08-04-2016	



SITE LOCATION MAP
N.T.S

KVD PROJECT# : 16001
COF # : 6190
Sheet #:
C0.0
DATE: 08-04-2016

Survey Prepared by Harrah and Associates
504 Autumn Spring Court
Suite B-15
Franklin, TN. 37067
615.778.0863

SITE AREA : 5.195 AC

LEGEND

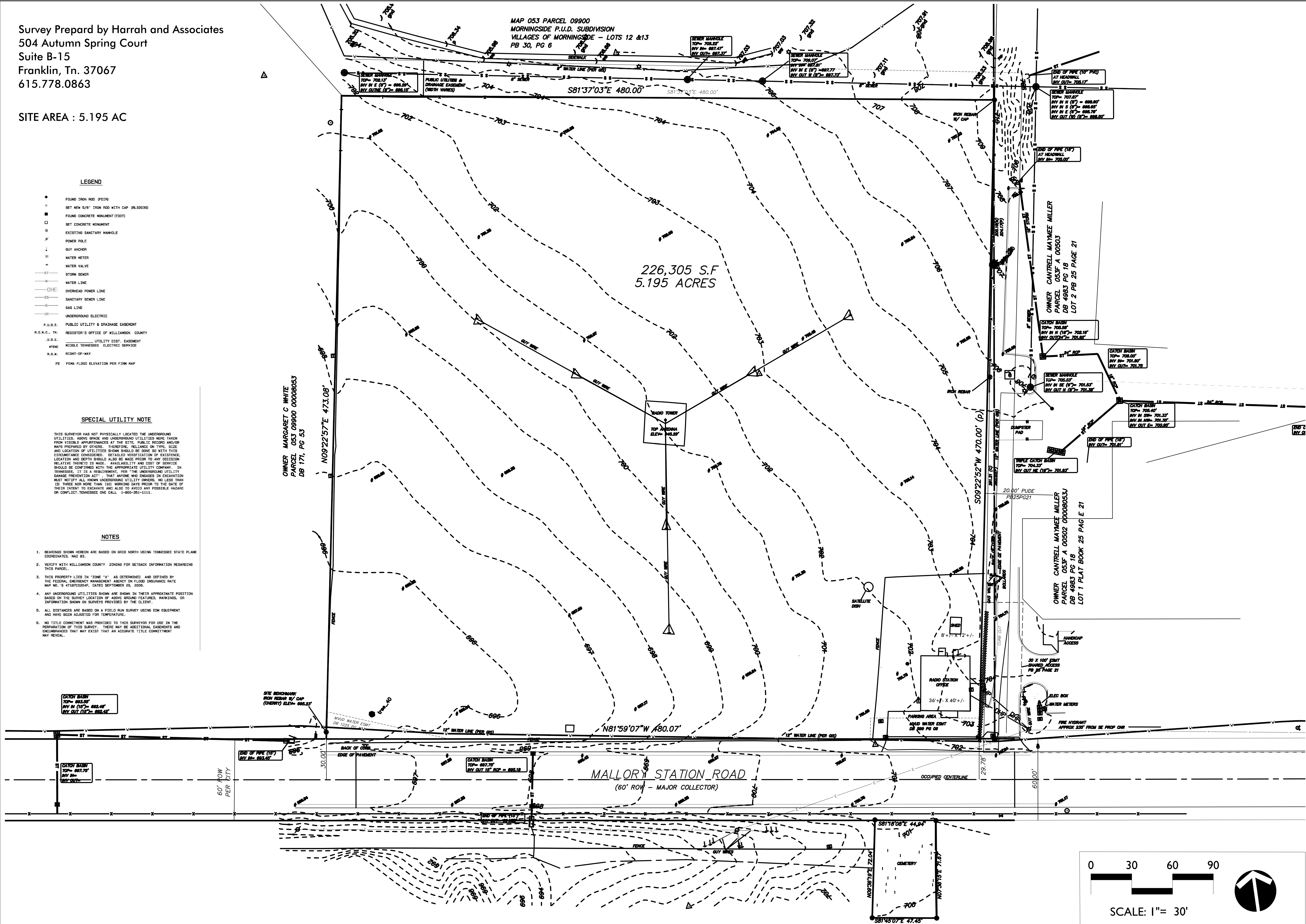
- FOUND IRON ROD (FDIR)
- SET NEW 5/8" IRON ROD WITH CAP (RLS203S)
- FOUND CONCRETE MONUMENT (T20T)
- SET CONCRETE MONUMENT
- ⊙ EXISTING SANITARY MANHOLE
- ⊙ POWER POLE
- ⊙ GUY ANCHOR
- ⊙ WATER METER
- ⊙ WATER VALVE
- ST— STORM SEWER
- W— WATER LINE
- OHE— OVERHEAD POWER LINE
- SS— SANITARY SEWER LINE
- G— GAS LINE
- UE— UNDERGROUND ELECTRIC
- P.U.D.E. PUBLIC UTILITY & DRAINAGE EASEMENT
- R.O.N.C. TN. REGISTERED'S OFFICE OF WILLIAMSON COUNTY
- U.D.E. UTILITY DIST. EASEMENT
- W.T.M. MIDDLE TENNESSEE ELECTRIC SERVICE
- R.O.W. RIGHT-OF-WAY
- FE FEMA FLOOD ELEVATION PER FIRM MAP

SPECIAL UTILITY NOTE

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GROUND AND UNDERGROUND UTILITIES WERE TAKEN FROM VISIBLE APPEARANCES AT THE SITE, PUBLIC RECORD AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE ON TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS UNDERSTANDING. LOCATIONS OF UTILITIES SHOWN SHOULD BE MADE PRIOR TO ANY DECISION RELATIVE THEREOF IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN (3) THREE HOURS PRIOR TO THE DATE OF THE INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL: 1-800-251-1111.

NOTES

- BEARINGS SHOWN HEREON ARE BASED ON GRID NORTH USING TENNESSEE STATE PLANE COORDINATES, NAD 83.
- VERIFY WITH WILLIAMSON COUNTY ZONING FOR SETBACK INFORMATION REGARDING THIS PARCEL.
- THIS PROPERTY LIES IN "ZONE X" AS DETERMINED AND DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY ON FLOOD INSURANCE RATE MAP NO. 15 47187C0004P, DATED SEPTEMBER 28, 2008.
- ANY UNDERGROUND UTILITIES SHOWN ARE SHOWN IN THEIR APPROXIMATE POSITION BASED ON THE SURVEY LOCATION OF ABOVE GROUND FEATURES, MARKINGS, OR INFORMATION SHOWN ON SURVEYS PROVIDED BY THE CLIENT.
- ALL DISTANCES ARE BASED ON A FIELD RUN SURVEY USING EDM EQUIPMENT AND HAVE BEEN ADJUSTED FOR TEMPERATURE.
- NO TITLE COMMITMENT WAS PROVIDED TO THIS SURVEYOR FOR USE IN THE PREPARATION OF THIS SURVEY. THERE MAY BE ADDITIONAL EASEMENTS AND ENCUMBRANCES THAT MAY EXIST THAT AN ACCURATE TITLE COMMITMENT MAY REVEAL.



KV+D
KISER VOGGIN DESIGN
5005 Meridian Blvd., Ste. 100, Franklin, TN 37067
615.778.0863

**LORD
AECK
SARGENT**

FULMER
ENGINEERING
2002 RICHARD JONES RD - SUITE C304 NASHVILLE,
TENNESSEE 37215
INFO@FULMERENG.COM • (615) 516-8477



AVENIDA OF COOL SPRINGS
REZONING PLAN RESUBMITTAL
EXISTING CONDITIONS
COF# 6190
Franklin, Williamson Co, TN

REVISIONS:
DATE: 08.04.16
DESIGNED BY: DK
DRAWN BY: CBW
CHECKED BY: CBW
Q.C. BY: Q.C. BY
SCALE: 1"=30'
PROJECT #: 16001
SHEET NUMBER:
C1.0

Survey Prepared by Harrah and Associates
504 Autumn Spring Court
Suite B-15
Franklin, Tn. 37067
615.778.0863

SITE AREA : 5.195 AC

LEGEND

- FOUND TRON ROD (FOIR)
- SET NEW 5/8" TRON ROD WITH CAP (RLS2030)
- FOUND CONCRETE MONUMENT (FOOT)
- SET CONCRETE MONUMENT
- EXISTING SANITARY MANHOLE
- POWER POLE
- GUY ANCHOR
- WATER METER
- WATER VALVE
- STORM SEWER
- WATER LINE
- OHE: OVERHEAD POWER LINE
- SS: SANITARY SEWER LINE
- G: GAS LINE
- UE: UNDERGROUND ELECTRIC
- P.U.D.E.: PUBLIC UTILITY & DRAINAGE EASEMENT
- R.O.W.: REGISTER'S OFFICE OF WILLIAMSON COUNTY
- U.D.C.: MIDDLE TENNESSEE ELECTRIC SERVICE
- WDC: RIGHT-OF-WAY
- R.O.W.: FEMA FLOOD ELEVATION PER FIRM MAP

SPECIAL UTILITY NOTE

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES WERE TAKEN FROM VISIBLE APPEARANCES AT THE SITE. PUBLIC RECORD AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE ON TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THEREO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN 48 HOURS NOT MORE THAN 140 WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT, TENNESSEE ONE CALL 1-800-391-1111.

NOTES

- BEARINGS SHOWN HEREIN ARE BASED ON GRID NORTH USING TENNESSEE STATE PLANE COORDINATES, NAD 83.
- VERIFY WITH WILLIAMSON COUNTY ZONING FOR SETBACK INFORMATION REGARDING THIS PARCEL.
- THIS PROPERTY LIES IN "ZONE A" AS DETERMINED AND DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY ON FLOOD INSURANCE RATE MAP NO. 15 47187C0204F, DATED SEPTEMBER 25, 2006.
- ANY UNDERGROUND UTILITIES SHOWN ARE SHOWN IN THEIR APPROXIMATE POSITION BASED ON THE SURVEY LOCATION OF ABOVE GROUND FEATURES, MARKINGS, OR INFORMATION SHOWN ON SURVEYS PROVIDED BY THE CLIENT.
- ALL DISTANCES ARE BASED ON A FIELD RUN SURVEY USING EDM EQUIPMENT AND HAVE BEEN ADJUSTED FOR TEMPERATURE.
- NO TITLE COMMITMENT WAS PROVIDED TO THIS SURVEYOR FOR USE IN THE PREPARATION OF THIS SURVEY. THERE MAY BE ADDITIONAL EASEMENTS AND ENCUMBRANCES THAT MAY EXIST THAT AN ACCURATE TITLE COMMITMENT MAY REVEAL.

CHRISTOPHER BRANDON WOOD
REGISTERED PROFESSIONAL SURVEYOR
COMMERCIAL & RESIDENTIAL
LANDSCAPE ARCHITECT

0 30 60 90

SCALE: 1"= 30'



SITE LOCATION MAP

STATEMENT OF IMPACTS

WATER FACILITIES:
The proposed development will add a demand of approximately 39,550 GPD to the existing system. The peak demands are:
• Fire: 2,000 GPM @ 20 PSI
• Domestic: 75 GPM
• Irrigation: 25 GPM

The existing demand being removed is negligible.

SEWER FACILITIES:
The proposed development will add a demand of approximately 39,550 GPD to the existing system.

REPURIFIED WATER FACILITIES:
Not Applicable

STREET NETWORK:
A traffic impact study has been produced by Fischbach Transportation Group, LLC based on traffic counts collected on a typical weekday in May of 2016 when schools were in session. The conclusion of the report states the traffic volumes generated by the proposed residential project for senior adults will have a negligible impact on the traffic operations at the existing intersections within the study area. Further, the analysis concludes all recommendations for improvement in the area are warranted prior to the project, and no additional improvements are warranted due to the project.

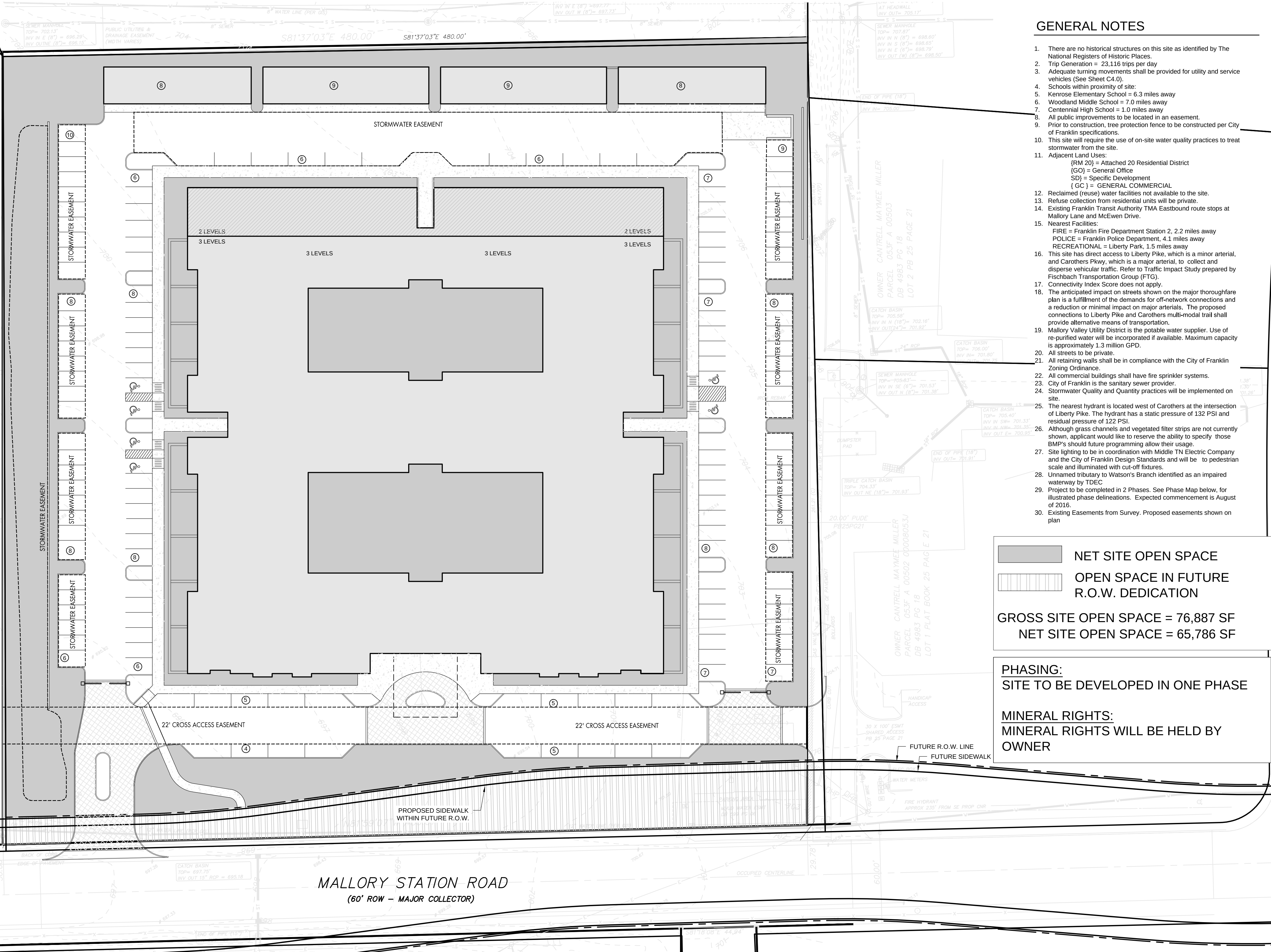
DRAINAGE FACILITIES:
The proposed development will have a positive impact on the drainage facilities. The project is designed to meet or exceed the City of Franklin water quality and detention requirements. The water quality requirements are being satisfied through green infrastructure, which promotes the infiltration of stormwater into the soil. A significant amount of vegetation will also contribute to the removal of stormwater.

SANITATION COLLECTION FACILITIES:
• The buildings' design will include two or more refuse rooms with refuse chutes on each level.
• The refuse rooms will be "stacked" with a common collection room for each refuse chute on level 1.
• All refuse rooms including the chute collection spaces on level 1 will be climate controlled.
• Tenants will conveniently place their refuse in the trash chute on their respective level or floor and will be collected in rolling containers on level 1.
• The project site will contain refuse containers which will be appropriately screened from direct view and accessed by gates.
• At regularly scheduled times maintenance staff will remove the refuse collected in each building refuse collection room and deposit the refuse into the site refuse containers.

At regularly scheduled times the local waste management company will provide its service of emptying the site refuse containers and haul refuse to the appropriate land fill or regional collection location.

POLICE, FIRE AND RECREATIONAL FACILITIES:
Police Station: 3.6 miles (900 Columbia Ave.)
Fire Station: .4 miles (298 Mallery Station Rd)
Recreation: Aspen Grove Park - 1.3 miles (3200 Aspen Grove Rd)

RESTRICTIVE COVENANTS, ARCHITECTURAL CONTROLS, ETC.
Prior to occupancy, the developer will record a restrictive covenant that provides that the developer, its successors and assigns, will lease each unit within the Senior Project to at least one person who is 55 years of age or older (the "Restriction"). Leases executed for occupancy of the units within the Senior Project shall contain a Restriction that at least one of the permanent residents of each unit be 55 years of age or older and that such adult member of the household certify the Restriction by signing the lease.
The developer shall operate the Senior Project in a manner that satisfies the requirements of Section 807(b)(2)(C) of the Fair Housing Act (42 U.S.C. 3607(b)(2)(C)), including the Housing for Older Persons Act of 1995 (HOPA), including the requirements of rules § 100.305, § 100.306, and § 100.307
See PDF Memo from Avenida Partners



GENERAL NOTES

- There are no historical structures on this site as identified by The National Registers of Historic Places.
- Trip Generation = 23,116 trips per day
- Adequate turning movements shall be provided for utility and service vehicles (See Sheet C4.0).
- Schools within proximity of site:
- Kenrose Elementary School = 6.3 miles away
- Woodland Middle School = 7.0 miles away
- Centennial High School = 1.0 miles away
- All public improvements to be located in an easement.
- Prior to construction, tree protection fence to be constructed per City of Franklin specifications.
- This site will require the use of on-site water quality practices to treat stormwater from the site.
- Adjacent Land Uses:
(RM 20) = Attached 20 Residential District
(GO) = General Office
(SD) = Specific Development
(GC) = GENERAL COMMERCIAL
- Reclaimed (reuse) water facilities not available to the site.
- Refuse collection from residential units will be private.
- Existing Franklin Transit Authority TMA Eastbound road stop at Mallery Lane and McEwen Drive.
- Nearest Facilities:
FIRE = Franklin Fire Department Station 2, 2.2 miles away
POLICE = Franklin Police Department, 4.1 miles away
RECREATIONAL = Liberty Park, 1.5 miles away
- This site has direct access to Liberty Pike, which is a minor arterial, and Carothers Pkwy, which is a major arterial, to collect and disperse vehicular traffic. Refer to Traffic Impact Study prepared by Fischbach Transportation Group (FTG).
- Connectivity Index Score does not apply.
- The anticipated impact on streets shown on the major thoroughfare plan is a fulfillment of the demands for off-network connections and a reduction or minimal impact on major arterials. The proposed connections to Liberty Pike and Carothers multi-modal trail shall provide alternative means of transportation.
- Mallery Valley Utility District is the potable water supplier. Use of re-purified water will be incorporated if available. Maximum capacity is approximately 1.3 million GPD.
- All streets to be private.
- All retaining walls shall be in compliance with the City of Franklin Zoning Ordinance.
- All commercial buildings shall have fire sprinkler systems.
- City of Franklin is the sanitary sewer provider.
- Stormwater Quality and Quantity practices will be implemented on site.
- The nearest hydrant is located west of Carothers at the intersection of Liberty Pike. The hydrant has a static pressure of 132 PSI and residual pressure of 122 PSI.
- Although grass channels and vegetated filter strips are not currently shown, applicant would like to reserve the ability to specify those BMPs should future programming allow their usage.
- Site lighting to be in coordination with Middle TN Electric Company and the City of Franklin Design Standards and will be to pedestrian scale and illuminated with cut-off fixtures.
- Unnamed tributary to Watson's Branch identified as an impaired waterway by TDEC.
- Project to be completed in 2 Phases. See Phase Map below, for illustrated phase delineations. Expected commencement is August of 2016.
- Existing Easements from Survey. Proposed easements shown on plan

NET SITE OPEN SPACE
OPEN SPACE IN FUTURE
R.O.W. DEDICATION

GROSS SITE OPEN SPACE = 76,887 SF
NET SITE OPEN SPACE = 65,786 SF

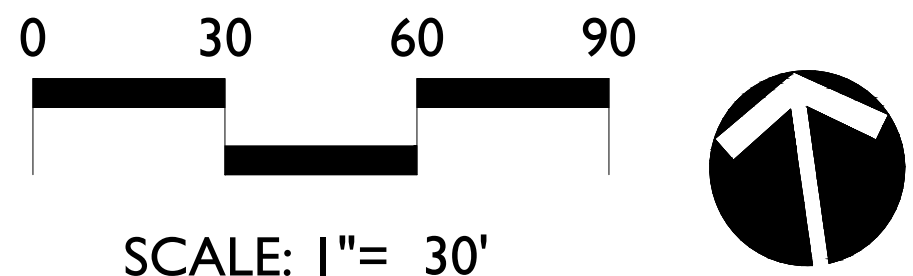
PHASING:
SITE TO BE DEVELOPED IN ONE PHASE

MINERAL RIGHTS:
MINERAL RIGHTS WILL BE HELD BY
OWNER

SITE CONTEXT AND DESIGN DESCRIPTIONS

- Per the Land Use Plan Area BCCO-3, Attached residential uses are appropriate for this site. High quality design, people-friendly environments, and strong connectivity will be encouraged through heightened architectural and site design to reflect, and reinforce, the character of Franklin.
- The proposed age restricted (55+ age) attached residential development and requested rezoning from General Office (GO) to Specific Development-Residential (SD-R) would be compatible with the surrounding area, given the site is currently surrounded by similar age restricted development to the North and Northwest and similarly zoned parcels to the North, West and South. The developments to the East and Northeast are currently zoned as Heavy Industrial (HI) land use designation, so therefore the proposed development would provide a physical transition to the lower density developments heading West along Mallery Station Road. The site design will be compatible with conventional design standards, as outlined by the city of Franklin.
- The proposed age restricted (55+ age) attached residential building located on this site will consist of a xx story enclosed garage structure along the northern property line, a two (2) story transitional feature along the northern elevation of the attached residential building which will then transition to the three (3) story mass of the proposed building. Each facade will be architectural detailed so that no elevation is perceived as the "rear" of the building. The proposed use of traditional building materials such as brick and wood on proposed structures as well as the architectural detailing will be used to create warm, welcoming environment that emphasize the up-scale residential nature of the project. This attention to detail will complement the historical qualities of the Franklin area, while adding to a higher level of quality to the proposed development. Appropriate scale and quality materials will be at the forefront of the architectural language.

CONCRETE PAVERS
CONCRETE SIDEWALK



SCALE: 1"= 30'

SITE DATA

PROJECT NAME: AVENIDA OF COOL SPRINGS
COF PROJECT NUMBER: 6191
MAP, PARCEL NUMBERS: 53, 10400
ADDRESS: 222 MALLERY STATION ROAD
CITY: FRANKLIN
COUNTY: WILLIAMSON
STATE: TENNESSEE
CIVIL DISTRICT: 8

EXISTING ZONING & CHARACTER AREA OVERLAY: GO - GENERAL OFFICE & BCCO-3
PROPOSED LAND USE: MULTIFAMILY
PROPOSED ZONING: SPECIFIC DEVELOPMENT RESIDENTIAL 27.36 (SD-R 27.36)

CHARACTER OVERLAYS: BCCO-3
APPLICABLE DEVELOPMENT STANDARDS: CONVENTIONAL
SITE ACREAGE: +/- 5.139 AC
SITE SQUARE FOOTAGE: +/- 223,854 SF
PUD SITE ACREAGE: +/- 4.843 AC
PUD SITE SQUARE FOOTAGE: +/- 210,961 SF
R.O.W. DEDICATION: +/- .0296 AC
R.O.W. DEDICATION SQUARE FOOTAGE: +/- 12,919 SF

BLDG TOTAL SF: 187,000 SF
1ST FLOOR: 65,000 SF
2ND FLOOR: 65,000 SF
3RD FLOOR: 57,000 SF

ACCESSORY STRUCTURE SF:
8 BAY GARAGE: 1,936 SF EACH; 3,872 SF TOTAL
9 BAY GARAGE: 2,178 SF EACH; 4,356 SF TOTAL

BUILDING/ACCESSORY STRUCTURE HEIGHT:
3-STORY: 33' TO SOFFIT; 45' TO RIDGE
2-STORY: 20' TO SOFFIT; 32' TO RIDGE
ACCESSORY STRUCTURE: 1-STORY: 16' TO RIDGE

TOTAL DWELLING UNITS PROPOSED: 142
UNIT MIX: +/- 61: 1-BEDROOM
81: 2-BEDROOM

PROPOSED GROSS DENSITY: 27 D.U.A.
PROPOSED NET DENSITY: 29 D.U.A.

MINIMUM REQUIRED SETBACK LINES:
FRONT YARD SETBACK ON COLLECTOR: 40 FEET
SIDE YARD: 15 FEET
REAR YARD: 30 FEET

ACCESSORY STRUCTURE SETBACK LINES:
5 FEET FROM PROPERTY LINES

MIN. LANDSCAPE SURFACE RATIO: 0.20
LANDSCAPE SURFACE RATIO PROVIDED:
GROSS: 0.33
NET: 0.30
PARKLAND DEDICATION REQUIREMENT: N/A

PROPOSED PARKING: 186 SPACES
34: GARAGE PARKING
146: SURFACE PARKING
6: ACCESSIBLE PARKING

PARKING RATIO PER CITY OF FRANKLIN ZONING ORDINANCE:
1.5 SPACES PER DWELLING UNIT = 213 PARKING SPACES
PARKING RATIO REQUESTED:
1.25 SPACES PER DWELLING UNIT = 178 PARKING SPACES

MINIMUM OPEN SPACE BASED UPON NET ACREAGE
REQUIRED: 15 PERCENT; +/- 31,644 SF
PROVIDED: 29 PERCENT; +/- 65,796 SF

FORMAL OPEN SPACE:
REQUIRED: +/- 10,442 SF
PROVIDED: +/- 15,798 SF

INFORMAL OPEN SPACE:
REQUIRED: +/- 21,202 SF
PROVIDED: +/- 49,988 SF

OWNER:
FRANKLIN RADIO ASSOCIATES, INC.
222 MALLERY STATION ROAD
FRANKLIN, TN 37067
CONTACT: CHARLES DRIBELL
615.794.1594

DEVELOPER:
AVENIDA PARTNERS
19700 FAIRCHILD ROAD
SUITE 170
IRVINE, CA 92612
CONTACT: ROBERT MAY
949.298.4540

APPLICANT:
KISER & VOGGIN DESIGN
5005 MERIDIAN BLVD. STE 100
FRANKLIN, TN 37067
CONTACT: CHRISTOPHER WOOD
615.719-1943
CHRIS@KISERVOGGIN.COM

Margaret White
200 Mallory Station Rd.
Franklin, TN 37067

Henry & Alice Faye Carlisle
8047 Sunrise Circle
Franklin, TN 37067

Haury & Smith Construction Inc.
7065 Moores Lane #300
Brentwood, TN 37027

Paula Kelling
6000 Sunrise Circle
Franklin, TN 37067

Carol Eudailey
8033 Sunrise Circle
Franklin, TN 37067

Richard & Hildah Best
8071 Sunrise Circle
Franklin, TN 37067

Haury & Smith Contractors Inc.
7065 Moores Lane #300
Brentwood, TN 37027

Franklin Radio Association Inc.
222 Mallory Station Rd.
Franklin, TN 37067

Mallory Valley Utility District
PO BOX 936
Franklin, TN 37065

Kite/Cupp Legend Golf Dev Co
1500 Legends Club Lane
Franklin, TN 37069

Harvey & Maymee Miller Cantrell
201 Hillwood Drive
Waverly, TN 37185

Harvey & Maymee Miller Cantrell
Foundation
201 Hillwood Drive
Waverly, TN 37185

John Lee
3326 Aspen Grove Drive #160
Franklin, TN 37067

GC Properties LLC
1881 Gen Geo Patton Drive #100
Franklin, TN 37067

Patton Station LLC
1880 Gen Geo Patton Drive #105
Franklin, TN 37067

Timothy & Janie Richards
1892 Gen Geo Patton Drive
Franklin, TN 37067

Occupant
1541 Brentwood Pointe
Franklin, TN 37067

Mallory Crossing
1896 Gen Geo Patton Drive #100
Franklin, TN 37067

William & Faye Baggett
1536 Brentwood Pointe
Franklin, TN 37067

Occupant
1553 Brentwood Pointe
Franklin, TN 37067

Glenn Stophel
8079 Sunrise Circle
Franklin, TN 37067

Occupant
8064 Sunrise Circle
Franklin, TN 37067

Occupant
1552 Brentwood Pointe
Franklin, TN 37067

Bill Greer
7132 Sunrise Circle
Franklin, TN 37067

Ronald Bramblett
1551 Brentwood Pointe
Franklin, TN 37067

Occupant
8040 Sunrise Circle
Franklin, TN 37067

Occupant
8042 Sunrise Circle
Franklin, TN 37067

Occupant
8044 Sunrise Circle
Franklin, TN 37067

Occupant
8046 Sunrise Circle
Franklin, TN 37067

Occupant
8048 Sunrise Circle
Franklin, TN 37067

Occupant
8050 Sunrise Circle
Franklin, TN 37067

Occupant
8052 Sunrise Circle
Franklin, TN 37067

Samantha Price
8054 Sunrise Circle
Franklin, TN 37067

Judy Jordan
8056 Sunrise Circle
Franklin, TN 37067

Occupant
8058 Sunrise Circle
Franklin, TN 37067

Occupant
8060 Sunrise Circle
Franklin, TN 37067

Occupant
8062 Sunrise Circle
Franklin, TN 37067

Occupant
8064 Sunrise Circle
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Occupant
8066 Sunrise Circle
Franklin, TN 37067

Occupant
8068 Sunrise Circle
Franklin, TN 37067

Occupant
8070 Sunrise Circle
Franklin, TN 37067

Occupant
8072 Sunrise Circle
Franklin, TN 37067

Occupant
8074 Sunrise Circle
Franklin, TN 37067

Occupant
8076 Sunrise Circle
Franklin, TN 37067

Occupant
8078 Sunrise Circle
Franklin, TN 37067

Dotti Bernato
8053 Sunrise Circle
Franklin, TN 37067

Occupant
8049 Sunrise Circle
Franklin, TN 37067

Occupant
8051 Sunrise Circle
Franklin, TN 37067

Occupant
8065 Sunrise Circle
Franklin, TN 37067

Occupant
8063 Sunrise Circle
Franklin, TN 37067

Occupant
8067 Sunrise Circle
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8073 Sunrise Circle
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8027 Sunrise Circle
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Occupant
8025 Sunrise Circle
Franklin, TN 37067

Occupant
8064 Sunrise Circle
Franklin, TN 37067

Occupant
8066 Sunrise Circle
Franklin, TN 37067

Occupant
8068 Sunrise Circle
Franklin, TN 37067

Occupant
6013 Sunrise Circle
Franklin, TN 37067

Occupant
6012 Sunrise Circle
Franklin, TN 37067

Occupant
6011 Sunrise Circle
Franklin, TN 37067

Jean and Bill Cleland
6010 Sunrise Circle
Franklin, TN 37067

Occupant
6009 Sunrise Circle
Franklin, TN 37067

Occupant
6008 Sunrise Circle
Franklin, TN 37067

Occupant
6007 Sunrise Circle
Franklin, TN 37067

Occupant
6006 Sunrise Circle
Franklin, TN 37067

Occupant
6005 Sunrise Circle
Franklin, TN 37067

Occupant
6004 Sunrise Circle
Franklin, TN 37067

Cindy Hottinger
2000 Mallory Lane #130-346
Franklin, TN 37067

Occupant
6002 Sunrise Circle
Franklin, TN 37067

Occupant
6001 Sunrise Circle
Franklin, TN 37067

Paula Kelling
6000 Sunrise Circle
Franklin, TN 37067

Occupant
1540 Brentwood Pointe
Franklin, TN 37067

August 4, 2016



Rezoning and PUD Development Plan Public Notice

This letter is written to provide public notice that the Franklin Municipal Planning Commission (FMPC) will be considering a proposed Rezoning and a PUD Development Plan for the property location at 222 Mallory Station Road, Franklin, TN 37067. The request will be heard by the FMPC on 08.25.16 at 7 p.m. in the City Hall Board Room, while the first Board of Mayor and Alderman (BOMA) reading for this project will be held on 09/27/16. As part of the rezoning process a second and third readings by (BOMA) will be held on 10/25/16 and 11/08/16. Please see the information below for more details.

The applicant for the above referenced project will be Avenida Partners and the applicant's representative will be Christopher Wood of Kiser Vogrin Design located at 5005 Meridian Blvd, Franklin, TN 37067, 615.813.0864

This submittal proposes to rezone the property from General Office District (GO) to Specific Development-Residential (SD-R) is to better match the surrounding land uses while the PUD Development Plan is to propose the development of one hundred and forty two (142) age restricted one (1) and two (2) bedroom units with kitchens. In addition, one hundred and eighty-six (186) parking spaces are being proposed to service the proposed project.

If the public chooses, they may appear at the FMPC meeting at 7 p.m. in the City Hall Board Room at 109 3rd Avenue South, Franklin, TN 37064 to be heard, or submit written comments with respect to the application. Written comments may be directed to the City of Franklin Planning and Sustainability Department, 109 3rd Avenue South, Franklin, TN 37064.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads 'Christopher B. Wood'. The signature is written in a cursive, flowing style.

Christopher B. Wood | RLA, LEED AP
Project Manager
Kiser + Vogrin Design, LLC
cc: file

PUBLIC NOTICE AFFIDAVIT

City of Franklin, Tennessee

We/I Kiser Vogrin Design - Christopher Wood

(Please print Name/Names in Full)

being duly sworn, depose and say(s) that (I am)/(we are), acting as the authorized agent on all matters pertaining to the processing of the development application for the property described as:

Map 053, Parcel 10400

(Property Parcel/Tax ID Number)

and located at:

222 Mallory Station Road, Franklin, TN 37067

(Street Address)

have/has provided a mailed notice in accordance with section 2.3.8 of the Franklin Zoning Ordinance, which included the following:

1. The address or location of the property subject to the submittal;
2. A brief description of the property (e.g., legal description, nearby streets and intersections);
3. Date, time, and location of the public meeting or hearing; Nature, scope, and purpose of submittal;
4. Information on where the public can view the application and where they may be heard;
5. Information on where the public can submit written comments.

Christopher B. Wood
Signature

Subscribed and sworn to before me this

19 day of July, 20 16.

Joan Elaine Hatch
Notary Public

My Commission Expires: 9/17/2017



My Commission Expires SEPT. 17, 2017

AVENIDA SENIOR LIVING

Development Group

August 19, 2016

Mr. Josh King
Principal Planner
City of Franklin Planning and Sustainability
109 3rd Avenue South
Franklin, TN 37064

Dear Mr. Josh King,

KVD and Avenida Partners is formally requesting that Avenida of Cool Springs Rezoning (COF # 6190) and the PUD Development Plan (COF # 6191) project be deferred one month and be placed onto the September 22, 2016 FMPC agenda.

We also welcome the opportunity to meet with City of Franklin staff and directors to discuss the issues of concern.

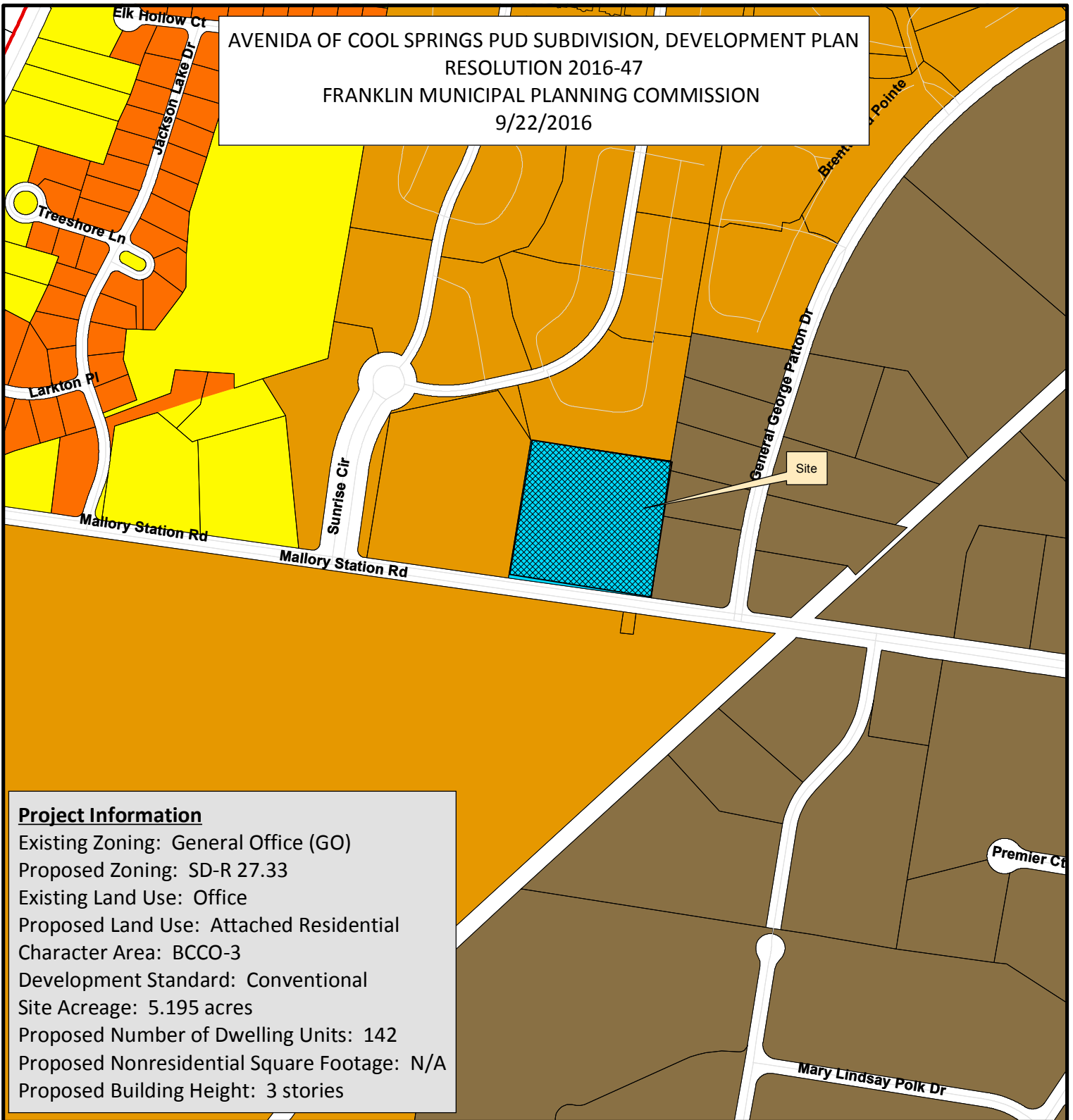
Thanks,



Robert Muirhead

Robert Muirhead
Avenida Partners, LLC
19700 Fairchild Road, Ste. 170
Irvine, CA 92612
Direct: 949.357.1431
rmuirhead@avenidapartners.com

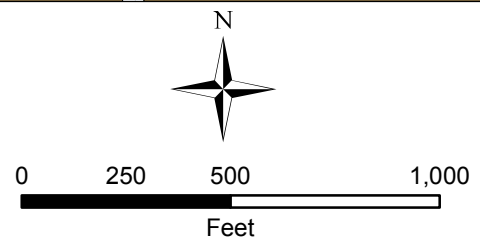
AVENIDA OF COOL SPRINGS PUD SUBDIVISION, DEVELOPMENT PLAN
 RESOLUTION 2016-47
 FRANKLIN MUNICIPAL PLANNING COMMISSION
 9/22/2016



Project Information

Existing Zoning: General Office (GO)
 Proposed Zoning: SD-R 27.33
 Existing Land Use: Office
 Proposed Land Use: Attached Residential
 Character Area: BCCO-3
 Development Standard: Conventional
 Site Acreage: 5.195 acres
 Proposed Number of Dwelling Units: 142
 Proposed Nonresidential Square Footage: N/A
 Proposed Building Height: 3 stories

Avenida PUD Subdivision	SD-R Specific Development-Residential
AG Agricultural District	SD-X Specific Development-Variety
ER Estate Residential	OR Office Residential District
R-1 Residential District	GO General Office District
R-2 Residential District	CC Central Commercial District
R-3 Residential District	NC Neighborhood Commercial District
R-6 Residential District	GC General Commercial District
RM-10 Attached 10 Residential District	LI Light Industrial District
RM-15 Attached 15 Residential District	HI Heavy Industrial District
RM-20 Attached 20 Residential District	CI Civic and Institutional District



This map was created by the Franklin Planning Department.
 It was compiled from the most authentic information available.
 The City is not responsible for any errors or omissions contained hereon.
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RESOLUTION 2016-47

TO BE ENTITLED: “A RESOLUTION APPROVING A DEVELOPMENT PLAN FOR AVENIDA OF COOL SPRINGS PUD SUBDIVISION), FOR THE PROPERTY LOCATED NORTH OF MALLORY STATION ROAD AND EAST OF FRANKLIN ROAD, 222 MALLORY STATION ROAD.”

WHEREAS, the Board of Mayor and Aldermen (BOMA) of the City of Franklin, Tennessee, has, or will, approve the zoning for the property as part of Ordinance 2016-33; and

WHEREAS, the Planned Unit Development (PUD) process is a review procedure that is intended to encourage innovative land planning and design and avoid the monotony sometimes associated with large developments by:

- (a) Reducing or eliminating the inflexibility that sometimes results from strict application of zoning standards that were designed primarily for individual lots;
- (b) Allowing greater freedom in selecting the means to provide access, light, open space, and design amenities;
- (c) Encouraging a sensitive design that respects the surrounding established land use character and natural or man-made features of the site including, but not limited to, trees, historic features, streams, hillsides, and floodplains;
- (d) Promoting quality design and environmentally sensitive development by allowing development to take advantage of special site characteristics, locations, and land uses; and
- (e) Allowing deviations from certain zoning standards that would otherwise apply if not contrary to the general spirit and intent of this ordinance; and

WHEREAS, the PUD process requires the approval of a Development Plan that is reviewed and approved by BOMA, after a public hearing and a recommendation by the Franklin Municipal Planning Commission; and

WHEREAS, in accordance with the provisions of *Tennessee Code Annotated* § 13-4-310, as amended, and subject to the exceptions set forth in said statute, the approval of the Development Plan by the BOMA will initiate a vesting period during which the development standards adopted by the City and in effect on the date of approval shall remain the standards applicable to the approved Development Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS:

SECTION I. That the legal description of the property included in the Development Plan is as follows:

PREMISES CONSIDERED	
Map-Parcel	Acres
053---10400	5.195
Total	5.195

BEING A CERTAIN PARCEL OF LAND SITUATED THE IN THE 8TH CIVIL DISTRICT OF WILLIAMSON COUNTY TENNESSEE AND BEING IN THE CITY OF FRANKLIN. ALSO BEING THE SAME LAND AS DESCRIBED IN DEED BOOK 424 PAGE 910 AS RECORDED IN THE REGISTERS OFFICE OF WILLIAMSON

COUNTY TENNESSEE (R.O.W.C.) AND IS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF THIS PARCEL AS RECORDED IN DEED BOOK 424, PAGE 910 (R.O.W.C) AND THE SOUTHWEST CORNER OF LOT 1 OF PATTON STATION BUSINESS PARK AS RECORDED IN PLAT BOOK 25 PAGE 21 (R.O.W.C); SAID POINT BEING ON THE NORTHERLY RIGHT OF WAY OF MALLORY STATION ROAD (60' R.O.W.);

THENCE LEAVING SAID BUSINESS PARK AND ALONG THE NORTHERLY RIGHT-OF-WAY LINE OF MALLORY STATION ROAD, NORTH 81°59'07" WEST, 480.07 FEET TO A POINT AT THE SOUTHEAST CORNER OF MARGARET WHITE (DB 171 PAGE 53);

THENCE, LEAVING SAID NORTH RIGHT OF WAY LINE AND WITH THE EASTERLY LINE OF WHITE, NORTH 09°22'57" EAST, 473.08 FEET TO THE NORTHEAST CORNER OF WHITE AND A SOUTHERLY CORNER OF THE MORNINGSIDE P.U.D. AS RECORDED IN PLAT BOOK 30 PAGE 6;

THENCE LEAVING WHITE AND WITH THE SOUTH LINE OF SAID MORNINGSIDE P.U.D. SOUTH 81°37'03" EAST, 480.00 TO AN IRON REBAR WITH CAP IN THE WESTERLY LINE OF THE AFORESAID PLAT OF PATTON STATION BUSINESS PARK.

THENCE, WITH THE WESTERLY LINE OF SAID PLAT SOUTH 09°22'52" WEST, 470.00 TO THE POINT OF BEGINNING.

CONTAINING 226,305 SQUARE FEET OR 5.195 ACRES.

SECTION II. That the attached Location Map shall serve the purpose of further delimiting the geographical boundaries as described by this Resolution.

SECTION III. That the overall entitlements for the Avenida of Cool Springs PUD Subdivision are as follows:

Entitlements	Avenida of Cool Springs PUD
Base Zone District	SD-R 27.33
Character Area Overlay	BCCO-3
Development Standard	Conventional
Number of Dwelling Units	142
Open Space Requirements	31,644 square feet
Number of Phases in Development	1

SECTION IV. That the Development Plan, the exhibits accompanying the Development Plan, and all conditions and restrictions placed upon the Development Plan by the Franklin Municipal Planning

Commission and this Board shall be made a part of this Resolution as though copied verbatim herein, and that a permanent record of the Development Plan, the exhibits accompanying the Development Plan, and all such conditions and restrictions shall be kept in the Franklin Planning and Sustainability Department.

SECTION V. That this Resolution shall take effect from and after its passage on its first and final reading, the health, safety, and welfare of the citizens requiring it.

Eric S. Stuckey
City Administrator

Dr. Ken Moore
Mayor

Approved as to form by:

Shauna R. Billingsley
City Attorney

PREAPPLICATION CONFERENCE: 6/23/2016

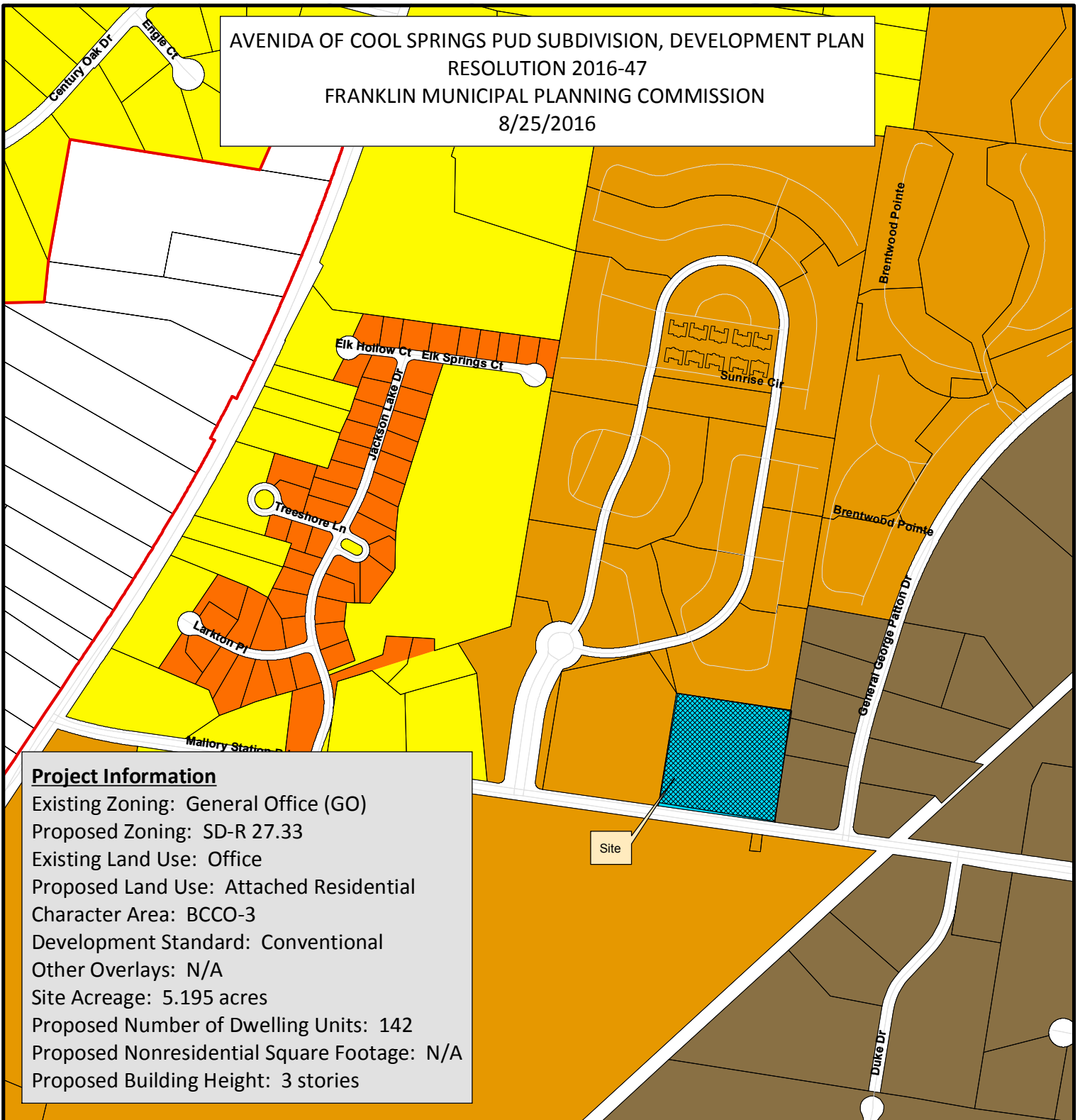
BOMA/FMPC JOINT CONCEPTUAL WORKSHOP: 6/23/2016

NEIGHBORHOOD MEETING: 6/29/2016

PLANNING COMMISSION RECOMMENDED APPROVAL: _____

PUBLIC HEARING AND BOMA APPROVAL: _____

AVENIDA OF COOL SPRINGS PUD SUBDIVISION, DEVELOPMENT PLAN
 RESOLUTION 2016-47
 FRANKLIN MUNICIPAL PLANNING COMMISSION
 8/25/2016



Project Information

Existing Zoning: General Office (GO)
 Proposed Zoning: SD-R 27.33
 Existing Land Use: Office
 Proposed Land Use: Attached Residential
 Character Area: BCCO-3
 Development Standard: Conventional
 Other Overlays: N/A
 Site Acreage: 5.195 acres
 Proposed Number of Dwelling Units: 142
 Proposed Nonresidential Square Footage: N/A
 Proposed Building Height: 3 stories

- | | |
|--|-------------------------------------|
| AG Agricultural District | SD-X Specific Development-Variety |
| ER Estate Residential | OR Office Residential District |
| R-1 Residential District | GO General Office District |
| R-2 Residential District | CC Central Commercial District |
| R-3 Residential District | NC Neighborhood Commercial District |
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| RM-10 Attached 10 Residential District | LI Light Industrial District |
| RM-15 Attached 15 Residential District | HI Heavy Industrial District |
| RM-20 Attached 20 Residential District | CI Civic and Institutional District |
| SD-R Specific Development-Residential | |



0 250 500 1,000
 Feet

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CONDITIONS OF APPROVAL:

Engineering - PUD Plan Checklist

General Comments

1. D. Statement of Impacts

- Per the review of the TIA by the City of Franklin on-call traffic consultant, the applicant shall

Coordinate with city of Franklin engineering staff and contribute to the implementation of modified traffic signal phasing for the westbound approach of Mallory Station Road at Franklin Road. The modification should provide new westbound right-turn overlap signal phasing, and associated required hardware.

These off-site intersection improvements shall be designed, completed and accepted by the City of Franklin prior to the issuance of the initial certificate of occupancy. The bond amount will be established in the site plan review stage.

Planning

General Comments

2. Deferred Parking

- Applicant shall update site data chart to reflect the new parking count including deferred spaces

3. Parking

- Applicant shall update sheet C2.1 to show how the parallel spaces become head in angled parking in order to meet the deferred spaces requirement.

[16001 Avenida PUD Development Plan Resubmittal - 16-09-01.pdf](#)

4. Architecture

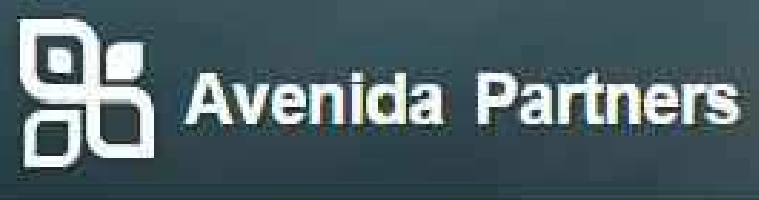
- At site plan, applicant shall submit door detail on the proposed roll up doors on the north elevation or details on how the interior space works to accommodate their usage.

AVENIDA OF COOL SPRINGS
PUD DEVELOPMENT PLAN
2ND INITIAL RESUBMITTAL
TAX MAP 53, PARCEL 10400
COF #6191
222 MALLORY STATION ROAD
FRANKLIN, WILLIAMSON CO., TN

OWNER

Franklin Radio Associates, Inc
222 Mallory Station Road
Franklin, TN 37067
Contact: Charles Dribell
615.794.1594

DEVELOPER



Avenida Partners
19700 Fairchild Road
Suite 170
Irvine, Ca. 92612
Contact: Robert May
949.298.4540

LANDSCAPE ARCHITECT
/ APPLICANT



Kiser+Vogrin Design
5005 Meridian Blvd
Suite 100
Franklin, TN 37067
Contact: Christopher Wood
615.719.1943

ARCHITECT



LordAeck Sargent
1175 Peachtree St NE
Atlanta, GA. 30361
Contact: Neil Weekley
404.253.1431

CIVIL ENGINEER



Fulmer Engineering
2612 Sunset Place
Nashville, TN 37212
Contact: Jay Fulmer
615.516.8477

SURVEYOR

Harrah & Associates
504 Autumn Spring Court
Suite B-15
Franklin, Tn. 37067
Contact: Roger Harrah
615.778.0863

SHEET INDEX:	Sheet Number	Preapp Submittal	Initial Submittal	Initial Resubmittal	2nd Initial Resubmittal	Post PC Submittal
COVER	C0.0	06-13-2016	07-11-2016	08-04-2016	09-01-2016	
EXISTING CONDITIONS PLAN	C1.0	06-13-2016	07-11-2016	08-04-2016	09-01-2016	
EXISTING CONDITIONS w/ AERIAL	C1.1	06-13-2016	07-11-2016	08-04-2016	09-01-2016	
DEVELOPMENT PLAN	C2.0	06-13-2016	07-11-2016	08-04-2016	09-01-2016	
DEFERRED PARKING AREA	C2.1				09-01-2016	
GRADING & DRAINAGE PLAN	C3.0	06-13-2016	07-11-2016	08-04-2016	09-01-2016	
R.O.W. & ACCESS PLAN	C4.0		07-11-2016	08-04-2016	09-01-2016	
UTILITY PLAN	C5.0	06-13-2016	07-11-2016	08-04-2016	09-01-2016	
ARCHITECTURAL ELEVATIONS	A1.0		07-11-2016	08-04-2016	09-01-2016	
ARCHITECTURAL ELEVATIONS	A1.1		07-11-2016	08-04-2016	09-01-2016	
ARCHITECTURAL ELEVATIONS	A1.2		07-11-2016	08-04-2016	09-01-2016	



SITE LOCATION MAP
N.T.S

KVD PROJECT# : 16001
COF # : 6191
Sheet #:
C0.0
DATE: 09-01-2016

SITE AREA : 5.195 AC

●	FOUND IRON ROD (FDR)	
●	SET NEW 5/8" IRON ROD WITH CAP (SLDR230)	
■	FOUND CONCRETE MONUMENT (T00T)	
■	SET CONCRETE MONUMENT	
○	EXISTING SANITARY MANHOLE	
⌋	POWER POLE	
⌋	GUY ANCHOR	
W	WATER METER	
W	WATER VALVE	
—ST—	STORM SEWER	
—W—	WATER LINE	
—OHE—	OVERHEAD POWER LINE	
—SS—	SANITARY SEWER LINE	
—G—	GAS LINE	
—UE—	UNDERGROUND ELECTRIC	
P.U.D.E.	PUBLIC UTILITY & DRAINAGE DEPARTMENT	
R.O.W.C., T.	REGISTER'S OFFICE OF WILLIAMSON COUNTY	
U.O.E.	UTILITY DIST. EASIMENT	
KTENC	MIDDLE TENNESSEE ELECTRIC SERVICE	
R.O.W.	RIGHT-OF-WAY	
FE	FEMA FLOOD ELEVATION PER FIRM MAP	

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE. PUBLIC RECORD AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE ON TYPE, SIZE AND LOCATION OF UTILITIES IS SOLELY ON THE BASIS OF THE CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THEREOF IS. AVAILABILITY ABOVE COST OF SERVICE CONTRACTS WITH THE TOWN OF MEMPHIS, TENNESSEE, IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT," THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NOT LESS THAN 14 DAYS PRIOR TO THE DATE OF THE EXCAVATION, OF THEIR INTENT TO EXCAVATE AND ALSO TO ADVISE ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL - 1-800-351-1111.

1. READINGS SHOWN HEREON ARE BASED ON GRID NORTH USING TENNESSEE STATE PLANE COORDINATES. NAD 83.

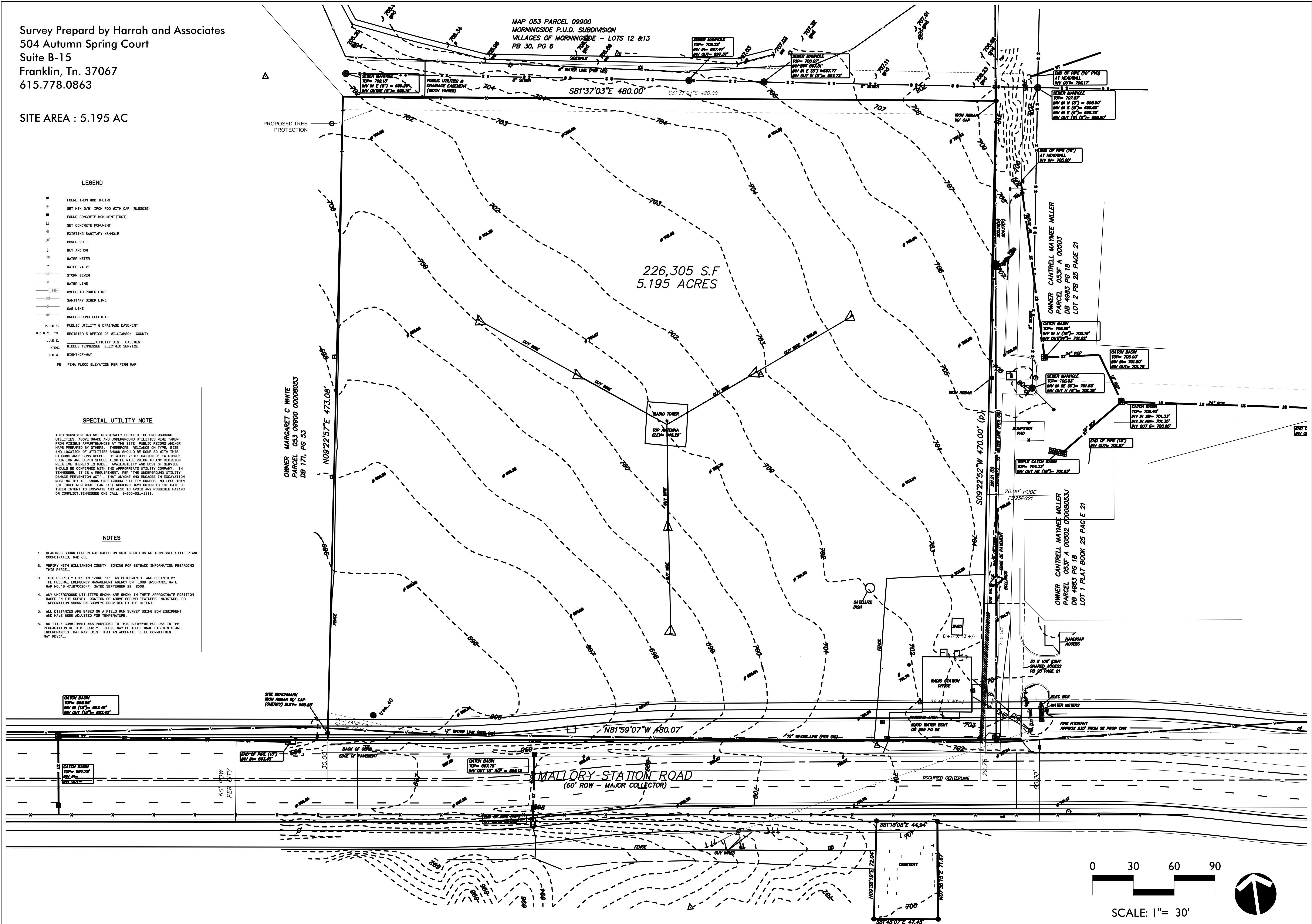
2. VERIFY WITH WILLIAMSON COUNTY ZONING FOR SETBACK INFORMATION REGARDING THIS PARCEL.

3. THIS PROPERTY LIES IN "ZONE "X" AS DETERMINED AND DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY ON FLOOD PLANCE RISK MAP NO. 8-57417C0004F, DATED SEPTEMBER 29, 2006.

4. ANY UNDERGROUND UTILITIES SHOWN ARE SHOWN IN THEIR APPROXIMATE POSITION BASED ON THE SURVEY LOCATION OF ADJACENT UTILITIES. HARNINGS, OR INFORMATION SHOWN ON SURVEYS PROVIDED BY THE CLIENT.

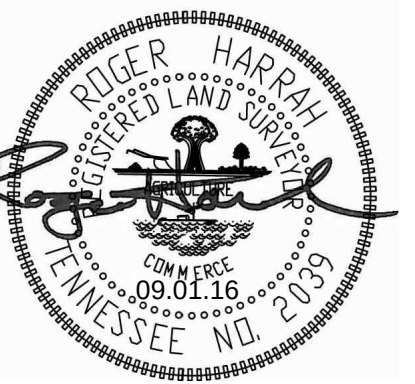
5. ALL DISTANCES ARE BASED ON A FIELD RUN SURVEY USING EDM EQUIPMENT AND HAVE BEEN ADJUSTED FOR TEMPERATURE.

6. NO TITLE COMMITMENT WAS PROVIDED TO THIS SURVEYOR FOR USE IN THE PREPARATION OF THIS SURVEY. THERE MAY BE ADDITIONAL ENCUMBRANCES AND Easements THAT MAY EXIST THAT AN ACCURATE TITLE COMMITMENT MAY REVEAL.

The logo for Kiser Vogrin Design features the letters 'KVD' in a large, bold, black sans-serif font. A bright green plus sign is positioned between the 'V' and the 'D'. To the right of the 'KVD' monogram, the text 'KISER VOGRIN DESIGN' is written in a smaller, black, all-caps sans-serif font, stacked vertically. Below this, the address '5005 Meridian Blvd., Ste 100 Franklin, TN 37067' and the phone number '615.719.1943' are listed in an even smaller font.

LORD
AECK
SARGENT

FULMER ENGINEERING
2002 RICHARD JONES RD. - SUITE C304 NASHVILLE,
TENNESSEE 37215
INFO@FULMERENG.COM - (615) 516-8477



**AVENIDA OF COOL SPRINGS
PUD DEVELOPMENT PLAN RESUBMITTAL
EXISTING CONDITIONS
COF# 6191
Franklin, Williamson Co, TN**

REVISIONS:

09-01-2016 : PER COF COMMENTS

DATE: 09.01.2016
DESIGNED BY: DK
DRAWN BY: CBW
CHECKED BY: CBW
Q.C. BY: Q.C. BY
SCALE: 1"=30'
PROJECT #: 16001
SHEET NUMBER:

0.1

SITE AREA : 5.195 AC



- FOUND IRON ROD (90739)
 • SET NHD 5/8" IRON ROD WITH CAP (RL82039)
 ■ FOUND CONCRETE MONUMENT (T007)
 ■ SET CONCRETE MONUMENT
 @ EXISTING SANITARY MANHOLE
 P POWER POLE
 A GUY ANCHOR
 W WATER METER
 V WATER VALVE
 S STORM SEWER
 M WATER LINE
 —OH— OVERHEAD POWER LINE
 —SB— SANITARY SEWER LINE
 G GAS LINE
 —UE— UNDERGROUND ELECTRIC
 PUBLIC UTILITY & DRAINAGE EASEMENT
 R.O.C.K., TN. REGISTER'S OFFICE OF WILLIAMSON COUNTY
 UTILITY DIST. EASEMENT
 MIDDLE TENNESSEE ELECTRIC SERVICE
 R.O.C.K. RIGHT-OF-WAY
 FE FIRM FLOOD ELEVATION PER FIRM MAP

SPECIAL UTILITY NOTE

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES, ABOVE GROUND AND UNDERGROUND UTILITIES WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORD AND/or MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE ON TYPE, SIZE AND LOCATION OF UTILITIES SHOWN ON THESE RECORDS AND/OR CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THEREIN IS THE AVAILABILITY AND RANGE OF SERVICE SHOWN ON THESE RECORDS WITH THE PROPOSED UTILITY CONSTRUCTION. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS WHO HAVE LESS THAN 48 HOURS MORE TIME TO BE ADVISED OF THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 1-800-255-1111.

NOTES

1. BEARINGS SHOWN HEREON ARE BASED ON GRID NORTH USING TENNESSEE STATE PLANNING COORDINATES. NAD 83.
2. VERIFY WITH WILLIAMSON COUNTY ZONING FOR SETBACK INFORMATION REGARDING THIS PARCEL.
3. THIS PROPERTY LIES IN "ZONE 'X'" AS DETERMINED AND DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY ON FLOOD INSURANCE RATE MAP NO. 5-154702C0048, DATED SEPTEMBER 28, 2006.
4. ANY UNDERGROUND UTILITIES SHOWN ARE SHOWN IN THEIR APPROXIMATE POSITION BASED ON SURVEY LOCATION OF ABOVE GROUND FEATURES. HARNINGS, OR INFORMATION SHOWN ON SURVEYS PROVIDED BY THE CLIENT.
5. ALL DISTANCES ARE BASED ON A FIELD RUN SURVEY USING EDM EQUIPMENT AND HAVE BEEN ADJUSTED FOR TEMPERATURE.
6. NO TITLE COMMITMENT WAS PROVIDED TO THIS SURVEYOR FOR USE IN THE PREPARATION OF THIS SURVEY. THERE MAY BE ADDITIONAL ENCUMBRANCES AND Easements THAT MAY EXIST THAT AN ACCURATE TITLE COMMITMENT MAY REVEAL.

KV+D
KISER VOGGIN DESIGN
5005 Meridian Blvd. Ste 100 Franklin, TN 37067

LORD
AECK
SARGENT

FULMER
ENGINEERING

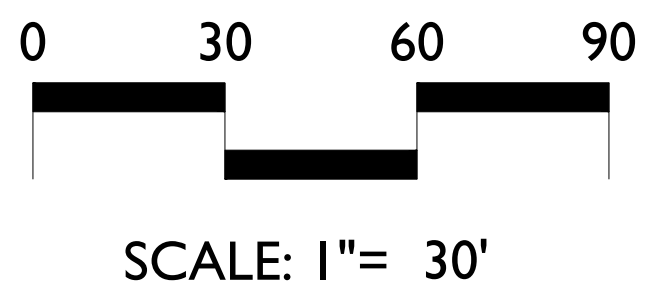
2002 RICHARD JONES RD - SUITE C304 NASHVILLE,
TENNESSEE 37215
INFO@FULMERENG.COM - (615) 516-9477



**AVENIDA OF COOL SPRINGS
PUD DEVELOPMENT PLAN RESUBMITTAL
EXISTING CONDITIONS w/ AERIAL
COF# 6191
Franklin, Williamson Co, TN**



09.01.16



REVISIONS:

09-01-2016 : PER COF COMMENTS

DATE: 09.01.16
DESIGNED BY: DK
DRAWN BY: CBW
CHECKED BY: CBW
Q.C. BY: Q.C.BY
SCALE: 1"=30'
PROJECT #: 16001
SHEET NUMBER:



SITE LOCATION MAP
N.T.S

MODIFICATION OF STANDARDS

1. The applicant respectfully requests a Modification of Standards for the Avenida of Cool Springs proposed development to exceed the 200' maximum length of an attached residential building per City of Franklin Zoning Ordinance, Section 5.3.5 Residential Development, 3, b, ii.

The front elevation, as viewed from Mallery Station Road, has a total building length of +/- 285'. The building has been shaped into (3) distinct pieces which are each well under 120' in length, including a welcoming centerpiece which functions as the main entry. Along the east and west sides the +/- 288' facade has been shaped into (2) distinct pieces which are each well under 150' in length, separated by secondary entry pieces. Additionally, the roof forms of each facade have been carefully treated so as to reinforce the separation of building masses, imbuing each piece with its own visual identity.

The design team feels that these architectural expressions are strong enough to break down the mass of the proposed 3-story building such that it meets the spirit of the ordinance - that is, to keep buildings from appearing overwhelming and uninviting.

VEHICULAR SERVICE GATE
EQUIPPED WITH
SIREN-OPERATED-SENSOR
CONTROLS AND A KNOX
BRAND KEY OVERRIDE
SWITCH. THE GATES WILL
OPEN TO THE FULL WIDTH
OF THE DRIVE AISLE.

FUTURE R.O.W. LINE
FUTURE SIDEWALK

CONCRETE DRIVEWAY
APRON

DEFERRED PARKING AREAS AS PER CITY OF FRANKLIN
ZONING ORDINANCE SECTION 5.9.11 (4) "DEFERRED PARKING"

EMERGENCY VEHICLE AREA

PROPOSED SIDEWALK
WITHIN FUTURE R.O.W.

VEHICULAR SERVICE GATE
EQUIPPED WITH
SIREN-OPERATED-SENSOR
CONTROLS AND
A KNOX BRAND KEY
OVERRIDE SWITCH.
THE GATES WILL OPEN TO
THE FULL WIDTH OF THE
DRIVE AISLE

SITE DATA

PROJECT NAME: AVENIDA OF COOL SPRING
COF PROJECT NUMBER: 6191
MAP, PARCEL NUMBERS: 53, 10400
ADDRESS: 222 MALLERY STATION ROAD
CITY: FRANKLIN
COUNTY: WILLIAMSON
STATE: TENNESSEE
CIVIL DISTRICT: 8

EXISTING ZONING & CHARACTER AREA OVERLAY: GO - GENERAL
OFFICE & BCCO-3
PROPOSED LAND USE: MULTIFAMILY
PROPOSED ZONING: SPECIFIC DEVELOPMENT RESIDENTIAL 27.33
(SD-R 27.33)
CHARACTER OVERLAYS: BCCO-3
APPLICABLE DEVELOPMENT STANDARDS: CONVENTIONAL
SITE ACREAGE (GROSS): +/- 5.195 AC
SITE SQUARE FOOTAGE (GROSS): +/- 226,294 SF
PUD SITE ACREAGE (NET): +/- 4.926 AC
PUD SITE SQUARE FOOTAGE (NET): +/- 214,576 SF
R.O.W. DEDICATION: +/- 2547 AC
R.O.W. DEDICATION SQUARE FOOTAGE: +/- 11,098 SF

BLDG TOTAL SF: 187,000 SF
1ST FLOOR: 65,000 SF
2ND FLOOR: 65,000 SF
3RD FLOOR: 57,000 SF

ACCESSORY STRUCTURE SF:
8 BAY GARAGE: 1,936 SF EACH; 3,872 SF TOTAL
9 BAY GARAGE: 2,178 SF EACH; 4,356 SF TOTAL

BUILDING/ACCESSORY STRUCTURE HEIGHT:
3-STORY: 33' TO SOFFIT; 45' TO RIDGE
2-STORY: 20' TO SOFFIT; 32' TO RIDGE
ACCESSORY STRUCTURE: 1-STORY: 16' TO RIDGE

TOTAL DWELLING UNITS PROPOSED: 142
UNIT MIX: +/- 61: 1 BEDROOM
81: 2 BEDROOM

PROPOSED GROSS DENSITY: 27 D.U./A.
PROPOSED NET DENSITY: 29 D.U./A.

MINIMUM REQUIRED SETBACK LINES:

FRONTYARD SETBACK ON COLLECTOR: 40 FEET
SIDE YARD: 15 FEET
REAR YARD: 30 FEET

ACCESSORY STRUCTURE SETBACK LINES:
5 FEET FROM PROPERTY LINES

PARKING RATIO PER CITY OF FRANKLIN ZONING ORDINANCE:
1.5 SPACES PER DWELLING UNIT = 213 PARKING SPACES

PROPOSED PARKING: 189 SPACES = 1.33 SPACES/DU
157: RESIDENT PARKING = 1.1 SPACES/DU
34: GARAGE PARKING
117: SURFACE PARKING
6: ACCESSIBLE PARKING
32: GUEST PARKING

DEFERRED PARKING REQUESTED:
15% OF REQUIRED SPACES = 33 SPACES

MIN. LANDSCAPE SURFACE RATIO: 0.20
LANDSCAPE SURFACE RATIO PROVIDED:
GROSS: 0.28
NET: 0.30

PARKLAND DEDICATION REQUIREMENT:
142 UNITS @ 106,200 SF:
FEES OF \$660,702.50 SHALL BE DUE AT THE FIRST
FINAL PLAT

MINIMUM OPEN SPACE, BASED UPON NET ACREAGE
REQUIRED: 15 PERCENT; +/- 31,644 SF
PROVIDED: 29 PERCENT; +/- 63,941 SF

FORMAL OPEN SPACE:
REQUIRED: +/- 10,442 SF
PROVIDED: +/- 15,798 SF

INFORMAL OPEN SPACE:
REQUIRED: +/- 21,202 SF
PROVIDED: +/- 48,143 SF

OWNER:
FRANKLIN RADIO ASSOCIATES, INC.
222 MALLERY STATION ROAD
FRANKLIN, TN 37067
CONTACT: CHARLES DRIBELL
615.794.1594

DEVELOPER:
AVENIDA PARTNERS
19700 FAIRCHILD ROAD
SUITE 170
IRVINE, CA 92612
CONTACT: ROBERT MAY
949.298.4540

APPLICANT:
KISER & VOGGIN DESIGN
5005 MERIDIAN BLVD. STE 100
FRANKLIN, TN 37067
CONTACT: CHRISTOPHER WOOD
615.719-1943
CHRIS@KISERVOGGIN.COM

SITE CONTEXT AND DESIGN DESCRIPTIONS

1. Per the Land Use Plan Area BCCO-3, Attached residential uses are appropriate for this site. High quality design, people-friendly environments, and strong connectivity will be encouraged through heightened architectural and site design to reflect, and reinforce, the character of Franklin.
2. The proposed age restricted (55+ age) attached residential development and requested rezoning from General Office (GO) to Specific Development-Residential (SD-R) would be compatible with the surrounding area, given that the site is currently surrounded by similar age restricted development to the North and Northwest and similarly zoned parcels to the North, West and South. The developments to the East and Northeast are currently zoned as Heavy Industrial (HI) land use designation, so therefore the proposed development would provide a physical transition to the lower density developments heading West along Mallery Station Road. The site design will be compatible with conventional design standards, as outlined by the City of Franklin.
3. The proposed age restricted (55+ age) attached residential building located on this site will consist of a one (1) story garage structure with individual secured parking bays located along the northern property line. The one story garage structure will transition to a two (2) story rear facade of the residential building which will then transition to a typical three (3) story elevation for the remainder of the proposed building. Each facade will be architecturally detailed so that no elevation is perceived as the "rear" of the building. The proposed use of traditional building materials such as brick and wood on proposed structures as well as the architectural detailing will be used to create warm, welcoming environment that emphasize the up-scale residential nature of the project. The building design will reflect elements of the Greek Revival architectural design style prevalent throughout the Franklin area.



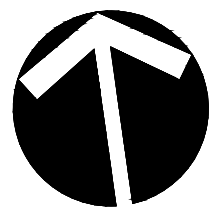
CONCRETE PAVERS



CONCRETE SIDEWALK



SCALE: 1"= 30'



GENERAL NOTES

- There are no historical structures on this site as identified by The National Registers of Historic Places.
- Trip Generation = 23,116 trips per day
- Adequate turning movements shall be provided for utility and service vehicles (See Sheet C4.0).
- Schools within proximity of site:
- Kenrose Elementary School = 6.3 miles away
- Woodland Middle School = 7.0 miles away
- Centennial High School = 1.0 miles away
- All public improvements to be located in an easement.
- Prior to construction, tree protection fence to be constructed per City of Franklin specifications.
- This site will require the use of on-site water quality practices to treat stormwater from the site.
- Adjacent Land Uses:
(RM 20) = Attached 20 Residential District
(GO) = General Office
(SD) = Specific Development
(GC) = GENERAL COMMERCIAL
- Reclaimed (reuse) water facilities not available to the site.
- Refuse collection from residential units will be private.
- Existing Franklin Transit Authority TMA Eastbound route stops at Mallery Lane and McEwen Drive.
- Nearest Facilities:
FIRE = Franklin Fire Department Station 2, 2.2 miles away
POLICE = Franklin Police Department, 4.1 miles away
RECREATIONAL = Liberty Park, 1.5 miles away
- This site has direct access to Liberty Pike, which is a minor arterial, and Carothers Pkwy, which is a major arterial, to collect and disperse vehicular traffic. Refer to Traffic Impact Study prepared by Fischbach Transportation Group (FTG).
- The anticipated impact on streets shown on the major thoroughfare plan is a fulfillment of the demands for off-network connections and a reduction or minimal impact on major arterials. The proposed connections to Liberty Pike and Carothers multi-modal trail shall provide alternative means of transportation.
- Mallery Valley Utility District is the potable water supplier. Use of re-purified water will be incorporated if available. Maximum capacity is approximately 1.3 million GPD.
- All streets to be private.
- All retaining walls shall be in compliance with the City of Franklin Zoning Ordinance.
- All commercial buildings shall have fire sprinkler systems.
- City of Franklin is the sanitary sewer provider.
- Stormwater Quality and Quantity practices will be implemented on site.
- The nearest hydrant is located west of Carothers at the intersection of Liberty Pike. The hydrant has a static pressure of 132 PSI and residual pressure of 122 PSI.
- Although grass channels and vegetated filter strips are not currently shown, applicant would like to reserve the ability to specify those BMP's should future programming allow their usage.
- Site lighting to be in coordination with Middle TN Electric Company and the City of Franklin Design Standards and will be to pedestrian scale and illuminated with cut-off fixtures.
- Unnamed tributary to Watson's Branch identified as an impaired waterway by TDEC.
- Project to be completed in 2 Phases. See Phase Map below, for illustrated phase delineations. Expected commencement is August of 2016.
- Existing Easements from Survey. Proposed easements shown on plan

NET SITE OPEN SPACE
63,941 SF
OPEN SPACE IN FUTURE
R.O.W. DEDICATION
11,098 SF

GROSS SITE OPEN SPACE = 75,521 SF
NET SITE OPEN SPACE = 63,941 SF

PHASING:
SITE TO BE DEVELOPED IN ONE PHASE

MINERAL RIGHTS:
MINERAL RIGHTS WILL BE HELD BY
OWNER

DATE: 09.01.16
DESIGNED BY: DK
DRAWN BY: CBW
CHECKED BY: CBW
Q.C. BY: Q.C. BY
SCALE: 1"=30'
PROJECT #: 16001
SHEET NUMBER:

REVISIONS:
09-01-2016 - PER COF COMMENTS

AVENIDA OF COOL SPRINGS
PUD DEVELOPMENT PLAN RESUBMITTAL
OVERALL DEVELOPMENTAL PLAN
COF# 6191

Franklin, Williamson Co, TN

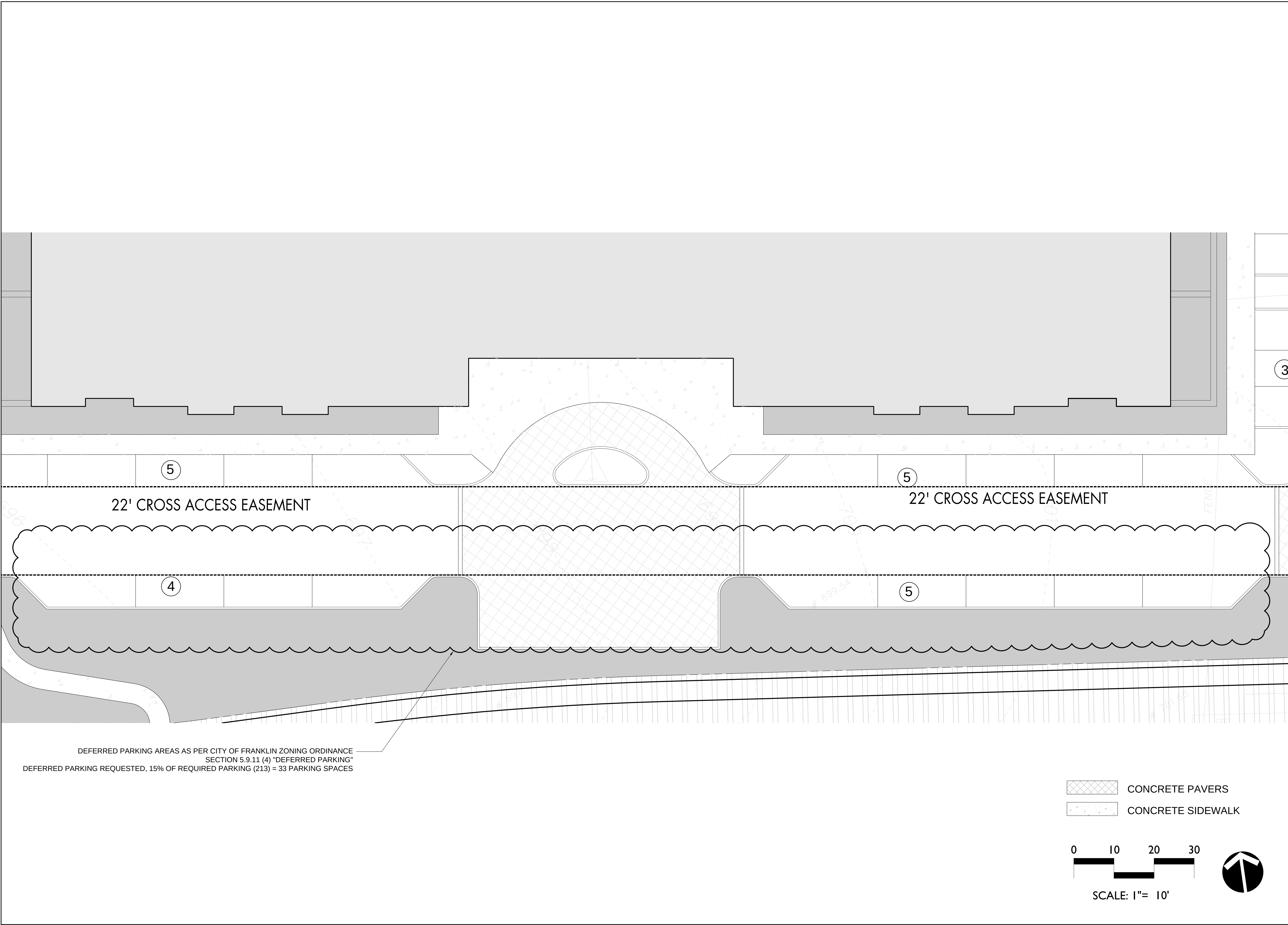


09.01.16

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TENNESSEE 37215
INFO@FULMERENG.COM - (615) 516-8477

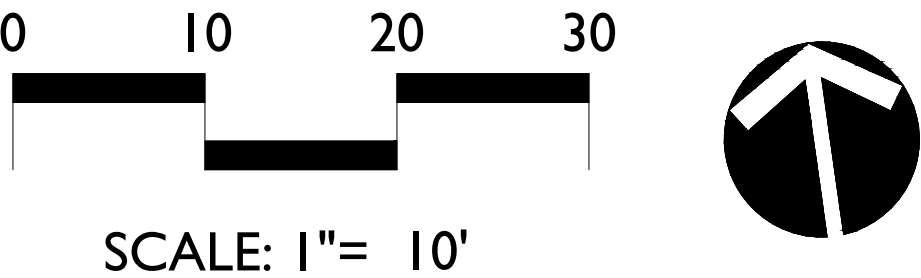
LORD
AECK
SARGENT

KV+D
KISER VOGGIN DESIGN
5005 Meridian Blvd. Ste 100 Franklin, TN 37067



DEFERRED PARKING AREAS AS PER CITY OF FRANKLIN ZONING ORDINANCE
SECTION 5.9.11 (4) "DEFERRED PARKING"
DEFERRED PARKING REQUESTED, 15% OF REQUIRED PARKING (213) = 33 PARKING SPACES

- CONCRETE PAVERS
- CONCRETE SIDEWALK



DATE: 09.01.16
DESIGNED BY: DK
DRAWN BY: CBW
CHECKED BY: CBW
Q.C. BY: Q.C. BY
SCALE: 1"=30'
PROJECT #: 16001
SHEET NUMBER:

C2.1

REVISIONS:
09-01-2016 : PER COF COMMENTS

AVENIDA OF COOL SPRINGS
PUD DEVELOPMENT PLAN RESUBMITTAL
DEFERRED PARKING AREA
COF# 6191
Franklin, Williamson Co, TN

09.01.16

LANDSCAPE ARCHITECT

REGISTERED

6191

CHRISTOPHER BRANDON WOOD

09.01.16

LANDSCAPE ARCHITECT

REGISTERED

6191

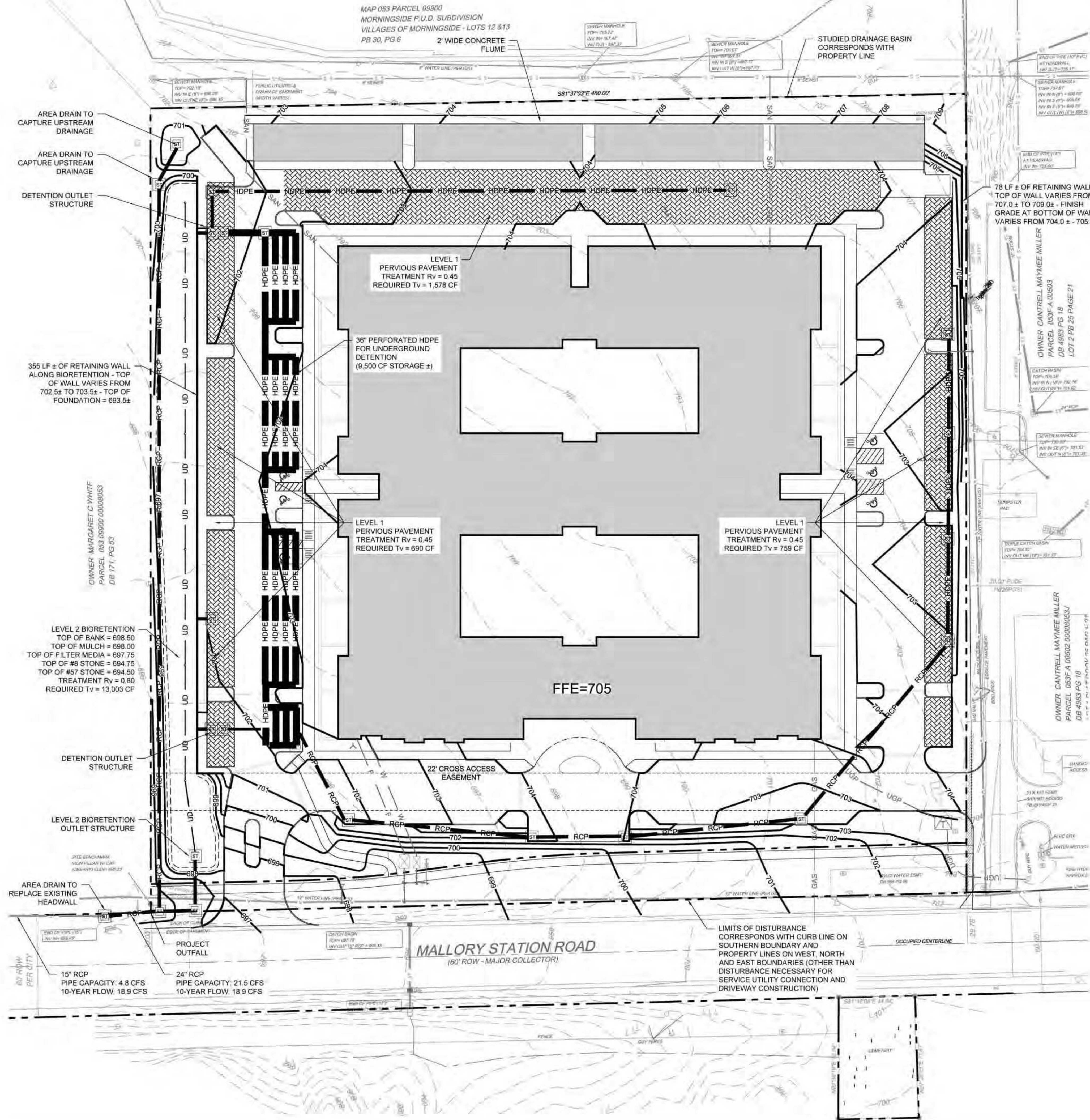
CHRISTOPHER BRANDON WOOD

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STORMWATER NARRATIVE:
STORMWATER QUALITY FOR THE PROJECT WILL BE PROVIDED BY UTILIZING BIORETENTION AND PERVIOUS PAVEMENT. THE AREA ALONG THE WESTERN PROPERTY LINE CAN PROVIDE APPROXIMATELY 7,000 SF OF BIORETENTION. THE PROPOSED BIORETENTION WILL BE LEVEL 2, WITH AN EQUIVALENT STORAGE DEPTH OF 2.30 FEET. PERVIOUS PAVEMENT WILL BE UTILIZED IN THE PARKING SPACES ON THE WESTERN AND EASTERN SIDE OF THE PROPERTY. IN ADDITION, PERVIOUS PAVEMENT WILL BE UTILIZED IN THE DRIVE AISLE ON THE NORTH SIDE OF THE PROPERTY. THESE GREEN INFRASTRUCTURE PRACTICES WILL SATISFY THE CITY REQUIREMENTS CONCERNING STORMWATER QUALITY REQUIREMENTS.

STORMWATER QUANTITY FOR THE PROJECT WILL BE PROVIDED BY UTILIZING BIORETENTION AND PERVIOUS PAVEMENT. THESE GREEN INFRASTRUCTURE PRACTICES WILL DECREASE THE RUNOFF LEAVING THE SITE. THESE PRACTICES ALONE WILL NOT REDUCE THE RUNOFF LEAVING THE SITE TO MEET THE CITY REQUIREMENTS CONCERNING PEAK RUNOFF CONTROL. UNDERGROUND STORAGE WITH OUTLET STRUCTURE CONTROL WILL BE UTILIZED TO SUPPLEMENT THE BIORETENTION AND PERVIOUS PAVEMENT TO SATISFY THE CITY REQUIREMENTS CONCERNING STORMWATER QUANTITY REQUIREMENTS.

ALL STORMWATER WILL BE CONVEYED TO THE EXISTING OUTFALL AT THE SOUTHWEST CORNER OF THE SITE, WHICH DISCHARGES TO THE SOUTHERN SIDE OF MALLORY STATION AND ULTIMATELY REACHES DRY BRANCH CREEK.

IMPACT STATEMENT:
THE PROPOSED DEVELOPMENT WILL CONSIST OF 142 RESIDENCES. THESE PROPOSED RESIDENCES WILL REQUIRE POLICE, FIRE AND SOLID WASTE SERVICES. IT IS ALSO ANTICIPATED THAT RESIDENTS WILL UTILIZE PUBLIC RECREATIONAL FACILITIES. IMPACT TO SURROUNDING DRAINAGE FACILITIES IS ANTICIPATED TO BE MINIMAL AS THE PROPOSED DEVELOPMENT WILL SATISFY THE CITY REQUIREMENTS FOR STORMWATER QUALITY AND QUANTITY.

- CITY OF FRANKLIN GRADING & DRAINAGE GENERAL NOTES**
1. GRADING PERMIT IS REQUIRED FOR ANY PROJECT DISTURBING MORE THAN 10,000 SF, ADDING MORE THAN 5,000 SF OF IMPERVIOUS SURFACE OR FOR ANY SITE GRADING REQUIRING STOCKPILING OF MATERIAL.
 2. THE DEVELOPER SHALL PROVIDE THE NECESSARY LABOR AND SUPERVISION REQUIRED TO SUPPORT FIELD TESTING BY THE INDEPENDENT TESTING FIRM AND INSPECTIONS BY CITY OFFICIALS AT NO COST TO THE CITY. TEST REPORTS OF FIELD TESTING IF APPLICABLE SHALL BE SUBMITTED DIRECTLY TO THE STREET DEPARTMENT. DEFECTS DISCLOSED BY TESTS SHALL BE RECTIFIED.
 3. AN AUTHORIZED REPRESENTATIVE OF THE CITY SHALL MAKE A FINAL INSPECTION OF THE PROJECT AFTER COMPLETION TO DETERMINE ACCEPTABILITY OF THE WORK AND FOR RELEASE OF PERFORMANCE BONDS IF REQUIRED. BEFORE THIS FINAL INSPECTION CAN BE MADE, THE ENGINEER RESPONSIBLE FOR THE PROJECT SHALL CERTIFY IN WRITING TO THE CITY ENGINEER THAT THE WORK HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS.
 4. DRAINAGE FACILITIES INCLUDING, BUT NOT LIMITED TO, CULVERTS, DETENTION BASINS AND DITCHES, AS WELL AS THE ROADWAY SUB-GRADE, BASE STONE AND BINDER & SURFACE COARSE SHALL BE INSPECTED, TESTED AND GIVEN APPROVAL AT EACH STAGE OF INSTALLATION PRIOR TO PROCEEDING TO THE NEXT STAGE OF CONSTRUCTION. FINAL CONSTRUCTION INSPECTION FOR APPROVAL AND ACCEPTANCE OF STREETS AND DRAINAGE SYSTEMS WILL NOT BE GRANTED UNTIL ALL WORK HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS.
 5. LOCATING AND COORDINATION FOR THE RELOCATION OF EXISTING UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. TENNESSEE'S ONE-CALL AND THE CITY OF FRANKLIN UTILITY LOCATION SERVICE SHALL BE UTILIZED IN ADDITION TO COORDINATION WITH LOCAL UTILITY OWNERS. THE CONTRACTOR SHALL AT ALL TIMES PROTECT EXISTING UTILITIES AND WILL BE RESPONSIBLE FOR COSTS DUE TO DAMAGE CAUSED TO ANY UTILITY LINES.

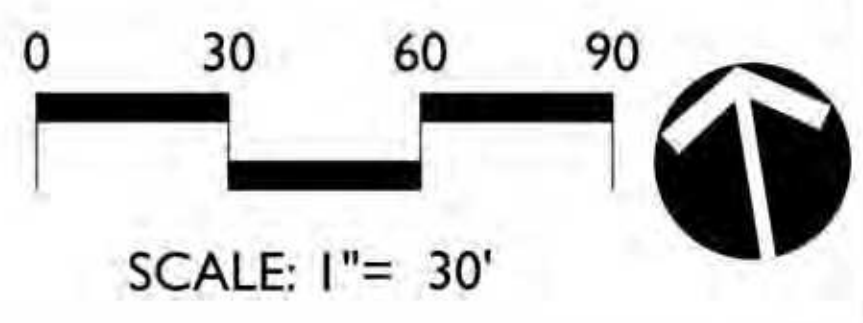
FLOODPLAIN NOTE
THE PROPERTY SHOWN HEREON IS LOCATED IN A FLOOD HAZARD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE OF 100 YEAR FLOODPLAIN) ACCORDING TO F.I.R.M. MAP "WILLIAMSON COUNTY, TENNESSEE AND INCORPORATED AREAS" PANEL 204 OF 485, MAP NUMBER 47187C0204F. MAP REVISED ON SEPTEMBER 29, 2006 ACCORDING TO THE FIRM MAP.

GRADING & DRAINAGE DATA CHART (EXISTING)

SITE AREA:	5.20 ACRES
IMPERVIOUS AREA:	0.07 ACRES
DISTURBED AREA:	0.00 ACRES
Rv VALUE:	0.19
PEAK FLOW RUNOFF:	
2 YEAR:	6.24 CFS
5 YEAR:	11.79 CFS
10 YEAR:	15.78 CFS
25 YEAR:	21.22 CFS
50 YEAR:	25.44 CFS
100 YEAR:	29.68 CFS

GRADING & DRAINAGE DATA CHART (PROPOSED)

SITE AREA:	5.20 ACRES
IMPERVIOUS AREA:	3.41 ACRES
DISTURBED AREA:	5.20 ACRES
Rv VALUE:	0.18
PEAK FLOW RUNOFF:	
2 YEAR:	6.20 CFS
5 YEAR:	11.60 CFS
10 YEAR:	15.50 CFS
25 YEAR:	21.00 CFS
50 YEAR:	25.10 CFS
100 YEAR:	29.20 CFS





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615.717.1945



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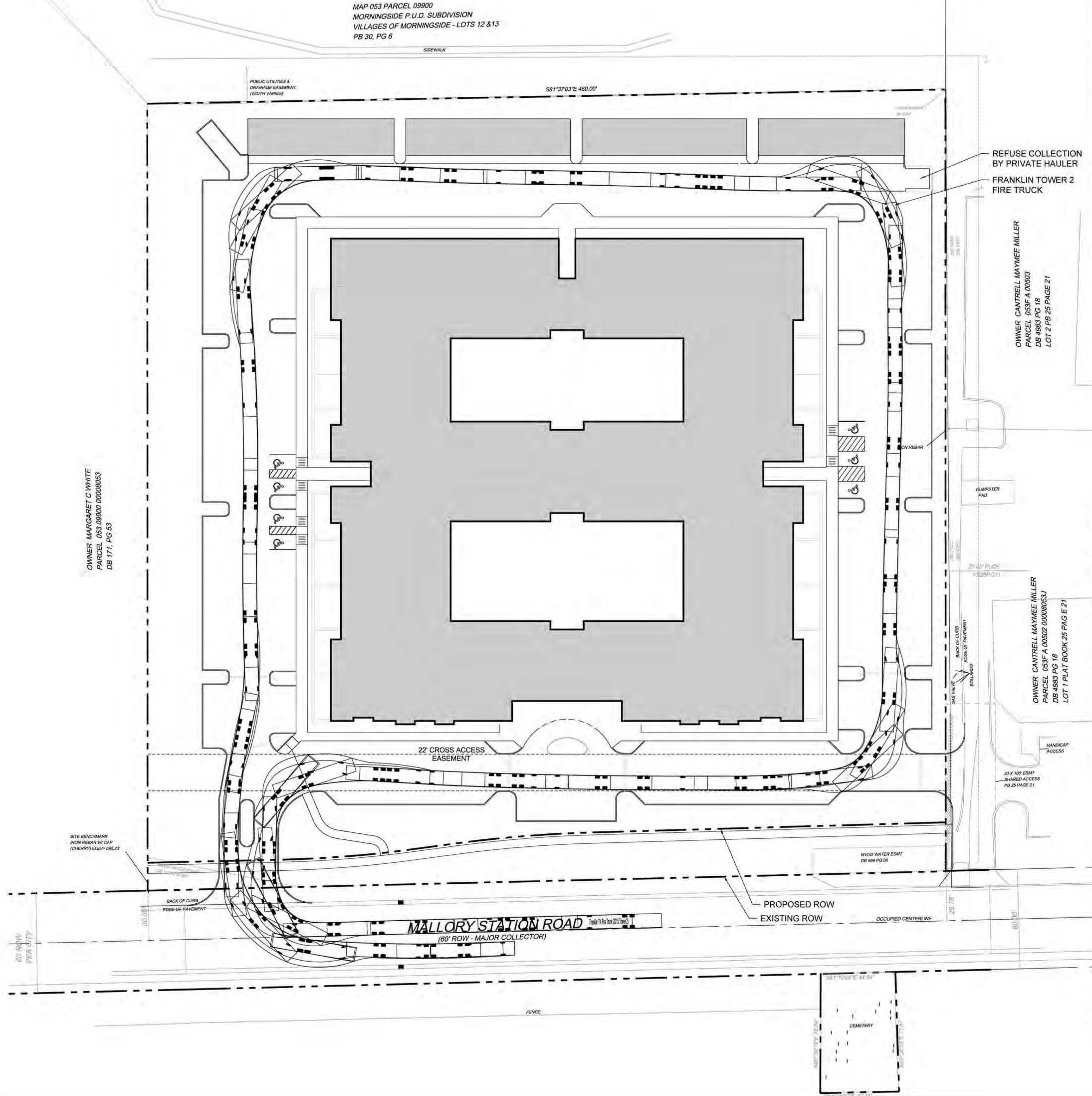
**AVENIDA OF COOL SPRINGS
PUD DEVELOPMENT PLAN SUBMITTAL
OVERALL GRADING & DRAINAGE PLAN
COF# 6191**

Franklin, Williamson Co, TN

REVISIONS:
09-01-2016 - PER COF COMMENTS

DATE: 09-01-16
DESIGNED BY: JF
DRAWN BY: BH
CHECKED BY: JM
Q.C. BY: JF
SCALE: 1"=30'
PROJECT #: 16001
SHEET NUMBER:

C3.0



ROADWAY NETWORK NARRATIVE:

THE PROJECT WILL INCLUDE A PRIVATE ROADWAY NETWORK WITH MAIN ACCESS TO MALLORY STATION. SECONDARY ACCESS WILL BE VIA THE EXISTING CROSS ACCESS EASEMENT AND EXISTING DRIVEWAY CONNECTION ON THE PROPERTY TO THE EAST. A CROSS ACCESS EASEMENT IS ALSO PROPOSED FOR CONNECTION TO THE WESTERN PROPERTY LINE FOR A FUTURE CONNECTION UPON REDEVELOPMENT OF THAT PARCEL. ROW DEDICATION IS PLANNED TO ACCOMMODATE THE FUTURE ROW FOR THE MALLORY STATION WIDENING WHICH IS IN THE LONG TERM PLAN.

IMPACT STATEMENT:

A TRAFFIC IMPACT STUDY HAS BEEN PRODUCED BY FISCHBACH TRANSPORTATION GROUP, LLC BASE ON TRAFFIC COUNTS COLLECTED ON A TYPICAL WEEKDAY IN MAY OF 2016 WHEN SCHOOLS WERE IN SESSION. THE CONCLUSION OF THE REPORT STATES THE TRAFFIC VOLUMES GENERATED BY THE PROPOSED RESIDENTIAL PROJECT FOR SENIOR ADULTS WILL HAVE A NEGLIGIBLE IMPACT ON THE TRAFFIC OPERATIONS AT THE EXISTING INTERSECTIONS WITHIN THE STUDY AREA. FURTHER, THE ANALYSIS CONCLUDES ALL RECOMMENDATIONS FOR IMPROVEMENT IN THE AREA ARE WARRANTED PRIOR TO THE PROJECT, AND NO ADDITIONAL IMPROVEMENTS ARE WARRANTED DUE TO THE PROJECT.

CITY OF FRANKLIN ROW & ACCESS GENERAL NOTES

1. PRIOR TO BEGINNING ANY CONSTRUCTION, THE DEVELOPER AND/OR CONTRACTOR, SHALL OBTAIN ALL NECESSARY PERMITS AS REQUIRED BY LAW. SUCH PERMITS MAY INCLUDE, BUT ARE NOT LIMITED TO, THOSE REQUIRED BY STATE OF TENNESSEE, WILLIAMSON COUNTY AND OTHER CITY OF FRANKLIN AGENCIES.
2. ALL OFF-SITE WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE AN APPROVED TRAFFIC CONTROL PLAN WHICH COMPLIES WITH THE MUTCD. NO OFF-SITE EXCAVATION MAY BE UNDERTAKEN IN ANY STREET, ROAD, ALLEY OR RIGHT-OF-WAY OF ANY UTILITY OR TEMPORARY CONSTRUCTION EASEMENT OF THE CITY OF FRANKLIN BY ANY ENTITY UNLESS 72-HOUR NOTICE HAS BEEN GIVEN TO THE CITY OF FRANKLIN TRAFFIC OPERATIONS CENTER. THE CONTRACTOR SHALL HAVE AN APPROVED TRAFFIC CONTROL PLAN ONSITE DURING CONSTRUCTION.
3. CONSTRUCTION MATERIALS SHALL BE FULLY TESTED IN ACCORDANCE WITH THE DESIGNATIONS AND REQUIREMENTS WITHIN THE REFERENCED "TDOT STANDARD SPECIFICATIONS" SECTIONS, UNLESS OTHERWISE NOTED WITHIN THE "STANDARD SPECIFICATIONS" SECTION OF THE CITY OF FRANKLIN TRANSPORTATION & STREET TECHNICAL STANDARDS.
4. AN AUTHORIZED REPRESENTATIVE OF THE CITY SHALL MAKE A FINAL INSPECTION OF THE PROJECT AFTER COMPLETION TO DETERMINE ACCEPTABILITY OF THE WORK AND FOR RELEASE OF PERFORMANCE BONDS IF REQUIRED. BEFORE THIS FINAL INSPECTION CAN BE MADE, THE ENGINEER RESPONSIBLE FOR THE PROJECT SHALL CERTIFY IN WRITING TO THE CITY ENGINEER THAT THE WORK HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS.
5. LOCATING AND COORDINATION FOR THE RELOCATION OF EXISTING UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. TENNESSEE'S ONE-CALL AND THE CITY OF FRANKLIN UTILITY LOCATION SERVICE SHALL BE UTILIZED IN ADDITION TO COORDINATION WITH LOCAL UTILITY OWNERS. THE CONTRACTOR SHALL AT ALL TIMES PROTECT EXISTING UTILITIES AND WILL BE RESPONSIBLE FOR COSTS DUE TO DAMAGE CAUSED TO ANY UTILITY LINES.
6. ALL TEMPORARY STRIPING SHALL CONFORM TO "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," PUBLISHED BY TDOT, THE LATEST REVISION EXCEPT AS HEREIN AMENDED. WHEN APPROVED, TEMPORARY STRIPING SHALL BE REQUIRED PRIOR TO THE OPENING OF A STREET FOR TRAVEL WHERE PAVEMENT AND/OR PERMANENT STRIPING CANNOT BE COMPLETED DUE TO WEATHER AND/OR TIME CONSTRAINTS.
7. THERMOPLASTIC PAVEMENT MARKINGS SHOULD BE USED ON ALL PUBLIC AND PRIVATE CITY STREET PROJECTS. THERMOPLASTIC TRAFFIC STRIPING AND PAVEMENT MARKINGS SHALL CONFORM TO SECTION 716.03 "THERMOPLASTIC PAVEMENT MARKINGS", OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS (TDOT), AND TO THE CITY OF FRANKLIN TRANSPORTATION & STREET TECHNICAL STANDARDS.

AVENIDA ROW & ACCESS DATA CHART

DAILY TRIP GENERATION:	482
PEAK TRIP GENERATION:	55 VEHICLES (AM PEAK) 49 VEHICLES (PM PEAK)
TRAFFIC IMPACT STUDY REQUIRED:	YES
CIRCULATION PLAN REQUIRED:	NO

DESIGN PARAMETERS:

FRANKLIN TRANSPORTATION STREET TECHNICAL STANDARDS EDITION:	2014
DESIGN VEHICLE:	FRANKLIN TOWER 2 FIRE TRUCK
DESIGN SPEED / POSTED SPEED:	45 MPH / 40 MPH
STOPPING SIGHT DISTANCE:	305 FT (MALLORY STATION)
INTERSECTION/DRIVEWAY SIGHT DISTANCE:	445 FT (MALLORY STATION)

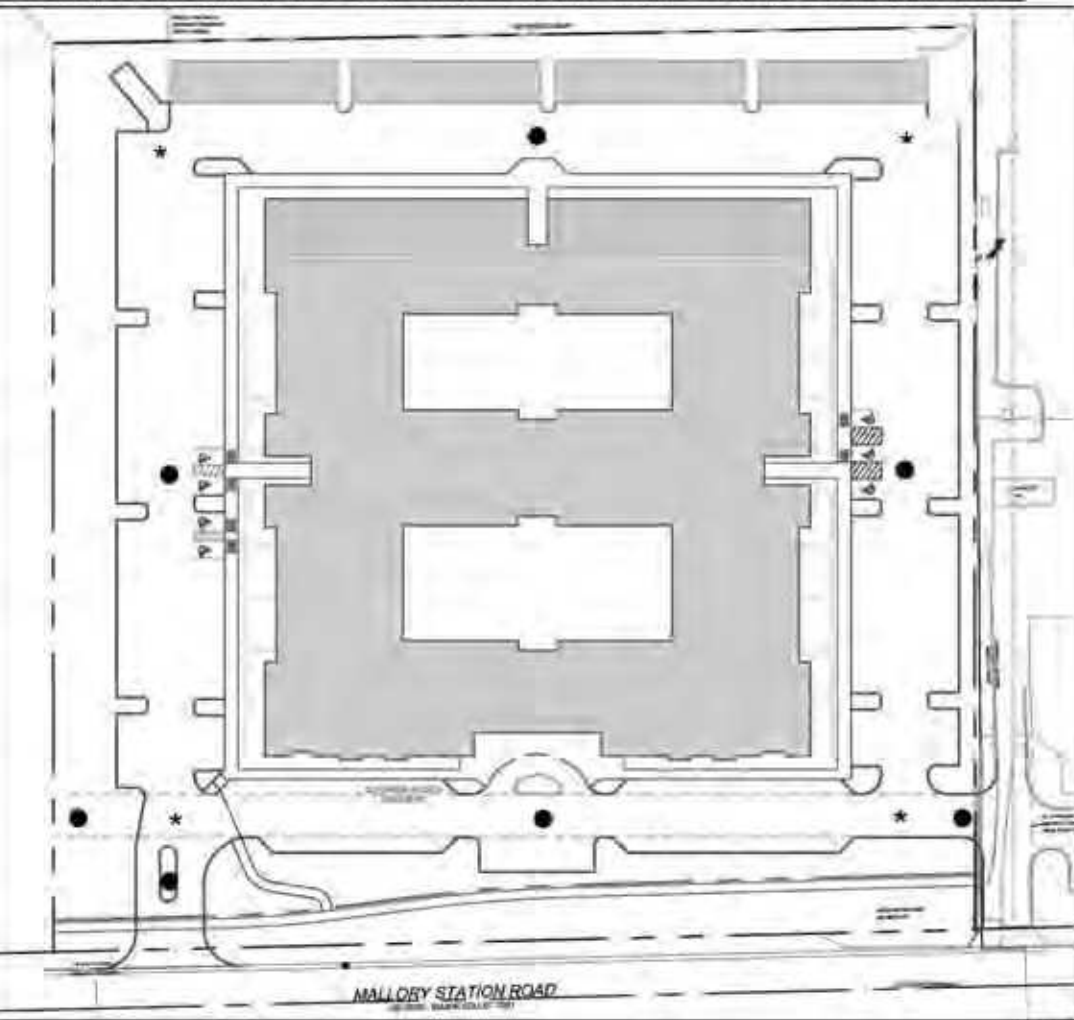
HORIZONTAL ALIGNMENT INFO:

VERTICAL ALIGNMENT INFO:	NOT APPLICABLE
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ACCESS MANAGEMENT:

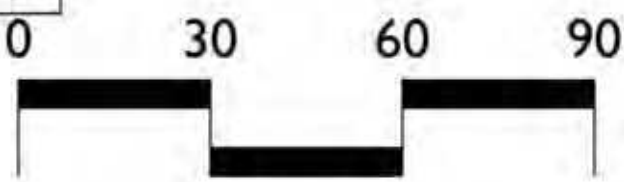
MIN. DISTANCE BETWEEN INTERSECTIONS:	1,320 FT
MIN. DISTANCE BETWEEN ALLEYS AND INTERSECTIONS:	300 FT
MIN. DISTANCE BETWEEN DRIVEWAYS AND INTERSECTIONS:	275 FT
DRIVEWAY WIDTH (TWO WAY):	25 FT - 36 FT
DRIVEWAY APPROACH STREET CONFIGURATION:	RADIUS RETURN

CONNECTIVITY INDEX MINI MAP AND CALCULATIONS

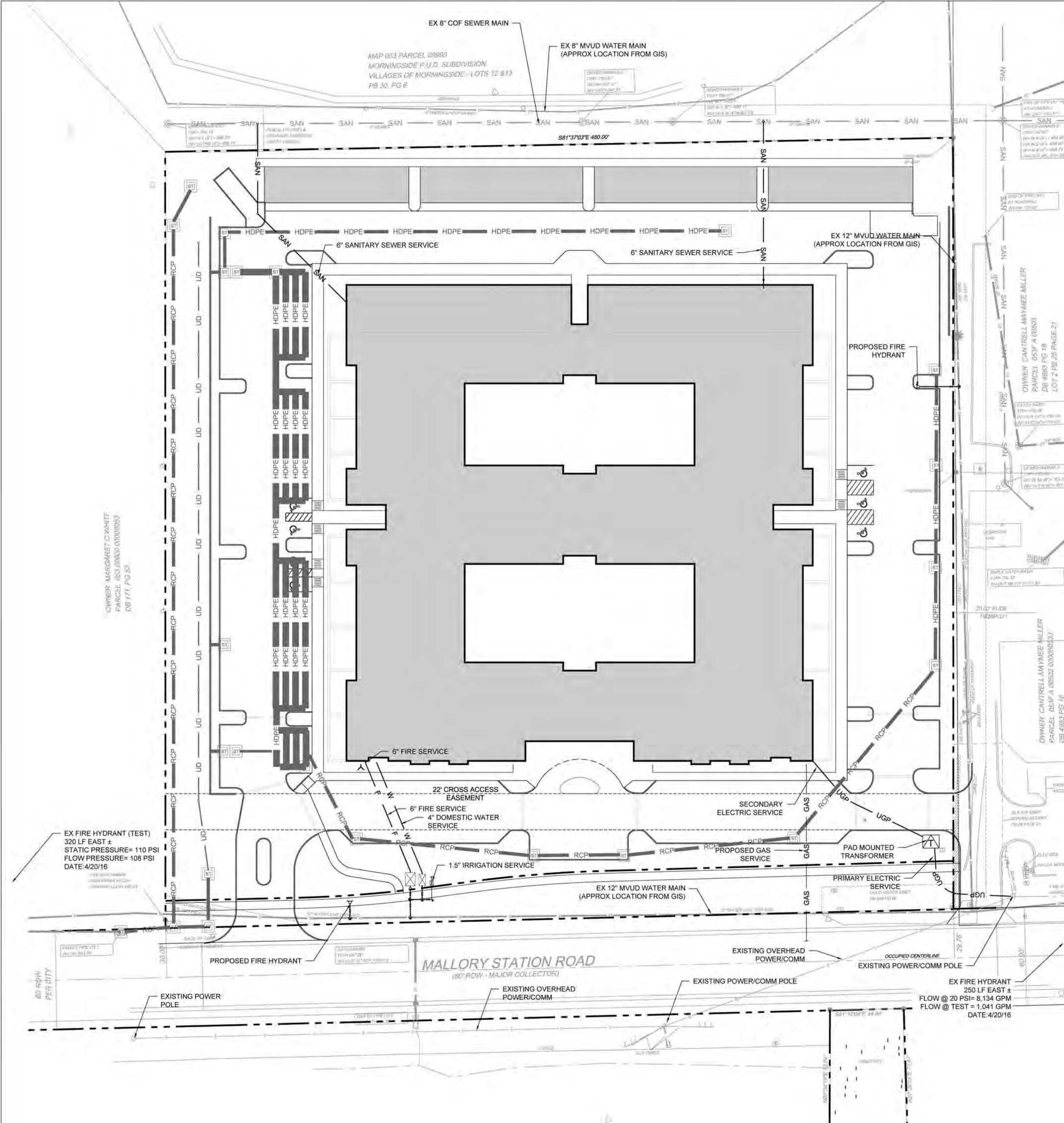


- LINKS
- ★ NODES

CONNECTIVITY INDEX:
7 LINKS / 4 NODES = 1.75



SCALE: 1"= 30'



LEGEND:

— W —	DOMESTIC WATER SERVICE	— UD —	PERVIOUS PAVEMENT UNDERDRAIN
— GAS —	GAS SERVICE	— RD —	ROOF DRAIN TRUNK LINE
— SAN —	SANITARY SEWER SERVICE	— RCP —	RCP STORM PIPE
— OHE —	OVERHEAD ELECTRIC SERVICE	— CMP —	CORRUGATED METAL PIPE
— OHT —	OVERHEAD TELEPHONE SERVICE	— HDPE —	HDPE PIPE (ADS N-12 OR EQUAL)

UTILITY NETWORK NARRATIVE:
THE PROPOSED MULTIFAMILY PROJECT WILL UTILIZE EXISTING UTILITIES ADJACENT TO THE SITE TO PROVIDE WATER, SANITARY SEWER, ELECTRIC, GAS AND COMMUNICATION. NO UTILITY MAIN EXTENSIONS ARE EXPECTED TO BE REQUIRED TO FACILITATE THE DEVELOPMENT. ADDITIONAL FIRE HYDRANTS ARE TO BE INSTALLED TO PROVIDE ADEQUATE FIRE PROTECTION HOSE COVERAGE.

IMPACT STATEMENT:
THE DEMAND OF THE PROPOSED DEVELOPMENT CAN BE ADEQUATELY ACCOMMODATED BY THE EXISTING INFRASTRUCTURE, AND THE PROJECT IS NOT ANTICIPATED TO HAVE A NEGATIVE EFFECT ON THE UTILITIES OR OTHER USERS THEREOF. THE PROJECT WILL USE DOMESTIC, FIRE AND IRRIGATION WATER SERVICE PROVIDED BY MALLORY VALLEY UTILITY DISTRICT. SANITARY SEWER IS PROVIDED BY THE CITY OF FRANKLIN. RE-PURIFIED WATER IS NOT INCLUDED IN THE PROPOSED DEVELOPMENT.

THE ANTICIPATED WATER DEMAND IS:
DOMESTIC: 75 GPM
FIRE: 2,000 GPM @ 20 PSI
IRRIGATION: 25 GPM

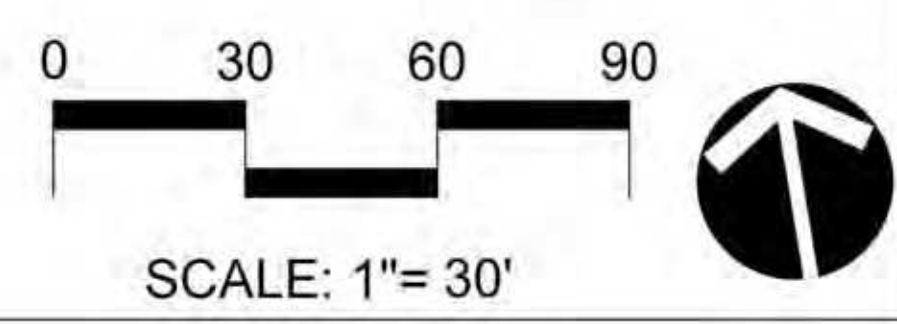
UTILITY CONTACTS:

SANITARY SEWER CITY OF FRANKLIN (COF) 109 3RD AVE S FRANKLIN, TN 37064 CONTACT: BRAD FURLINE BRAD.FURLINE@FRANKLIN.TN.GOV 615-202-2288	ELECTRIC SERVICE MIDDLE TN ELECTRIC MEMBERSHIP CORP. 2156 EDWARD CURD LANE FRANKLIN, TN 37067 CONTACT: BOBBY O'NEAL BOBBY.O'NEAL@MTEMC.COM 615-595-4663	COMMUNICATION SERVICE AT&T 500 LIBERTY PIKE FRANKLIN, TN 37064 CONTACT: DAVID TUTTEROW DT8243@ATT.COM 615-595-7816
COF WATER MANAGEMENT INSPECTIONS 124 LUMBER DRIVE FRANKLIN, TN 37064 CONTACT: BEN MCNEIL BEN.MCNEIL@FRANKLIN.TN.GOV 615-794-4554	GAS SERVICE ATMOS ENERGY 220 NOAH DRIVE FRANKLIN, TN 37064 CONTACT: RON MYATT RON.MYATT@ATMOSENERGY.COM 615-566-3073	COMCAST CABLE 660 MAINSTREAM DRIVE NASHVILLE, TN 37228 CONTACT: MARLON FRIZZELL MARLON.FRIZZELL@CABLE.COMCAST.COM 615-244-7452X1115647
WATER SERVICE MALLORY VALLEY UTILITY DISTRICT 465 DUKE DRIVE FRANKLIN, TN 37067 CONTACT: JENNY CLARKE JCLARKE@MVUD.ORG 615-628-0245		

- CITY OF FRANKLIN WATER & SEWER GENERAL NOTES**
- ALL PERSONS WHO UNDERTAKE THE CONSTRUCTION OF WATER, SEWER AND/OR RECLAIMED WATER LINES LOCATED IN, OR AFFECTING SERVICES PROVIDED BY THE CITY OF FRANKLIN SHALL COMPLY WITH THE REQUIREMENTS AND REGULATIONS SET FORTH IN THE "GENERAL REQUIREMENTS & TECHNICAL SPECIFICATIONS, WATER MANAGEMENT DEPARTMENT, CITY OF FRANKLIN, TENNESSEE" LATEST EDITION, ALONG WITH ANY AMENDMENTS, ADDITIONS, OR ALTERATION THAT MAY THEREAFTER BE ADOPTED BY THE BOARD OF MAYOR AND ALDERMEN BY RESOLUTION.
 - CONTRACTOR SHALL OBTAIN WATER & SEWER INFRASTRUCTURE INSTALLATION PERMIT PRIOR TO SCHEDULING REQUIRED PRE-CONSTRUCTION SITE MEETING. CONTRACTOR SHALL COMPLETE THE PRE-CONSTRUCTION SITE MEETING PRIOR TO COMMENCING WITH CONSTRUCTION.
 - CONTRACTOR SHALL OBTAIN AND KEEP ALL OF THE FOLLOWING ITEMS ON THE JOBSITE AT ALL TIMES DURING CONSTRUCTION:
A. APPROVED, STAMPED AND SIGNED WATER AND/OR SEWER PLANS
B. WATER & SEWER INFRASTRUCTURE INSTALLATION PERMIT, WITH ALL STEPS COMPLETED AND SIGNED BY APPROPRIATE CITY EMPLOYEES.
C. COPY OF APPROVED AVAILABILITY REQUEST RESPONSE LETTER.
D. A COPY OF ALL APPROVED CUT SHEETS.
 - ACCEPTANCE OF CITY OF FRANKLIN PUBLIC WATER INFRASTRUCTURE, SANITARY SEWER INFRASTRUCTURE AND/OR RECLAIMED WATER INFRASTRUCTURE SHALL BECOME THE RESPONSIBILITY OF THE CITY OF FRANKLIN, TN FOLLOWING APPROVAL FROM THE CITY OF FRANKLIN INSPECTORS AND ACCEPTANCE BY THE FRANKLIN MUNICIPAL PLANNING COMMISSION. THE ACCEPTANCE DATE SHALL BE BASED ON THE DAY MAINTENANCE SURETIES ARE ESTABLISHED BY THE FRANKLIN MUNICIPAL PLANNING COMMISSION.
 - PRIOR TO THE ACCEPTANCE OF CITY OF FRANKLIN PUBLIC WATER INFRASTRUCTURE, SANITARY SEWER INFRASTRUCTURE AND/OR RECLAIMED WATER INFRASTRUCTURE, THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT AS-BUILT DRAWINGS TO THE WATER MANAGEMENT DEPARTMENT.
 - ALL OFF-SITE WORK WITHIN THE PUBLIC RIGHT-OF-WAY OF ANY UTILITY OR TEMPORARY CONSTRUCTION EASEMENT OF THE CITY OF FRANKLIN BY ANY ENTITY UNLESS 72-HOUR NOTICE HAS BEEN GIVEN TO THE CITY OF FRANKLIN TRAFFIC OPERATIONS CENTER. THE CONTRACTOR SHALL HAVE AN APPROVED TRAFFIC CONTROL PLAN ON SITE DURING CONSTRUCTION.
 - ANY DAMAGES CAUSED TO EXISTING UTILITIES DURING CONSTRUCTION SHALL, AT HIS OWN EXPENSE, BE REPLACED OR REPAIRED TO ORIGINAL CONDITION AND QUALITY, AS APPROVED BY THE OWNER AND REPRESENTATIVE OF THE APPROPRIATE UTILITY COMPANY, BY THE CONTRACTOR.
 - THE CITY OF FRANKLIN IS NOT A MEMBER OF TN ONE CALL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT FRANKLIN WATER MANAGEMENT NO LESS THAN 72 HOURS PRIOR TO COMMENCING WORK.

UTILITY PLAN DATA CHART

FACILITY TYPE:	MULTIFAMILY 61 - 1 BEDROOM 81 - 2 BEDROOM
UNIT FLOW (GPD):	250 GPD FOR 1 BEDROOM 300 GPD FOR 2 BEDROOM
NUMBER OF UNITS:	113 UNITS OF FLOW (350 GPD/UNIT)
TOTAL FLOW:	39,550 GPD
**125 SFUE HAVE BEEN RESERVED	



5005 Meridian Blvd. Ste 100 Franklin, TN 37067
615.719.1945

2002 RICHARD JONES RD - SUITE C304 NASHVILLE, TENNESSEE 37215
INFO@FULMERENGINEERING.COM - (615) 516-8477

AVENIDA OF COOL SPRINGS
PUD DEVELOPMENT PLAN SUBMITTAL
OVERALL UTILITY PLAN
COF# 6191
Franklin, Williamson Co, TN

REVISIONS:

DATE: 09.01.16	DESIGNED BY: JF
	DRAWN BY: BH
	CHECKED BY: JM
	Q.C. BY: JF
	SCALE: 1"=30'
	PROJECT #: 16001
	SHEET NUMBER:

C5.0



SOUTH (FRONT) ELEVATION 0 16 32 FT



EAST (SIDE) ELEVATION 0 16 32 FT



WEST (SIDE) ELEVATION 0 16 32 FT

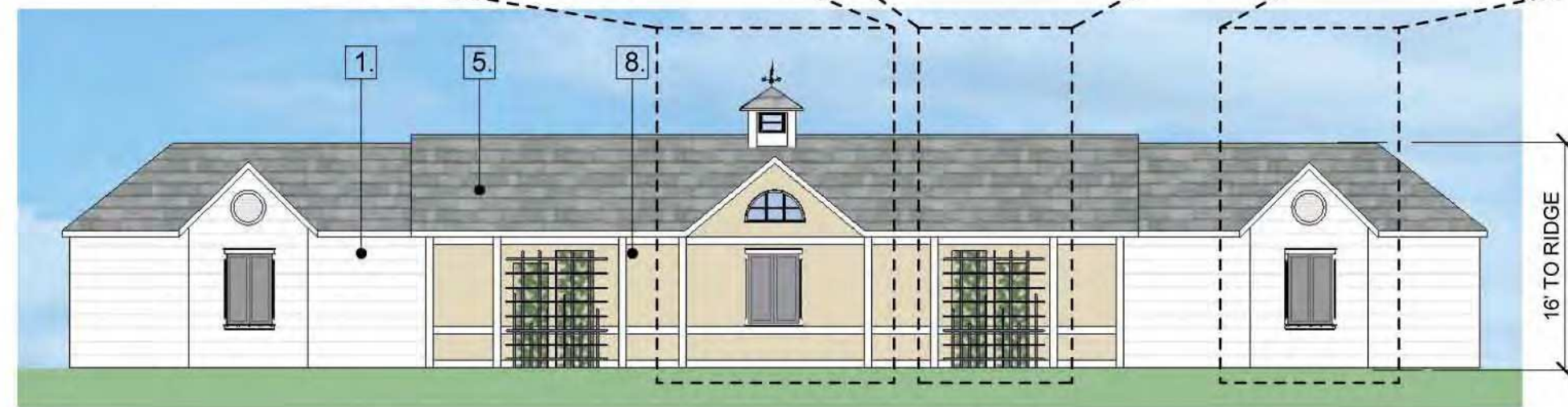
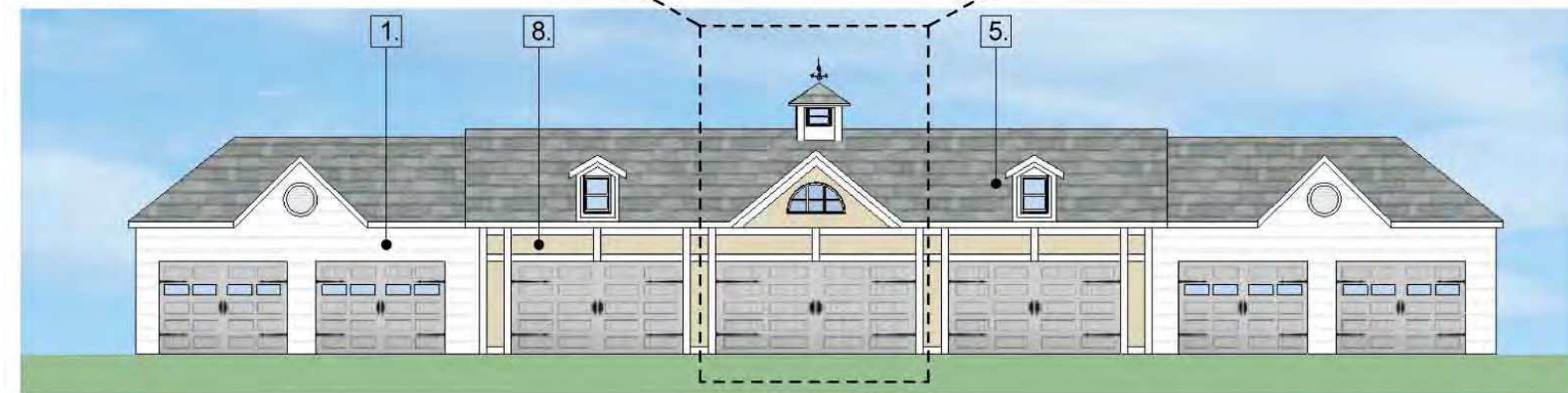
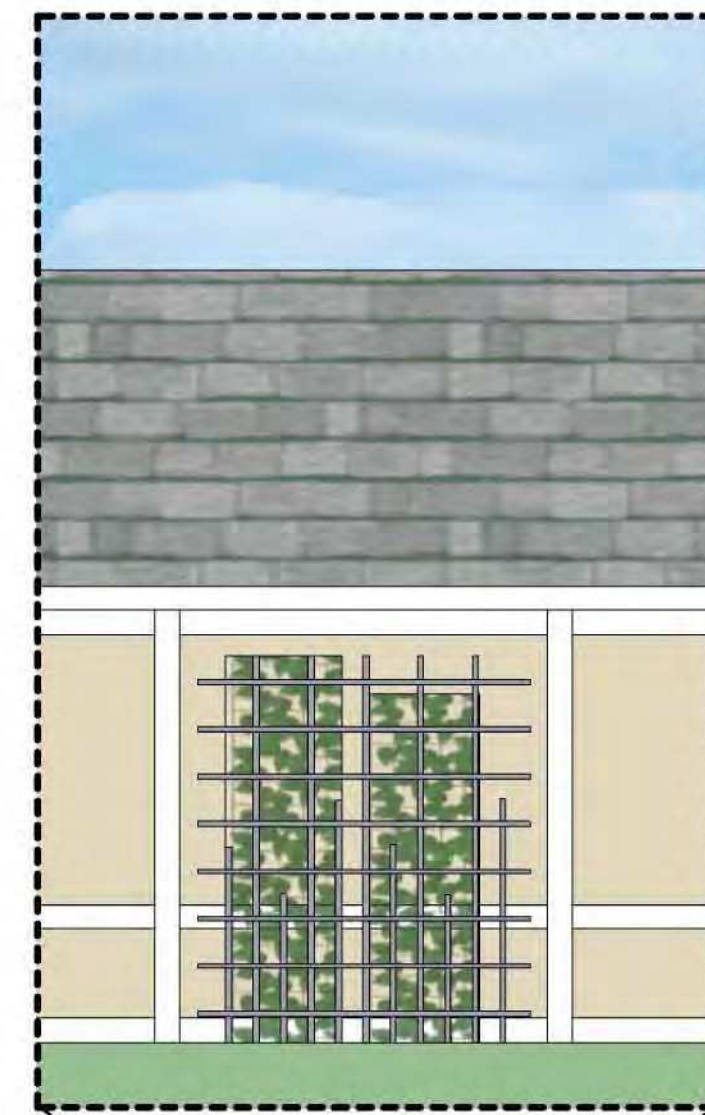
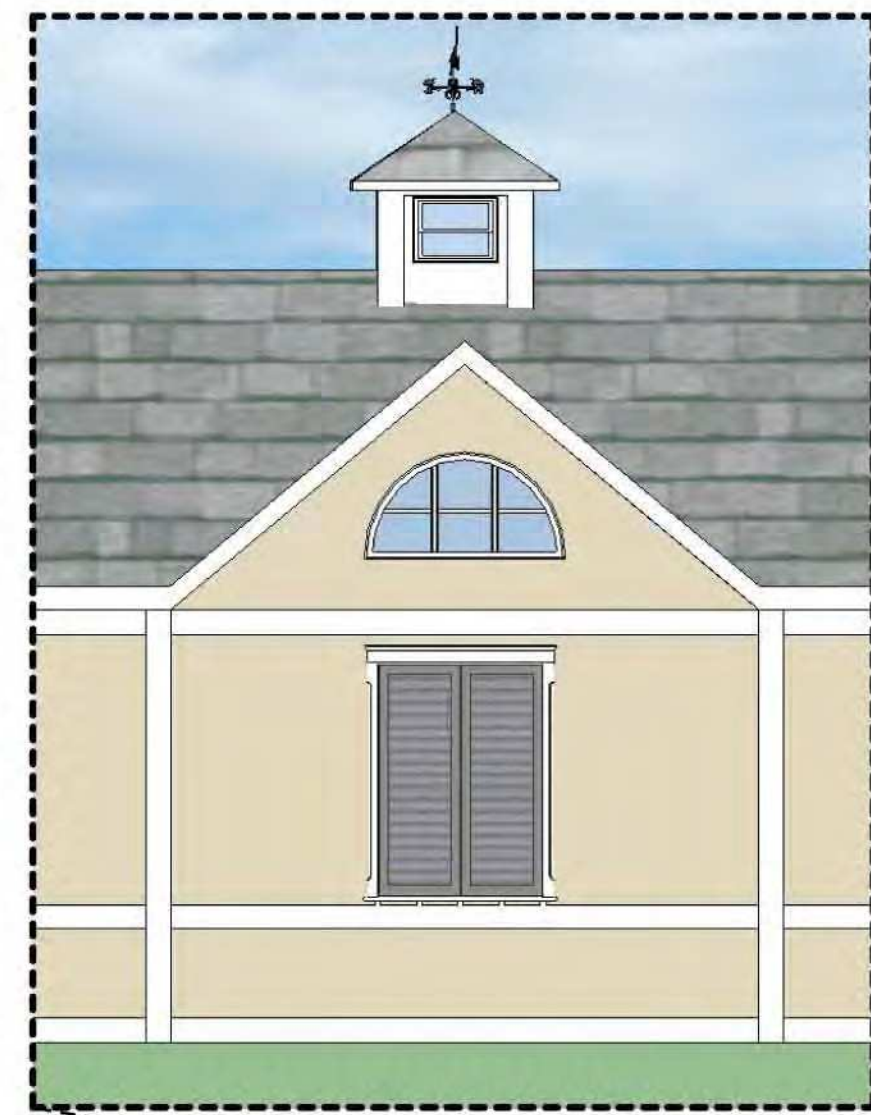
ELEVATION KEY

1. FIBER CEMENT LAP SIDING (WHITE)
2. BRICK
3. STONE / BRICK
4. STANDING SEAM METAL ROOF
5. ARCHITECTURAL SHINGLE
6. STOREFRONT WINDOW SYSTEM (DARK GRAY)
7. RESIDENTIAL WINDOWS (WHITE)
8. FIBER CEMENT BOARD AND BATTEN
9. STUCCO



- ELEVATION KEY**
- 1. FIBER CEMENT LAP SIDING (WHITE)
 - 2. BRICK
 - 3. STONE / BRICK
 - 4. STANDING SEAM METAL ROOF
 - 5. ARCHITECTURAL SHINGLE
 - 6. STOREFRONT WINDOW SYSTEM (DARK GRAY)
 - 7. RESIDENTIAL WINDOWS (WHITE)
 - 8. FIBER CEMENT BOARD AND BATTEN
 - 9. STUCCO





GARAGE ELEVATION (SOUTH) 0 16 32 FT

GARAGE ELEVATION (NORTH) 0 16 32 FT

ELEVATION KEY

1. FIBER CEMENT LAP SIDING (WHITE)
2. BRICK
3. STONE / BRICK
4. STANDING SEAM METAL ROOF
5. ARCHITECTURAL SHINGLE
6. STOREFRONT WINDOW SYSTEM (DARK GRAY)
7. RESIDENTIAL WINDOWS (WHITE)
8. FIBER CEMENT BOARD AND BATTEN
9. STUCCO



NORTH (BACK) ELEVATION 0 16 32 FT



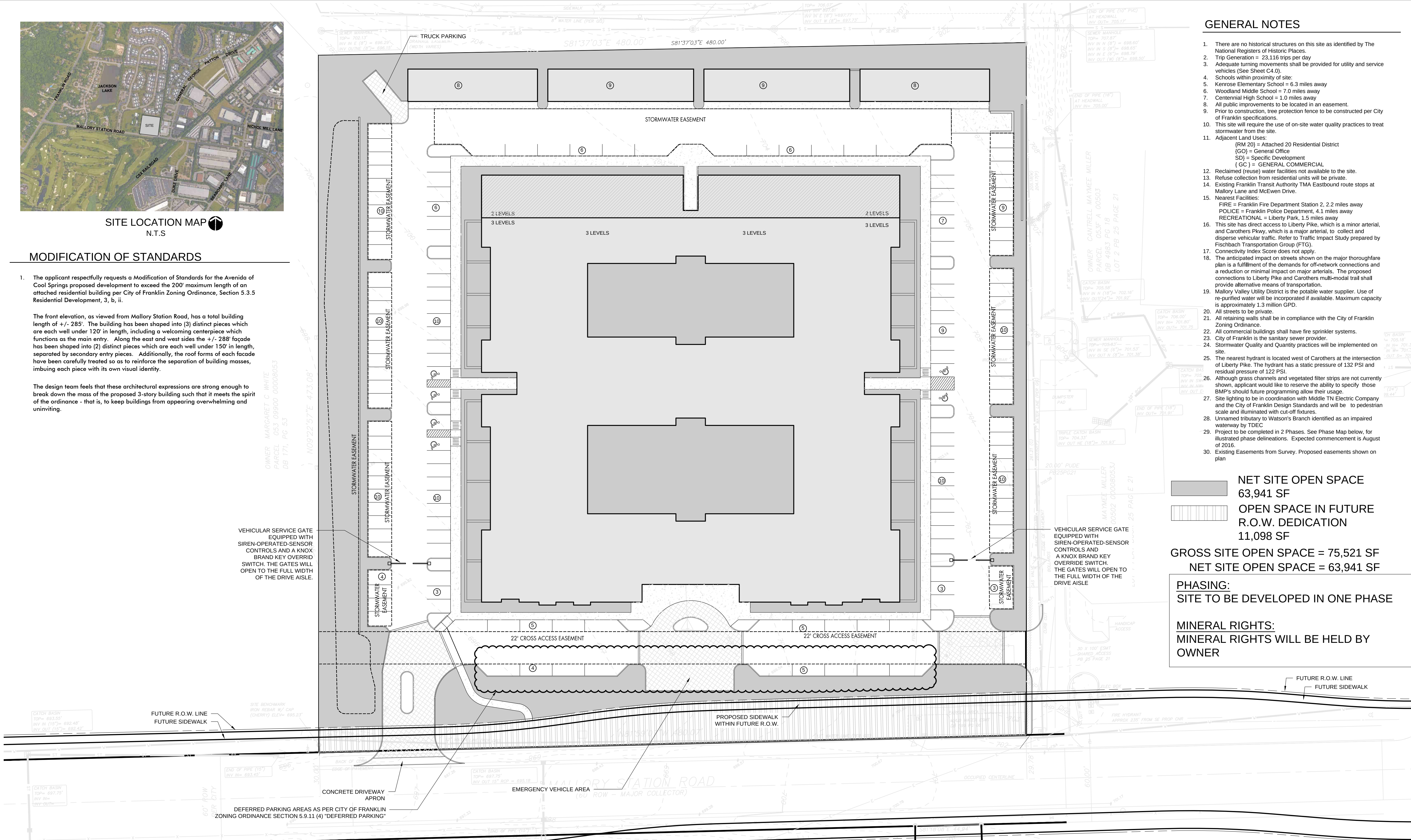
SITE LOCATION MAP
N.T.S

MODIFICATION OF STANDARDS

- The applicant respectfully requests a Modification of Standards for the Avenida of Cool Springs proposed development to exceed the 200' maximum length of an attached residential building per City of Franklin Zoning Ordinance, Section 5.3.5 Residential Development, 3, b, ii.

The front elevation, as viewed from Mallery Station Road, has a total building length of +/- 285'. The building has been shaped into (3) distinct pieces which are each well under 120' in length, including a welcoming centerpiece which functions as the main entry. Along the east and west sides the +/- 288' facade has been shaped into (2) distinct pieces which are each well under 150' in length, separated by secondary entry pieces. Additionally, the roof forms of each facade have been carefully treated so as to reinforce the separation of building masses, imbuing each piece with its own visual identity.

The design team feels that these architectural expressions are strong enough to break down the mass of the proposed 3-story building such that it meets the spirit of the ordinance - that is, to keep buildings from appearing overwhelming and uninviting.



SITE DATA

PROJECT NAME: AVENIDA OF COOL SPRING
COF PROJECT NUMBER: 6191
MAP, PARCEL NUMBERS: 53, 10400
ADDRESS: 222 MALLERY STATION ROAD
CITY: FRANKLIN
COUNTY: WILLIAMSON
STATE: TENNESSEE
CIVIL DISTRICT: 8

EXISTING ZONING & CHARACTER AREA OVERLAY: GO - GENERAL OFFICE & BCCO-3
PROPOSED LAND USE: MULTIFAMILY
PROPOSED ZONING: SPECIFIC DEVELOPMENT RESIDENTIAL 27.33 (SD-R 27.33)
CHARACTER OVERLAYS: BCCO-3
APPLICABLE DEVELOPMENT STANDARDS: CONVENTIONAL
SITE ACREAGE (GROSS): +/- 5.195 AC
SITE SQUARE FOOTAGE (GROSS): +/- 226,294 SF
PUD SITE ACREAGE (NET): +/- 4.926 AC
PUD SITE SQUARE FOOTAGE (NET): +/- 214,576 SF
R.O.W. DEDICATION: +/- 2547 AC
R.O.W. DEDICATION SQUARE FOOTAGE: +/- 11,098 SF

BLDG TOTAL SF: 187,000 SF
1ST FLOOR: 65,000 SF
2ND FLOOR: 65,000 SF
3RD FLOOR: 57,000 SF

ACCESSORY STRUCTURE SF:
8 BAY GARAGE: 1,936 SF EACH; 3,872 SF TOTAL
9 BAY GARAGE: 2,178 SF EACH; 4,356 SF TOTAL

BUILDING/ACCESSORY STRUCTURE HEIGHT:
3-STORY: 33' TO SOFFIT; 45' TO RIDGE
2-STORY: 20' TO SOFFIT; 32' TO RIDGE
ACCESSORY STRUCTURE: 1-STORY: 16' TO RIDGE

TOTAL DWELLING UNITS PROPOSED: 142
UNIT MIX: +/- 61: 1 BEDROOM
81: 2 BEDROOM

PROPOSED GROSS DENSITY: 27 D.U.A.
PROPOSED NET DENSITY: 29 D.U.A.

MINIMUM REQUIRED SETBACK LINES:

FRONTYARD SETBACK ON COLLECTOR: 40 FEET
SIDE YARD: 15 FEET
REAR YARD: 30 FEET

ACCESSORY STRUCTURE SETBACK LINES:
5 FEET FROM PROPERTY LINES

PARKING RATIO PER CITY OF FRANKLIN ZONING ORDINANCE:
1.5 SPACES PER DWELLING UNIT = 213 PARKING SPACES

PROPOSED PARKING: 189 SPACES = 1.33 SPACES/DU
157: RESIDENT PARKING = 1.1 SPACES/DU
34: GARAGE PARKING
117: SURFACE PARKING
6: ACCESSIBLE PARKING
32: GUEST PARKING

DEFERRED PARKING REQUESTED:
15% OF REQUIRED SPACES = 33 SPACES

MIN. LANDSCAPE SURFACE RATIO: 0.20

LANDSCAPE SURFACE RATIO PROVIDED:
GROSS: 0.28
NET: 0.30

PARKLAND DEDICATION REQUIREMENT:
142 UNITS @ 106,200 SF:
FEES OF \$660,702.50 SHALL BE DUE AT THE FIRST FINAL PLAT

MINIMUM OPEN SPACE, BASED UPON NET ACREAGE
REQUIRED: 15 PERCENT; +/- 31,644 SF
PROVIDED: 29 PERCENT; +/- 63,941 SF

FORMAL OPEN SPACE:
REQUIRED: +/- 10,442 SF
PROVIDED: +/- 15,798 SF

INFORMAL OPEN SPACE:
REQUIRED: +/- 21,202 SF
PROVIDED: +/- 48,143 SF

OWNER:
FRANKLIN RADIO ASSOCIATES, INC.
222 MALLERY STATION ROAD
FRANKLIN, TN 37067
CONTACT: CHARLES DRIBELL
615.794.1594

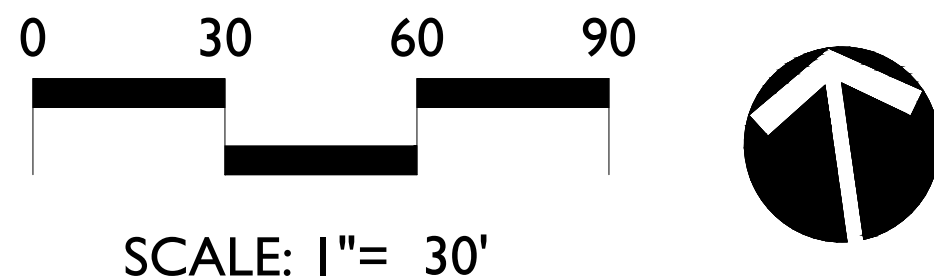
DEVELOPER:
AVENIDA PARTNERS
19700 FAIRCHILD ROAD
SUITE 170
IRVINE, CA 92612
CONTACT: ROBERT MAY
949.298.4540

APPLICANT:
KISER & VOGGIN DESIGN
5005 MERIDIAN BLVD. STE 100
FRANKLIN, TN 37067
CONTACT: CHRISTOPHER WOOD
615.719-1943
CHRIS@KISERVOGGIN.COM

SITE CONTEXT AND DESIGN DESCRIPTIONS

- Per the Land Use Plan Area BCCO-3, Attached residential uses are appropriate for this site. High quality design, people-friendly environments, and strong connectivity will be encouraged through heightened architectural and site design to reflect, and reinforce, the character of Franklin.
- The proposed age restricted (55+ age) attached residential development and requested rezoning from General Office (GO) to Specific Development-Residential (SD-R) would be compatible with the surrounding area, given that the site is currently surrounded by similar age restricted development to the North and Northwest and similarly zoned parcels to the North, West and South. The developments to the East and Northeast are currently zoned as Heavy Industrial (HI) land use designation, so therefore the proposed development would provide a physical transition to the lower density developments heading West along Mallery Station Road. The site design will be compatible with conventional design standards, as outlined by the City of Franklin.
- The proposed age restricted (55+ age) attached residential building located on this site will consist of a one (1) story garage structure with individual secured parking bays located along the northern property line. The one story garage structure will transition to a two (2) story rear facade of the residential building which will then transition to a typical three (3) story elevation for the remainder of the proposed building. Each facade will be architecturally detailed so that no elevation is perceived as the "rear" of the building. The proposed use of traditional building materials such as brick and wood on proposed structures as well as the architectural detailing will be used to create warm, welcoming environment that emphasize the up-scale residential nature of the project. The building design will reflect elements of the Greek Revival architectural design style prevalent throughout the Franklin area.

CONCRETE PAVERS
CONCRETE SIDEWALK



GENERAL NOTES

- There are no historical structures on this site as identified by The National Registers of Historic Places.
- Trip Generation = 23,116 trips per day
- Adequate turning movements shall be provided for utility and service vehicles (See Sheet C4.0).
- Schools within proximity of site:
- Kenrose Elementary School = 6.3 miles away
- Woodland Middle School = 7.0 miles away
- Centennial High School = 1.0 miles away
- All public improvements to be located in an easement.
- Prior to construction, tree protection fence to be constructed per City of Franklin specifications.
- This site will require the use of on-site water quality practices to treat stormwater from the site.
- Adjacent Land Uses:
(RM 20) = Attached 20 Residential District
(GO) = General Office
(SD) = Specific Development
(GC) = GENERAL COMMERCIAL
- Reclaimed (reuse) water facilities not available to the site.
- Refuse collection from residential units will be private.
- Existing Franklin Transit Authority TMA Eastbound route stops at Mallery Lane and McEwen Drive.
- Nearest Facilities:
FIRE = Franklin Fire Department Station 2, 2.2 miles away
POLICE = Franklin Police Department, 4.1 miles away
RECREATIONAL = Liberty Park, 1.5 miles away
- This site has direct access to Liberty Pike, which is a minor arterial, and Carothers Pkwy, which is a major arterial, to collect and disperse vehicular traffic. Refer to Traffic Impact Study prepared by Fischbach Transportation Group (FTG).
- The anticipated impact on streets shown on the major thoroughfare plan is a fulfillment of the demands for off-network connections and a reduction or minimal impact on major arterials. The proposed connections to Liberty Pike and Carothers multi-modal trail shall provide alternative means of transportation.
- Mallery Valley Utility District is the potable water supplier. Use of re-purified water will be incorporated if available. Maximum capacity is approximately 1.3 million GPD.
- All streets to be private.
- All retaining walls shall be in compliance with the City of Franklin Zoning Ordinance.
- All commercial buildings shall have fire sprinkler systems.
- City of Franklin is the sanitary sewer provider.
- Stormwater Quality and Quantity practices will be implemented on site.
- The nearest hydrant is located west of Carothers at the intersection of Liberty Pike. The hydrant has a static pressure of 132 PSI and residual pressure of 122 PSI.
- Although grass channels and vegetated filter strips are not currently shown, applicant would like to reserve the ability to specify those BMP's should future programming allow their usage.
- Site lighting to be in coordination with Middle TN Electric Company and the City of Franklin Design Standards and will be to pedestrian scale and illuminated with cut-off fixtures.
- Unnamed tributary to Watson's Branch identified as an impaired waterway by TDEC.
- Project to be completed in 2 Phases. See Phase Map below, for illustrated phase delineations. Expected commencement is August of 2016.
- Existing Easements from Survey. Proposed easements shown on plan

NET SITE OPEN SPACE
63,941 SF
OPEN SPACE IN FUTURE
R.O.W. DEDICATION
11,098 SF

GROSS SITE OPEN SPACE = 75,521 SF
NET SITE OPEN SPACE = 63,941 SF

PHASING:
SITE TO BE DEVELOPED IN ONE PHASE

MINERAL RIGHTS:
MINERAL RIGHTS WILL BE HELD BY
OWNER

KV+D
KISER VOGGIN DESIGN
5005 Meridian Blvd., Ste 100 Franklin, TN 37067

LORD
AECK
SARGENT

FULMER
ENGINEERING
2002 RICHARD JONES RD - SUITE C304 NASHVILLE,
TENNESSEE 37215
INFO@FULMERENG.COM - (615) 516-8477



09.01.16

AVENIDA OF COOL SPRINGS
PUD DEVELOPMENT PLAN RESUBMITTAL
OVERALL DEVELOPMENTAL PLAN
COF# 6191

Franklin, Williamson Co, TN

REVISIONS:
09-01-2016 - PER COF COMMENTS

DATE: 09.01.16
DESIGNED BY: DK
DRAWN BY: CBW
CHECKED BY: CBW
C.C. BY: C.C. BY
SCALE: 1"=30'
PROJECT #: 16001
SHEET NUMBER:

C2.0



SOUTH (FRONT) ELEVATION 0 16 32 FT



EAST (SIDE) ELEVATION 0 16 32 FT



WEST (SIDE) ELEVATION 0 16 32 FT

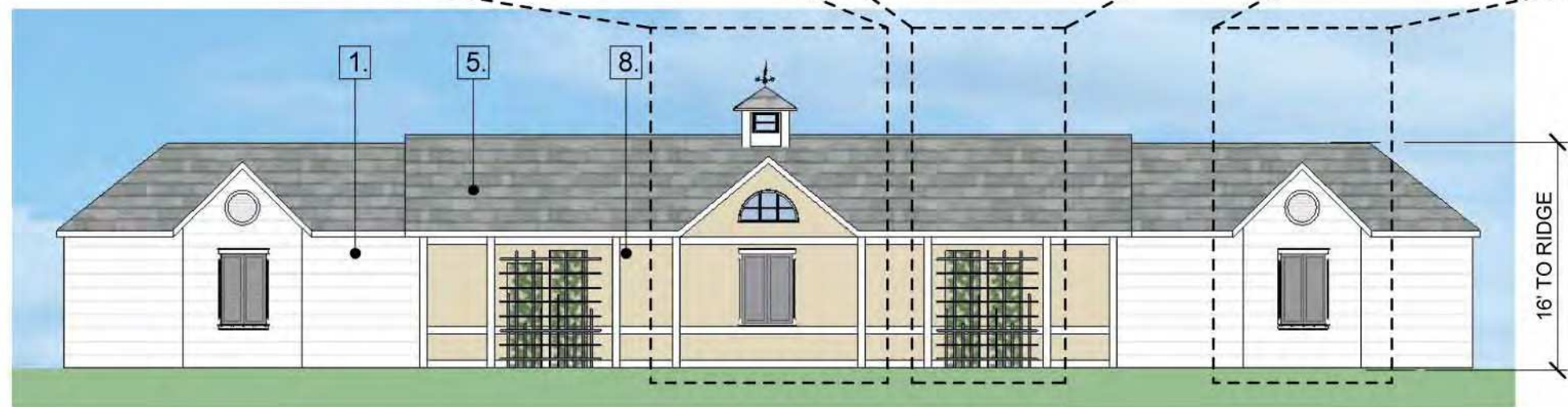
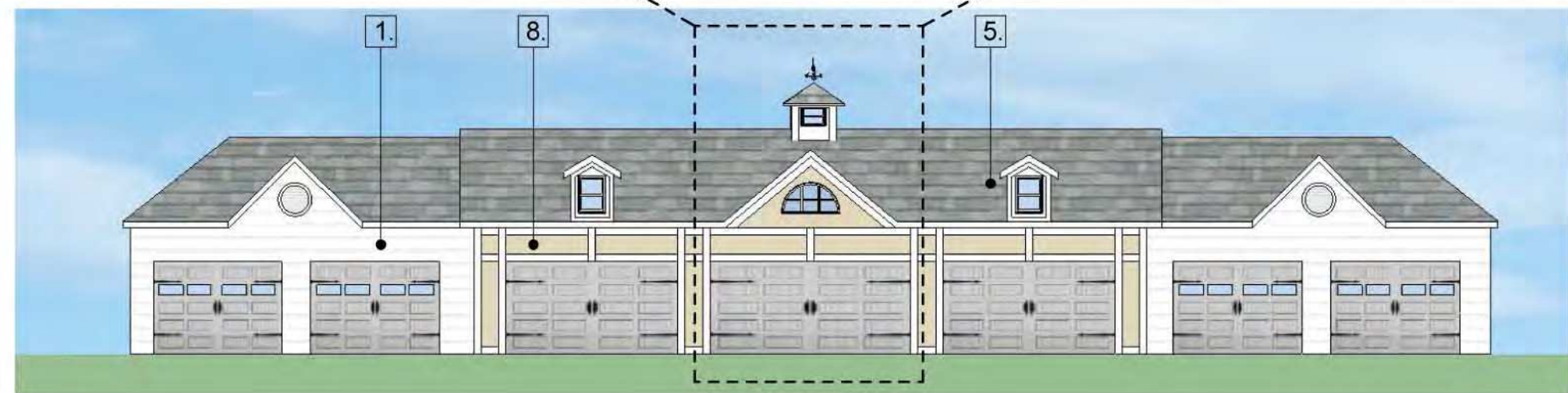
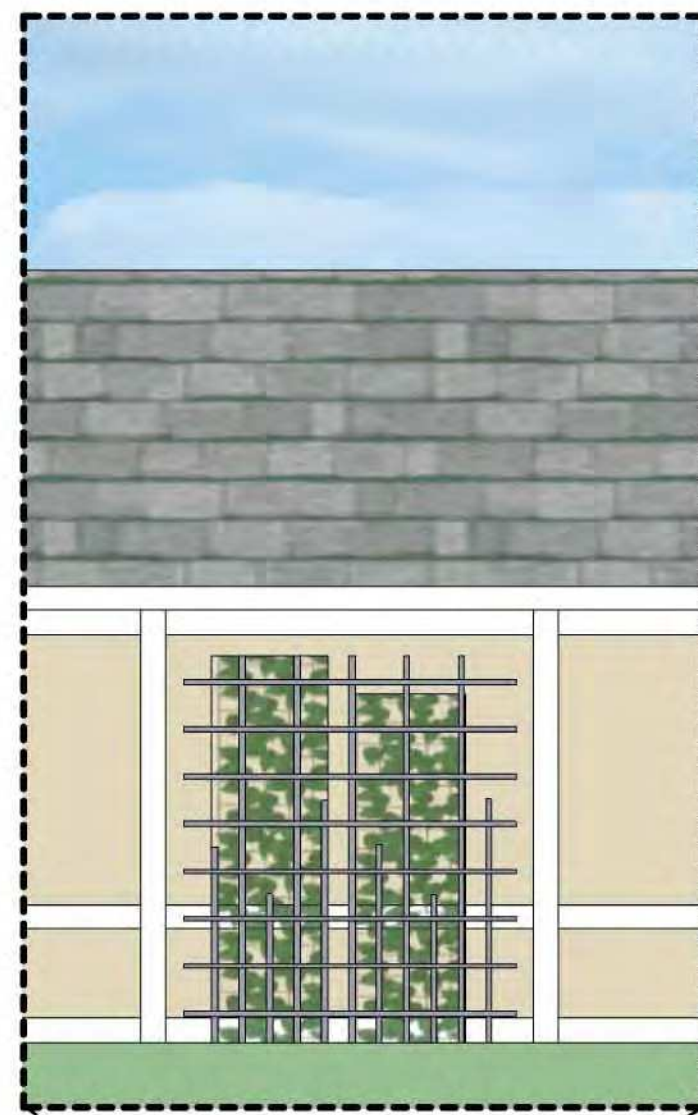
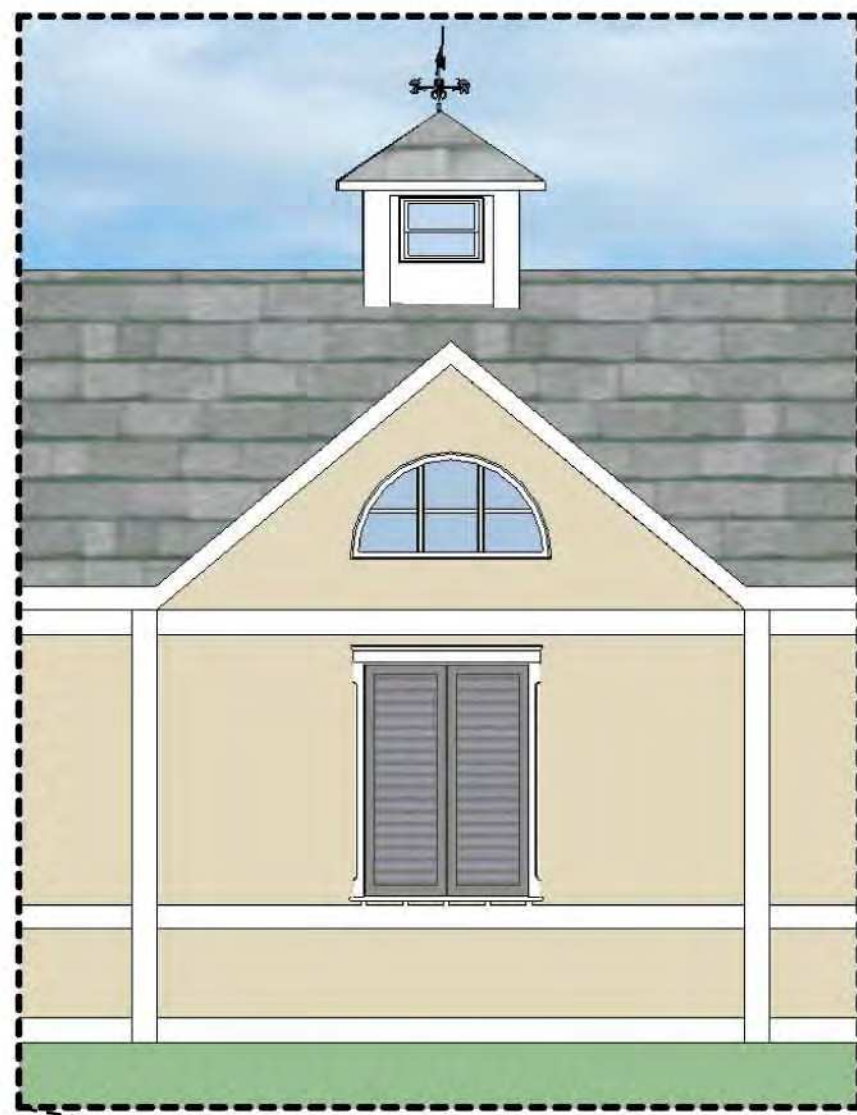
ELEVATION KEY

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9. STUCCO

GARAGE ELEVATION (SOUTH) 0 16 32 FT

GARAGE ELEVATION (NORTH) 0 16 32 FT



NORTH (BACK) ELEVATION 0 16 32 FT

August 10, 2016

N-S Project No. 13194.004

Mr. Carl Baughman, P.E.
Traffic/Transportation Engineer
City of Franklin
109 3rd Avenue South
Franklin, TN 37065-0305

**Subject: Follow-up Review of Traffic Impact Analysis – Updated August 2016
Avenida Senior Housing Development**

Dear Carl:

Please accept this correspondence as documentation of our review of the updated traffic impact analysis (TIA) report, dated August 2016, for the referenced proposed development. Per city engineering and Neel-Schaffer review comments, the applicant updated its original study to reflect feedback received as a result of the initial DRT review. This memorandum serves to document our follow-up review of the revised TIA.

In general, the updated TIA provides the requested additional analysis and clarifications. The following highlights key points addressed in the updated TIA:

- As requested, the revised TIA provides additional information and analysis in coordination with the Ironhorse multi-family project being separately considered. The Avenida and Ironhorse projects share a common signalized intersection within their study areas: Franklin Road at Mallory Station Road. For this reason, review comments requested that the Avenida TIA prepare its analysis referencing input data and proposed recommendations resulting from the Ironhorse TIA. The Avenida TIA now specifically references and includes forecasted traffic from the proposed Ironhorse project. Further, the Avenida TIA provides capacity analysis and evaluation including the additional Ironhorse background traffic.
- Also, the updated TIA provides specific analysis results of various lane configurations proposed for the Franklin Road at Mallory Station Road intersection. Primarily, this reflects the additional scenarios that account for the proposed right-turn lane improvements in the northbound and westbound approaches.
- Based on feedback from the initial review, the applicant updated the signal timing parameters used in the capacity analysis of the Franklin Road at Mallory Station Road signalized intersection. The updated analysis now more closely reflects the City's actual traffic signal timings. This provides analysis that is more representative of actual field conditions. The TIA report made similar adjustments for the signalized capacity analysis for the intersections of Mallory Station Road at General George Patton Drive, Duke Drive and Seaboard Lane.
- Regarding the capacity analysis of the signalized intersection of Mallory Station Road and Seaboard Lane, the updated evaluation confirmed that the southbound right turn operates at a Level-of-Service "E" under existing, background and proposed scenarios with existing geometry. Future improvements to the intersection should include consideration of adding a dedicated southbound right-turn lane.

Our review also noted the study's recommendations for mitigating impacts to the surrounding transportation network. The following highlights the improvements identified by the TIA report. We concur with these recommendations and recommend that these measures be required for implementation of the project:

- Dedicate and reserve right-of-way along the frontage of the proposed property to provide for future widening of Mallory Station Road.
- Provide construction of new sidewalk infrastructure along its frontage of Mallory Station Road.
- Coordinate with city of Franklin engineering staff and contribute to the implementation of modified traffic signal phasing for the westbound approach of Mallory Station Road at Franklin Road. The modification should provide new westbound right-turn overlap signal phasing, and associated required hardware.
- Provide multiple driveway access points to Mallory Station Road including the joint east driveway with adjacent existing commercial driveway.

In addition to the noted recommendations made by the TIA report, we submit the following items as related considerations:

- We recommend that the signal timings of the signalized intersections within the study area (Mallory Station Road's intersections with Franklin Road, Gen. George Patton Drive/Duke Drive and Seaboard Lane) be updated and optimized in conjunction with the project.
- During site design phase, we recommend project planners review and confirm that appropriate intersection sight distance will be provided at the development's proposed driveway intersections with Mallory Station Road.
- The separation distance between the proposed western driveway and the proposed shared joint-access drive should be maximized.

Thank you for the opportunity to contribute to the review of this project. Please let us know if you need any additional information or have any questions.

Sincerely,
NEEL-SCHAFFER, INC.



Gregory Judy, P.E., PTOE
Engineer Manager



PUBLIC NOTICE AFFIDAVIT

City of Franklin, Tennessee

We/I Kiser Vogrin Design - Christopher Wood

(Please print Name/Names in Full)

being duly sworn, depose and say(s) that (I am)/(we are), acting as the authorized agent on all matters pertaining to the processing of the development application for the property described as:

Map 053, Parcel 10400

(Property Parcel/Tax ID Number)

and located at:

222 Mallory Station Road, Franklin, TN 37067

(Street Address)

have/has provided a mailed notice in accordance with section 2.3.8 of the Franklin Zoning Ordinance, which included the following:

1. The address or location of the property subject to the submittal;
2. A brief description of the property (e.g., legal description, nearby streets and intersections);
3. Date, time, and location of the public meeting or hearing; Nature, scope, and purpose of submittal;
4. Information on where the public can view the application and where they may be heard;
5. Information on where the public can submit written comments.

Christopher B. Wood
Signature

Subscribed and sworn to before me this

19 day of July, 20 16.

Joan Elaine Hatch
Notary Public

My Commission Expires: 9/17/2017



My Commission Expires SEPT. 17, 2017

ORDINANCE 2016-37

TO BE ENTITLED, "AN ORDINANCE TO REZONE 3.66 ACRES FROM SPECIFIC DEVELOPMENT RESIDENTIAL (SD-R 8.03) DISTRICT TO SPECIFIC DEVELOPMENT RESIDENTIAL (SD-R 8.70) DISTRICT AND REZONE 0.48 ACRES FROM DETACHED RESIDENTIAL 3 (R-3) DISTRICT TO SPECIFIC DEVELOPMENT RESIDENTIAL (SD-R 8.70) DISTRICT FOR THE PROPERTY LOCATED NORTH OF WEST MAIN STREET AND WEST OF RUCKER AVENUE, 117 RUCKER AVENUE."

WHEREAS, the City of Franklin, Tennessee, encourages responsible growth and the sensible transition of land uses and densities; and

WHEREAS, the Specific Development Residential district provides zoning for land uses compatible with both the Franklin Land Use Plan and surrounding development; and

WHEREAS, the Board of Mayor and Aldermen (BOMA) of the City of Franklin, Tennessee, adopted Resolution 2016-56 approving a Plan Unit Development (PUD) Development Plan as required by the Franklin Zoning Ordinance; and

WHEREAS, the zoning has been reviewed and approved by BOMA after a public hearing and a recommendation by the Franklin Municipal Planning Commission.

NOW THEREFORE BE IT ORDAINED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS:

SECTION I. That the following described property shall be, and is hereby, rezoned from its present zoning classifications of Specific Development Residential (SD-R 8.03) District and Detached Residential 3 (R-3) District to Specific Development Residential (SD-R 8.70) District:

LEGAL DESCRIPTION – PARCEL 17 ON MAP 78P GROUP A

Parcel of land lying in the 9th Civil District of City of Franklin, Williamson County, Tennessee. Said parcel being lots 13 & 14 of Bob Rucker Lot Addition Subdivision as of record in Plat Book 1 Page 71 Registers Office Williamson County, Tennessee. Bounded on the east by Rucker Avenue (50' ROW), on the south by Rucker Park P.U.D. Subdivision, Replatting of Lot 12 of Rucker Subdivision as of record in Plat Book P61 Page 81 R.O.W.C.T., on the west by Hardison Hills Subdivision, Section 3 as of record in Plat Book P39 Page 141 R.O.W.C.T. on the north by lot 15 of said Bob Rucker Lot Addition Subdivision, and being more particularly described as follows:

Beginning at the southeast corner at an existing iron rod on the west margin of Rucker Avenue, said corner being approximately 317+/-feet from the northerly margin of Carters Creek Pike; Thence with the following calls, N 80°57'50" W a distance of 196.12' to a metal fence post next to a wooden fence post; Thence, following remnants of a metal fence N 06°36'27" W a distance of 103.41' to a metal fence post; Thence, with remnants of a second metal fence S 81°04'15" E a distance of 224.84' to an iron rod set. said corner lying on the westerly margin of Rucker Avenue; Thence, S 09°30'58" W a distance of 100.00' to the Point of Beginning Containing 21 ,006 square feet, or 0.482 acres more or less.

LEGAL DESCRIPTION – FINAL PLAT RUCKER PARK PUD SUBDIVISION, REV 1, PB 63 PG 34

Parcels of land lying in the 5th Civil District of the City of Franklin, Williamson County, Tennessee. Said parcels being lots 101-132 of the Final Plat of Rucker Park PUD Subdivision, Resubdivision of Lot 12, Revision 1, as of record in Plat Book 63, Page 34, recorded on January 29, 2016, at the Registers Office, Williamson County, Tennessee. Property containing 3.66 acres, more or less.

SECTION II. That the attached Location Map shall serve the purpose of further delimiting the geographical boundaries as described by this Ordinance.

SECTION III. BE IT FINALLY ORDAINED by the Board of Mayor and Aldermen of the City of Franklin, Tennessee, that this Ordinance shall take effect from and after its passage on third and final reading, the health, safety, and welfare of the citizens requiring it.

ATTEST:

CITY OF FRANKLIN, TENNESSEE:

By: _____
Eric Stuckey
City Administrator/Recorder

By: _____
Dr. Ken Moore
Mayor

Approved as to form by:

Shauna R. Billingsley
City Attorney

PLANNING COMMISSION RECOMMENDED:

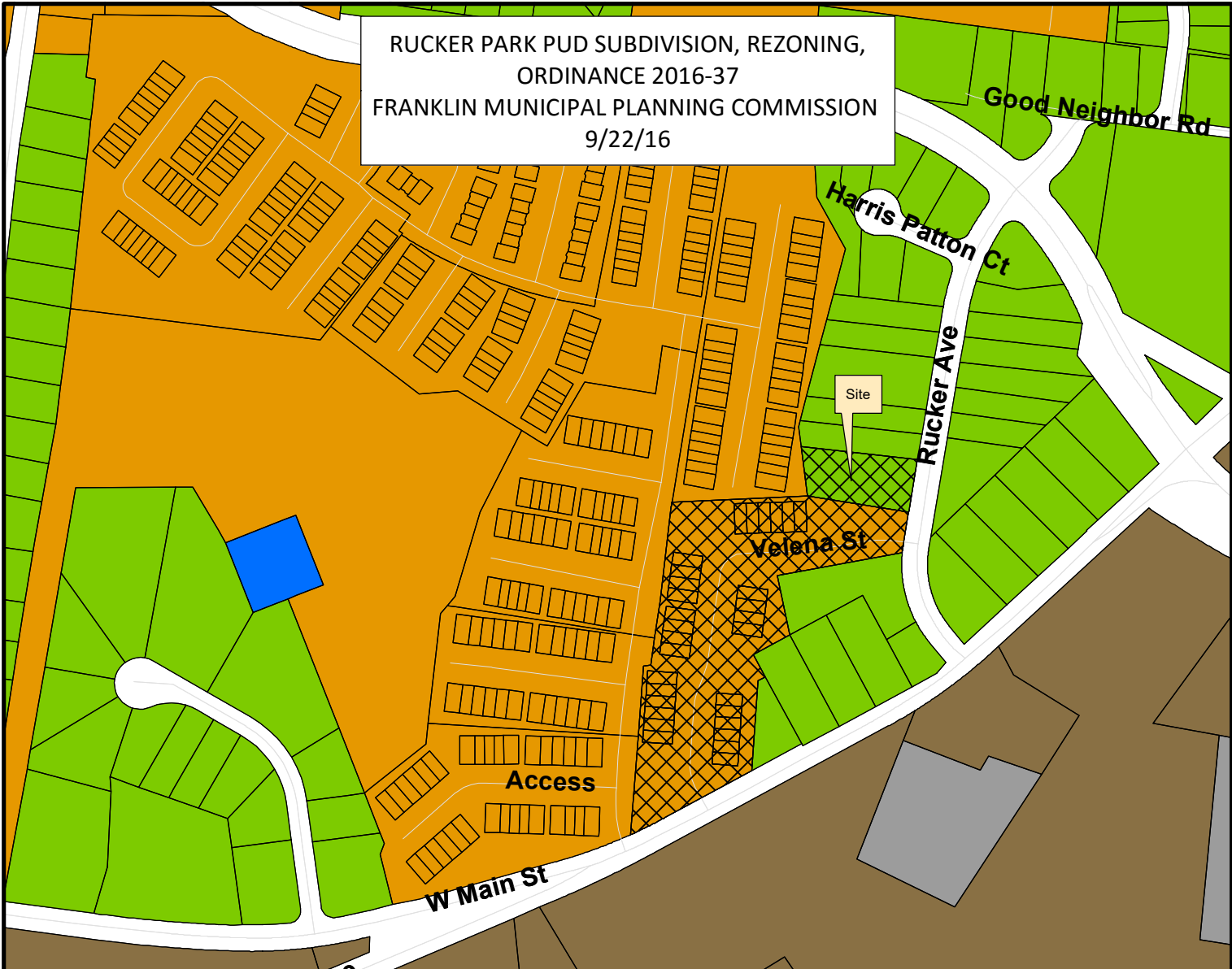
PASSED FIRST READING:

PUBLIC HEARING HELD:

PASSED SECOND READING:

PASSED THIRD READING:

RUCKER PARK PUD SUBDIVISION, REZONING,
ORDINANCE 2016-37
FRANKLIN MUNICIPAL PLANNING COMMISSION
9/22/16



Project Information

Existing Zoning: Specific Development Residentiall (SD-R 8.03)
Proposed Zoning: Specific Development Residentiall (SD-R 8.17)
Existing Land Use: Attached Residential
Proposed Land Use: Attached Residential
Character Area: WHCO-2
Development Standard: Conventional
Other Overlays: N/A
Site Acreage: 4.14 acres

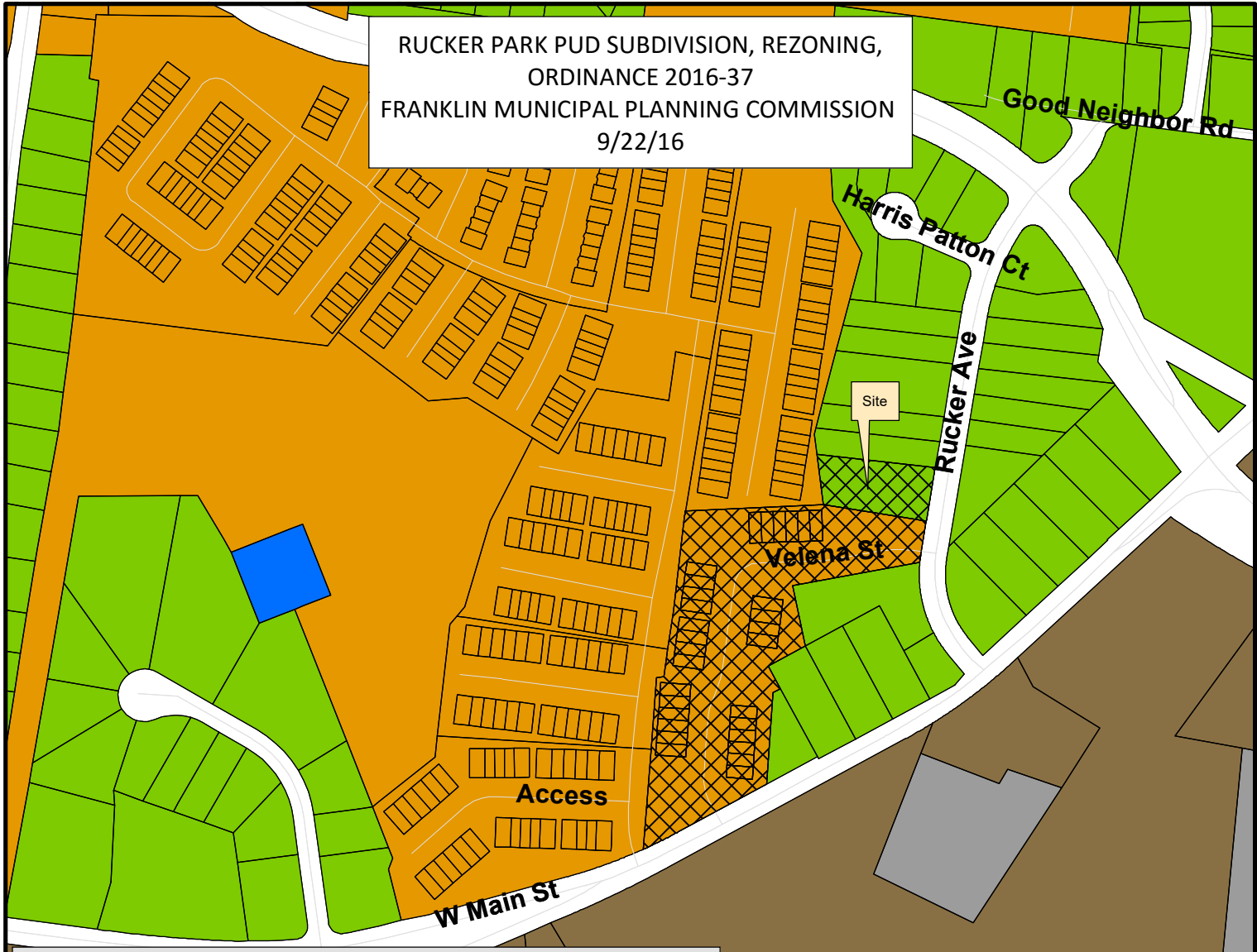
- | | |
|--|---------------------------------------|
| Rucker Park Rezoning | SD-R Specific Development-Residential |
| AG Agricultural District | SD-X Specific Development-Variety |
| ER Estate Residential | OR Office Residential District |
| R-1 Residential District | GO General Office District |
| R-2 Residential District | CC Central Commercial District |
| R-3 Residential District | NC Neighborhood Commercial District |
| R-6 Residential District | GC General Commercial District |
| RM-10 Attached 10 Residential District | LI Light Industrial District |
| RM-15 Attached 15 Residential District | HI Heavy Industrial District |
| RM-20 Attached 20 Residential District | CI Civic and Institutional District |



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Feet

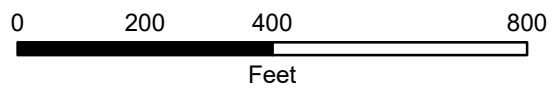
This map was created by the Franklin Planning Department. It was compiled from the most authentic information available. The City is not responsible for any errors or omissions contained hereon. All data and materials (c) copyright 2016. All rights reserved.

RUCKER PARK PUD SUBDIVISION, REZONING,
ORDINANCE 2016-37
FRANKLIN MUNICIPAL PLANNING COMMISSION
9/22/16



<UND><BOL>Project Information</BOL></UND>
 Existing Zoning: Specific Development Residential (SD-R 8.03)
 & Detached Residential 3 (R-3)
 Proposed Zoning: Specific Development Residential (SD-R 8.70)
 Existing Land Use: Attached Residential
 Proposed Land Use: Attached Residential
 Character Area: WHCO-2
 Development Standard: Conventional
 Other Overlays: N/A
 Site Acreage: 4.14 acres

- | | |
|--|---------------------------------------|
| Rucker Park Rezoning | SD-R Specific Development-Residential |
| AG Agricultural District | SD-X Specific Development-Variety |
| ER Estate Residential | OR Office Residential District |
| R-1 Residential District | GO General Office District |
| R-2 Residential District | CC Central Commercial District |
| R-3 Residential District | NC Neighborhood Commercial District |
| R-6 Residential District | GC General Commercial District |
| RM-10 Attached 10 Residential District | LI Light Industrial District |
| RM-15 Attached 15 Residential District | HI Heavy Industrial District |
| RM-20 Attached 20 Residential District | CI Civic and Institutional District |



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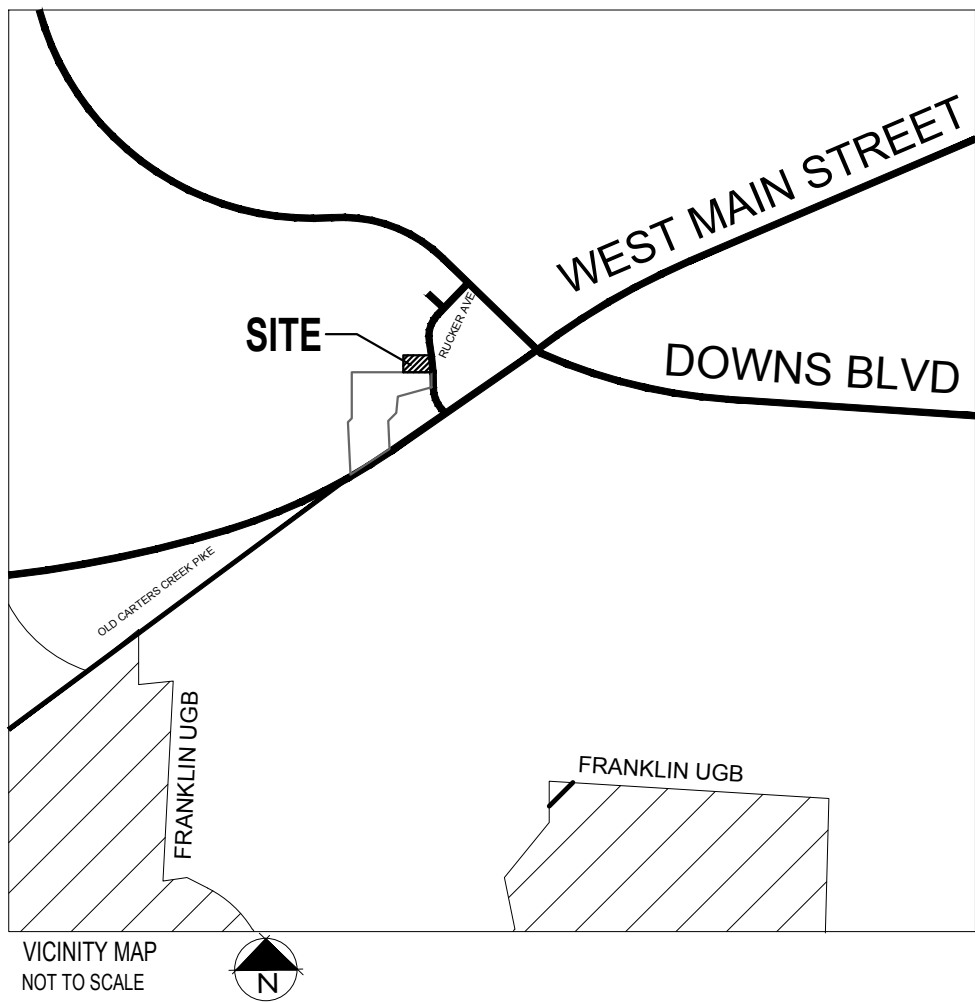
RUCKER PARK PUD SUBDIVISION

REZONING PLAN, REVISION 1

COF # 6226
MAP 78P, PARCEL 17.00
FRANKLIN, TENNESSEE
CIVIL DISTRICT 5

SHEET INDEX

- C 0.0 COVER SHEET
- C 1.0 OVERALL EXISTING CONDITIONS PLAN
- C 1.1 ENLARGED EXISTING CONDITIONS PLAN



LANDSCAPE ARCHITECT/PLANNER

GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY SUITE 200
FRANKLIN TN 37064
GREG GAMBLE, RLA (615) 975-5765
EMAIL ADDRESS: greggamble209@gmail.com



RUCKER PARK PUD SUBDIVISION

REZONING PLAN, REVISION 1

COF # 6226
FRANKLIN, TENNESSEE

SITE DATA:	
PROJECT NAME:	RUCKER PARK PUD SUBDIVISION
PROJECT NUMBER:	6226
SUBDIVISION:	RUCKER
LOT NUMBER:	13 & 14
ADDRESS:	117 RUCKER AVENUE
CITY:	FRANKLIN
COUNTY:	WILLIAMSON
STATE:	TENNESSEE
CIVIL DISTRICT:	5TH CIVIL DISTRICT
MAP, GROUP, PARCEL NUMBERS:	MAP 78P, PARCEL 17.00
EXISTING ZONING:	SD-R 8.17 (Existing PUD) and R3
PROPOSED ZONING:	SD-R 8.70
CHARACTER AREA OVERLAY:	WEST HARPETH 2
OTHER APPLICABLE OVERLAYS:	NONE
APPLICABLE DEVELOPMENT STANDARD:	CONVENTIONAL
TOTAL ACREAGE	3.66 + .48 in Parcel 17 = 4.14 ACRES
TOTAL SQUARE FOOTAGE:	179,970 SF
MINIMUM REQUIRED SETBACKS:	
FRONT YARD:	20'
REAR YARD:	5'
SIDE YARD:	MIN 5'
	12' BETWEEN STRUCTURES
OWNER / APPLICANT:	RBF INVESTMENTS, LLC
ADDRESS:	144 SOUTHEAST PARKWAY, SUITE 230 FRANKLIN, TN 37064
PHONE:	(615) 567-4420
EMAIL:	ma@colnfranks.org
CONTACT:	JOHN FRANKS
ENGINEER:	STEVE CLIFTON, P.E.
ADDRESS:	144 S.E. PARKWAY, SUITE 255, FRANKLIN, TN 37064
	(615) 207-9339
EMAIL:	stevec@cliftonandkingllc.com
CONTACT:	STEVE CLIFTON, P.E.
LANDSCAPE ARCHITECT :	GAMBLE DESIGN COLLABORATIVE
ADDRESS:	144 S.E. PARKWAY, SUITE 200, FRANKLIN, TN 37064
PHONE:	(615) 975-5765
FAX:	(615) 790-1350
EMAIL:	greg.gamble@gdc-tn.com
CONTACT:	GREG GAMBLE

PRE-APPLICATION SUBMITTAL	JULY 13, 2016
INITIAL SUBMITTAL	AUGUST 8, 2016
RESUBMITTAL	SEPTEMBER 1, 2016
REVISION	-
REVISION	-

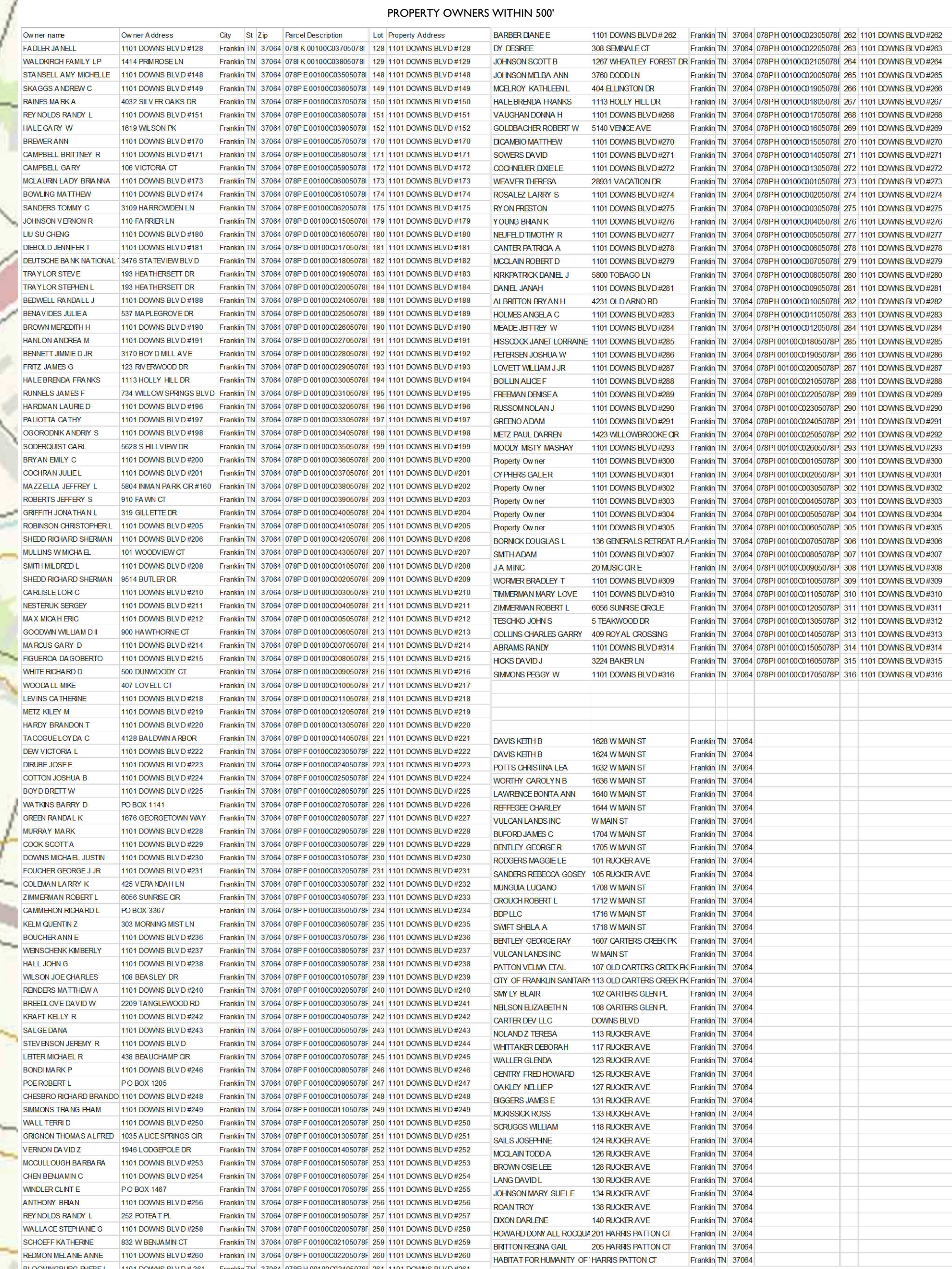


rev. date
8.26.16 - REVISED PER DRT REVIEW
COMMENTS REVIEW 1 DATED 8.23.16

△ _____
△ _____
△ _____

S H E E T

COF # 6226



PROPERTY DESCRIPTION

Parcel of land lying in the 9th Civil District of City of Franklin, Williamson County, Tennessee said parcel being Lots 13 & 14 of Bob Rucker Lot Addition Subdivision as of record in Plat Book 1 Page 71 Registers Office Williamson County, Tennessee. Bounded on the east by Rucker Avenue (50' ROW), on the south by Rucker Park P.D.V. Subdivision, Replatting of Lot 12 of Rucker Subdivision as of record in Plat Book P61 Page 81 R.O.W.C.T., on the west by Hardison Hills Subdivision, Section 3 as of record in Plat Book P39 Page 141 R.O.W.C.T. on the north by lot 15 of Bob Rucker Lot Addition Subdivision, and being more particularly described as follows:

Beginning at the southeast corner at an existing iron rod on the west margin of Rucker Avenue, said corner being approximately 317+/-feet from the northerly margin of Carters Creek Pike;

Thence with the following calls,

N 80° 57' 50" W a distance of 196.12' to a metal fence post next to a wooden fence post;

Thence, following remnants of a metal fence N 060 3627" W a distance of 103.41' to a metal fence post;

Thence, with remnants of a second metal fence S 81 0 04' 1 5" E a distance of 224.84' to an iron rod set;

said corner lying on the westerly margin of Rucker Avenue;

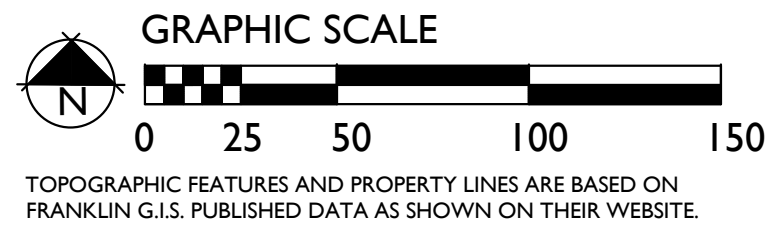
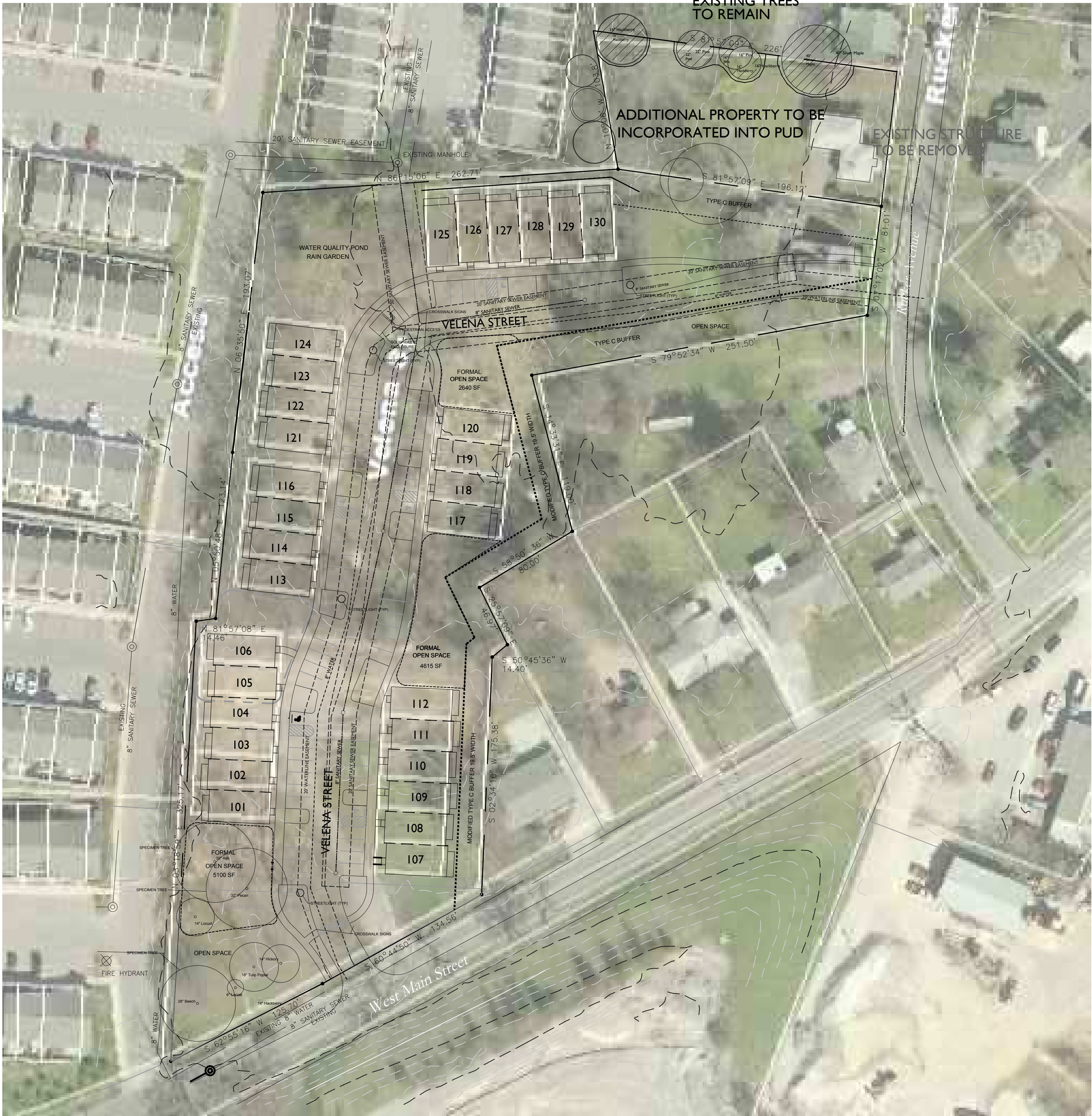
Thence, S 090 30'58" W a distance of 100.00' to the Point of Beginning Containing 21, 006 square feet, or 0.482 acres more or less.

PARCEL LINES AND TOPOGRAPHIC INFORMATION SHOWN HERE IS FROM THE C.O.F. - G.I.S. DEPT.



OVERALL EXISTING CONDITIONS PLAN

COF # 6226



STATEMENT OF IMPACTS

STREET NETWORK
VELEÑA STREET IS ALREADY CONSTRUCTED AS A PRIVATE STREET CONNECTING WEST MAIN STREET TO RUCKER AVENUE. NO ADDITIONAL IMPROVEMENTS ARE PROPOSED OTHER THAN THE ADDITION OF 15 PARKING SPACES. AVERAGE DAILY TRIPS WILL INCREASE FROM 160 UNDER THE EXISTING APPROVED PUD TO 192 UNDER THE PROPOSED CONDITIONS.

WATER
WATER WILL BE PROVIDED BY CITY OF FRANKLIN VIA AN EXISTING 8" PIPE RUNNING THROUGH THE DEVELOPMENT. THIS LINE WAS BUILT IN CONJUNCTION WITH THE EXISTING PUD LINKING EXISTING WATER LINES IN WEST MAIN STREET AND RUCKER AVENUE.

SEWER
SEWER WILL BE PROVIDED BY CITY OF FRANKLIN VIA AN EXISTING 8" PIPE RUNNING WITHIN THE PAVEMENT OF VELEÑA STREET. THE PROPOSED DEVELOPMENT WILL PLACE AN ADDITIONAL 6" PIPE ON THE SEWER THAT WAS BUILT TO SERVE THE EXISTING APPROVED PUD.

RECLAIMED WATER
RECLAIMED WATER IS NOT KNOWN TO BE PRESENT AT THIS SITE, EXTENSIONS ARE NOT PROPOSED.

DRAINAGE FACILITIES
POST DEVELOPMENT PEAK FLOWS WILL BE LESS THAN PRE DEVELOPMENT PEAK FLOWS AND THE OUTFALL LOCATION WILL NOT CHANGE. THE DEVELOPMENT WILL INCREASE IMPERVIOUS AREA FROM 0.26 AC TO 0.41 AC.

POLICE/FIRE
2.1 MILES FROM THE POLICE DEPARTMENT AND 1.75 MILES FROM THE FIRE DEPARTMENT STATION 1.

RECREATION/SCHOOLS
WHILE NUMBER OF STRUCTURES WILL INCREASE BY SIX, THIS DEVELOPMENT WILL HAVE NO ADVERSE EFFECT ON SURROUNDING SCHOOLS AND RECREATIONAL FACILITIES.

REFUSE COLLECTION
REFUSE COLLECTION SERVICE WILL BE PROVIDED BY THE CITY OF FRANKLIN SOLID WASTE USING THE EXISTING DUMPSTER LOCATION FOR THE NEW RESIDENCES.

RESTRICTIVE COVENANTS
THERE IS AN HOA IN PLACE THAT IS RESPONSIBLE FOR THE MAINTENANCE OF COMMON AREAS.

MINERAL RIGHTS
NO THIRD PARTY MINERAL RIGHTS ARE ASSOCIATED WITH THIS PROPERTY.

GENERAL NOTES

1. THERE ARE NO SLOPES GREATER THAN 14% ON THE SITE
2. THERE IS NO FLOOD PLAIN ON THE SITE.

EXISTING STRUCTURES
EXISTING NATURAL FEATURES

HISTORIC PROPERTIES
PLANNED UNIT DEVELOPMENTS
EASEMENTS
MINERAL RIGHTS
STORMWATER NARRATIVE
GRADING AND DRAINAGE DATA
CHART AND DRAINAGE BASINS

EXISTING SOILS

S₁C₂—STIVERSVILLE SILT LOAM, 5 TO 12 PERCENT SLOPES, ERODED

THERE ARE NO HISTORIC PROPERTIES OR FEATURES LOCATED ON THE SITE
TREE CANOPY IS SHOWN. THERE ARE NO ROCK OUTCROPPINGS OR KARST TOPOGRAPHY
THERE ARE NO WATERCOURSES, CHANNELS, WETLANDS OR OTHER WATER BODIES PRESENT
THERE ARE NO HISTORIC PROPERTIES WITHIN 500' OF THE SITE
HARDISON HILLS IS LOCATED WEST OF THE PROPERTY AS SHOWN
EXISTING EASEMENTS ARE SHOWN
THERE ARE NO THIRD PARTY MINERAL RIGHTS ON THE SUBJECT PROPERTY
SEE SHEET 3.0
SEE SHEET 3.0

SITE DATA:

PROJECT NAME:
PROJECT NUMBER:
SUBDIVISION:
LOT NUMBER:
ADDRESS:
CITY:
COUNTY:
STATE:
CIVIL DISTRICT:
MAP, GROUP, PARCEL NUMBERS:

EXISTING ZONING:
PROPOSED ZONING:
CHARACTER AREA OVERLAY:
OTHER APPLICABLE OVERLAYS
APPLICABLE DEVELOPMENT STANDARD:
TOTAL ACREAGE
TOTAL SQUARE FOOTAGE:

MINIMUM REQUIRED SETBACKS:
FRONT YARD:
REAR YARD:
SIDE YARD:

OWNER / APPLICANT:
ADDRESS:
PHONE:
EMAIL:
CONTACT:
ENGINEER:
ADDRESS:

EMAIL
CONTACT:

LANDSCAPE ARCHITECT :
ADDRESS:
PHONE:
FAX:
EMAIL:
CONTACT:

RUCKER PARK PUD SUBDIVISION, REZONING PLAN, REVISION 1
6226
RUCKER
13 & 14
117 RUCKER AVENUE
FRANKLIN
WILLIAMSON
TENNESSEE
5TH CIVIL DISTRICT
MAP 78P, PARCEL 17.00

SD-R 8.17 (Existing PUD) AND R3
SD-R(8.70)
WEST HARPETH 2
NONE
CONVENTIONAL
3.66 + .48 in Parcel 17 = 4.14 ACRES
179,970 SF

20'
5'
MIN 5'
12' BETWEEN STRUCTURES

RBF INVESTMENTS, LLC
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FRANKLIN, TN 37064
(615) 547-4420
mail@johnfranks.org
JOHN FRANKS
STEVE CLIFTON, P.E.
144 S.E. PARKWAY, SUITE 255, FRANKLIN, TN 37064
(615) 207-9339
stevec@cliftonandkingllc.com
STEVE CLIFTON, P.E.

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144 S.E. PARKWAY, SUITE 200, FRANKLIN, TN 37064
(615) 975-5765
(615) 790-1350
greg.gamble@gdc-tn.com
GREG GAMBLE

EXISTING TREE CANOPY OF AREA TO BE ADDED

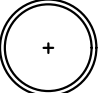
BASED ON SITE VISIT AND AS SHOWN IN AERIAL PHOTOGRAPH THERE ARE EIGHT TREES ON OR ADJOINING THE SITE, ONE OF WHICH WOULD BE CLASSIFIED AS A SPECIMEN TREE. AS PROPOSED THIS TREE AND ONE OTHER WILL HAVE TO BE REMOVED.

TREE CANOPY DATA

TOTAL SITE AREA = 21,006 SF

EXISTING TREE CANOPY: 3,661 SF
3,661 SF/21,006 SF = .174 (17.4%) OF TOTAL SITE

REQUIRED CANOPY PRESERVATION =
26% OF TOTAL CANOPY
3,661 SF * 26% = 952 SF



SPECIMEN TREE LIST

TREE TO BE REMOVED ONE HACKBERRY @ 30'

PROPERTY DESCRIPTION

Parcel of land lying in the 9th Civil District of City of Franklin, Williamson County, Tennessee. Said parcel being lots 13 & 14 of Bob Rucker Lot Addition Subdivision as of record in Plat Book 1 Page 71 Registers Office Williamson County, Tennessee. Bounded on the east by Rucker Avenue (50' ROW), on the south by Rucker Park P.U.D. Subdivision, Replatting of Lot 12 of Rucker Subdivision as of record in Plat Book P61 Page 83 R.O.W.C.T., on the west by Hardison Hills Subdivision, Section 3 as of record in Plat Book P99 Page 141 R.O.W.C.T. on the north by lot 15 of said Bob Rucker Lot Addition Subdivision, and being more particularly described as follows:

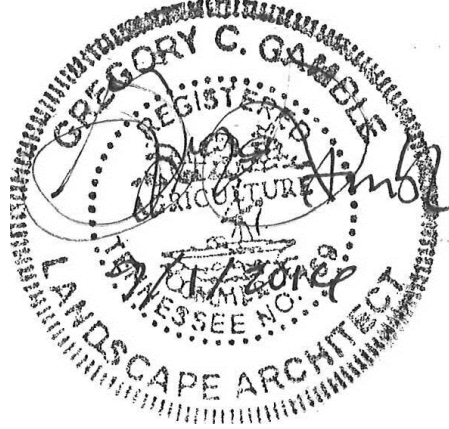
Beginning at the southeast corner at an existing iron rod on the west margin of Rucker Avenue, said corner being approximately 317.4/-feet from the northerly margin of Carters Creek Pike;
Thence with the following calls:
N 800 57' 50" W a distance of 196.12' to a metal fence post next to a wooden fence post;
Thence, following remnants of a metal fence N 060 36' 27" W a distance of 103.41' to a metal fence post;
Thence, with remnants of a second metal fence S 81 0 04' 1 5" E a distance of 224.84' to an iron rod set;
said corner lying on the westerly margin of Rucker Avenue;
Thence, S 090 30' 58" W a distance of 100.00' to the Point of Beginning Containing 21,006 square feet, or 0.482 acres more or less.

SCHEDULE OF RESIDENTIAL UNITS

RUCKER PARK PUD SUBDIVISION	179,970 SF	3.66 ACRES	30 UNITS	8.2 DU/ACRE
ADDITIONAL PROPERTY - PARCEL 17	21,006 SF	.48 ACRES	6 ADDITIONAL UNITS	
RUCKER PARK PUD - REVISION 1	200,976 SF	4.14 ACRES	36 UNITS	8.7 DU/ACRE

GDC

GAMBLE
DESIGN COLLABORATIVE
DEVELOPMENT PLANNING AND
LANDSCAPE ARCHITECTURE



RUCKER PARK PUD SUBDIVISION
REZONING PLAN, REVISION 1
FRANKLIN, TENNESSEE

GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 230
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
greg@gdccollab.com
615.975.5765

rev. date

△ 8.26.16, REVISED PER DRT REVIEW
COMMENTS, REVIEW 1 DATED 8.23.16

△
△
△

GDC Job No. 16013
JULY 30, 2016

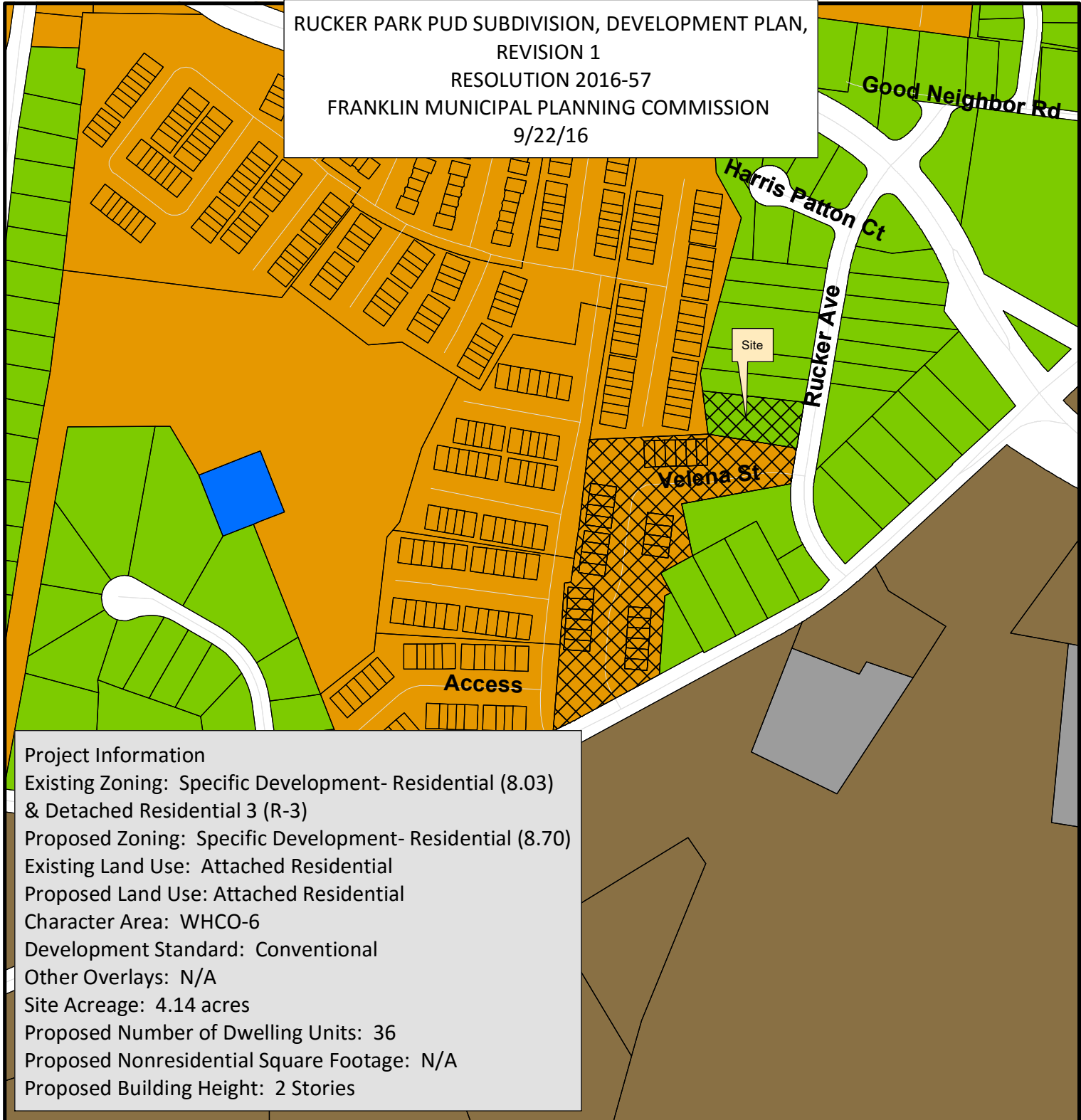
S H E E T

C1.1

COF # 6226

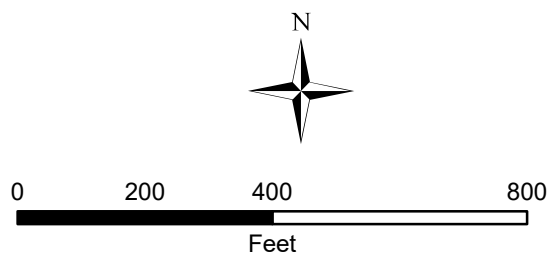
ENLARGED EXISTING CONDITIONS

RUCKER PARK PUD SUBDIVISION, DEVELOPMENT PLAN,
 REVISION 1
 RESOLUTION 2016-57
 FRANKLIN MUNICIPAL PLANNING COMMISSION
 9/22/16



Project Information
 Existing Zoning: Specific Development- Residential (8.03)
 & Detached Residential 3 (R-3)
 Proposed Zoning: Specific Development- Residential (8.70)
 Existing Land Use: Attached Residential
 Proposed Land Use: Attached Residential
 Character Area: WHCO-6
 Development Standard: Conventional
 Other Overlays: N/A
 Site Acreage: 4.14 acres
 Proposed Number of Dwelling Units: 36
 Proposed Nonresidential Square Footage: N/A
 Proposed Building Height: 2 Stories

- | | |
|---|---------------------------------------|
| Rucker Park Development Plan Revision 1 | SD-R Specific Development-Residential |
| AG Agricultural District | SD-X Specific Development-Variety |
| ER Estate Residential | OR Office Residential District |
| R-1 Residential District | GO General Office District |
| R-2 Residential District | CC Central Commercial District |
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| RM-20 Attached 20 Residential District | CI Civic and Institutional District |



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RESOLUTION 2016-57

TO BE ENTITLED: "A RESOLUTION APPROVING A REVISED DEVELOPMENT PLAN FOR RUCKER PARK PUD SUBDIVISION, FOR THE PROPERTY LOCATED NORTH OF WEST MAIN STREET AND WEST OF RUCKER AVENUE, 117 RUCKER AVENUE."

WHEREAS, the Board of Mayor and Aldermen (BOMA) has, or will, approve zoning for the Property as part of Ordinance 2016-37; and

WHEREAS, the Planned Unit Development (PUD) process is a review procedure that is intended to encourage innovative land planning and design and avoid the monotony sometimes associated with large developments by:

- (a) Reducing or eliminating the inflexibility that sometimes results from strict application of zoning standards that were designed primarily for individual lots;
- (b) Allowing greater freedom in selecting the means to provide access, light, open space, and design amenities;
- (c) Encouraging a sensitive design that respects the surrounding established land use character and natural or man-made features of the site including, but not limited to, trees, historic features, streams, hillsides, and floodplains;
- (d) Promoting quality design and environmentally sensitive development by allowing development to take advantage of special site characteristics, locations, and land uses; and
- (e) Allowing deviations from certain zoning standards that would otherwise apply if not contrary to the general spirit and intent of this ordinance; and

WHEREAS, the PUD process requires the approval of a Development Plan that is reviewed and approved by BOMA, after a public hearing and a recommendation by the Franklin Municipal Planning Commission (FMPC).

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS:

SECTION I. That the legal description of the property included in the Development Plan, as amended, is as follows:

LEGAL DESCRIPTION – PARCEL 17 ON MAP 78P GROUP A

Parcel of land lying in the 9th Civil District of City of Franklin, Williamson County, Tennessee. Said parcel being lots 13 & 14 of Bob Rucker Lot Addition Subdivision as of record in Plat Book 1 Page 71 Registers Office Williamson County, Tennessee. Bounded on the east by Rucker Avenue (50' ROW), on the south by Rucker Park P.U.D. Subdivision, Replatting of Lot 12 of Rucker Subdivision as of record in Plat Book P61 Page 81 R.O.W.C.T., on the west by Hardison Hills Subdivision, Section 3 as of record in Plat Book P39 Page 141 R.O.W.C.T. on the north by lot 15 of said Bob Rucker Lot Addition Subdivision, and being more particularly described as follows:

Beginning at the southeast corner at an existing iron rod on the west margin of Rucker Avenue, said corner being approximately 317+/-feet from the northerly margin of Carters Creek Pike; Thence with the following calls, N 80° 57 '50" W a distance of 196.12' to a metal fence post next to a wooden fence post; Thence, following remnants of a metal

fence N 06° 36'27" W a distance of 103.41' to a metal fence post; Thence, with remnants of a second metal fence S 81 ° 04' 1 5" E a distance of 224.84' to an iron rod set. said corner lying on the westerly margin of Rucker Avenue; Thence, S 09° 30'58" W a distance of 100.00' to the Point of Beginning Containing 21 ,006 square feet, or 0.482 acres more or less.

LEGAL DESCRIPTION – FINAL PLAT RUCKER PARK PUD SUBDIVISION, REV 1, PB 63 PG 34

Parcels of land lying in the 5th Civil District of the City of Franklin, Williamson County, Tennessee. Said parcels being lots 101-132 of the Final Plat of Rucker Park PUD Subdivision, Resubdivision of Lot 12, Revision 1, as of record in Plat Book 63, Page 34, recorded on January 29, 2016, at the Registers Office, Williamson County, Tennessee. Property containing 3.66 acres, more or less.

SECTION II: That the attached Location Map shall serve the purpose of further delimiting the geographical boundaries as described by this Resolution.

SECTION III: That the overall entitlements, as amended, for the (Rucker Park PUD Subdivision) are as follows:

Entitlements	Rucker Park PUD Subdivision
Base Zone Districts	Specific Development-Residential (SD-R 8.03) District and Detached Residential 3 (R-3) District
Proposed Zone District	Specific Development-Residential (SD-R 8.70) District
Character Area Overlay	WHCO-2
Other Zoning Overlays	N/A
Development Standard	Conventional
Number of Dwelling Units	30 existing, 36 proposed
Open Space Requirements	Formal - .36 Acres Informal – 1.93 Acres Total – 2.29 Acres
Number of Phases in Development	N/A
Original Development Plan Approval	Resolution No. 2012-53 Date of approval: 11/13/2012
Revision Number	1

SECTION IV: That the Development Plan, the exhibits accompanying the Development Plan, and all conditions and restrictions placed upon the Development Plan by the Franklin Municipal Planning Commission and this Board shall be made a part of this Resolution as though copied verbatim herein,

and that a permanent record of the Development Plan, the exhibits accompanying the Development Plan, and all such conditions and restrictions shall be kept in the Franklin Planning and Sustainability Department.

SECTION V. That this Resolution shall take effect from and after its passage on its first and final reading, the health, safety, and welfare of the citizens requiring it.

ERIC S. STUCKEY
City Administrator

DR. KEN MOORE
Mayor

Approved as to form by:

Shauna R. Billingsley
City Attorney

PREAPPLICATION CONFERENCE: _____7/26/2016_____

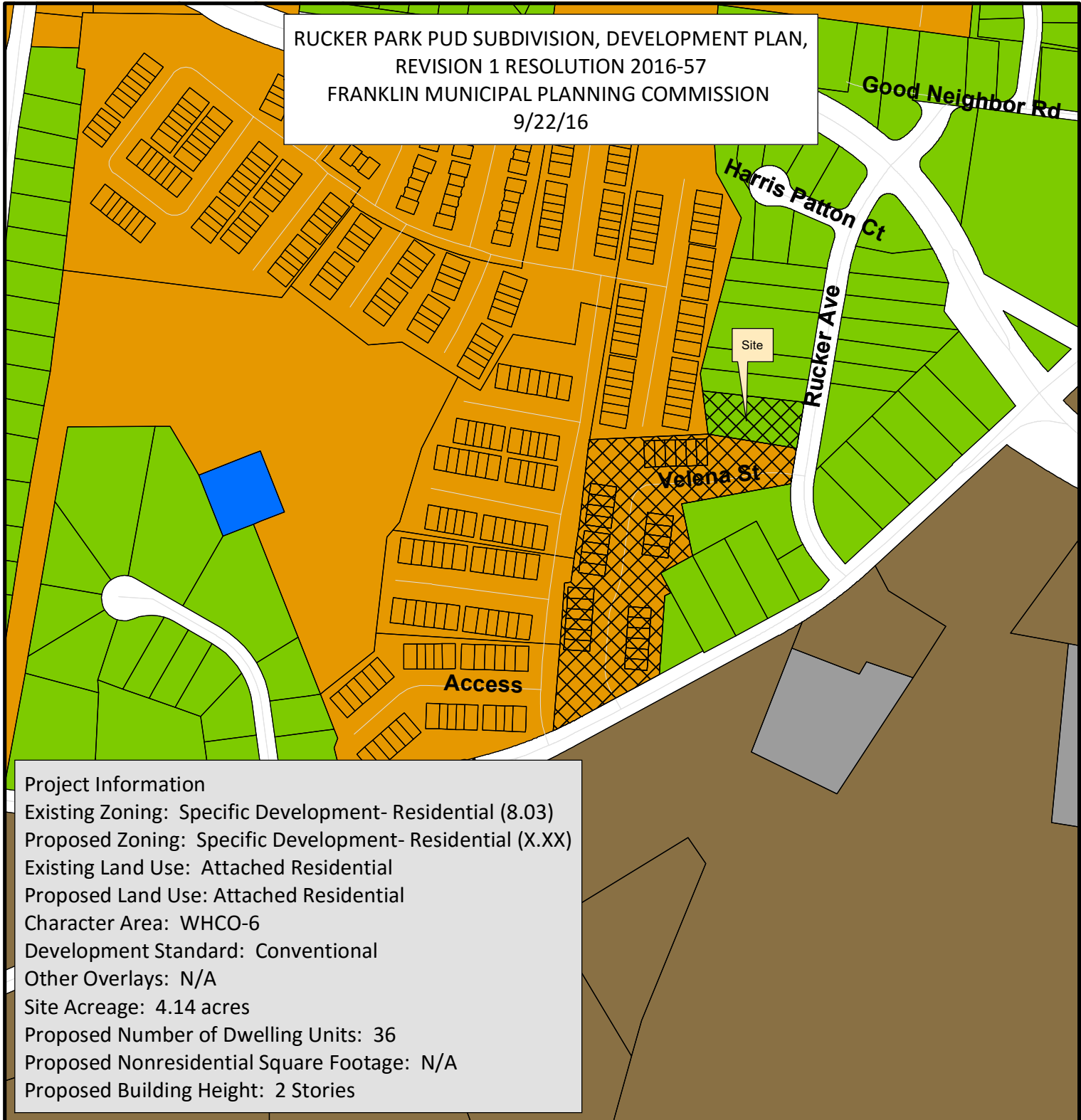
BOMA/FMPC JOINT CONCEPTUAL WORKSHOP: _____7/28/2016_____

NEIGHBORHOOD MEETING: _____8/4/2016_____

PLANNING COMMISSION RECOMMENDED APPROVAL: _____

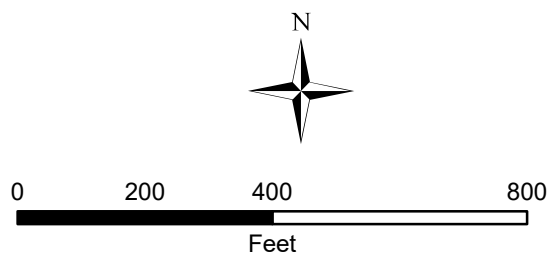
PUBLIC HEARING AND BOMA APPROVAL: _____

RUCKER PARK PUD SUBDIVISION, DEVELOPMENT PLAN,
 REVISION 1 RESOLUTION 2016-57
 FRANKLIN MUNICIPAL PLANNING COMMISSION
 9/22/16



Project Information
 Existing Zoning: Specific Development- Residential (8.03)
 Proposed Zoning: Specific Development- Residential (X.XX)
 Existing Land Use: Attached Residential
 Proposed Land Use: Attached Residential
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 Other Overlays: N/A
 Site Acreage: 4.14 acres
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 Proposed Nonresidential Square Footage: N/A
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- | | |
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CONDITIONS OF APPROVAL:

Engineering - PUD Plan Checklist

General Comments

1. E. Existing Conditions Plan

- Applicant shall indicate watercourse, water bodies, conveyance, springs (perennial only), sinkholes, and channels that drain 25 acres or more. Show the location of the existing channel indicated to be a wet weather conveyance on all plan sheets.
- Please see sheet C1.0
- The previous comment, "*Show the location of the existing channel indicated to be a wet weather conveyance on all plan sheets.*" has not been addressed.

Applicant shall show the location of the existing channel on all plan sheets.

2. H. Stormwater Management Plan

- Applicant shall locate all permanent stormwater BMPs and Green Infrastructure in open space lots for all residential development. All water resource buffers shall also be placed in open space lots.
- This is shown on sheet C3.0
- The previous comment, "*Applicant shall locate all permanent stormwater BMPs and Green Infrastructure in open space lots for all residential development. All water resource buffers shall also be placed in open space lots.*" has not been addressed.

Applicant shall show the proposed open space lot(s) on the plans.

Parks

General Comments

3. Parkland information

- Parks-A development with over 10 units shall comply with the Parkland Dedication ordinance 5.5.4. This Development has 30 units existing and paid for therefore, fees in lieu shall be requested for additional units in this development.

The first 35 units are at 1200sf and all units over 35 are 600sf.

Applicant shall place additional units on plans and show square footage counts.

The fees shall be due before recording final plat.

- Understood
- Parks-Applicant shall change the information on sheet C.2 to reflect additional units and show square footage. These fees shall be due before the final plat can be recorded.

Planning (Landscape)

General Comments

4. sidewalks

- Sidewalks are required along Rucker Avenue and West Main.
- Sidewalks are shown along Rucker Avenue, there is no sidewalk available on West Main Street to connect to
- Per COF Zoning 5.10.13 sidewalks are required on both sides of all streets.

RUCKER PARK PUD SUBDIVISION

DEVELOPMENT PLAN, REVISION 1

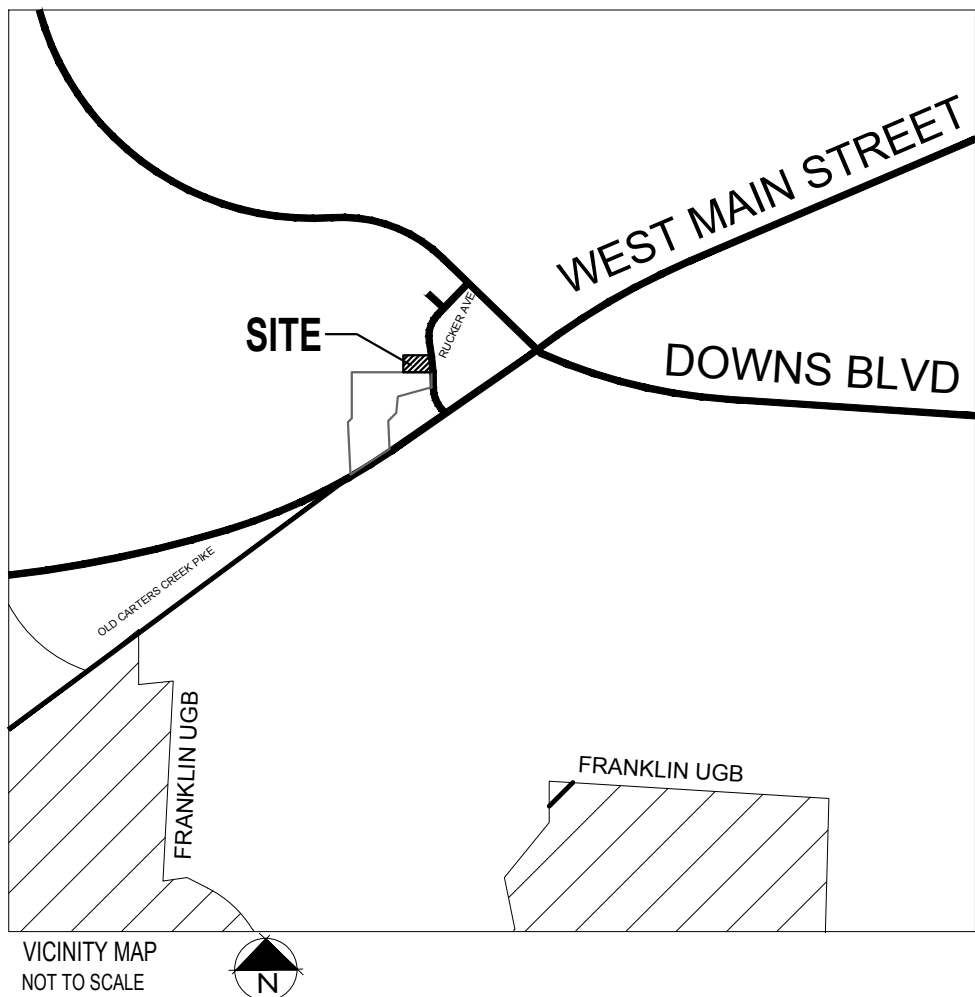
COF # 6227

MAP 78P, PARCEL 17.00
MAP 78P, GROUP J, PARCELS 00100-003200

FRANKLIN, TENNESSEE
CIVIL DISTRICT 5

SHEET INDEX

- C 0.0 COVER SHEET
- C 1.0 OVERALL EXISTING CONDITIONS PLAN
- C 1.1 ENLARGED EXISTING CONDITIONS PLAN
- C 2.0 OVERALL DEVELOPMENT PLAN
- C 2.1 ARCHITECTURAL IMAGES
- C 3.0 OVERALL GRADING & DRAINAGE PLAN
- C 4.0 NOT INCLUDED IN THIS DRAWING SET
- C 5.0 OVERALL UTILITY PLAN



LANDSCAPE ARCHITECT/PLANNER

GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY SUITE 200
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GREG GAMBLE, RLA (615) 975-5765
EMAIL ADDRESS: greggambie209@gmail.com



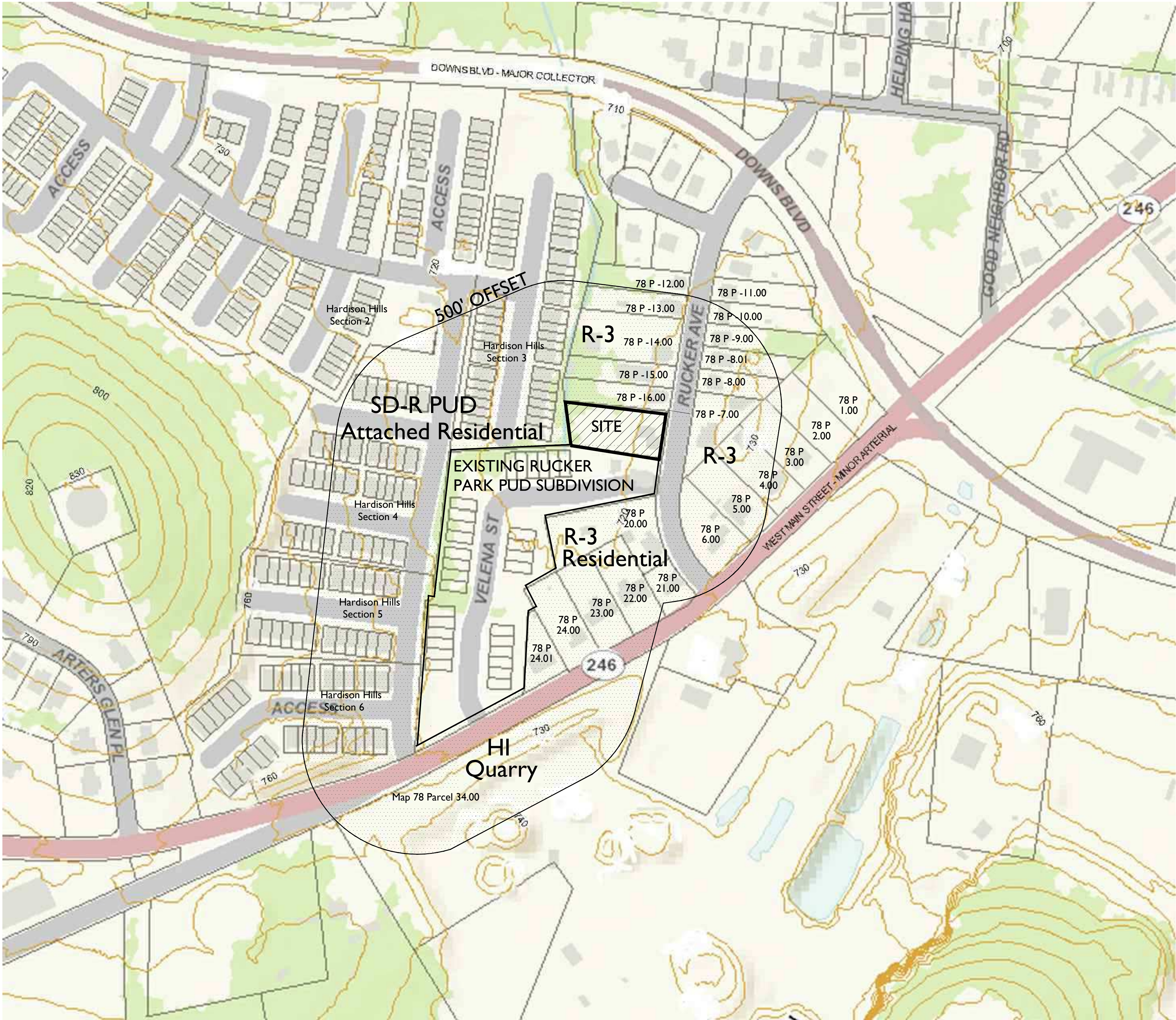
RUCKER PARK PUD SUBDIVISION

DEVELOPMENT PLAN, REVISION 1

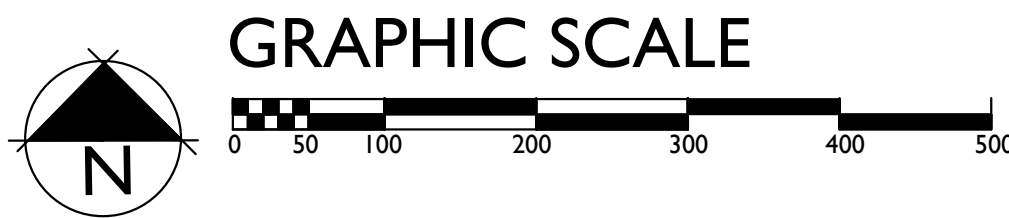
COF # 6227
FRANKLIN, TENNESSEE

SITE DATA:	
PROJECT NAME:	RUCKER PARK PUD SUBDIVISION
PROJECT NUMBER:	6227
SUBDIVISION:	RUCKER
LOT NUMBER:	13 & 14
ADDRESS:	117 RUCKER AVENUE
CITY:	FRANKLIN
COUNTY:	WILLIAMSON
STATE:	TENNESSEE
CIVIL DISTRICT:	5TH CIVIL DISTRICT
MAP, GROUP, PARCEL NUMBERS:	MAP 78P, PARCEL 17.00 MAP 78P, GROUP J, PARCELS 00100-003200 SD-R 8.17 (Existing PUD) and R3 SD-R 8.70
EXISTING ZONING:	WEST HARPETH 2
PROPOSED ZONING:	NONE
CHARACTER AREA OVERLAY:	CONVENTIONAL
OTHER APPLICABLE OVERLAYS:	3.66 + .48 in Parcel 17 = 4.14 ACRES
APPLICABLE DEVELOPMENT STANDARD:	179,970 SF
TOTAL ACREAGE	
TOTAL SQUARE FOOTAGE:	
MINIMUM REQUIRED SETBACKS:	
FRONT YARD:	20'
REAR YARD:	5'
SIDE YARD:	MIN 5'
	12' BETWEEN STRUCTURES
OWNER / APPLICANT:	RBF INVESTMENTS, LLC
ADDRESS:	144 SOUTHEAST PARKWAY, SUITE 230 FRANKLIN, TN 37064
PHONE:	(615) 567-4420
EMAIL:	ma@colnfranks.org
CONTACT:	JOHN FRANKS
ENGINEER:	STEVE CLIFTON, P.E.
ADDRESS:	144 S.E. PARKWAY, SUITE 255, FRANKLIN, TN 37064
	(615) 207-9339
EMAIL:	stevec@cliftonandkingllc.com
CONTACT:	STEVE CLIFTON, P.E.
LANDSCAPE ARCHITECT:	GAMBLE DESIGN COLLABORATIVE
ADDRESS:	144 S.E. PARKWAY, SUITE 200, FRANKLIN, TN 37064
PHONE:	(615) 975-5765
FAX:	(615) 790-1350
EMAIL:	greg.gamble@gdc-tn.com
CONTACT:	GREG GAMBLE

PRE-APPLICATION SUBMITTAL	JULY 13, 2016
INITIAL SUBMITTAL	AUGUST 8, 2016
RESUBMITTAL	SEPTEMBER 1, 2016
REVISION	-
REVISION	-



PARCEL LINES AND TOPOGRAPHIC INFORMATION SHOWN HERE IS FROM THE C.O.F. - G.I.S. DEPT.



PROPERTY OWNERS WITHIN 500'

PROPERTY DESCRIPTION
Parcel of land lying in the 9th Civil District of City of Franklin, Williamson County, Tennessee
Said parcel being lots 13 & 14 of Bob Rucker Lot Addition Subdivision as of record in Plat Book 1 Page 71 Registers Office Williamson County, Tennessee. Bounded on the east by Rucker Avenue (50' ROW), on the south by Rucker Park P.U.D. Subdivision, Replatting of Lot 12 of Rucker Subdivision as of record in Plat Book P61 Page 81 R.O.W.C.T., on the west by Hardison Hills Subdivision, Section 3 as of record in Plat Book P39 Page 141 R.O.W.C.T. on the north by lot 15 of said Bob Rucker Lot Addition Subdivision, and being more particularly described as follows:
Beginning at the southeast corner at an existing iron rod on the west margin of Rucker Avenue, said corner being approximately 317+/-feet from the northerly margin of Carters Creek Pike;
Thence with the following calls,
N 80° 57' 50" W a distance of 196.12' to a metal fence post next to a wooden fence post;
Thence, following remnants of a metal fence N 06° 36' 27" W a distance of 103.41' to a metal fence post;
Thence, with remnants of a second metal fence S 81° 0' 04" 1 5" E a distance of 224.84' to an iron rod set.
said corner lying on the westerly margin of Rucker Avenue;
Thence, S 09° 30' 58" W a distance of 100.00' to the Point of Beginning Containing 21 ,006 square feet, or 0.482 acres more or less.

OVERALL EXISTING
CONDITIONS PLAN



RUCKER PARK PUD SUBDIVISION
DEVELOPMENT PLAN, REVISION 1
FRANKLIN, TENNESSEE

GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 330
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
gg@gamble209@gmail.com
615.975.5765

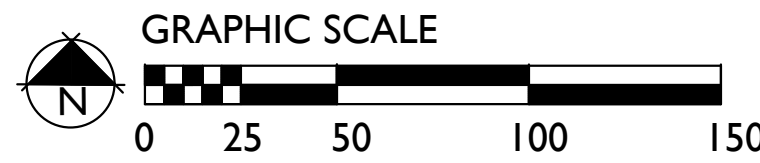
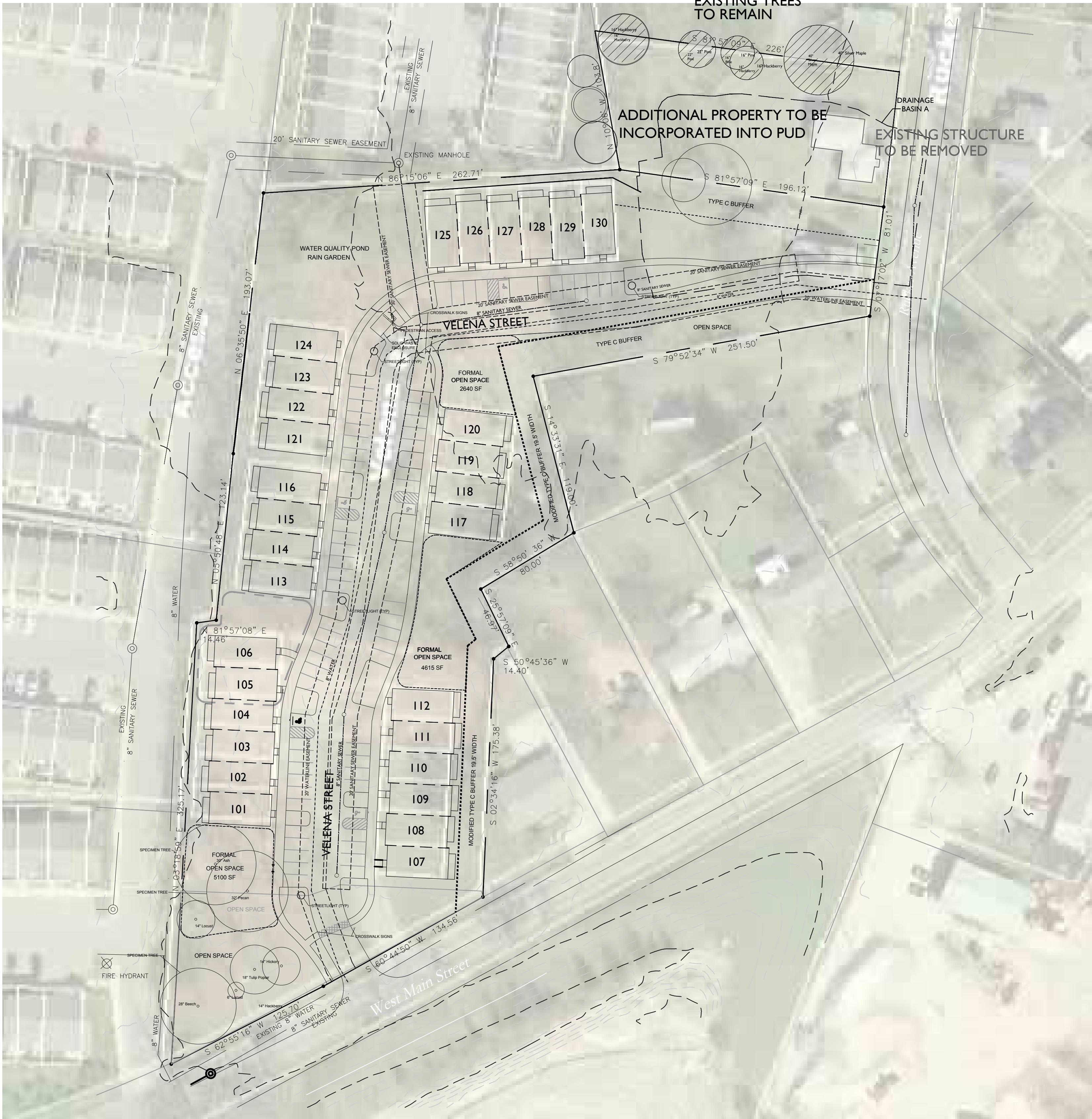
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△	8.26.16, REVISED FOR DRT REVIEW COMMENTS, REVIEW 1 DATED 8.23.16
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GDC Job No. 16013
JULY 30, 2016

S H E E T

C1.0

COF # 6226



PARCEL LINES AND TOPOGRAPHIC INFORMATION SHOWN HERE IS FROM THE C.O.F. - G.I.S. DEPT.

SITE DATA:	
PROJECT NAME:	RUCKER PARK PUD SUBDIVISION, DEVELOPMENT PLAN, REVISION 1
PROJECT NUMBER:	6227
SUBDIVISION:	RUCKER
LOT NUMBER:	13 & 14
ADDRESS:	117 RUCKER AVENUE
CITY:	FRANKLIN
COUNTY:	WILLIAMSON
STATE:	TENNESSEE
CIVIL DISTRICT:	5TH CIVIL DISTRICT
MAP, GROUP, PARCEL NUMBERS:	MAP 78P, PARCEL 17.00 MAP 78P, GROUP 1, PARCELS 00100-003200 SD-R 8.17 (Existing PUD) AND R3
EXISTING ZONING:	SD-R(8.70)
PROPOSED ZONING:	WEST HARPETH 2
CHARACTER AREA OVERLAY:	NONE
OTHER APPLICABLE OVERLAYS:	CONVENTIONAL
APPLICABLE DEVELOPMENT STANDARD:	3.66 + 48 in Parcel 17 = 4.14 ACRES
TOTAL ACREAGE:	179,970 SF
TOTAL SQUARE FOOTAGE:	
MINIMUM REQUIRED SETBACKS:	
FRONT YARD:	20'
REAR YARD:	5'
SIDE YARD:	MIN 5'
	12' BETWEEN STRUCTURES
OWNER / APPLICANT:	RBF INVESTMENTS, LLC
ADDRESS:	144 SOUTHEAST PARKWAY, SUITE 230 FRANKLIN, TN 37064 (615) 547-4420
PHONE:	mail@johnfranks.org
EMAIL:	JOHN FRANKS
CONTACT:	STEVE CLIFTON, P.E.
ENGINEER:	144 S.E. PARKWAY, SUITE 235, FRANKLIN, TN 37064 (615) 207-9339
ADDRESS:	steve@cliftonandkingllc.com
EMAIL:	STEVE CLIFTON, P.E.
CONTACT:	
LANDSCAPE ARCHITECT:	GAMBLE DESIGN COLLABORATIVE
ADDRESS:	144 S.E. PARKWAY, SUITE 200, FRANKLIN, TN 37064
PHONE:	(615) 975-5765
FAX:	(615) 790-1350
EMAIL:	greg.gamble@gdc-tn.com
CONTACT:	GREG GAMBLE

EXISTING TREE CANOPY OF AREA TO BE ADDED

BASED ON SITE VISIT AND AS SHOWN IN AERIAL PHOTOGRAPH THERE ARE EIGHT TREES ON OR ADJOINING THE SITE, ONE OF WHICH WOULD BE CLASSIFIED AS A SPECIMEN TREE. AS PROPOSED THIS TREE AND ONE OTHER WILL HAVE TO BE REMOVED.

TREE CANOPY DATA

TOTAL SITE AREA = 20,920 SF

EXISTING TREE CANOPY: 3,661 SF
3,661 SF/20,920 SF = .175 (17.5%) OF TOTAL SITE

REQUIRED CANOPY PRESERVATION =
26% OF TOTAL CANOPY
3,661 SF * 26% = 952 SF

SPECIMEN TREE LIST
TREE TO BE REMOVED ONE HACKBERRY @ 30'

GENERAL NOTES

1. THERE ARE NO SLOPES GREATER THAN 14% ON THE SITE
2. THERE IS NO FLOOD PLAIN ON THE SITE.

EXISTING STRUCTURES	THERE ARE NO HISTORIC PROPERTIES OR FEATURES LOCATED ON THE SITE
EXISTING NATURAL FEATURES	TREE CANOPY IS SHOWN, THERE ARE NO ROCK OUTCROPPINGS OR KARST TOPOGRAPHY
HISTORIC PROPERTIES	THERE ARE NO WATERCOURSES, CHANNELS, WETLANDS OR OTHER WATER BODIES PRESENT
PLANNED UNIT DEVELOPMENTS	THERE ARE NO HISTORIC PROPERTIES WITHIN 500' OF THE SITE
EASEMENTS	HARDISON HILLS IS LOCATED WEST OF THE PROPERTY AS SHOWN
MINERAL RIGHTS	EXISTING EASEMENTS ARE SHOWN
STORMWATER NARRATIVE	THERE ARE NO THIRD PARTY MINERAL RIGHTS ON THE SUBJECT PROPERTY
CHART AND DRAINAGE BASINS	SEE SHEET 3.0

EXISTING SOILS

SiC2—STIVERSVILLE SILT LOAM, 5 TO 12 PERCENT SLOPES, ERODED



RUCKER PARK PUD SUBDIVISION
DEVELOPMENT PLAN, REVISION 1
FRANKLIN, TENNESSEE

GAMBLE DESIGN COLLABORATIVE
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SUITE 230
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
greg@gdc-tn.com
615.975.5765

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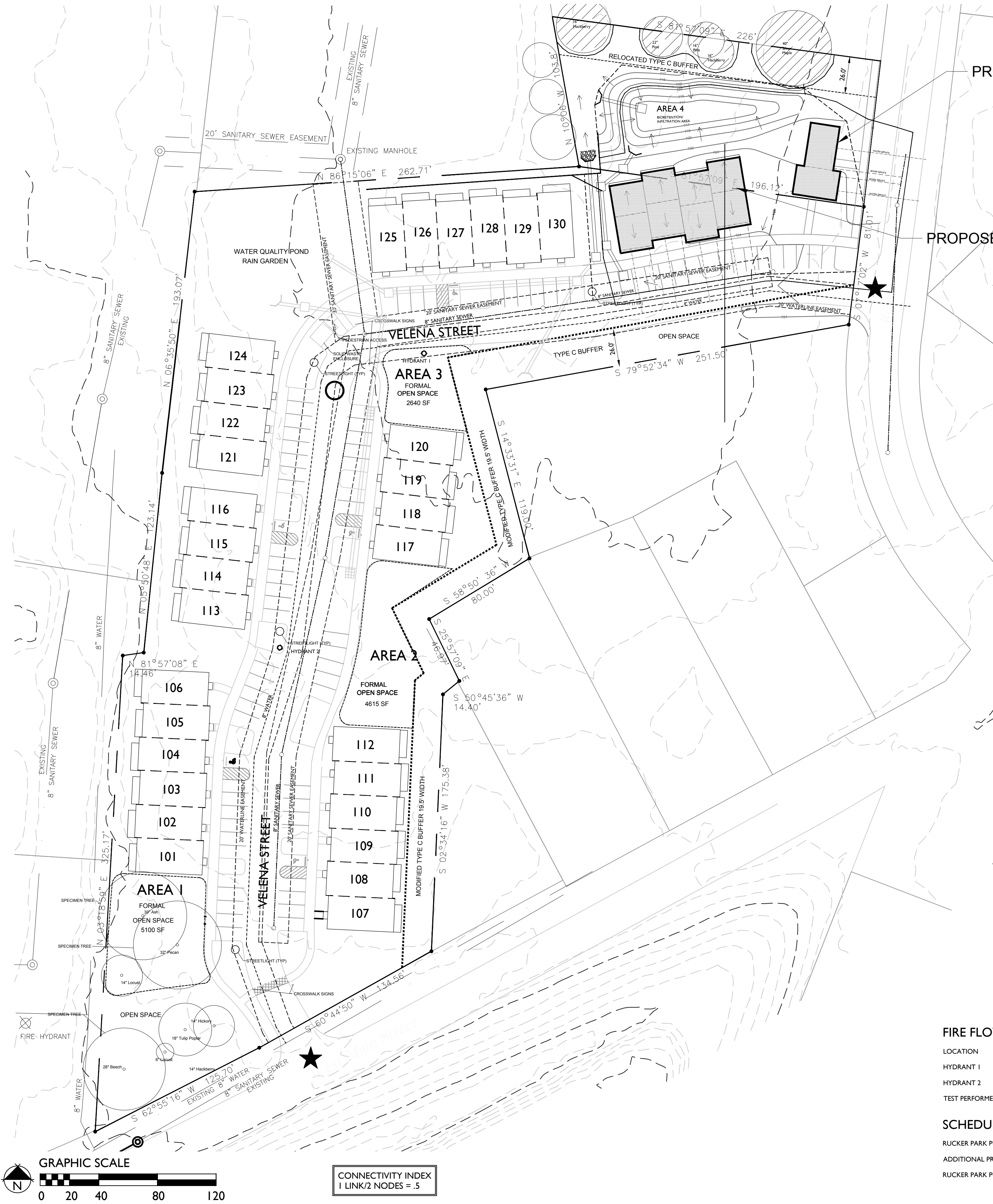
GDC Job No. 16013
AUGUST 8, 2016

S H E E T

C1.1

COF # 6227

ENLARGED EXISTING CONDITIONS



PROPOSED DUPLEX

PROPOSED FOUR UNIT TOWN HOME

FIRE FLOW DATA

LOCATION	STATIC	RESIDUAL	FLOW
HYDRANT 1	54 psi	30 psi	1220 gpm
HYDRANT 2	55 psi	28 psi	1341 gpm
TEST PERFORMED AT 8:00 AM ON AUGUST 12, 2016			

SCHEDULE OF RESIDENTIAL UNITS

RUCKER PARK PUD SUBDIVISION	179,970 SF	3.66 ACRES	30 UNITS	8.2 DU/ACRE
ADDITIONAL PROPERTY - PARCEL 17	21,006 SF	.48 ACRES	6 ADDITIONAL UNITS	
RUCKER PARK PUD - REVISION 1	200,976 SF	4.14 ACRES	36 UNITS	8.7 DU/ACRE

SITE DATA:

PROJECT NAME:	RUCKER PARK PUD SUBDIVISION, REVISION 1
PROJECT NUMBER:	6227
SUBDIVISION:	RUCKER
LOT NUMBER:	13 & 14
ADDRESS:	117 RUCKER AVENUE
CITY:	FRANKLIN
COUNTY:	WILLIAMSON
STATE:	TENNESSEE
CIVIL DISTRICT:	5TH CIVIL DISTRICT
MAP, GROUP, PARCEL NUMBERS:	MAP 78P, PARCEL 17.00
EXISTING ZONING:	SD-R 8.17 (Existing PUD) & R3
PROPOSED ZONING:	SD-R 8.70
CHARACTER AREA OVERLAY:	WEST HARPEETH 2
OTHER APPLICABLE OVERLAYS:	NONE
APPLICABLE DEVELOPMENT STANDARD:	CONVENTIONAL
TOTAL ACREAGE:	3.87 + .48 in Parcel 17 = 4.35 ACRES
TOTAL SQUARE FOOTAGE:	179,970 SF
MINIMUM REQUIRED SETBACKS:	
FRONT YARD:	20'
REAR YARD:	5'
SIDE YARD:	MIN 5'
	12' BETWEEN STRUCTURES
OWNER / APPLICANT:	RBF INVESTMENTS, LLC
ADDRESS:	144 S.E. PARKWAY, SUITE 230 FRANKLIN, TN 37064
PHONE:	(615) 567-4420
EMAIL:	mail@johnfranks.org
CONTACT:	JOHN FRANKS
ENGINEER:	STEVE CLIFTON, P.E.
ADDRESS:	144 S.E. PARKWAY, SUITE 255, FRANKLIN, TN 37064
EMAIL:	(615) 207-9339
CONTACT:	stevec@cliftonandjungle.com
LANDSCAPE ARCHITECT:	STEVE CLIFTON, P.E.
ADDRESS:	GAMBLE DESIGN COLLABORATIVE
PHONE:	144 S.E. PARKWAY, SUITE 200, FRANKLIN, TN 37064
FAX:	(615) 975-5765
EMAIL:	(615) 790-1350
CONTACT:	greg.gamble@gdc-tn.com
BUILDING SQUARE FOOTAGE:	GREG GAMBLE
BUILDING HEIGHT:	36 Single Family Attached Residences - 36,390 square feet total
LANDSCAPE SURFACE RATIO:	Building Height will not exceed 28'
MINIMUM LANDSCAPE SURFACE RATIO:	158 provided - 56%
MINIMUM PARKING REQUIREMENT:	20%
MAXIMUM PARKING LIMIT:	2.5/Unit = 90 Spaces
PARKING PROVIDED:	99 Spaces
RESIDENTIAL DENSITY:	90 Spaces
TREE CANOPY:	8.7 Units per Acre
PARKLAND:	15% of Site; 54% to be retained or 8% of site to remain
OPEN SPACE:	None
	FORMAL 15,750 s.f. or 36 Acres
	INFORMAL 83,992 s.f. or 1.93 Acres
	TOTAL 99,742 s.f. or 2.29 Acres

LAND USE PLAN COMPLIANCE

CHARACTER AREA OVERLAY: WHCO-2
APPLICABLE DEVELOPMENT STANDARD: CONVENTIONAL

LOCAL COMPATIBILITY

THE PROPOSED DEVELOPMENT IS COMPRISED OF TWO STRUCTURE. THE FOUR UNIT BUILDING IS A CONTINUATION OF THE RUCKER PARK TOWN HOMES. THE DUPLEX PROPOSED TO FRONT ON RUCKER AVENUE WILL HAVE THE CHARACTER MORE SIMILAR TO THE SINGLE FAMILY HOMES LOCATED ON THAT STREET AND IT WILL BE SETBACK CONSISTENT WITH THOSE RESIDENCES. THE PROPOSED DUPLEX WILL CONTINUE THE ESTABLISHED RHYTHM AND CHARACTER OF THE NEIGHBORING HOMES AS WELL.

SIDEWALKS:
SIDEWALKS TO BE INSTALLED FROM THE EXISTING RUCKER PARK PUD TO RUCKER AVENUE AND NORTH ALONG THAT STREET.

STORMWATER MANAGEMENT NARRATIVE:
ON-SITE STORMWATER WILL BE DIRECTED AWAY FROM PROPOSED BUILDINGS VIA POSITIVE DRAINAGE AND SWALES. OVERALL DRAINAGE PATTERNS WILL MIMIC EXISTING CONDITIONS. FLOWING FROM WEST TO EAST, THEN NORTH ALONG THE WET WEATHER CONVEYANCE LOCATED ALONG THE EAST SIDE OF HARDISON HILLS SECTION 2. STORMWATER WILL THEN BE COLLECTED IN A PROPOSED BIORETENTION AREA. OFF-SITE STORMWATER WILL BE DIVERTED AWAY FROM ANY PROPOSED STORMWATER TREATMENT AREAS. THE PROPOSED BIORETENTION AREAS WILL TREAT STORMWATER RUNOFF BEFORE IT EITHER INFILTRATES INTO THE SOIL OR DISCHARGES TO THE WET WEATHER CONVEYANCE.

THE HOMEOWNER'S ASSOCIATION SHALL BE RESPONSIBLE FOR AND SHALL MAINTAIN THE STORMWATER INFRASTRUCTURE. THESE ITEMS INCLUDE RAIN GARDENS, DETENTION BASINS, AND DRAINAGE SWALES.

OPEN SPACE REQUIREMENT CHART

Minimum Open Space Requirement : 15% RRequired
Site Acreage 4.13 Acres Open Space Required: 62 Acres
Formal Open Space Required: 9,999 Square Feet
Informal Open Space Required: 17,997 Square Feet

Open Space Provided:				
Key	Classification	Type	Area of Open Space	Paved Area Percent Impervious
Area 1	Formal	Sitting Area	5100 s.f.	None 0%
Area 2	Formal	Sitting Area	4850 s.f.	None 0%
Area 3	Formal	Gathering Area	3800 s.f.	None 0%
Lot 131	Informal	Buffer Yard/SW Area	40427 s.f.	None 0%
Lot 132	Informal	Buffer Yards	29350 s.f.	None 0%
Area 4	Informal	Bioretention Area	14215 s.f.	None 0%

THE PROPOSED FOUR UNIT TOWN HOME WILL BE ONE STORY AND CONTAIN UNITS RANGING FROM 1000 TO 1100 SF. THE DUPLEX BEING PROPOSED IS A TWO STORY BUILDING CONTAINING TWO 1200 SF UNITS.

STATEMENT OF IMPACTS

STREET NETWORK

VELENA STREET IS ALREADY CONSTRUCTED AS A PRIVATE STREET CONNECTING WEST MAIN STREET TO RUCKER AVENUE. NO ADDITIONAL IMPROVEMENTS ARE PROPOSED OTHER THAN THE ADDITION OF 15 PARKING SPACES. AVERAGE DAILY TRIPS WILL INCREASE FROM 160 UNDER THE EXISTING APPROVED PUD TO 192 UNDER THE PROPOSED CONDITIONS.

WATER

WATER WILL BE PROVIDED BY CITY OF FRANKLIN VIA AN EXISTING 8" PIPE RUNNING THROUGH THE DEVELOPMENT. THIS LINE WAS BUILT IN CONJUNCTION WITH THE EXISTING PUD LINKING EXISTING WATER LINES IN WEST MAIN STREET AND RUCKER AVENUE.

SEWER

SEWER WILL BE PROVIDED BY CITY OF FRANKLIN VIA AN EXISTING 8" PIPE RUNNING WITHIN THE PAYMENT OF VELENA STREET. THE PROPOSED DEVELOPMENT WILL PLACE AN ADDITIONAL 6 SFUE ON THE SEWER THAT WAS BUILT TO SERVE THE EXISTING APPROVED PUD.

RECLAIMED WATER

RECLAIMED WATER IS NOT KNOWN TO BE PRESENT AT THIS SITE, EXTENSIONS ARE NOT PROPOSED.

DRAINAGE FACILITIES

POST DEVELOPMENT PEAK FLOWS WILL BE LESS THAN PRE DEVELOPMENT PEAK FLOWS AND THE OUTFALL LOCATION WILL NOT CHANGE. THE DEVELOPMENT WILL INCREASE IMPERVIOUS AREA FROM 0.26 AC TO 0.41 AC.

POLICE/FIRE

2.1 MILES FROM THE POLICE DEPARTMENT AND 1.75 MILES FROM THE FIRE DEPARTMENT STATION 1.

RECREATION/SCHOOLS

WHILE NUMBER OF STRUCTURES WILL INCREASE BY SIX, THIS DEVELOPMENT WILL HAVE NO ADVERSE EFFECT ON SURROUNDING SCHOOLS AND RECREATIONAL FACILITIES.

REFUSE COLLECTION

REFUSE COLLECTION SERVICE WILL BE PROVIDED BY THE CITY OF FRANKLIN SOLID WASTE USING THE EXISTING DUMPSTER LOCATION FOR THE NEW RESIDENCES.

RESTRICTIVE COVENANTS

THERE IS AN HOA IN PLACE THAT IS RESPONSIBLE FOR THE MAINTENANCE OF COMMON AREAS.

MINERAL RIGHTS

NO THIRD PARTY MINERAL RIGHTS ARE ASSOCIATED WITH THIS PROPERTY.

OVERALL DEVELOPMENT PLAN



RUCKER PARK PUD SUBDIVISION
DEVELOPMENT PLAN, REVISION 1
PUD SUBDIVISION, DEVELOPMENT PLAN
FRANKLIN, TENNESSEE

GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 230
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
greg@gdccollab.com
615.975.5765

rev.	date
△	8.36.16 REVISED PER DRT REVIEW COMMENTS, REVIEW 1 DATED 8.23.16
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GDC Job No. 16013
JULY 30, 2016

S H E E T

C2.0

COF # 6227

THE INFORMATION SHOWN ON THIS PLAN IS BASED ON THE TENNESSEE STATE PLANE COORDINATE SYSTEM, ZONE 5301, FLIP ZONE 4100 AND NAD 83 DATUM.

PARCEL LINES AND TOPOGRAPHIC INFORMATION SHOWN HERE IS FROM THE C.O.F. - G.I.S. DEPT.



FOUR UNIT TOWN HOME

THIS IS A PHOTO OF ONE BUILDING ALREADY CONSTRUCTED IN RUCKER PARK. THESE ARE 1000-1100 SQUARE FOOT RESIDENCES WITH TWO BEDROOMS. THE UNITS HAVE BRICK VENEER ON ALL FOUR SIDES AND HAVE INDIVIDUAL PATIOS AT THE REAR OF THE UNIT.

DUPLEX HOME

THIS IS A PHOTO OF THE PROPOSED DUPLEX. THE HOME WILL HAVE ONE ENTRANCE AND A FRONT PORCH ON RUCKER AVENUE AND ANOTHER SIDE ENTRANCE FACING THE PARKING AREA OFF OF VELENA STREET. THE PROPOSED STRUCTURE WILL HAVE A MASONRY BASE WITH CEMENT BOARD SIDING ON ALL FOUR SIDES.



ARCHITECTURAL
IMAGES



RUCKER PARK PUD SUBDIVISION
DEVELOPMENT PLAN, REVISION 1
FRANKLIN, TENNESSEE

GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 330
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
gg@gsdca209@gmail.com
615.975.5765

rev.	date
△	ADDED COF NUMBER TO SET
△	
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GDC Job No. 16013
AUGUST 8, 2016

S H E E T

C2.1

COF # 6227

STATEMENT OF IMPACTS

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VELENA STREET IS ALREADY CONSTRUCTED AS A PRIVATE STREET CONNECTING WEST MAIN STREET TO RUCKER AVENUE. NO ADDITIONAL IMPROVEMENTS ARE PROPOSED OTHER THAN THE ADDITION OF 15 PARKING SPACES. AVERAGE DAILY TRIPS WILL INCREASE FROM 160 UNDER THE EXISTING APPROVED PUD TO 192 UNDER THE PROPOSED CONDITIONS.

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RECLAIMED WATER
RECLAIMED WATER IS NOT KNOWN TO BE PRESENT AT THIS SITE, EXTENSIONS ARE NOT PROPOSED.

DRAINAGE FACILITIES
POST DEVELOPMENT PEAK FLOWS WILL BE LESS THAN PRE DEVELOPMENT PEAK FLOWS AND THE OUTFALL LOCATION WILL NOT CHANGE. THE DEVELOPMENT WILL INCREASE IMPERVIOUS AREA FROM 0.26 AC TO 0.41 AC.

POLICE/FIRE
2.1 MILES FROM THE POLICE DEPARTMENT AND 1.75 MILES FROM THE FIRE DEPARTMENT STATION 1.

RECREATION/SCHOOLS
WHILE NUMBER OF STRUCTURES WILL INCREASE BY SIX, THIS DEVELOPMENT WILL HAVE NO ADVERSE EFFECT ON SURROUNDING SCHOOLS AND RECREATIONAL FACILITIES.

REFUSE COLLECTION
REFUSE COLLECTION SERVICE WILL BE PROVIDED BY THE CITY OF FRANKLIN SOLID WASTE USING THE EXISTING DUMPMSTER LOCATION FOR THE NEW RESIDENCES.

RESTRICTIVE COVENANTS
THERE IS AN HOA IN PLACE THAT IS RESPONSIBLE FOR THE MAINTENANCE OF COMMON AREAS.

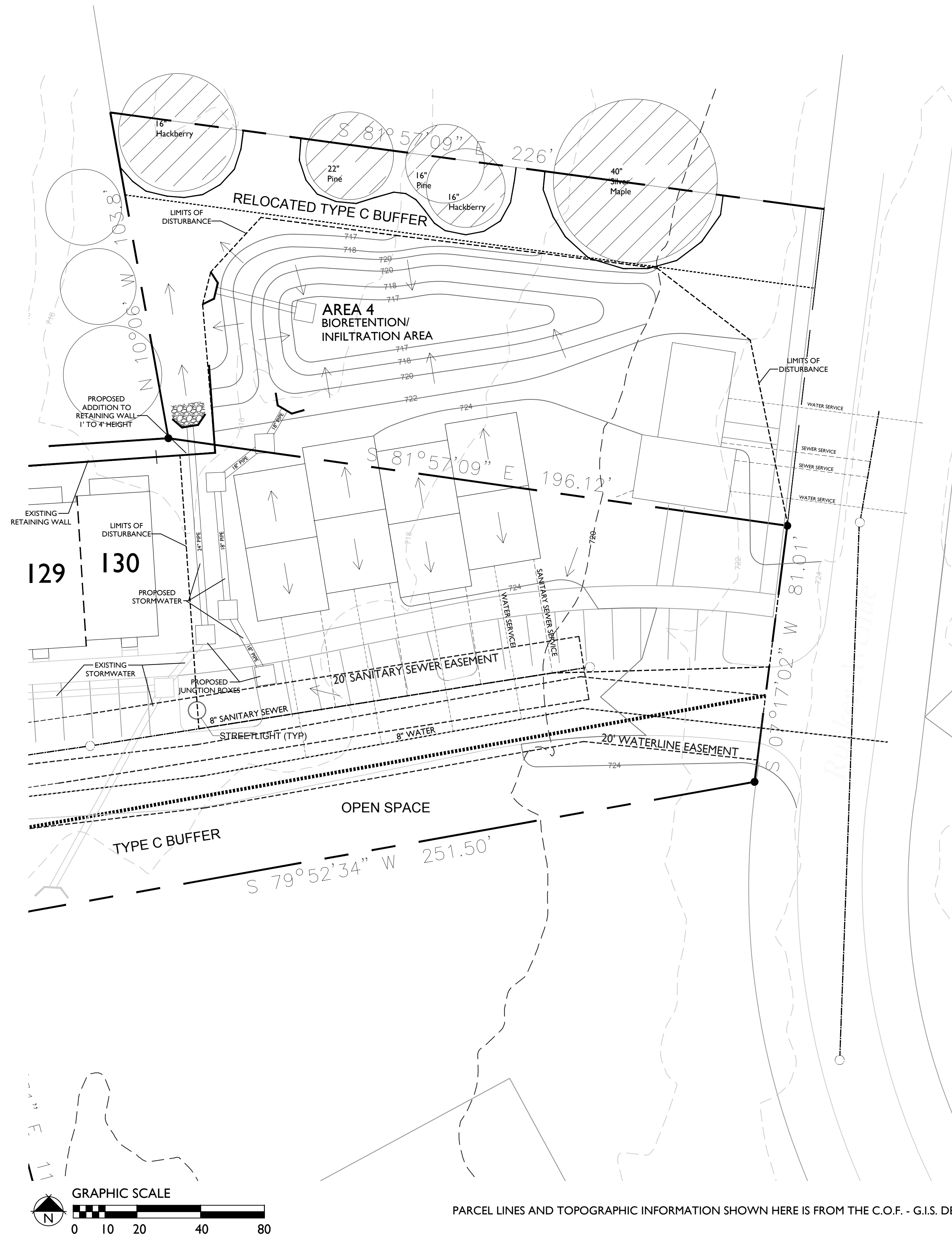
MINERAL RIGHTS
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STORMWATER MANAGEMENT NARRATIVE
ON-SITE STORMWATER WILL BE DIRECTED AWAY FROM PROPOSED BUILDINGS VIA POSITIVE DRAINAGE AND SWALES. OVERALL DRAINAGE PATTERNS WILL MIMIC EXISTING CONDITIONS, FLOWING FROM WEST TO EAST, THEN NORTH ALONG THE WET WEATHER CONVEYANCE LOCATED ALONG THE EAST SIDE OF HARDISON HILLS SECTION 2. STORMWATER WILL THEN BE COLLECTED IN A PROPOSED BIORETENTION AREA. OFF-SITE STORMWATER WILL BE DIVERTED AWAY FROM ANY PROPOSED STORMWATER TREATMENT AREAS. THE PROPOSED BIORETENTION AREAS WILL TREAT STORMWATER RUNOFF BEFORE IT EITHER INFILTRATES INTO THE SOIL OR DISCHARGES TO THE WET WEATHER CONVEYANCE.

THE HOMEOWNER'S ASSOCIATION SHALL BE RESPONSIBLE FOR AND SHALL MAINTAIN THE STORMWATER INFRASTRUCTURE. THESE ITEMS INCLUDE RAIN GARDENS, DETENTION BASINS, AND DRAINAGE SWALES AND ARE ALL LOCATED IN OPEN SPACE LOTS.

Grading & Drainage GeneralotesGrading Permit is required for any project disturbing more than 10,000 sf, adding more than 5,000 sf of impervious surface or for any site grading requiring stockpiling of material.

1. The Developer shall provide the necessary labor and supervision required to support field testing by the independent testing firm and inspections by City officials at no cost to the City. Test reports of field testing if applicable shall be submitted directly to the Street Department. Defects disclosed by tests shall be rectified.
2. An authorized representative of the City shall make a final inspection of the project after completion to determine acceptability of the work and for release of performance bonds if required. Before this final inspection can be made, the Engineer responsible for the project shall certify in writing to the City Engineer that the work has been completed in accordance with approved plans and specifications.
3. Drainage facilities including, but not limited to, culverts, detention basins and ditches, as well as the roadway sub-grade, base stone and binder & surface coarse shall be inspected, tested and given approval at each stage of installation prior to proceeding to the next stage of construction. Final construction inspection for approval and acceptance of streets and drainage systems will not be granted until all work has been completed in accordance with the approved plans.
4. Locating and coordination for the relocation of existing utilities is the responsibility of the contractor. Tennessee's One-Call and the City of Franklin utility location service shall be utilized in addition to coordination with local utility owners. The contractor shall at all times protect existing utilities and will be responsible for costs due to damage caused to any utility lines.



OVERALL GRADING AND DRAINAGE PLAN

Water & Sewer General Notes

1. All persons who undertake the construction of water, sewer and/or reclaimed water lines located in, or affecting services provided by the City of Franklin shall comply with the requirements and regulations set forth in the "General Requirements & Technical Specifications, Water Management Department, City of Franklin, Tennessee" latest edition, along with any amendments, additions, or alteration that may thereafter be adopted by the board of mayor and aldermen by resolution.
2. Contractor shall obtain Water & Sewer Infrastructure Installation Permit prior to scheduling required Pre-Construction Site Meeting. Contractor shall complete the PreConstruction Site Meeting prior to commencing with construction.
3. Contractor shall obtain and keep all of the following items on the jobsite at all times during construction:
 - a. Approved, Stamped and Signed Water and/or Sewer Plans
 - b. Water & Sewer Infrastructure Installation Permit, with all steps completed and signed by appropriate City employees.
 - c. Copy of approved availability request response letter.
 - d. A copy of all approved Cut Sheets.
4. Acceptance of City of Franklin public water infrastructure, sanitary sewer infrastructure and/or reclaimed water infrastructure shall become the responsibility of the City of Franklin, TN following approval from the City of Franklin Inspectors and acceptance by the Franklin Municipal Planning Commission. The Acceptance date shall be based on the day maintenance sureties are established by the Franklin Municipal Planning Commission. Prior to the acceptance of City of Franklin public water infrastructure, sanitary sewer infrastructure and/or reclaimed water infrastructure the contractor shall be required to submit as-built drawings to the Planning and Sustainability Department.
5. All off-site work within the public right-of-way shall require an approved traffic control plan which complies with the MUTCD. No off-site excavation may be undertaken in any street, road, alley or right-of-way of any utility or temporary construction easement of the City of Franklin by any entity unless 72-hour notice has been given to the City of Franklin Traffic Operations Center. The contractor shall have an approved traffic control plan onsite during construction.
7. Any damages caused to existing utilities during construction shall, at his own expense, be replaced or repaired to original condition and quality, as approved by the owner and representative of the appropriate utility company, by the Contractor.

Water & Sewer Data Chart

Facility Type: Public
Unit Flow in GPD: 350 GPD per HOUSE
Number of Units: 6
Total Flow in GPD: 2100 GPD

WATER & SEWER
City of Franklin Water Management Dept. contact:
PH: (615) 794-4554

ELECTRIC
Middle Tennessee Electric Membership Corp
Contact: Russell Lane
PH: (615) 453-3085

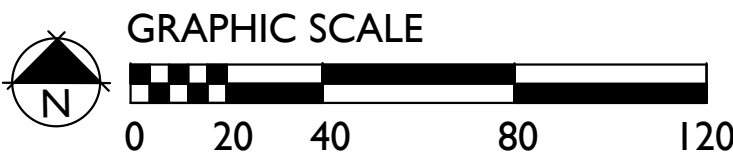
GAS
Atmos Energy
Contact: Walt Miller
PH: (615) 754-2596 ext. 324

Note: No additional fire hydrants to be proposed.

FIRE FLOW DATA

LOCATION	STATIC	RESIDUAL	FLOW
HYDRANT 1	54 psi	30 psi	XX gpm
HYDRANT 2	55 psi	28 psi	XX gpm

TEST PERFORMED AT 8:00 AM ON AUG 12, 2016



THE INFORMATION SHOWN ON THIS PLAN IS BASED ON THE TENNESSEE STATE PLANE COORDINATE SYSTEM, ZONE 5301, FLIP ZONE 4100 AND NAD 83 DATUM.

PARCEL LINES AND TOPOGRAPHIC INFORMATION SHOWN HERE IS FROM THE C.O.F. - G.I.S. DEPT.



OVERALL UTILITY PLAN

RUCKER PARK PUD SUBDIVISION
DEVELOPMENT PLAN, REVISION 1
PUD SUBDIVISION, DEVELOPMENT PLAN
FRANKLIN, TENNESSEE

GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 330
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
g@gambledc.com
615.975.5765

rev.	date
△	8.26.16, REVISED FOR DRT REVIEW COMMENTS, REVIEW 1 DATED 8.23.16
△	
△	
△	

GDC Job No. 16013
JULY 30, 2016

S H E E T

C5.0

COF # XXXX



FOUR UNIT TOWN HOME

THIS IS A PHOTO OF ONE BUILDING ALREADY CONSTRUCTED IN RUCKER PARK. THESE ARE 1000-1100 SQUARE FOOT RESIDENCES WITH TWO BEDROOMS. THE UNITS HAVE BRICK VENEER ON ALL FOUR SIDES AND HAVE INDIVIDUAL PATIOS AT THE REAR OF THE UNIT.

DUPLEX HOME

THIS IS A PHOTO OF THE PROPOSED DUPLEX. THE HOME WILL HAVE ONE ENTRANCE AND A FRONT PORCH ON RUCKER AVENUE AND ANOTHER SIDE ENTRANCE FACING THE PARKING AREA OFF OF VELENA STREET. THE PROPOSED STRUCTURE WILL HAVE A MASONRY BASE WITH CEMENT BOARD SIDING ON ALL FOUR SIDES.



ARCHITECTURAL
IMAGES



RUCKER PARK PUD SUBDIVISION
DEVELOPMENT PLAN, REVISION 1
FRANKLIN, TENNESSEE

GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 330
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
g788gmbl209@gmail.com
615.975.5765

rev.	date
△	ADDED COF NUMBER TO SET
△	
△	
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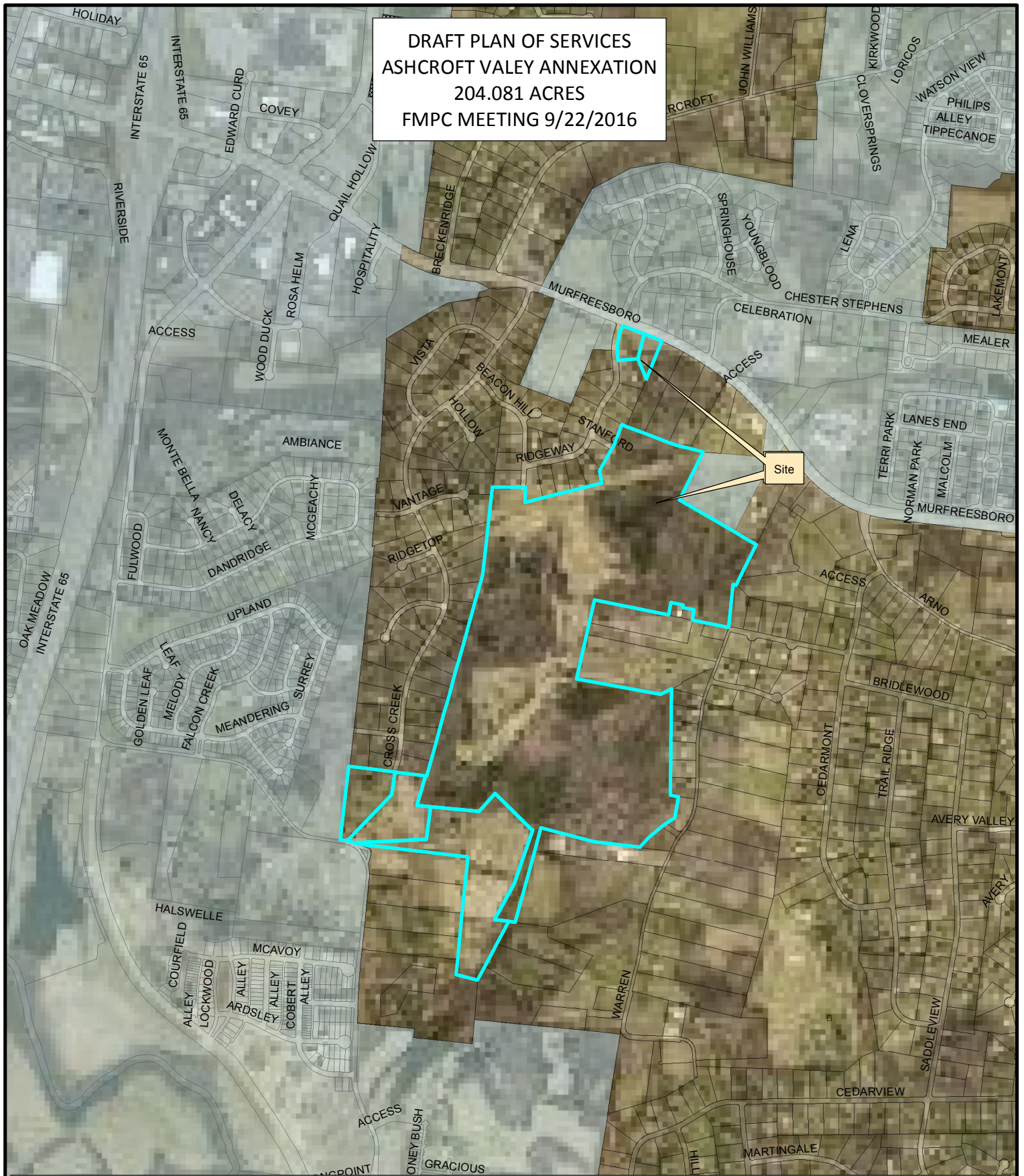
GDC Job No. 16013
AUGUST 8, 2016

S H E E T

C2.1

COF # 6227

DRAFT PLAN OF SERVICES
 ASHCROFT VALEY ANNEXATION
 204.081 ACRES
 FMPC MEETING 9/22/2016



Legend

- Properties Under Consideration
- Existing City Limits

0 500 1,000 2,000 3,000 4,000
 Feet



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 It was compiled from the most authentic information available.
 The City is not responsible for any errors or omissions contained hereon.
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RESOLUTION 2016-41

TO BE ENTITLED: “A RESOLUTION ADOPTING A PLAN OF SERVICES FOR THE ANNEXATION OF PROPERTY LOCATED SOUTH OF MURFREESBORO ROAD AND NORTH OF SOUTH CAROTHERS ROAD AND ADJOINING THE CITY LIMITS WITHIN THE EAST PART OF THE FRANKLIN URBAN GROWTH BOUNDARY (UGB)„ BY THE CITY OF FRANKLIN, TENNESSEE.”

WHEREAS, *Tennessee Code Annotated* (T.C.A.) § 6-51-102, as amended, requires that a Plan of Services be adopted by a municipal governing body prior to the passage of an annexation resolution; and

WHEREAS, Glenn Adams, Rob Adams, James E. Adams Jr, George Durnin, Patti Sue Watkins, Ralph H. Peden Jr, (“Owner(s)”) of property located as described below (“Property”) petitioned the Board of Mayor and Aldermen (BOMA) of the City of Franklin, Tennessee (“City”), to annex 204.081 acres adjoining the City limits and located within the Franklin Urban Growth Boundary (UGB); and

WHEREAS, the Property is located south of Murfreesboro Road and north of South Carothers Road, as described herein and as depicted on the Map attached hereto as Exhibit A:

Map-Parcel	Acres
079M---B02800	2.7
079M---B02900	
089---05500	201.381
089---04304	
089---04303	
089---04302	
Total	204.081

The Property adjoins the City limits within the Franklin Urban Growth Boundary (UGB) and comprises a total of 204.081 acres in 6 parcels The Property is used as agricultural and residential.

WHEREAS, this Resolution shall bind the Owners and subsequent Owners of the Property; and

WHEREAS, the Franklin Municipal Planning Commission has reviewed and recommended approval of the Plan of Services for the annexation area; and

WHEREAS, a public hearing was held following public notice as required by *T.C.A.* § 6-51-102, as amended; and

WHEREAS, it is believed it is in the best interest of the City to adopt a Plan of Services for the area petitioned to be annexed in order to provide for future development in accordance with City standards; and

WHEREAS, this Resolution shall not bind the City to later annex the Property.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS:

SECTION I. Pursuant to the provisions of T.C.A. § 6-51-102, as amended, there is hereby adopted, for the area bounded as described above, the following Plan of Services:

A. Water

1. The Property is located within the Milcrofton Utility District.
2. Water availability shall be approved and provided through Milcrofton prior to annexation.
3. The Owner shall be required to provide adequate fire flow and pressure to the Property.

B. Reclaimed Water

1. According to the City of Franklin's Municipal Code, reclaimed water systems shall be extended to a development if the development is located within 1,000 feet of an existing reclaimed water line.
2. In the case of this Property, a several mile extension would be required to serve the Property. For this reason, reclaimed water will not be required to be extended to the Property.

C. Wastewater

1. The Property lies within the Watson Branch Basin and Goose Creek Basin as defined in the City of Franklin Sanitary Sewer Basin Study.
2. The proposed development of the Property is anticipated to construct 342 single family units as part of an overall 383 single family unit subdivision.
3. The Owner shall be required to extend the Simmons Ridge Sanitary Sewer Interceptor to provide service to the Property.
4. The City of Franklin Sanitary Sewer System Basin Plans show this as a 12" and 8" sanitary sewer Interceptor.
5. The Owner shall be required to submit engineering calculations to determine final sizing requirements.
6. The Owner shall be required to provide Engineering design, construction, easements, rights-of-way and the costs associated with the on-site sanitary sewer infrastructure required to serve the development of this Property.
7. The Owner shall be responsible for the payment of fees per the policies and procedures outlined in Franklin Municipal Code.

D. Stormwater

1. The Owner shall be responsible for the engineering, design and construction of the necessary stormwater infrastructure for the development of the Property and shall comply with the requirements as outlined in the Franklin Municipal Code.
2. As the Property develops, the City will charge prevailing stormwater user fees per policies and procedures as outlined in the Franklin Municipal Code.

E. Streets

1. Emergency maintenance of streets will begin on the effective date of annexation.
2. Reconstruction and resurfacing of streets, routine maintenance, and installation of storm drainage will be accomplished under existing City policies.
3. Access to the Property shall be provided from Ridgeway Drive and South Carothers Road.
4. Unless waived by the Franklin Engineering Department, the Owner of the Property shall be required to submit a traffic impact study prior to submitting a development plan for review and approval. The exact scope associated with this traffic impact study shall be determined prior to submittal of the development plan. Required street improvements shall be determined as part

of the plan. The roadways constructed as part of this development shall comply with City Street Standards.

F. Traffic Control

1. Traffic signals, traffic signs, street markings, and other traffic control devices shall be installed as the need is established by appropriate study and traffic standards.
2. New development after the effective date of annexation shall comply with City regulations governing traffic control devices and markings.

G. Street Lighting

1. No off-site street lighting is proposed at this time.
2. Street lighting within new developments shall be funded and installed by the Owner per City policy, which includes the installation of electric meters to allow for future ownership and maintenance by the City or homeowners association. The installation and operation of street lights shall coincide with the phasing of development and issuance of Certificates of Occupancy.

H. Street Name Signs

1. No additional street name signs in the area have been deemed necessary.
2. New development shall install street name signs per City policy.

I. Fire Protection

1. Fire protection by the present personnel and equipment of the Franklin Fire Department will be provided on and after the effective date of annexation.
2. No additional manpower or equipment will be necessary to serve the annexation area at this time.

J. Planning and Zoning

1. The planning and zoning jurisdiction of the City will extend to the annexed area on and after the effective date of annexation.
2. The Franklin Land Use Plan states: The McEwen Character Area will continue to be the major economic driver for the City of Franklin. However, economically productive development will respect the residential neighborhoods. Murfreesboro Road will be redeveloped pursuant to a comprehensive land use and economic strategy and will be a quality gateway from I-65. High-quality design and people-friendly environments will be encouraged through heightened standards and site design to reinforce the small-town appeal of Franklin.
The Franklin Land Use Plan states for the Seward Hall Character Area- This area is largely built out and typically includes detached residential uses on larger lots. However, there are significantly sized parcels that are currently vacant or agricultural which may be considered for development in the future. The protection of environmental features is important to this area's unique community character and should be protected. Of particular importance in this area is the floodplain.
3. Upon annexation, the Property will be zoned by the Board of Mayor and Aldermen, pursuant to the requirements of the Franklin Zoning Ordinance with a base zone district, Overlay District, Character Area Overlay District, and designated as a Conventional or Traditional Area. The Owner shall also be required to submit a Planned Unit Development (PUD) Development Plan pursuant to the requirements of the Zoning Ordinance.

K. Parks and Recreation

1. The benefit and use of the recreational facilities and programs provided by the Parks Department will be available on and after the effective date of the annexation. Recreational facilities and programs will be provided with existing personnel, facilities and resources.
2. New development in the annexed area shall comply with the City of Franklin Parkland Dedication Ordinance.

L. Police Protection

1. Police patrol and response to calls by the Franklin Police Department will be provided on and after the effective date of annexation.
2. Police services will be provided with existing personnel and equipment.

M. Building and Code Inspection Services

1. Building and code inspection services will begin in the annexed area on and after the effective date of the annexation.
2. New development in the annexed area shall comply with adopted City Building Codes, pay the applicable fees, and obtain the required permits for inspection services.

N. Garbage and Recycling Pickup and Environmental

1. The Sanitation and Environmental Services Department will begin providing services in the annexed area on and after the effective date of the annexation in accordance with adopted City requirements.
2. No additional manpower or equipment will be necessary to serve the annexation area at this time.

SECTION II. This Resolution shall take effect from and after its adoption.

ADOPTED THIS _____.

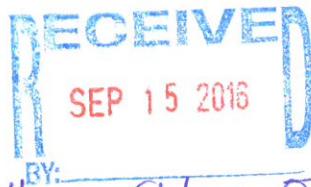
ERIC S. STUCKEY
City Administrator

DR. KEN MOORE
Mayor

Approved as to form by:

Shauna R. Billingsley
City Attorney

1991 Beacon Hill Dr.
Franklin
TN 37067



9/12/16
Item 8
9/22/16 FMPC Mtg.

Dear Members of the City of Franklin Planning and sustainability department,

I am writing to express my concern about the planned development of Ashcroft Valley and the consequences it will bear on adjacent county neighborhoods.

Please understand that most of my neighbors in Franklin East and Cross Creek do not support a plan that brings city traffic onto our county roads.

Traffic from 70 homes in a gated community, entering and exiting on Stanford Drive will cause a danger to the 30+ young children who live on Ridgeway (yes, the number has increased, another young family has moved in, 2 babies have been born and at least one more family with 2 little ones is due to move in soon.

What guarantee do we, as residents, have that once building starts, there will be a "gated" community and the "pedestrian only" connectivity will not become roads, connecting the further 250+ homes on the Ridge Valley?

Greg Gamble is on record stating that he "understands there will be a fatality." Please prevent this from happening by

redirecting all city traffic away from our county neighborhood.

Unfortunately my husband and I will be absent from the public meeting on September 22. We have to travel out of the country to a family member's funeral.

We regret that our voices won't be heard and request that you acknowledge our concerns.

Sincerely,

Susan and Brian Caplan

Susan Caplan

A handwritten signature in blue ink, appearing to read "Brian Caplan", with a long, sweeping horizontal stroke extending to the left.

**RESOLUTION 2016-40
ORDINANCE 2016-27**

**TO BE ENTITLED, “A RESOLUTION AND ORDINANCE TO ANNEX
PROPERTY, CONSISTING OF 204.081 ACRES, PROPERTY LOCATED
SOUTH OF MURFREESBORO ROAD AND NORTH OF SOUTH CAROTHERS
ROAD AND ADJOINING THE CITY LIMITS WITHIN THE EAST PART OF
THE FRANKLIN URBAN GROWTH BOUNDARY (UGB).”**

WHEREAS, Glenn Adams, Rob Adams, James E. Adams Jr, George Durnin, Patti Sue Watkins, Ralph H. Peden Jr, (“Owner(s)”) of properties located as described below (“Property”) petitioned the Board of Mayor and Aldermen (BOMA) of the City of Franklin, Tennessee (“City”), to annex 204.081 acres adjoining the City limits and located within the Franklin Urban Growth Boundary (UGB); and

WHEREAS, the Franklin Municipal Planning Commission (FMPC) has reviewed and recommended approval of the proposed annexation and Plan of Services for the annexation area; and

WHEREAS, a public hearing was held following public notice as required by *Tennessee Code Annotated* Title 6, Chapter 51, as amended; and

WHEREAS, the BOMA has adopted a Plan of Services for the annexation area as described in Resolution 2016-41; and

WHEREAS, the BOMA has determined that it is in the best interest of its existing residents to annex the Property described herein and that failure to annex said property will inhibit the prosperity of the City and endanger the health, safety and welfare of its inhabitants.

**NOW THEREFORE BE IT RESOLVED AND ORDAINED BY THE BOARD OF
MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS:**

SECTION I. That the following described Property shall be, and is hereby, annexed in and to the corporate limits of the City of Franklin, Tennessee:

PREMISES CONSIDERED

Map-Parcel	Acres
079M---B02800 079M---B02900	2.7
089---05500 089---04304 089---04303 089---04302	201.381
Total	204.081

Legal Description

Land lying in the Fourteenth Civil District of Williamson County, being lots 127 and 128 on the Final Plat for Section 1 of Franklin East, of record in Plat Book 6, Page 91, Register’s Office of Williamson County, Tennessee, and containing 2.7 acres more or less.

Legal Description

The following legal description is for land in the Fourteenth Civil District of Williamson County, located on the lands of James E. Adams, Jr., of record in Deed Book 2008, Page 702, R.O.W.C., TN, Ralph H Peden, Jr., of record in Deed Book 4590, Page 436, R.O.W.C., TN, Patti Sue Watkins, of record in Deed Book 6074, Page 249, R.O.W.C., TN, and George V. Durnin, of record in Deed Book 1607, Page 1006, R.O.W.C., TN, and more particularly described in as follow:

Beginning at a Point in the north margin of South Carothers Road, approximately 1600 feet southeast of the intersection of Falcon Creek Drive and said South Carothers Road;

Thence, leaving the north margin of said South Carothers Road, North 06 Degrees 20 Minutes 18 Seconds East, a distance of 716.81 feet to a point;

Thence South 82 Degrees 56 Minutes 59 Seconds East, a distance of 753.05 feet to a point;

Thence North 15 Degrees 32 Minutes 59 Seconds East, a distance of 2,025.58 feet to a point;

Thence North 06 Degrees 33 Minutes 34 Seconds East, a distance of 861.42 feet to a point;

Thence South 89 Degrees 39 Minutes 10 Seconds East, a distance of 319.84 feet to a point;

Thence South 02 Degrees 23 Minutes 32 Seconds West, a distance of 149.73 feet to a point;

Thence North 75 Degrees 48 Minutes 17 Seconds East, a distance of 768.48 feet to a point;

Thence North 09 Degrees 39 Minutes 11 Seconds West, a distance of 117.87 feet to a point;

Thence North 29 Degrees 14 Minutes 05 Seconds East, a distance of 293.60 feet to a point;

Thence North 20 Degrees 05 Minutes 58 Seconds East, a distance of 210.10 feet to a point;

Thence South 62 Degrees 38 Minutes 15 Seconds East, a distance of 48.00 feet to a point;

Thence South 69 Degrees 38 Minutes 11 Seconds East, a distance of 509.70 feet to a point;

Thence South 76 Degrees 09 Minutes 25 Seconds East, a distance of 277.18 feet to a point;

Thence South 26 Degrees 11 Minutes 34 Seconds West, a distance of 520.34 feet to a point;

Thence South 59 Degrees 49 Minutes 41 Seconds East, a distance of 862.61 feet to a point;

Thence South 26 Degrees 16 Minutes 06 Seconds West, a distance of 444.04 feet to a point;

Thence North 70 Degrees 59 Minutes 36 Seconds West, a distance of 28.01 feet to a point;

Thence South 06 Degrees 10 Minutes 51 Seconds West, a distance of 403.96 feet to a point;

Thence South 20 Degrees 12 Minutes 18 Seconds West, a distance of 14.56 feet to a point;

Thence North 78 Degrees 25 Minutes 28 Seconds West, a distance of 356.81 feet to a point;

Thence North 09 Degrees 56 Minutes 19 Seconds East, a distance of 100.04 feet to a point;

Thence North 78 Degrees 25 Minutes 28 Seconds West, a distance of 110.05 feet to a point;

Thence North 09 Degrees 56 Minutes 27 Seconds East, a distance of 25.01 feet to a point;

Thence North 78 Degrees 25 Minutes 30 Seconds West, a distance of 125.05 feet to a point;

Thence South 09 Degrees 56 Minutes 17 Seconds West, a distance of 125.05 feet to a point;

Thence North 78 Degrees 25 Minutes 29 Seconds West, a distance of 734.65 feet to a point;

Thence South 12 Degrees 44 Minutes 58 Seconds West, a distance of 784.89 feet to a point;

Thence South 79 Degrees 24 Minutes 14 Seconds East, a distance of 830.08 feet to a point;

Thence North 62 Degrees 28 Minutes 37 Seconds East, a distance of 119.56 feet to a point;

Thence South 00 Degrees 37 Minutes 45 Seconds West, a distance of 1,031.05 feet to a point;

Thence South 76 Degrees 31 Minutes 22 Seconds East, a distance of 81.00 feet to a point;

Thence South 09 Degrees 52 Minutes 41 Seconds West, a distance of 206.49 feet to a point;

Thence South 57 Degrees 04 Minutes 46 Seconds West, a distance of 151.05 feet to a point;

Thence South 49 Degrees 16 Minutes 17 Seconds West, a distance of 170.39 feet to a point;

Thence South 41 Degrees 39 Minutes 12 Seconds West, a distance of 123.05 feet to a point;

Thence North 83 Degrees 17 Minutes 12 Seconds West, a distance of 441.91 feet to a point;

Thence North 75 Degrees 19 Minutes 30 Seconds West, a distance of 540.96 feet to a point;

Thence South 15 Degrees 23 Minutes 08 Seconds West, a distance of 951.14 feet to a point;

Thence North 82 Degrees 39 Minutes 38 Seconds West, a distance of 60.79 feet to a point;

Thence South 28 Degrees 07 Minutes 56 Seconds West, a distance of 646.53 feet to a point;

Thence North 75 Degrees 15 Minutes 25 Seconds West, a distance of 215.00 feet to a point;

Thence North 05 Degrees 42 Minutes 26 Seconds East, a distance of 1,148.85 feet to a point;
Thence North 83 Degrees 26 Minutes 21 Seconds West, a distance of 1,067.76 feet to a point, said point being in the north margin of said South Carothers Road;
Thence, with the north margin of said South Carothers Road, North 71 Degrees 12 Minutes 56 Seconds West, a distance of 97.37 feet to a point;
Thence North 81 Degrees 09 Minutes 29 Seconds West, a distance of 74.53 feet to the point of beginning, and containing 8,772,174.99 square feet or 201.381 acres.

SECTION II: That the attached Location Map shall serve the purpose of further delimiting the geographical boundaries as described by this Resolution and Ordinance.

SECTION III: That the annexed Property shall become part of Aldermanic Ward 1.

SECTION IV. BE IT FINALLY RESOLVED AND ORDAINED by the Board of Mayor and Aldermen of the City of Franklin, Tennessee, that this Resolution and Ordinance shall take effect from and after its passage on third and final reading, the health, safety, and welfare of the citizens requiring it.

ATTEST:

CITY OF FRANKLIN, TENNESSEE:

By: _____
Eric Stuckey
City Administrator/Recorder

By: _____
Dr. Ken Moore
Mayor

Approved as to form by:

Shauna R. Billingsley
City Attorney

PLANNING COMMISSION RECOMMENDED:

PASSED FIRST READING:

PUBLIC HEARING HELD:

PASSED SECOND READING:

PASSED THIRD READING:

DRAFT PLAN OF SERVICES
ASHCROFT VALEY ANNEXATION
204.081 ACRES
FMPC MEETING 8/25/2016

The map displays a large, irregularly shaped area outlined in cyan, labeled 'Site'. This area is situated within a larger, brown-shaded region. Surrounding the site are various residential streets and neighborhoods, including:

- Streets:** INTERSTATE 65, RIVERSIDE, HOLIDAY, EDWARD CURD, COVEY, QUAIL HOLLOW, HOSPITALITY, BRECKENRIDGE, MURFREESBORO, CELEBRATION, CHESTER STEPHENS, LAKEMONT, MEALER, LANS END, NORMAN PARK, MALCOLM, MURFREESBORO, ARNO, BRIDLEWOOD, TRAIL RIDGE, AVERY VALLEY, AVERY, SADDLEVIEW, CEDARVIEW, MARTINGALE, GRACIOUS, ONEY BUSH, ACCESS, WARREN, CEDARWELL, HALSWELLE, COURTFIELD, LOCKWOOD, ALLEY, ARDSLEY, COBERT, ALLEY, MCAVOY, UPLAND, MEANDERING, SURREY, FALCON CREEK, MELODY, LEAF, GOLDEN LEAF, DANDRIDGE, DELACY, MCGEACHY, AMBANCE, MONTE BELLA, NANCY, FULLWOOD, ACCESS, VISTA, BEACON HILL, RIDGEWAY, STANFORD, RIDGETOP, VANTAGE, CROSS CREEK, and ACCESS.
- Neighborhoods:** WATSON VIEW, PHILIPS ALLEY, TIPPECANOE, LORICOS, CLOVERSPRINGS, DODD, KIRK, JOHN WILLIAMS, SPRINGHOUSE, YOUNGBLOOD, LEM, LAKEMONT, MEALER, LANS END, NORMAN PARK, MALCOLM, MURFREESBORO, ARNO, BRIDLEWOOD, TRAIL RIDGE, AVERY VALLEY, AVERY, SADDLEVIEW, CEDARVIEW, MARTINGALE, GRACIOUS, ONEY BUSH, ACCESS, WARREN, CEDARWELL, HALSWELLE, COURTFIELD, LOCKWOOD, ALLEY, ARDSLEY, COBERT, ALLEY, MCAVOY, UPLAND, MEANDERING, SURREY, FALCON CREEK, MELODY, LEAF, GOLDEN LEAF, DANDRIDGE, DELACY, MCGEACHY, AMBANCE, MONTE BELLA, NANCY, FULLWOOD, ACCESS, VISTA, BEACON HILL, RIDGEWAY, STANFORD, RIDGETOP, VANTAGE, CROSS CREEK, and ACCESS.

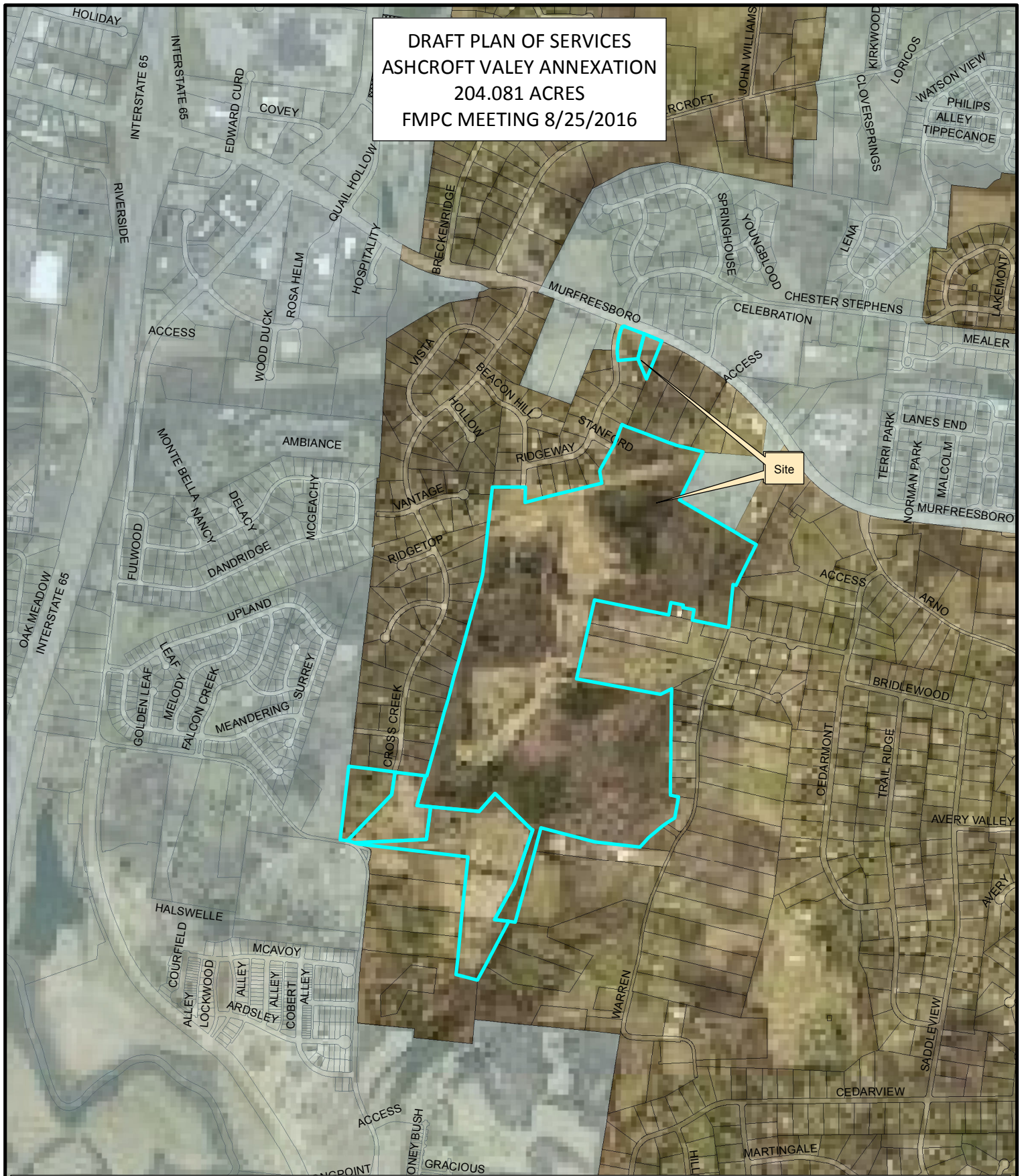
Site

 Properties Under Consideration
 Existing City Limits



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It was compiled from the most authentic information available.
The City is not responsible for any errors or omissions contained hereon.
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DRAFT PLAN OF SERVICES
ASHCROFT VALEY ANNEXATION
204.081 ACRES
FMPC MEETING 8/25/2016



Legend

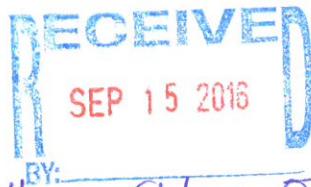
-  Properties Under Consideration
-  Existing City Limits

0 500 1,000 2,000 3,000 4,000
Feet



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1991 Beacon Hill Dr.
Franklin
TN 37067



9/12/16
Item 8
9/22/16 FMPC Mtg.

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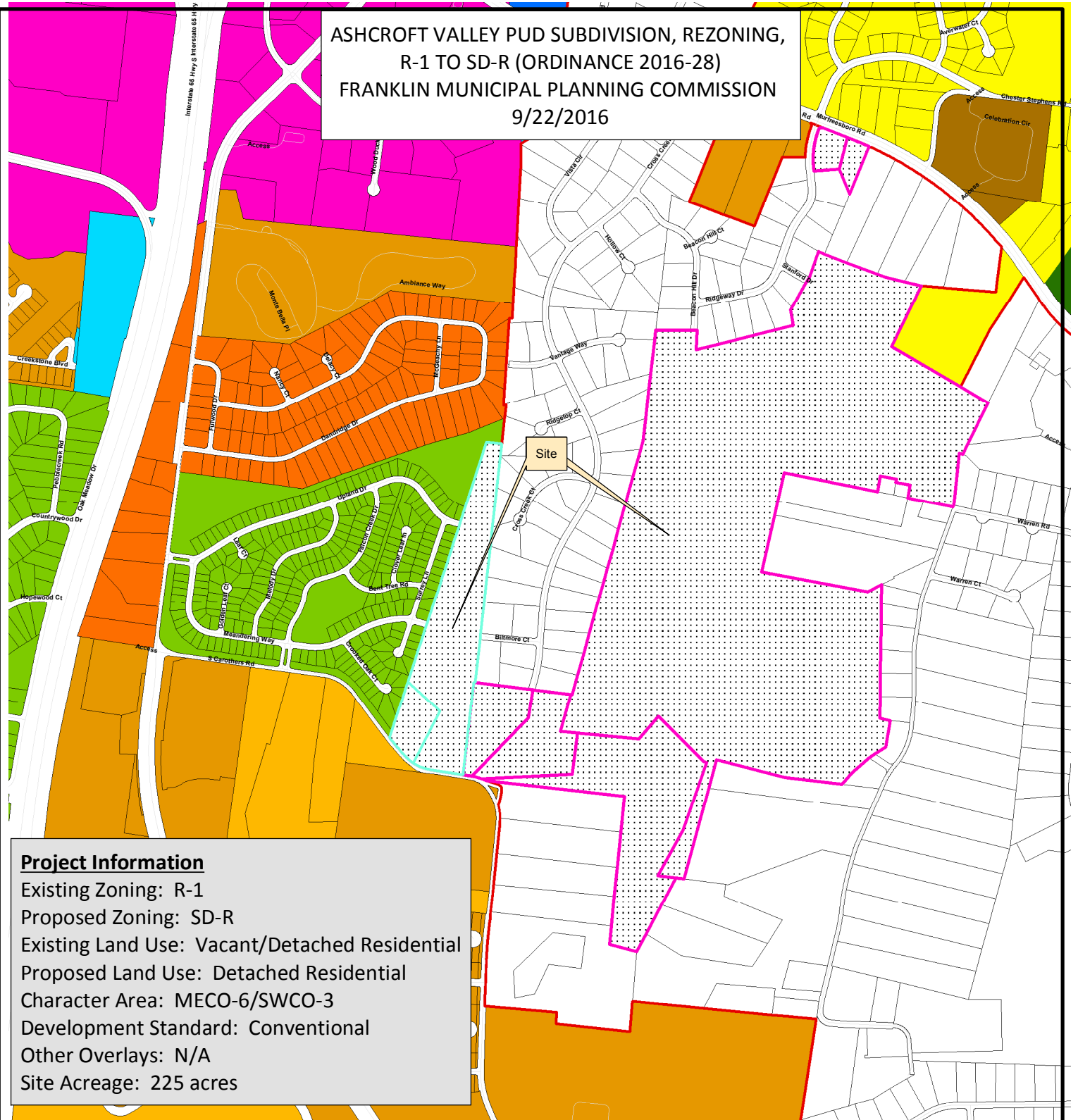
Sincerely,

Susan and Brian Caplan

Susan Caplan

A handwritten signature in blue ink, appearing to read "Brian Caplan", with a long, sweeping horizontal stroke extending to the left.

ASHCROFT VALLEY PUD SUBDIVISION, REZONING,
R-1 TO SD-R (ORDINANCE 2016-28)
FRANKLIN MUNICIPAL PLANNING COMMISSION
9/22/2016



Project Information

Existing Zoning: R-1
Proposed Zoning: SD-R
Existing Land Use: Vacant/Detached Residential
Proposed Land Use: Detached Residential
Character Area: MECO-6/SWCO-3
Development Standard: Conventional
Other Overlays: N/A
Site Acreage: 225 acres

- | | |
|--|---------------------------------------|
| Glass Parcels | SD-R Specific Development-Residential |
| Annexed Property | SD-X Specific Development-Variety |
| AG Agricultural District | OR Office Residential District |
| ER Estate Residential | GO General Office District |
| R-1 Residential District | CC Central Commercial District |
| R-2 Residential District | NC Neighborhood Commercial District |
| R-3 Residential District | GC General Commercial District |
| R-6 Residential District | LI Light Industrial District |
| RM-10 Attached 10 Residential District | HI Heavy Industrial District |
| RM-15 Attached 15 Residential District | CI Civic and Institutional District |
| RM-20 Attached 20 Residential District | |



0 500 1,000 2,000
Feet

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ORDINANCE 2016-28

TO BE ENTITLED, "AN ORDINANCE TO ZONE 204.081 ACRES DETACHED RESIDENTIAL 1 DISTRICT (R-1), MCEWEN CHARACTER AREA OVERLAY DISTRICT (MECO-6), SEWARD HALL CHARACTER AREA OVERLAY DISTRICT (SWCO-3), AND DESIGNATE AS CONVENTIONAL AREA STANDARDS, FOR THE PROPERTY LOCATED SOUTH OF MURFREESBORO ROAD AND NORTH OF SOUTH CAROTHERS ROAD."

WHEREAS, Glenn Adams, Rob Adams, James E. Adams Jr, George Durnin, Patti Sue Watkins, Ralph H. Peden Jr, ("Owner(s)") of property located as described below ("Property") petitioned the Board of Mayor and Aldermen (BOMA) of the City of Franklin, Tennessee ("City"), to annex 204.081 acres adjoining the City limits and located within the Franklin Urban Growth Boundary (UGB); and

WHEREAS, the BOMA has adopted a Plan of Services and annexed the property as described in Resolution 2016-41 and Resolution 2016-40/Ordinance 2016-27; and

WHEREAS, the City of Franklin, Tennessee, encourages responsible growth and the sensible transition of land uses and densities; and

WHEREAS, the Detached Residential 1 District (R-1), McEwen Character Area Overlay District (MECO-6), Seward Hall Character Area Overlay District (SWCO-3), and Conventional Standards, provide zoning for land uses compatible with both the Franklin Land Use Plan and the surrounding development; and

WHEREAS, the zoning has been reviewed and approved by the BOMA after a public hearing and a recommendation by the Franklin Municipal Planning Commission (FMPC).

NOW THEREFORE BE IT ORDAINED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS:

SECTION I. That the following described Property shall be, and is hereby, zoned the following: Detached Residential 1 District (R-1), McEwen Character Area Overlay District (MECO-6), Seward Hall Character Area Overlay District (SWCO-3), and Conventional Standards

PREMISES CONSIDERED

Map-Parcel	Acres	Character Area
079M---B02800	2.7	SWCO-3
079M---B02900		SWCO-3
089---05500	201.381	SWCO-3
089---04304		MECO-6
089---04303		MECO-6
089---04302		MECO-6
Total	204.081	

LEGAL DESCRIPTION – PARCELS 28.00 AND 29.00 ON MAP 79 M GROUP B

LAND LYING IN THE FOURTEENTH CIVIL DISTRICT OF WILLIAMSON COUNTY, BEING LOTS 127 AND 128 ON THE FINAL PLAT FOR SECTION 1 OF FRANKLIN EAST, OF RECORD IN PLAT BOOK 6, PAGE 91, REGISTER'S OFFICE OF WILLIAMSON COUNTY, TENNESSEE, AND CONTAINING 2.7 ACRES MORE OR LESS.

LEGAL DESCRIPTION – PARCELS 43.02, 43.03, 43.04, 55.00 ON MAP 89

THE FOLLOWING LEGAL DESCRIPTION IS FOR LAND IN THE FOURTEENTH CIVIL DISTRICT OF WILLIAMSON COUNTY, LOCATED ON THE LANDS OF JAMES E. ADAMS, JR., OF RECORD IN DEED BOOK 2008, PAGE 702, R.O.W.C., TN, RALPH H PEDEN, JR., OF RECORD IN DEED BOOK 4590, PAGE 436, R.O.W.C., TN, PATTI SUE WATKINS, OF RECORD IN DEED BOOK 6074, PAGE 249, R.O.W.C., TN, AND GEORGE V. DURNIN, OF RECORD IN DEED BOOK 1607, PAGE 1006, R.O.W.C., TN, AND MORE PARTICULARLY DESCRIBED IN AS FOLLOW:

BEGINNING AT A POINT IN THE NORTH MARGIN OF SOUTH CAROTHERS ROAD, APPROXIMATELY 1600 FEET SOUTHEAST OF THE INTERSECTION OF FALCON CREEK DRIVE AND SAID SOUTH CAROTHERS ROAD;

THENCE, LEAVING THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD, NORTH 06 DEGREES 20 MINUTES 18 SECONDS EAST, A DISTANCE OF 716.81 FEET TO A POINT;

THENCE SOUTH 82 DEGREES 56 MINUTES 59 SECONDS EAST, A DISTANCE OF 753.05 FEET TO A POINT;

THENCE NORTH 15 DEGREES 32 MINUTES 59 SECONDS EAST, A DISTANCE OF 2,025.58 FEET TO A POINT;

THENCE NORTH 06 DEGREES 33 MINUTES 34 SECONDS EAST, A DISTANCE OF 861.42 FEET TO A POINT;

THENCE SOUTH 89 DEGREES 39 MINUTES 10 SECONDS EAST, A DISTANCE OF 319.84 FEET TO A POINT;

THENCE SOUTH 02 DEGREES 23 MINUTES 32 SECONDS WEST, A DISTANCE OF 149.73 FEET TO A POINT;

THENCE NORTH 75 DEGREES 48 MINUTES 17 SECONDS EAST, A DISTANCE OF 768.48 FEET TO A POINT;

THENCE NORTH 09 DEGREES 39 MINUTES 11 SECONDS WEST, A DISTANCE OF 117.87 FEET TO A POINT;

THENCE NORTH 29 DEGREES 14 MINUTES 05 SECONDS EAST, A DISTANCE OF 293.60 FEET TO A POINT;

THENCE NORTH 20 DEGREES 05 MINUTES 58 SECONDS EAST, A DISTANCE OF 210.10 FEET TO A POINT;

THENCE SOUTH 62 DEGREES 38 MINUTES 15 SECONDS EAST, A DISTANCE OF 48.00 FEET TO A POINT;

THENCE SOUTH 69 DEGREES 38 MINUTES 11 SECONDS EAST, A DISTANCE OF 509.70 FEET TO A POINT;

THENCE SOUTH 76 DEGREES 09 MINUTES 25 SECONDS EAST, A DISTANCE OF 277.18 FEET TO A POINT;

THENCE SOUTH 26 DEGREES 11 MINUTES 34 SECONDS WEST, A DISTANCE OF 520.34 FEET TO A POINT;

THENCE SOUTH 59 DEGREES 49 MINUTES 41 SECONDS EAST, A DISTANCE OF 862.61 FEET TO A POINT;

THENCE SOUTH 26 DEGREES 16 MINUTES 06 SECONDS WEST, A DISTANCE OF 444.04 FEET TO A POINT;

THENCE NORTH 70 DEGREES 59 MINUTES 36 SECONDS WEST, A DISTANCE OF 28.01 FEET TO A POINT;

THENCE SOUTH 06 DEGREES 10 MINUTES 51 SECONDS WEST, A DISTANCE OF 403.96 FEET TO A POINT;
THENCE SOUTH 20 DEGREES 12 MINUTES 18 SECONDS WEST, A DISTANCE OF 14.56 FEET TO A POINT;
THENCE NORTH 78 DEGREES 25 MINUTES 28 SECONDS WEST, A DISTANCE OF 356.81 FEET TO A POINT;
THENCE NORTH 09 DEGREES 56 MINUTES 19 SECONDS EAST, A DISTANCE OF 100.04 FEET TO A POINT;
THENCE NORTH 78 DEGREES 25 MINUTES 28 SECONDS WEST, A DISTANCE OF 110.05 FEET TO A POINT;
THENCE NORTH 09 DEGREES 56 MINUTES 27 SECONDS EAST, A DISTANCE OF 25.01 FEET TO A POINT;
THENCE NORTH 78 DEGREES 25 MINUTES 30 SECONDS WEST, A DISTANCE OF 125.05 FEET TO A POINT;
THENCE SOUTH 09 DEGREES 56 MINUTES 17 SECONDS WEST, A DISTANCE OF 125.05 FEET TO A POINT;
THENCE NORTH 78 DEGREES 25 MINUTES 29 SECONDS WEST, A DISTANCE OF 734.65 FEET TO A POINT;
THENCE SOUTH 12 DEGREES 44 MINUTES 58 SECONDS WEST, A DISTANCE OF 784.89 FEET TO A POINT;
THENCE SOUTH 79 DEGREES 24 MINUTES 14 SECONDS EAST, A DISTANCE OF 830.08 FEET TO A POINT;
THENCE NORTH 62 DEGREES 28 MINUTES 37 SECONDS EAST, A DISTANCE OF 119.56 FEET TO A POINT;
THENCE SOUTH 00 DEGREES 37 MINUTES 45 SECONDS WEST, A DISTANCE OF 1,031.05 FEET TO A POINT;
THENCE SOUTH 76 DEGREES 31 MINUTES 22 SECONDS EAST, A DISTANCE OF 81.00 FEET TO A POINT;
THENCE SOUTH 09 DEGREES 52 MINUTES 41 SECONDS WEST, A DISTANCE OF 206.49 FEET TO A POINT;
THENCE SOUTH 57 DEGREES 04 MINUTES 46 SECONDS WEST, A DISTANCE OF 151.05 FEET TO A POINT;
THENCE SOUTH 49 DEGREES 16 MINUTES 17 SECONDS WEST, A DISTANCE OF 170.39 FEET TO A POINT;
THENCE SOUTH 41 DEGREES 39 MINUTES 12 SECONDS WEST, A DISTANCE OF 123.05 FEET TO A POINT;
THENCE NORTH 83 DEGREES 17 MINUTES 12 SECONDS WEST, A DISTANCE OF 441.91 FEET TO A POINT;
THENCE NORTH 75 DEGREES 19 MINUTES 30 SECONDS WEST, A DISTANCE OF 540.96 FEET TO A POINT;
THENCE SOUTH 15 DEGREES 23 MINUTES 08 SECONDS WEST, A DISTANCE OF 951.14 FEET TO A POINT;
THENCE NORTH 82 DEGREES 39 MINUTES 38 SECONDS WEST, A DISTANCE OF 60.79 FEET TO A POINT;
THENCE SOUTH 28 DEGREES 07 MINUTES 56 SECONDS WEST, A DISTANCE OF 646.53 FEET TO A POINT;
THENCE NORTH 75 DEGREES 15 MINUTES 25 SECONDS WEST, A DISTANCE OF 215.00 FEET TO A POINT;
THENCE NORTH 05 DEGREES 42 MINUTES 26 SECONDS EAST, A DISTANCE OF 1,148.85 FEET TO A POINT;
THENCE NORTH 83 DEGREES 26 MINUTES 21 SECONDS WEST, A DISTANCE OF 1,067.76 FEET TO A POINT, SAID POINT BEING IN THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD;

THENCE, WITH THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD, NORTH 71 DEGREES 12 MINUTES 56 SECONDS WEST, A DISTANCE OF 97.37 FEET TO A POINT;
THENCE NORTH 81 DEGREES 09 MINUTES 29 SECONDS WEST, A DISTANCE OF 74.53 FEET TO THE POINT OF BEGINNING, AND CONTAINING 8,772,174.99 SQUARE FEET OR 201.381 ACRES.

SECTION II: That the attached Location Map shall serve the purpose of further delimiting the geographical and zoning boundaries as described by this Ordinance.

SECTION III. BE IT FINALLY ORDAINED by the Board of Mayor and Aldermen of the City of Franklin, Tennessee, that this Ordinance shall take effect from and after its passage on third and final reading, the health, safety, and welfare of the citizens requiring it.

ATTEST:

CITY OF FRANKLIN, TENNESSEE:

By: _____
Eric Stuckey
City Administrator/Recorder

By: _____
Dr. Ken Moore
Mayor

Approved as to form by:

Shauna R. Billingsley
City Attorney

PLANNING COMMISSION RECOMMENDED:

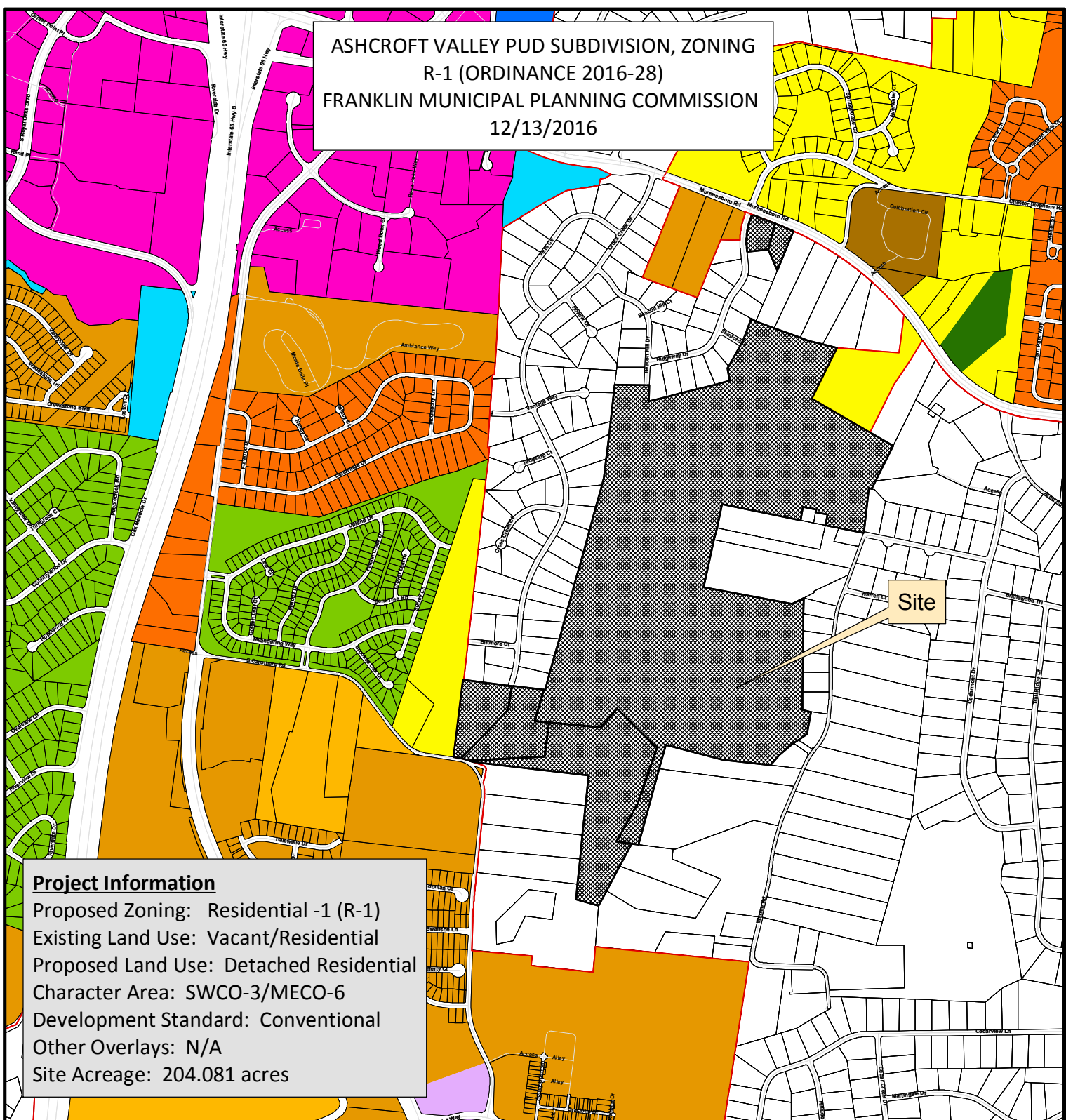
PASSED FIRST READING:

PUBLIC HEARING HELD:

PASSED SECOND READING:

PASSED THIRD READING:

ASHCROFT VALLEY PUD SUBDIVISION, ZONING
R-1 (ORDINANCE 2016-28)
FRANKLIN MUNICIPAL PLANNING COMMISSION
12/13/2016



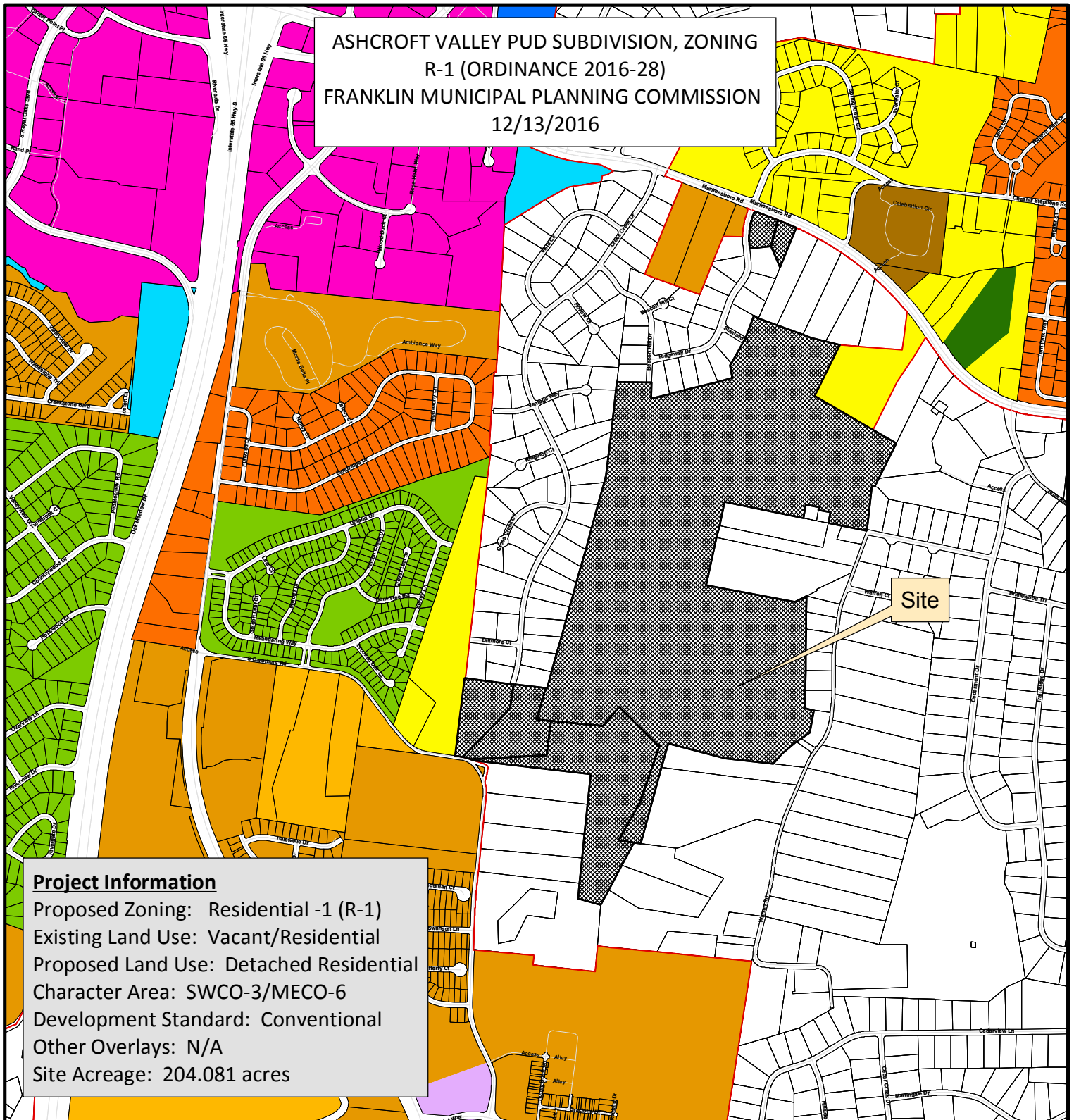
Project Information
 Proposed Zoning: Residential -1 (R-1)
 Existing Land Use: Vacant/Residential
 Proposed Land Use: Detached Residential
 Character Area: SWCO-3/MECO-6
 Development Standard: Conventional
 Other Overlays: N/A
 Site Acreage: 204.081 acres

Annexed Property	SD-R Specific Development-Residential
AG Agricultural District	SD-X Specific Development-Variety
ER Estate Residential	OR Office Residential District
R-1 Residential District	GO General Office District
R-2 Residential District	CC Central Commercial District
R-3 Residential District	NC Neighborhood Commercial District
R-6 Residential District	GC General Commercial District
RM-10 Attached 10 Residential District	LI Light Industrial District
RM-15 Attached 15 Residential District	HI Heavy Industrial District
RM-20 Attached 20 Residential District	CI Civic and Institutional District

0 750 1,500 3,000
 Feet

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ASHCROFT VALLEY PUD SUBDIVISION, ZONING
R-1 (ORDINANCE 2016-28)
FRANKLIN MUNICIPAL PLANNING COMMISSION
12/13/2016



Project Information

Proposed Zoning: Residential -1 (R-1)
Existing Land Use: Vacant/Residential
Proposed Land Use: Detached Residential
Character Area: SWCO-3/MECO-6
Development Standard: Conventional
Other Overlays: N/A
Site Acreage: 204.081 acres

- | | | | |
|---|--|---|---------------------------------------|
|  | Annexed Property |  | SD-R Specific Development-Residential |
|  | AG Agricultural District |  | SD-X Specific Development-Variety |
|  | ER Estate Residential |  | OR Office Residential District |
|  | R-1 Residential District |  | GO General Office District |
|  | R-2 Residential District |  | CC Central Commercial District |
|  | R-3 Residential District |  | NC Neighborhood Commercial District |
|  | R-6 Residential District |  | GC General Commercial District |
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Affidavit of Public Notice

PUBLIC NOTICE AFFIDAVIT City of Franklin, Tennessee

We/I MATTHEW S. HUFF
(Please print Name/Names in Full)

being duly sworn, depose and say(s) that (I am)/(we are), acting as the authorized agent on all matters pertaining to the processing of the development application for the property described as:

MAP 89, PARCELS 55.00, 30.00, 30.01, 43.02, 43.03, 43.04 1/2, MAP 79M, PARCELS 28.00 1/2, 29.00
(Property Parcel/Tax ID Number)

and located at:

1101 RIDGEWAY DRIVE
(Street Address)

have/has provided a mailed notice in accordance with section 2.3.8 of the Franklin Zoning Ordinance, which included the following:

1. The address or location of the property subject to the submittal;
2. A brief description of the property (e.g., legal description, nearby streets and intersections);
3. Date, time, and location of the public meeting or hearing; Nature, scope, and purpose of submittal;
4. Information on where the public can view the application and where they may be heard;
5. Information on where the public can submit written comments.

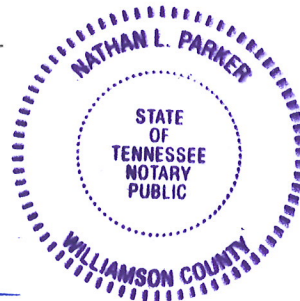
Matthew S. Huff
Signature

Subscribed and sworn to before me this

7th day of Sept, 2016

Nathan L. Parker
Notary Public

My Commission Expires: 2-19-2020



Contact the Department of Planning and Sustainability to ensure you obtain the latest version of the Public Notice Affidavit prior to submittal.

REZONING REQUEST

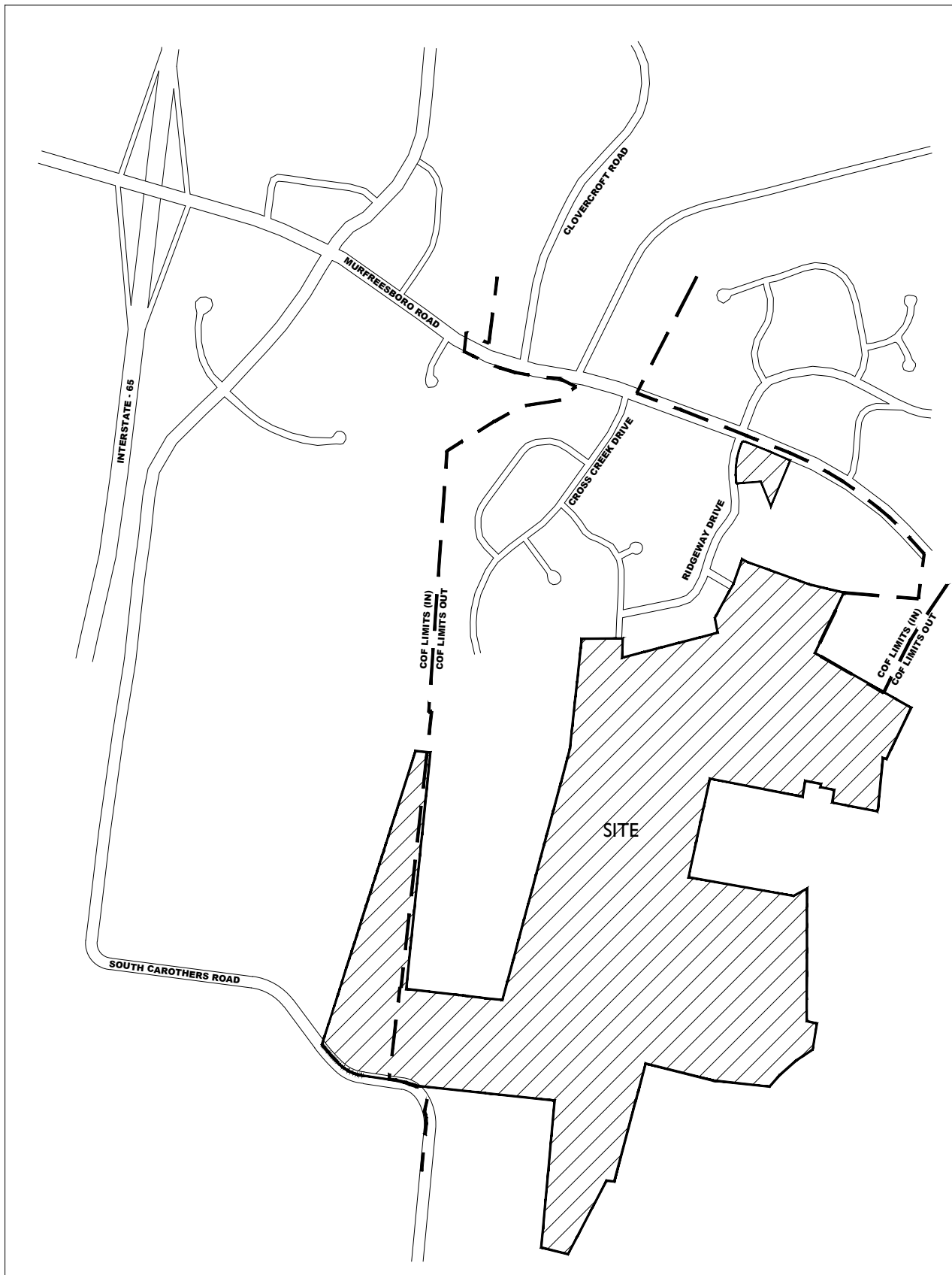
ASHCROFT VALLEY PUD SUBDIVISION

COF # 6188

MAP 89, PARCEL 55.00
MAP 79M B, PARCEL 28.00
MAP 79M B, PARCEL 29.00
MAP 089, PARCEL 30.00
MAP 089, PARCEL 30.01
MAP 089, PARCEL 43.02
MAP 089, PARCEL 43.03
MAP 089, PARCEL 43.04
FRANKLIN, TENNESSEE
CIVIL DISTRICT 14

SHEET INDEX

- C 0.0 COVER SHEET
- C 1.0 NEIGHBORHOOD CONTEXT PLAN
- C 1.1 NEIGHBORHOOD CONTEXT PLAN
- C 1.2 OVERALL EXISTING CONDITIONS PLAN
- C 1.3 OVERALL EXISTING CONDITIONS PLAN



OWNER: 089 05500
ESTATE OF MARY ETTA ADAMS
32 COLONEL WINSTEAD DRIVE
BRENTWOOD, TN 37027
JOHN E. ADAMS, JR EXECUTOR
(615) 377-3219

OWNER: 079 MB 002800
GLENN R. ADAMS
PO BOX 680098
FRANKLIN, TN 37067

OWNER: 079 MB 002900
ROB G. ADAMS
PO BOX 680098
FRANKLIN, TN 37067

OWNER: 089 03000
JEAN MARIE GILES GLASS
4340 S CAROTHERS ROAD
FRANKLIN, TN 37064

OWNER: 089 03001
GLASS HARRY GREGORY
4338 S CAROTHERS RD
FRANKLIN, TN 37064

OWNER: 089 04302
PEDEN RALPH H. JR
4348 S CAROTHERS RD
FRANKLIN, TN 37064

OWNER: 089 04303
WATKINS PATTIE SUE
4344 S CAROTHERS RD
FRANKLIN, TN 37064

OWNER: 089 04304
DURNIN GEORGE V
4350 S CAROTHERS RD
FRANKLIN, TN 37064

APPLICANT:
GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 200
FRANKLIN, TN 37064
615.975.5765
greggambie209@gmail.com
GREG GAMBLE

ENGINEER:
LAND SOLUTIONS COMPANY, LLC
2925 BERRY HILL DRIVE
NASHVILLE, TN 37204
615.300.8496
kevin@landsolutionsco.net
KEVIN ESTES

NOTE: AERIAL PHOTO, PARCEL LINES AND TOPOGRAPHIC INFORMATION
PROVIDED BY CITY OF FRANKLIN G.I.S.



LANDSCAPE ARCHITECT/PLANNER

GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY SUITE 200
FRANKLIN TN 37064
GREG GAMBLE, RLA (615) 975-5765
EMAIL ADDRESS: greggambie209@gmail.com



REZONING REQUEST

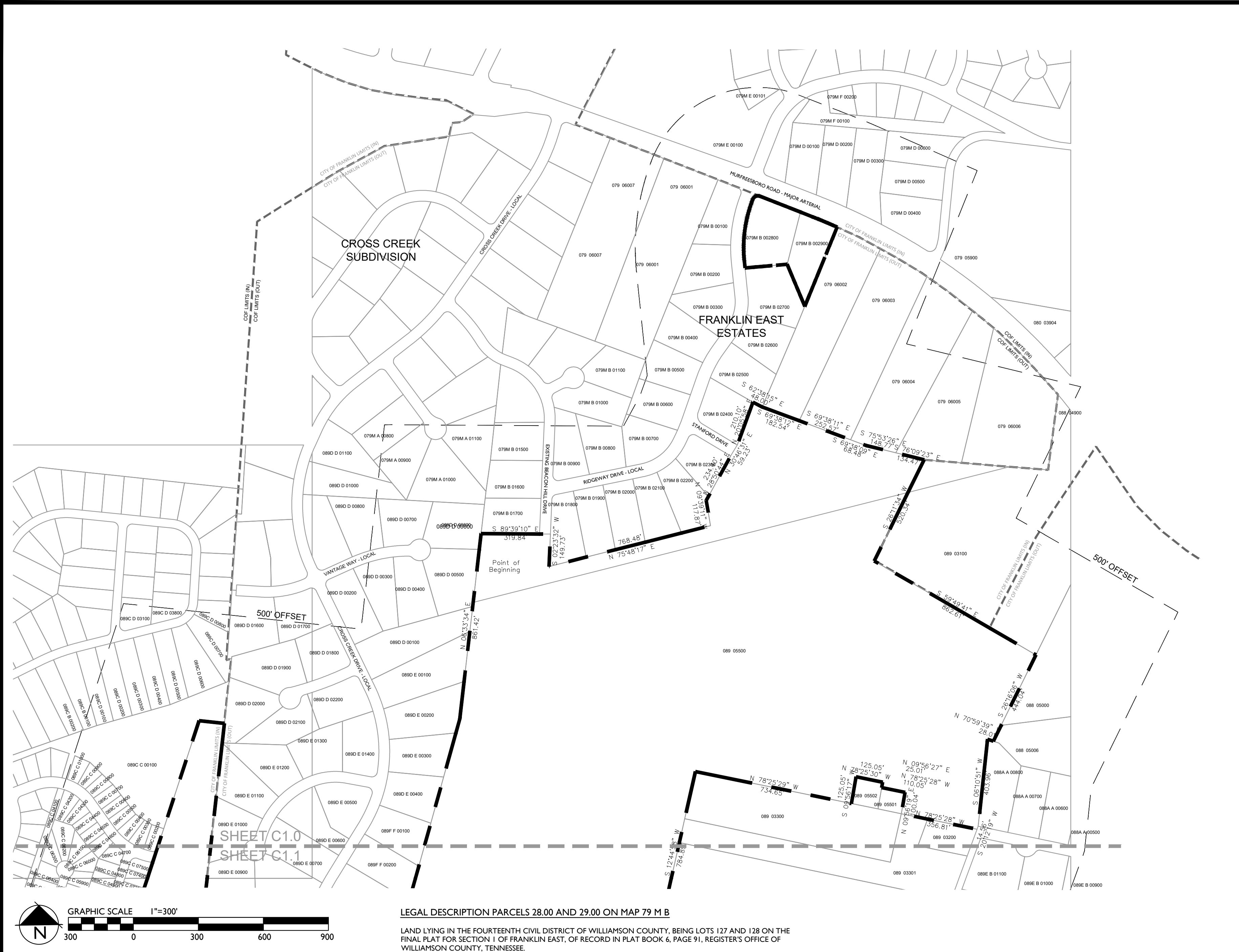
ASHCROFT VALLEY PUD SUBDIVISION

COF # 6188
FRANKLIN, TENNESSEE

SITE DATA:

PROJECT NAME:	ASHCROFT VALLEY REZONING REQUEST
PROJECT NUMBER:	6188
SUBDIVISION:	NA
LOT NUMBER:	1-376, 501-507, 601-616
ADDRESS:	1101 RIDGEWAY DRIVE, MURFREESBORO ROAD
CITY:	FRANKLIN
COUNTY:	WILLIAMSON
STATE:	TENNESSEE
CIVIL DISTRICT:	14TH CIVIL DISTRICT
MAP, GROUP, PARCEL NUMBERS:	079 MB 002800 079 MB 002900 089 05500 089 03000 089 03001 089 04302 089 04303 089 04304
EXISTING ZONING:	WILLIAMSON COUNTY: NC (079079 MB 002800, 079 MB 002900) MGA-1 (079 05500, 089 04302, 089 04303, 089, 04304) CITY OF FRANKLIN R-1 (089 03000, 089 03001) SD-R (1.67)
PROPOSED ZONING:	MECO-6
CHARACTER AREA OVERLAY:	NONE
OTHER APPLICABLE OVERLAYS:	CONVENTIONAL
APPLICABLE DEVELOPMENT STANDARD:	226.01 AC
TOTAL ACREAGE:	9,844,942.09 SF
TOTAL SQUARE FOOTAGE:	

PRE-APPLICATION SUBMITTAL	JUNE 10, 2016
INITIAL SUBMITTAL	JULY 11, 2016
RESUBMITTAL	AUGUST 4, 2016
RESUBMITTAL	SEPTEMBER 1, 2016
REVISION	-



LEGAL DESCRIPTION PARCELS 28.00 AND 29.00 ON MAP 79 M B

LAND LYING IN THE FOURTEENTH CIVIL DISTRICT OF WILLIAMSON COUNTY, BEING LOTS 127 AND 128 ON THE FINAL PLAT FOR SECTION 1 OF FRANKLIN EAST, OF RECORD IN PLAT BOOK 6, PAGE 91, REGISTER'S OFFICE OF WILLIAMSON COUNTY, TENNESSEE.

LEGAL DESCRIPTION PARCELS 30.00, 30.01, 43.02, 43.03, 43.04, AND 55.00 ON MAP 89

THE FOLLOWING LEGAL DESCRIPTION IS FOR LAND IN THE FOURTEENTH CIVIL DISTRICT OF WILLIAMSON COUNTY, LOCATED ON THE LANDS OF JAMES E. ADAMS, JR., OF RECORD IN DEED BOOK 2008, PAGE 702, R.O.W.C., TN, JEAN MARIE GILES GLASS, OF RECORD IN DEED BOOK 6526, PAGE 568, R.O.W.C., TN, HARRY GREGORY GLASS, OF RECORD IN DEED BOOK 4156, PAGE 670, R.O.W.C., TN, RALPH H. PEDEN, JR., OF RECORD IN DEED BOOK 4590, PAGE 436, R.O.W.C., TN, PATTI SUE WATKINS, OF RECORD IN DEED BOOK 6074, PAGE 249, R.O.W.C., TN, AND GEORGE V. DURNIN, OF RECORD IN DEED BOOK 1607, PAGE 1006, R.O.W.C., TN, AND MORE PARTICULARLY DESCRIBED IN AS FOLLOWS:

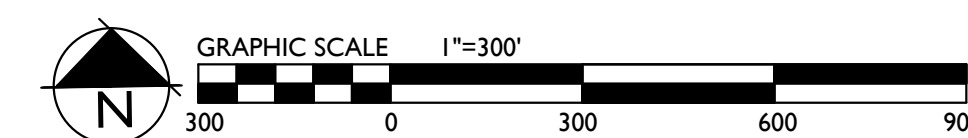
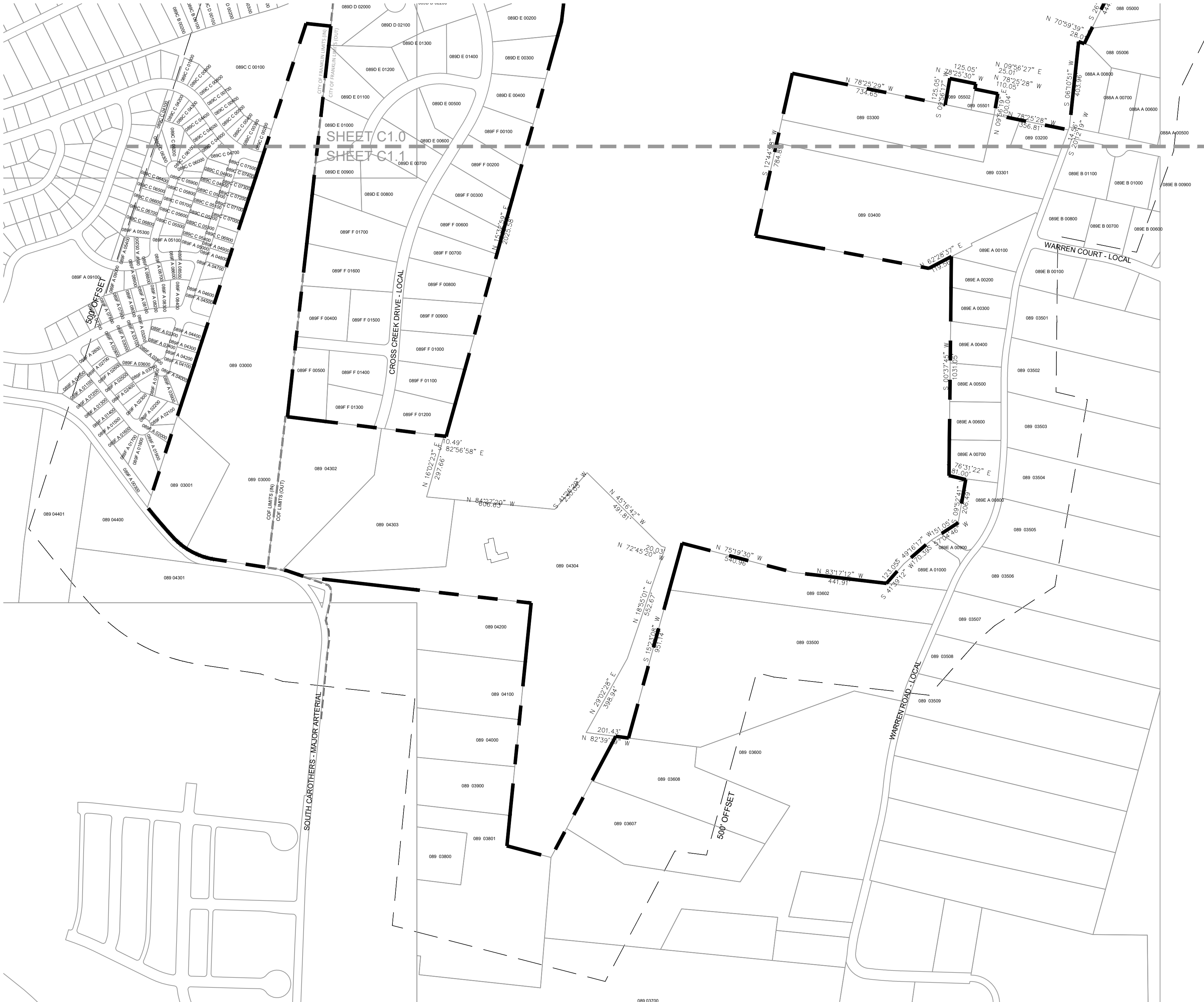
BEGINNING AT A POINT IN THE NORTH MARGIN OF SOUTH CAROTHERS ROAD, APPROXIMATELY 1200 FEET SOUTHEAST OF THE INTERSECTION OF FALCON CREEK DRIVE AND SAID SOUTH CAROTHERS ROAD; THENCE, LEAVING THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD, NORTH 18 DEGREES 09 MINUTES 26 SECONDS EAST, A DISTANCE OF 2,397.47 FEET TO A POINT; THENCE SOUTH 83 DEGREES 50 MINUTES 54 SECONDS EAST, A DISTANCE OF 117.23 FEET TO A POINT; THENCE SOUTH 06 DEGREES 20 MINUTES 18 SECONDS WEST, A DISTANCE OF 1,850.41 FEET TO A POINT; THENCE SOUTH 82 DEGREES 56 MINUTES 59 SECONDS EAST, A DISTANCE OF 753.05 FEET TO A POINT; THENCE NORTH 15 DEGREES 32 MINUTES 59 SECONDS EAST, A DISTANCE OF 2,025.58 FEET TO A POINT; THENCE NORTH 06 DEGREES 33 MINUTES 34 SECONDS EAST, A DISTANCE OF 861.42 FEET TO A POINT; THENCE SOUTH 89 DEGREES 39 MINUTES 10 SECONDS EAST, A DISTANCE OF 319.84 FEET TO A POINT; THENCE SOUTH 02 DEGREES 23 MINUTES 32 SECONDS WEST, A DISTANCE OF 149.73 FEET TO A POINT; THENCE NORTH 75 DEGREES 48 MINUTES 17 SECONDS EAST, A DISTANCE OF 768.48 FEET TO A POINT; THENCE NORTH 09 DEGREES 39 MINUTES 11 SECONDS WEST, A DISTANCE OF 117.87 FEET TO A POINT; THENCE NORTH 29 DEGREES 14 MINUTES 05 SECONDS EAST, A DISTANCE OF 293.60 FEET TO A POINT; THENCE NORTH 20 DEGREES 05 MINUTES 58 SECONDS EAST, A DISTANCE OF 210.10 FEET TO A POINT; THENCE SOUTH 62 DEGREES 38 MINUTES 15 SECONDS EAST, A DISTANCE OF 48.00 FEET TO A POINT; THENCE SOUTH 69 DEGREES 38 MINUTES 11 SECONDS EAST, A DISTANCE OF 509.70 FEET TO A POINT; THENCE SOUTH 76 DEGREES 09 MINUTES 25 SECONDS EAST, A DISTANCE OF 277.18 FEET TO A POINT; THENCE SOUTH 26 DEGREES 11 MINUTES 34 SECONDS WEST, A DISTANCE OF 403.96 FEET TO A POINT; THENCE SOUTH 59 DEGREES 49 MINUTES 41 SECONDS EAST, A DISTANCE OF 862.61 FEET TO A POINT; THENCE NORTH 26 DEGREES 16 MINUTES 06 SECONDS WEST, A DISTANCE OF 444.04 FEET TO A POINT; THENCE NORTH 70 DEGREES 59 MINUTES 36 SECONDS WEST, A DISTANCE OF 280.01 FEET TO A POINT; THENCE SOUTH 06 DEGREES 10 MINUTES 31 SECONDS EAST, A DISTANCE OF 403.96 FEET TO A POINT; THENCE SOUTH 20 DEGREES 12 MINUTES 18 SECONDS WEST, A DISTANCE OF 14.56 FEET TO A POINT; THENCE NORTH 78 DEGREES 25 MINUTES 28 SECONDS WEST, A DISTANCE OF 356.81 FEET TO A POINT; THENCE NORTH 09 DEGREES 54 MINUTES 19 SECONDS EAST, A DISTANCE OF 100.04 FEET TO A POINT; THENCE NORTH 78 DEGREES 25 MINUTES 28 SECONDS WEST, A DISTANCE OF 110.05 FEET TO A POINT; THENCE NORTH 09 DEGREES 54 MINUTES 27 SECONDS EAST, A DISTANCE OF 25.01 FEET TO A POINT; THENCE NORTH 78 DEGREES 25 MINUTES 30 SECONDS WEST, A DISTANCE OF 125.05 FEET TO A POINT;

THENCE SOUTH 09 DEGREES 54 MINUTES 17 SECONDS WEST, A DISTANCE OF 125.05 FEET TO A POINT; THENCE NORTH 78 DEGREES 25 MINUTES 29 SECONDS WEST, A DISTANCE OF 734.45 FEET TO A POINT; THENCE SOUTH 12 DEGREES 44 MINUTES 58 SECONDS WEST, A DISTANCE OF 784.89 FEET TO A POINT; THENCE SOUTH 79 DEGREES 24 MINUTES 14 SECONDS EAST, A DISTANCE OF 830.08 FEET TO A POINT; THENCE NORTH 62 DEGREES 38 MINUTES 37 SECONDS EAST, A DISTANCE OF 119.56 FEET TO A POINT; THENCE SOUTH 00 DEGREES 37 MINUTES 45 SECONDS WEST, A DISTANCE OF 1,031.05 FEET TO A POINT; THENCE SOUTH 76 DEGREES 31 MINUTES 22 SECONDS EAST, A DISTANCE OF 81.00 FEET TO A POINT; THENCE SOUTH 09 DEGREES 52 MINUTES 41 SECONDS WEST, A DISTANCE OF 206.49 FEET TO A POINT; THENCE SOUTH 57 DEGREES 04 MINUTES 46 SECONDS WEST, A DISTANCE OF 151.05 FEET TO A POINT; THENCE SOUTH 49 DEGREES 16 MINUTES 17 SECONDS WEST, A DISTANCE OF 170.39 FEET TO A POINT; THENCE SOUTH 41 DEGREES 39 MINUTES 12 SECONDS WEST, A DISTANCE OF 123.05 FEET TO A POINT; THENCE NORTH 83 DEGREES 17 MINUTES 12 SECONDS WEST, A DISTANCE OF 441.91 FEET TO A POINT; THENCE NORTH 75 DEGREES 19 MINUTES 30 SECONDS EAST, A DISTANCE OF 540.96 FEET TO A POINT; THENCE SOUTH 15 DEGREES 23 MINUTES 08 SECONDS WEST, A DISTANCE OF 951.14 FEET TO A POINT; THENCE NORTH 82 DEGREES 39 MINUTES 38 SECONDS WEST, A DISTANCE OF 60.79 FEET TO A POINT; THENCE SOUTH 82 DEGREES 07 MINUTES 56 SECONDS WEST, A DISTANCE OF 646.53 FEET TO A POINT; THENCE NORTH 28 DEGREES 15 MINUTES 25 SECONDS WEST, A DISTANCE OF 215.50 FEET TO A POINT; THENCE NORTH 05 DEGREES 42 MINUTES 26 SECONDS EAST, A DISTANCE OF 1,148.85 FEET TO A POINT; THENCE NORTH 83 DEGREES 26 MINUTES 21 SECONDS WEST, A DISTANCE OF 1,067.76 FEET TO A POINT, SAID POINT BEING IN THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD; THENCE, WITH THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD, NORTH 71 DEGREES 12 MINUTES 56 SECONDS WEST, A DISTANCE OF 97.37 FEET TO A POINT; THENCE NORTH 81 DEGREES 09 MINUTES 29 SECONDS WEST, A DISTANCE OF 342.75 FEET TO A POINT; THENCE ALONG A CURVE TO THE RIGHT, HAVING A DELTA OF 38 DEGREES 34 MINUTES 48 SECONDS, A RADIUS OF 332.15 FEET, A TANGENT OF 116.25 FEET, AN ARC LENGTH OF 223.65 FEET, A CHORD BEARING OF NORTH 61 DEGREES 58 MINUTES 32 SECONDS WEST, AND A CHORD LENGTH OF 219.45 FEET TO A POINT;

THENCE ALONG A CURVE TO THE RIGHT, HAVING A DELTA OF 94 DEGREES 21 MINUTES 00 SECONDS, A RADIUS OF 2,458.63 FEET, A TANGENT OF 93.38 FEET, AN ARC LENGTH OF 186.47 FEET, A CHORD BEARING OF NORTH 40 DEGREES 36 MINUTES 59 SECONDS WEST, AND A CHORD LENGTH OF 186.62 FEET TO THE POINT OF BEGINNING, AND CONTAINING 9,726.7712 SQUARE FEET OR 223.296 ACRES.

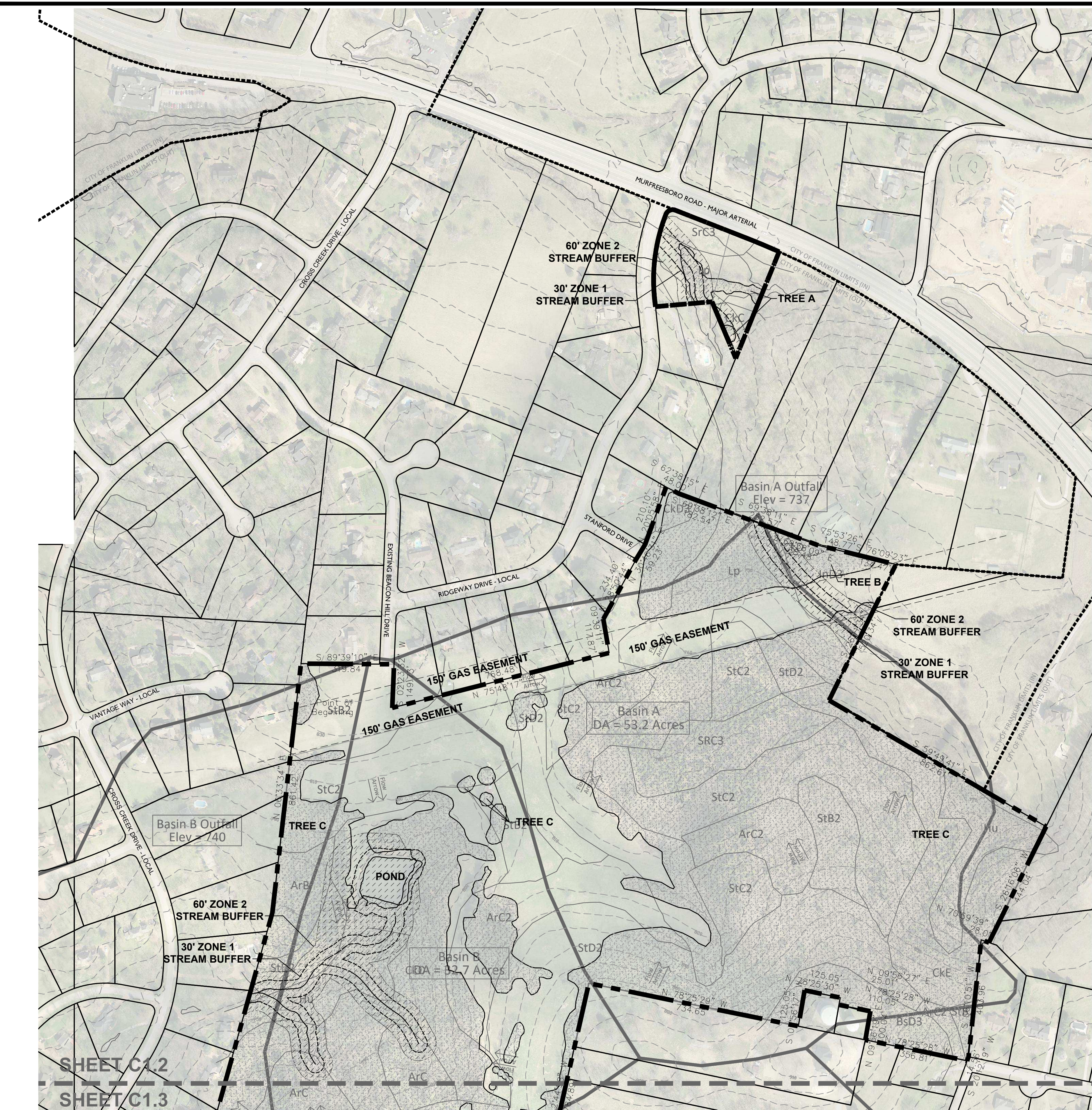
500' NEIGHBORS LIST:

PARCEL ID	OWNER ADDRESS	OWNER	CITY	STATE	ZIP	ZONE	CHARACTER AREA	LAND-USE	DEV STANDARD
1 089F-A01400	310 CROOKED OAK CT	AHR I TN LLC	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
2 089F-A03100	1066 MEANDERING WAY	AMH 2014-3 BORROWER LLC	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
3 089F-A03900	2339 SURREY LN	AHR I TN LLC	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
4 089C-C05000	2305 SURREY LN	CAFFYN-PARSONS RYAN R	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
5 089F-A03000	1064 MEANDERING WAY	CAFFYN-PARSONS RYAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
6 089-05500	MURFREESBORO RD	ADAMS JAMES E JR	Brentwood	TN	37027	MGA-1	SWCO-3	Vacant	Conventional
7 089C-C00200	2073 UPLAND DR	RIDINGS DANIEL SCOTT	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
8 089C-C07300	2305 SURREY LN	RIDINGS DAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
9 089F-A02600	305 CROOKED OAK CT	CONROY PATRICK	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
10 089C-C07500	2301 SURREY LN	CAFFYN-PARSONS CHRISTOPHER	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
11 089C-C06500	511 CLOVER LEAF LN	ELIZER CHRISTOPHER DILON	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
12 079-05900	4100 MURFREESBORO RD	FOUNTAINS OF FRANKLIN LLC	Franklin	TN	37064	SD-X	SWCO-3	Multi-Family	Conventional
13 079-06003	MURFREESBORO RD	FRENZEL G CHARLES	Franklin	TN	37067	MGA-1	SWCO-3	Vacant	Conventional
14 079-06004	4091 MURFREESBORO RD	FRENZEL GERALD CHARLES JR	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
15 079-06005	4095 MURFREESBORO RD	GOOD WALTER EARLE SR	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
16 079M-A00900	109 HOLLOW CT	KEENAN COLUM	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
17 079M-A01000	113 HOLLOW CT	LUNA JONES W	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
18 079M-A01100	115 HOLLOW CT	LUNA JONES W	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
19 079M-B00200	1104 RIDGEWAY DR	PEIFFER LEONARD M	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
20 079M-B00300	1108 RIDGEWAY DR	BRADSHAW ANTHONY W	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
21 079M-B00500	1112 RIDGEWAY DR	FERGUSON MATTHEW ALLEN	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
22 079M-B00600	1114 RIDGEWAY DR	LAMBERT OLIVER J	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
23 079M-B00700	1200 RIDGEWAY DR	O'CONNELL PHILIP	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
24 079M-B00800	1206 RIDGEWAY DR	RHEA KATHRYN L	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
25 079M-B00900	1210 RIDGEWAY DR	HANNIGAN PAUL D	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
26 079M-B01500	2001 BEACON HILL DR	WILLIS WADE A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
27 079M-B01600	1995 BEACON HILL DR	PRUITT JAY R	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
28 079M-B01700	1991 BEACON HILL DR	CAPLEN BRIAN GEORGE	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
29 079M-B01800	1211 RIDGEWAY DR	SUNGERLAND RUTH	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
30 079M-B01900	1209 RIDGEWAY DR	BRITTAIN THOMAS DAVID	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
31 079M-B02000	1207 RIDGEWAY DR	SHOEMAKE JULIUS S	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
32 079M-B02100	1205 RIDGEWAY DR	PACKARD DONALD A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
33 079M-B02200	1203 RIDGEWAY DR	OWENS MICHAEL A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
34 079M-B02300	1101 STANFORD DR	BURNS WILLIAM C JR	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
35 079M-B02400	1115 RIDGEWAY DR	MOEHLE MARK A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
36 079M-B02500	1111 RIDGEWAY DR	RICH DALE	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
37 079M-B02600	1109 RIDGEWAY DR	BUSELMER NORMAN T III	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
38 079M-B02700	1105 RIDGEWAY DR	GOERZEN LAURIE	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
39 079M-B02800	1101 RIDGEWAY DR	ADAMS R GLENN	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
40 079M-B02900	MURFREESBORO RD	ADAMS ROB G	Franklin	TN	37067	NC	SWCO-3	Vacant	Conventional
41 079M-D00100	4068 MURFREESBORO RD	BETTS CHRISTOPHER E	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
42 079M-D00200	4072 MURFREESBORO RD	SALAZAR MARY ELLEN	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
43 079M-D00300	4076 MURFREESBORO RD	BOZEWAH H ANDREW	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
44 079M-D00400	107 CHESTER STEPHENS CT	CAVENDER DAVID O	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
45 079M-D00500	111 CHESTER STEPHENS CT	MCQUIRE W GARY AND JANE M REV TRUST	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
46 079M-D00600	115 CHESTER STEPHENS CT	TAYLOR ROBERT P AND JAN J TAYLOR REV TRUST	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
47 079M-E00101	205 SPRINGHOUSE CIR	AWAD GEORGE	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
48 079M-F00200	102 CHESTER STEPHENS RD	BERREY THOMAS S	Franklin	TN	37067	R-1 (COF)	SWCO-2	Residential	Either
49 088-04900	4115 MURFREESBORO RD	WRIGHT GLEN EFFERSON	Franklin	TN	37067	MGA-1	SWCO-2	Residential	Either
50 088-05000	1980 CEDAR MONT DR	MIZELL TROY A	Thompson Station	TN	37179	MGA-1	SWCO-3	Est. Residential	Conventional
51 088-05001	4119 MURFREESBORO RD	CHURCH ST DUNSTANS EPISCOPAL	Franklin	TN	37213	MGA-1	SWCO-2	Residential	Either
52 088-05002	1972 CEDAR MONT DR	MIZELL TROY A	Franklin	TN	37067	MGA-1	SWCO-2	Residential	Either
53 088-05005	1982 CEDAR MONT DR	SLAUGHTER JAMES C	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
54 088-05007	MURFREESBORO RD	CEMETERY HOLY CROSS-MARSHALL	Franklin	TN	37067	MGA-1	SWCO-3	Cmc	Conventional
55 088-05008	MURFREESBORO RD	CEMETERY MARSHALL	Franklin	TN	37067	MGA-1	SWCO-3	Cmc	Conventional
56 088A-A00500	4209 WARREN RD	POMEROY DAVE GLENN JR	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
57 088A-A00600	4211 WARREN RD	DOSUNMU BASIL OLUWAJIDE	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
58 088A-A00700	4213 WARREN RD	PORTER JERRI L	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
59 088A-A00800	4215 WARREN RD	ROBERTS HALL M	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
60 089-03000	4340 S CAROTHERS RD	GLASS JEAN MARIE GILES	Franklin	TN	37067	R-1 (COF)	MECO-6	Agriculture	Conventional
61 089-03001	4338 S CAROTHERS RD	GLASS HARRY GREGORY	Franklin	TN	37067	R-1 (COF)	MECO-6	Residential	Conventional
62 089-03100	4113 MURFREESBORO RD	MIZELL TROY A	Thompson Station	TN	37179	MGA-1	SWCO-3	Est. Residential	Conventional
63 089-03200	4217 WARREN RD	HICKERSON LOU WILLIE	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
64 089-03300	4221 WARREN RD	HICKERSON ROBERT JR	Franklin	TN	37064	MGA-1	SWCO-3	Est. Residential	Conventional
65 089-03301	4223 WARREN RD	HICKERSON LOU WILLIE	Franklin	TN	37067	MGA-1	SWCO-3	Vacant	Conventional
66 089-03500	4269 WARREN RD	KING WILLIAM ROBERT	Franklin	TN	37067	MGA-1	SWCO-3	Agriculture	Conventional
67 089-03501	4240 WARREN RD	HUMPHREY ROALD	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
68 089-03502	4244 WARREN RD	OFMAN LEE	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
69 089-03503	4248 WARREN RD	LASTER KELLY D	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
70 089-03504	4252 WARREN RD	SKAGGS FRANK P IV	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
71 089-03505	4256 WARREN RD	KANDEL MARY E REVOCABLE TRUST	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
72 089-03506	4260 WARREN RD	DESANTIS DEREK T	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
73 089-03507	4264 WARREN RD	HOOD JONATHAN S	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
74 089-03508	4268 WARREN RD	MCGRATH ROBERT PAUL	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
75 089-03509	4272 WARREN RD	GREGUS JOSEPH A	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
76 089-03600	4279 WARREN RD	HOOD JAMES ROBERT	Franklin	TN	37067	MGA-1	SWCO-3	Agriculture	Conventional
77 089-03602	4261 WARREN RD	PEREZ ANDRES	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
78 089-03607	4287 WARREN RD	HOOD JAMES ROBERT JR	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
79 089-03608	4283 WARREN RD	MOORE JERRY ADDISON JR	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
80 089-03700	4408 S CAROTHERS RD	SIMMONS RIDGE JOINT VENTURE	Franklin	TN	37067	R-2 (COF)	MECO-6	Agriculture	Conventional
81 089-03800	4378 S CAROTHERS RD	SMITH STERLING C	Franklin	TN	37067	MGA-1	SWCO-3	Open Space	Conventional
82 089-03901	S CAROTHERS RD	SMITH STERLING C	Franklin	TN	37064	MGA-1	SWCO-3	Vacant	Conventional
83 089-03900	4372 S CAROTHERS RD	RIEDEL BERNHARD	Franklin	TN	37064	MGA-1	SWCO-3	Residential	Conventional
84 089-04000	4364 S CAROTHERS RD	HEITHCOCK JAMES G	Franklin	TN	37064	MGA-1	SWCO-3	Mixed-Use	Conventional
85 089-04200	4352 S CAROTHERS RD	ANDERSON WILMA JUNE TRUST	Franklin	TN	37064	MGA-1	SWCO-3	Est. Residential	Conventional
86 089-04301	S CAROTHERS RD	LOCKWOOD DEXTER	Franklin	TN	37067	R-2 (COF)	MECO-6	Agriculture	Conventional
87 089-04302	4348 S CAROTHERS RD	PEDEN RALPH H JR	Franklin	TN	37064	MGA-1	SWCO-3	Est. Residential	Conventional
88 089-04303	4344 S CAROTHERS RD	WATKINS PATTI SUE	Franklin	TN	37064	MGA-1	SWCO-3	Est. Residential	Conventional
89 089-04304	4350 S CAROTHERS RD	DURNIN GEORGE V	Franklin	TN	37064	MGA-1	SWCO-3	Agriculture	Conventional
90 089-04400	4341 S CAROTHERS RD	RUSSELL ROBERT	Franklin	TN	37067	ER	MECO-6	Agriculture	Conventional
91 089-04401	4335 S CAROTHERS RD	STRAIN COLLIE	Franklin	TN	37067	ER	MECO-6	Vacant	Conventional
92 089-05501	WARREN RD	MILCROFTON UTILITY DIST	Franklin	TN	37064	MGA-1	SWCO-3	Utilities	Conventional
93 089-05502	MURFREESBORO RD	MILCROFTON UTILITY DIST	Franklin	TN	37064	MGA-1	SWCO-3	Utilities	Conventional
94 089-05503	277 DANDRIDGE DR	PERKINS LUGER DAVID	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
95 089-06000	73 DANDRIDGE DR	RINKER JOHN R	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
96 089C-C01020	UPLAND DR	FIRST TN BANK NATIONAL ASSOC	Franklin	TN	37067	R-3 (COF)	MECO-6	Open Space	Conventional
97 089C-C03030	2071 UPLAND DR	HENCHY PATRICK J	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
98 089C-C04040	2069 UPLAND DR	POWELL MELISSA B	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
99 089C-C05050	2067 UPLAND DR	WHITER MEAKA R	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
100 089C-C06060	2065 UPLAND DR	WALSH DONNA S	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
101 089C-C07070	2063 UPLAND DR	RADDER MARK A	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
102 089C-C08080	2061 UPLAND DR	YOUNG REV LIVING TRUST	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
103 089C-C09090	2059 UPLAND DR	BALDING JONATHAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
104 089C-C01000	2057 UPLAND DR	CLAXTON LIA	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
105 089C-C02010	UPLAND DR	FIRST TN BANK NATIONAL ASSOC	Franklin	TN	37067	R-3 (COF)	MECO-6	Open Space	Conventional
106 089C-C03020	UPLAND DR	WALACE JENNIFER J	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
107 089C-C04030	2046 UPLAND DR	SANCHEZ TIFANY	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
108 089C-C04040	2048 UPLAND DR	HUNTER KAREN L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
109 089C-C04050	2050 UPLAND DR	BRATTON DAVID A	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
110 089C-C04060	2052 UPLAND DR	HOOD JAMES P	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
111 089C-C04070	2300 SURREY LN	CHERRY SAUNDRA	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
112 089C-C04080	2302 SURREY LN	FRASURE DOUGLAS	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
113 089C-C04090	2304 SURREY LN	HERRON LACY	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
114 089C-C05100	2308 SURREY LN	JONES ANDREW J JR	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
115 089C-C05020	2310 SURREY LN	STOVAL DAVID W	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
116 089C-C05030	2312 SURREY LN	JAMES RONALD D	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
117 089C-C05040	2314 SURREY LN	HARTS DANIEL V	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
118 089C-C05050	502 CLOVER LEAF LN	WOODING MATTIE E	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
119 089C-C05060	504 CLOVER LEAF LN	GIESIN JAMES W	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
120 089C-C05070	506 CLOVER LEAF LN	COLEMAN MATTHEW T	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
121 089C-C05080	508 CLOVER LEAF LN	SPIEGEL STEPHEN P	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
122 089C-C05090	510 CLOVER LEAF LN	MORRIS STEVE E JR	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
123 089C-C05090	512 C								



NOTES:
1. PARCEL LINES PROVIDED BY CITY OF FRANKLIN G.I.S.
2. SITE BOUNDARY PROVIDED BY LAND SOLUTIONS COMPANY

138	089C-D00400	293 DANDRIDGE DR	ROLAND ROBERT LEE	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
139	089C-D00500	297 DANDRIDGE DR	CURLEE SUSAN M	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
140	089C-D00600	301 DANDRIDGE DR	OLSEN KAREN	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
141	089C-D00700	305 DANDRIDGE DR	VALETUTTI THOMAS	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
142	089C-D00800	309 DANDRIDGE DR	KECK LEROY A	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
143	089C-D03100	800 MCGEECHY LN	BOOKER CHARLES	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
144	089C-D03800	284 DANDRIDGE DR	MILLER DAVID C	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
145	089C-D00100	1149 CROSS CREEK DR	CRANSTON WALTER KEITH	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
146	089C-D00200	213 VANTAGE WAY	CHRISTOFFERSEN B MICHON	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
147	089C-D00300	209 VANTAGE WAY	MURPHY JOHN L	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
148	089C-D00400	205 VANTAGE WAY	WEL MICHAEL P	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
149	089C-D00500	201 VANTAGE WAY	RAMOS TIFFANY A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
150	089C-D00600	200 VANTAGE WAY	JORDAN MARGARET	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
151	089C-D00700	204 VANTAGE WAY	JOHNSON VAL	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
152	089C-D00800	208 VANTAGE WAY	BEASLEY EYERETT L JR	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
153	089C-D01000	1137 CROSS CREEK DR	HASSLER MICHAEL C	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
154	089C-D01100	1133 CROSS CREEK DR	OKERSON C ALBERT	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
155	089C-D01600	221 VANTAGE WAY	HOOS RICHARD T	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
156	089C-D01700	1146 CROSS CREEK DR	STRUNCE TODD	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
157	089C-D01800	300 RIDGETOP CT	HUGHES CARROLL L	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
158	089C-D01900	304 RIDGETOP CT	NABER CLIFFORD A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
159	089C-D02000	308 RIDGETOP CT	WINDHAM FORREST GREGORY	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
160	089C-D02100	305 RIDGETOP CT	GITHENS EILEEN S	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
161	089C-D02200	301 RIDGETOP CT	HILL SARAH	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
162	089C-E00100	1153 CROSS CREEK DR	BRASEL MIKE T	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
163	089C-E00200	1151 CROSS CREEK DR	GLEASON ALAN R	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
164	089C-E00300	1159 CROSS CREEK DR	YOUNG CLAYTON S	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
165	089C-E00400	1183 CROSS CREEK DR	MINCHEW ALAN B	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
166	089C-E00500	1162 CROSS CREEK DR	PRUITT TIMOTHY A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
167	089C-E00600	405 CROSS CREEK CT	CASE STEVEN H	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
168	089C-E00700	409 CROSS CREEK CT	EVANS MICHAEL D	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
169	089C-E00800	1114 CROSS CREEK DR	WOOD CHARLES A JR	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
170	089C-E00900	416 CROSS CREEK CT	MADDUX RICHARD L	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
171	089C-E01000	414 CROSS CREEK CT	WILSON BRADLEY D	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
172	089C-E01100	412 CROSS CREEK CT	PATRICK JOSEPH M	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
173	089C-E01200	408 CROSS CREEK CT	WILSON BRENT A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
174	089C-E01300	404 CROSS CREEK CT	JOHNSON DAVID E	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
175	089C-E01400	400 CROSS CREEK CT	DONAHOE JOHN R	Concord	MS	37421	NC	SWCO-3	Residential	Conventional
176	089E-A00100	4229 WARREN RD	HENSON HEATHER	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
177	089E-A00200	4233 WARREN RD	REINFRIED DANA	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
178	089E-A00300	4237 WARREN RD	GLMORRE JOE H	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
179	089E-A00400	4241 WARREN RD	EBB DANIEL KENT	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
180	089E-A00500	4245 WARREN RD	KUEKER MICHAEL	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
181	089E-A00600	4249 WARREN RD	ALLINSON JOHN E	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
182	089E-A00700	4253 WARREN RD	THOMPSON TIMOTHY W	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
183	089E-A00800	4257 WARREN RD	ROMEO CLAUDIO	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
184	089E-A00900	4261 WARREN RD	VALLEY VIEW DEV INC	Franklin	TN	37067	MGA-1	SWCO-3	Vacant	Conventional
185	089E-A01000	4259 WARREN RD	COGHLAN PATRICK W	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
186	089E-B00100	4201 WARREN CT	KRENGEL NORMAN K	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
187	089E-B00600	4210 WARREN CT	EDGE SAMUEL S	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
188	089E-B00700	4208 WARREN CT	BROWN ROGER LEE	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
189	089E-B00800	4202 WARREN CT	REEVES TOMMY L	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
190	089E-B00900	4220 WARREN RD	CARLAND ROBERT MORGAN	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
191	089E-B01000	4218 WARREN RD	CAMERON JAMES	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
192	089E-B01100	4216 WARREN RD	NEWMAN ANDREW J	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
193	089F-A00300	S CAROTHERS RD	FALCON CREEK HOMEOWNERS ASSOC INC	Franklin	TN	37067	R-3 (COF)	MECO-6	Open Space	Conventional
194	089F-A01000	302 CROOKED OAK CT	GREER WILLIAM P	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
195	089F-A01100	304 CROOKED OAK CT	SCRIPPS JACOB	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
196	089F-A01200	306 CROOKED OAK CT	ROE MITCHELL GREGG	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
197	089F-A01300	308 CROOKED OAK CT	NANCE MATTHEW	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
198	089F-A01600	314 CROOKED OAK CT	NIX CLYDE M	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
199	089F-A01700	316 CROOKED OAK CT	ASADER GRIGIS J	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
200	089F-A01800	318 CROOKED OAK CT	SANISTER DEBORAH EVANS	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
201	089F-A01900	320 CROOKED OAK CT	CHEN JAN Z	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
202	089F-A02000	317 CROOKED OAK CT	ZIMMERMAN PHILP M	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
203	089F-A02100	315 CROOKED OAK CT	FLAG CRAIG F	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
204	089F-A02200	313 CROOKED OAK CT	UHLER LESTER H	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
205	089F-A02300	311 CROOKED OAK CT	MCGEE AMY B	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
206	089F-A02400	309 CROOKED OAK CT	HOSFIELD HAROLD DEAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
207	089F-A02500	307 CROOKED OAK CT	MARTIN MARY LOU	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
208	089F-A02700	303 CROOKED OAK CT	YOUNG RUSSELL	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
209	089F-A02800	301 CROOKED OAK CT	FARKAS SUSAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
210	089F-A02900	1062 MEANDERING WAY	BROWN AARON L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
211	089F-A03000	1068 MEANDERING WAY	CLARAMITARO JORDAN L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
212	089F-A03300	1070 MEANDERING WAY	DUFRECHOU SCOTT J	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
213	089F-A03400	2330 SURREY LN	ARAUJO FRANK JR	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
214	089F-A03500	2332 SURREY LN	RAINES DANIEL R	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
215	089F-A03600	2334 SURREY LN	LAYMAN ROGER W	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
216	089F-A03700	2336 SURREY LN	DALTON AUDREY	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
217	089F-A03800	2338 SURREY LN	SEVERS MICHAEL E	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
218	089F-A04000	2337 SURREY LN	ELSWICK ROBERT A	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
219	089F-A04100	2335 SURREY LN	COBB REBECCA DAWN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
220	089F-A04200	2333 SURREY LN	MUNGICAL DON	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
221	089F-A04300	2331 SURREY LN	PAWA LUKE D	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
222	089F-A04400	2329 SURREY LN	BIES MICHAEL C	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
223	089F-A04500	2323 SURREY LN	WHITE RONALD L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
224	089F-A04700	2319 SURREY LN	SHELTON CHARLES V	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
225	089F-A04800	2317 SURREY LN	DALESSANDRO FRED J	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
226	089F-A04900	2315 SURREY LN	CHESSMAN CHRISTINE M TR	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
227	089F-A05100	3009 BENT TREE RD	TUTT RONALD	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
228	089F-A05200	3007 BENT TREE RD	AHN BYUNG PIL	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
229	089F-A05300	503 CLOVER LEAF LN	ODEN SETH A	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
230	089F-A05400	3005 BENT TREE RD	KILLAWEE SUSAN L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
231	089F-A07100	1063 MEANDERING WAY	ZALUD LAWRENCE R	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
232	089F-A07800	1065 MEANDERING WAY	SMITH BRIAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
233	089F-A07900	1067 MEANDERING WAY	WATERS MICHAEL	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
234	089F-A08000	1069 MEANDERING WAY	LOCKWOOD PROP LLC	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
235	089F-A08100	1071 MEANDERING WAY	PITTS GLENN S	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
236	089F-A08200	1073 MEANDERING WAY	HUYNH KHANH T	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
237	089F-A08400	1071 MEANDERING WAY	ROBINSON ROBERT L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
238	089F-A08500	2320 SURREY LN	BERNARD LINDA M	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
239	089F-A08600	3016 BENT TREE RD	JENKINS KENNETH	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
240	089F-A08700	3014 BENT TREE RD	MANIER M LISA	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
241	089F-A08800	3012 BENT TREE RD	SAWYER BERNICE B	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
242	089F-A08900	3010 BENT TREE RD	SMITH DENNIS	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
243	089F-A09000	3008 BENT TREE RD	WEST KEVIN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
244	089F-A09100	2231 FALCON CREEK DR	FALCON CREEK HOMEOWNERS ASSOC INC	Franklin	TN	37067				



NOTES:

- 1. THERE ARE NO FLOODPLAINS EXISTING ON THE SITE BASED ON FEMA MAP 47187C0220F & 47187C0214F.
- 3. AERIAL PHOTO, PARCEL LINES AND TOPOGRAPHIC INFORMATION PROVIDED BY CITY OF FRANKLIN G.I.S.
- 4. SITE BOUNDARY CALLS PROVIDED BY LAND SOLUTIONS COMPANY.
- 5. NO THIRD PARTY MINERAL RIGHTS ARE ASSOCIATED WITH THIS PROPERTY.

EXISTING TREE CANOPY

BASED ON AERIAL PHOTOGRAPHS OF THE PROPERTY THE EXISTING TREE CANOPY IS APPROXIMATELY 151 ACRES WHICH IS 66.83% OF THE TOTAL SITE

TREE CANOPY DATA

TREE AREA	EXISTING
TREE A	20,501 SF
TREE B	184,596 SF
TREE C	5,661,645 SF
TREE D	221,073 SF
TREE E	491,876 SF
TOTAL SF	6,579,691 SF

EXISTING TREE CANOPY: 6,579,691 SF
6,579,691 SF/9,844,942.09 SF = .668 (66.8%) OF TOTAL SITE

REQUIRED CANOPY PRESERVATION =
36% OF TOTAL CANOPY
6,579,691 SF * 36% = 2,368,689 SF

LEGEND

- SLOPES 14%-20%
- SLOPES >20%
- EXISTING TREE CANOPY
- STREAM BUFFER

EXISTING STORMWATER MANAGEMENT SUMMARY

TOTAL PROPERTY AREA = 226.01 ACRES
TOTAL PROPOSED DISTURBED AREA = 143.51 ACRES

SOIL TYPES: 54.6% TYPE A SOIL
25.8% TYPE B SOIL
17.2% TYPE C SOIL
0.0% TYPE D SOIL
2.4% NON-SOIL AREAS

STORMWATER NARRATIVES

BASIN A:
STORMWATER IS CURRENTLY ROUTED BY WAY OF WET WEATHER CONVEYANCES TO THE NORTHEAST CORNER OF THE SITE, WHERE IT FLOWS INTO A BLUE-LINE STREAM OFFSITE.
BASIN AREA: 53.2 AC.
OUTFALL ELEVATION: 737'

BASIN B:
STORMWATER IS CURRENTLY COLLECTED IN A POND ON THE WEST SIDE OF THE SITE WHERE IT IS CARRIED OFF SITE BY A BLUE-LINE STREAM.
BASIN AREA: 32.7 AC.
OUTFALL ELEVATION: 740'

BASIN C:
STORMWATER IS CURRENTLY ROUTED BY WAY OF A BLUE-LINE STREAM TO THE FAR WEST PROPERTY LINE. THIS BASIN IS AN EXTENSION OF THE PREVIOUS, BASIN B.
BASIN AREA: 80.8 AC.
OUTFALL ELEVATION: 694'

BASIN D:
STORMWATER IS CURRENTLY ROUTED BY WAY OF WET WEATHER CONVEYANCES TO THE SOUTH OF THE SITE ALONG S CAROTHERS ROAD, WHERE IT EVENTUALLY FLOWS INTO THE SAME STREAM AS THE FOLLOWING, BASIN E.
BASIN AREA: 15.2 AC.
OUTFALL ELEVATION: 726'

BASIN E:
STORMWATER IS CURRENTLY ROUTED BY WAY OF WET WEATHER CONVEYANCES TO THE SOUTH SIDE OF THE SITE AND EVENTUALLY FLOWS INTO THE SAME STREAM AS THE PREVIOUS, BASIN D. A BLUE-LINE STREAM COMES ONTO THIS BASIN FROM THE NORTHEAST BUT ENDS IN AN EXISTING SINKHOLE AND DRY POND, WHICH LIES TO THE NORTHEAST OF WHERE LOTS ARE TO BE DEVELOPED.
BASIN AREA: 167.0 AC.
OUTFALL ELEVATION: 673'

STATEMENT OF IMPACTS:

WATER:
WATER SERVICE WILL BE PROVIDED BY MILCROFTON UTILITY DISTRICT.
376 X 350 GPD = 131,600 GPD

SEWER:
SEWER SERVICE WILL BE PROVIDED BY THE CITY OF FRANKLIN. FOR THE PORTION OF THE SITE IN THE WAYS CREEK BASIN, CONNECTION TO THE SEWER MAIN WILL BE MADE IN SIMMONS RIDGE TO THE SOUTH. FOR THE PORTION OF THE SITE IN THE WATKINS CREEK BASIN, CONNECTION WILL BE MADE TO THE NORTH TO THE SEWER MAIN IN OCTOBER PARK ON RIDGEWAY DRIVE.

REPURIFIED (REUSE) WATER FACILITIES:
NOT AVAILABLE

STREET NETWORK:
AS SHOWN ON THE MAJOR THOROUGHFARE PLAN - SEE SHEET C 4.0 OVERALL ROW AND ACCESS PLAN INCLUDING CONNECTIVITY ELEMENTS.

THE SITE IS LOCATED SOUTH OF HIGHWAY 96 EAST WHICH IS CLASSIFIED AS A MAJOR ARTERIAL. ACCESS TO THE NORTHERN PORTION OF ASHCROFT VALLEY IS PROVIDED BY LOCAL STREETS VIA RIDGEWAY DRIVE AND STANFORD ROAD. THE NORTHERN PORTION OF THE ASHCROFT VALLEY PUD WILL BE A GATED SECLUDED NEIGHBORHOOD OF 70 HOMES WITH PRIVATELY MAINTAINED STREETS. THIS NEIGHBORHOOD WILL HAVE AN EMERGENCY CONNECTION TO THE SOUTHERN PORTION OF ASHCROFT VALLEY.

THE SOUTHERN PORTION OF ASHCROFT VALLEY WILL HAVE CONNECTIONS TO SOUTH CAROTHERS ROAD. THE PORTION OF SOUTH CAROTHERS WHICH CURRENTLY HAS A HARD 90 DEGREE BEND WILL BE RECONSTRUCTED INTO A 4-WAY INTERSECTION COMPLIANT WITH THE CITY OF FRANKLIN STREET STANDARDS.

FUTURE ROAD CONNECTIONS ARE PROVIDED AT FOUR POINTS ALONG THE PERIMETER OF THE PROPERTY FOR FUTURE CONNECTIVITY TO FUTURE DEVELOPMENT. A FULL TRAFFIC IMPACT STUDY PREPARED BY FISCHBACH TRAFFIC GROUP, LLC AND REVIEWED BY A THIRD PARTY, VOLKERT ENGINEERING, PROVIDES GREATER DETAIL OF THE OVERALL IMPACT OF THE DEVELOPMENT ON THE EXISTING ROAD NETWORK.

DRAINAGE FACILITIES:
THE PROPERTY HAS THREE PRIMARY DRAINAGE BASINS. ONE DRAINS NORTH TO WATKINS CREEK. ONE DRAINS WEST THROUGH CROSS CREEK SUBDIVISION AND ONE DRAINS SOUTH TOWARDS SOUTH CAROTHERS ROAD.

POLICE AND FIRE DEPT:
FRANKLIN FIRE DEPT STATION #2 - 2.1 MILES DRIVING DISTANCE
COLUMBIA AVE. POLICE STATION - 2.7 MILES DRIVING DISTANCE

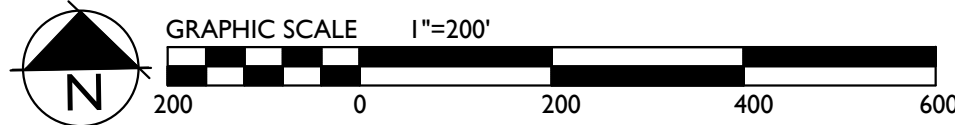
RECREATIONAL FACILITIES:
LIBERTY PARK - 3.0 MILES DRIVING DISTANCE

PROJECTED STUDENT POPULATION:
376 HOMES X .64 STUDENTS = 238 PROJECTED STUDENTS

REFUSE COLLECTION:
PROVIDED BY THE CITY OF FRANKLIN SOLID WASTE.

RESTRICTIVE COVENANTS:
A HOME OWNER'S ASSOCIATION WILL BE ESTABLISHED PRIOR TO THE FIRST OCCUPANCY OF RESIDENTS. THE HOA WILL REGULATE ARCHITECTURAL STANDARDS AND THE MAINTENANCE OF THE COMMUNITY. THE HOA WILL MAINTAIN ALL COMMON OPEN SPACE AND RECREATIONAL AREAS. THE HOA WILL MAINTAIN ALL STREETS AND SIDEWALKS WITHIN THE GATED NEIGHBORHOOD WHERE THE STREETS WILL BE PRIVATE.

Map Unit Symbol	Map Unit Name
ArB	Armour silt loam, 2 to 5 percent slopes
ArB2	Armour silt loam, 2 to 5 percent slopes, eroded
ArC	Armour silt loam, 5 to 12 percent slopes
ArC2	Armour silt loam, 5 to 12 percent slopes, eroded
BrB2	Braxton cherty silt loam, 2 to 5 percent slopes, eroded
BrC2	Braxton cherty silt loam, 5 to 12 percent slopes, eroded
BsC3	Braxton cherty silty clay loam, 5 to 12 percent slopes, severely eroded
BsD3	Braxton cherty silty clay loam, 12 to 20 percent slopes, severely eroded
CkC	Culleoka silt loam, 5 to 12 percent slopes
CkD	Culleoka silt loam, 12 to 20 percent slopes
CkD3	Culleoka silt loam, 12 to 20 percent slopes, severely eroded
CkE	Culleoka silt loam, 20 to 35 percent slopes
CkE3	Culleoka silt loam, 20 to 35 percent slopes, severely eroded
Eg	Egam silt loam, phosphatic
Gu	Gullied land
HcC3	Hampshire silty clay loam, 5 to 12 percent slopes, severely eroded
HeB2	Hampshire-colbert silt loams, 2 to 5 percent slopes, eroded
HeC2	Hampshire-colbert silt loams, 5 to 12 percent slopes, eroded
HhC3	Hampshire-colbert silty clay loams, 5 to 12 percent slopes, severely eroded
Hu	Huntington silt loam, phosphatic
InD3	Inman silty clay loam, 12 to 20 percent slopes, severely eroded
Lp	Lindell silt loam, 0 to 2 percent slopes, occasionally flooded
MbC2	Maury silt loam, 5 to 12 percent slopes, eroded
MnE	Mimosa-Rock outcrop complex, 20 to 40 percent slopes
MoD	Ashwood-Mimosa-Rock outcrop complex, 5 to 15 percent slopes
Rc	Rockland
SrC3	Stiversville clay loam, 5 to 12 percent slopes, severely eroded
SrD3	Stiversville clay loam, 12 to 20 percent slopes, severely eroded
StB2	Stiversville silt loam, 2 to 5 percent slopes, eroded
StC2	Stiversville silt loam, 5 to 12 percent slopes, eroded
StD2	Stiversville silt loam, 12 to 20 percent slopes, eroded
TvD	Talbott very rocky soils, 2 to 15 percent slopes



Revisions:

Drawing Notes:



GAMBLE

DESIGN COLLABORATIVE

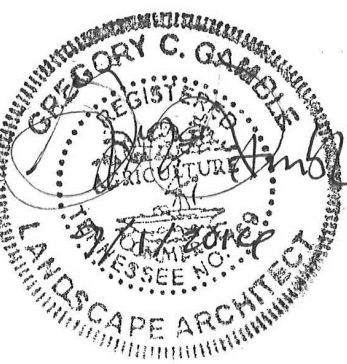
DEVELOPMENT PLANNING AND

LANDSCAPE ARCHITECTURE

Date: JUNE 10, 2016

ASHCROFT VALLEY PUD SUBDIVISION
REZONING REQUEST

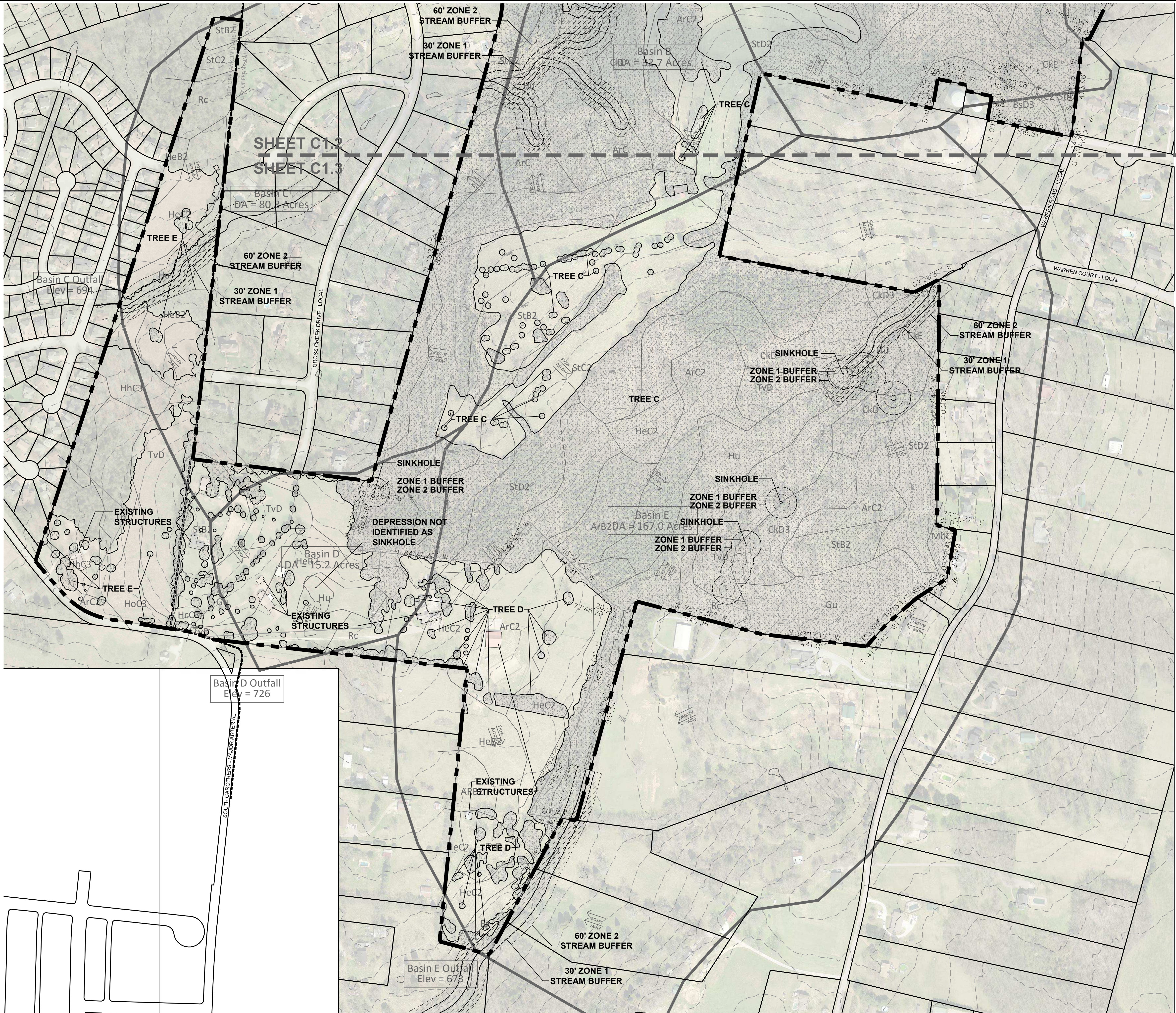
Franklin, Williamson County, Tennessee



GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 230
FRANKLIN, TENNESSEE 37064
greg@mbcdp@gmail.com
615.975.5765

OVERALL
EXISTING
CONDITIONS
PLAN

C 1.2



NOTES:

1. THERE ARE NO FLOODPLAINS EXISTING ON THE SITE BASED ON FEMA MAP 47187C0220F & 47187C0214F.
3. AERIAL PHOTO, PARCEL LINES AND TOPOGRAPHIC INFORMATION PROVIDED BY CITY OF FRANKLIN G.I.S.
4. SITE BOUNDARY CALLS PROVIDED BY LAND SOLUTIONS COMPANY.
5. NO THIRD PARTY MINERAL RIGHTS ARE ASSOCIATED WITH THIS PROPERTY.

EXISTING TREE CANOPY

BASED ON AERIAL PHOTOGRAPHS OF THE PROPERTY THE EXISTING TREE CANOPY IS APPROXIMATELY 151 ACRES WHICH IS 66.83% OF THE TOTAL SITE

TREE CANOPY DATA

TREE AREA	EXISTING
TREE A	20,501 SF
TREE B	184,596 SF
TREE C	5,661,645 SF
TREE D	221,073 SF
TREE E	491,878 SF
TOTAL SF	6,579,691 SF

EXISTING TREE CANOPY: 6,579,691 SF
6,579,691 SF/9,844,942.09 SF = .668 (66.8%) OF TOTAL SITE

REQUIRED CANOPY PRESERVATION =
36% OF TOTAL CANOPY
6,579,691 SF * 36% = 2,368,689 SF

LEGEND

- SLOPES 14%-20%
- SLOPES >20%
- EXISTING TREE CANOPY
- STREAM BUFFER

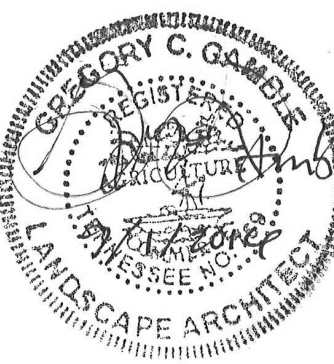
Map Unit Symbol	Map Unit Name
ArB	Armour silt loam, 2 to 5 percent slopes
ArB2	Armour silt loam, 2 to 5 percent slopes, eroded
ArC	Armour silt loam, 5 to 12 percent slopes
ArC2	Armour silt loam, 5 to 12 percent slopes, eroded
BrB2	Braxton cherty silt loam, 2 to 5 percent slopes, eroded
BrC2	Braxton cherty silt loam, 5 to 12 percent slopes, eroded
BsC3	Braxton cherty silty clay loam, 5 to 12 percent slopes, severely eroded
BsD3	Braxton cherty silty clay loam, 12 to 20 percent slopes, severely eroded
CkC	Culleoka silt loam, 5 to 12 percent slopes
CkD	Culleoka silt loam, 12 to 20 percent slopes
CkD3	Culleoka silt loam, 12 to 20 percent slopes, severely eroded
CkE	Culleoka silt loam, 20 to 35 percent slopes
CkE3	Culleoka silt loam, 20 to 35 percent slopes, severely eroded
Eg	Egam silt loam, phosphatic
Gu	Gullied land
HcC3	Hampshire silty clay loam, 5 to 12 percent slopes, severely eroded
HeB2	Hampshire-colbert silt loams, 2 to 5 percent slopes, eroded
HeC2	Hampshire-colbert silt loams, 5 to 12 percent slopes, eroded
HhC3	Hampshire-colbert silty clay loams, 5 to 12 percent slopes, severely eroded
Hu	Huntington silt loam, phosphatic
InD3	Inman silty clay loam, 12 to 20 percent slopes, severely eroded
Lp	Lindell silt loam, 0 to 2 percent slopes, occasionally flooded
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MnE	Mimosa-Rock outcrop complex, 20 to 40 percent slopes
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SrC3	Stiversville clay loam, 5 to 12 percent slopes, severely eroded
SrD3	Stiversville clay loam, 12 to 20 percent slopes, severely eroded
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StD2	Stiversville silt loam, 12 to 20 percent slopes, eroded
TvD	Talbott very rocky soils, 2 to 15 percent slopes

Revisions:

Drawing Notes:

GDC
GAMBLE
DESIGN COLLABORATIVE
DEVELOPMENT PLANNING AND
LANDSCAPE ARCHITECTURE
Date: JUNE 10, 2016

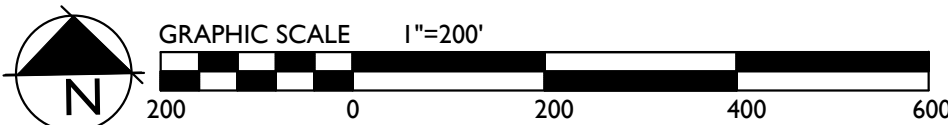
ASHCROFT VALLEY PUD SUBDIVISION
REZONING REQUEST
Franklin, Williamson County, Tennessee



GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 230
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
gg@gmblecdp@gmail.com
615.975.5765

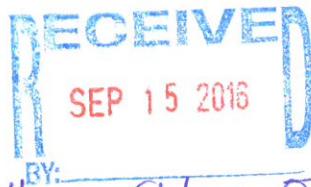
OVERALL
EXISTING
CONDITIONS
PLAN

C 1.3



COF 6189

1991 Beacon Hill Dr.
Franklin
TN 37067



9/12/16
Item 8
9/22/16 FMPC Mtg.

Dear Members of the City of Franklin Planning and sustainability department,

I am writing to express my concern about the planned development of Ashcroft Valley and the consequences it will bear on adjacent county neighborhoods.

Please understand that most of my neighbors in Franklin East and Cross Creek do not support a plan that brings city traffic onto our county roads.

Traffic from 70 homes in a gated community, entering and exiting on Stanford Drive will cause a danger to the 30+ young children who live on Ridgeway (yes, the number has increased, another young family has moved in, 2 babies have been born and at least one more family with 2 little ones is due to move in soon).

What guarantee do we, as residents, have that once building starts, there will be a "gated" community and the "pedestrian only" connectivity will not become roads, connecting the further 250+ homes on the Ridge Valley?

Greg Gamble is on record stating that he "understands there will be a fatality." Please prevent this from happening by

redirecting all city traffic away from our county neighborhood.

Unfortunately my husband and I will be absent from the public meeting on September 22. We have to travel out of the country to a family member's funeral.

We regret that our voices won't be heard and request that you acknowledge our concerns.

Sincerely,

Susan and Brian Caplan

Susan Caplan

A handwritten signature in blue ink, appearing to read "Brian Caplan", with a long, sweeping horizontal stroke extending to the left.



HISTORIC
FRANKLIN
TENNESSEE

City of Franklin

Connectivity Presentation

Ashcroft Valley PUD Subdivision

BOMA Work Session 10/11/2016



Connectivity Requirements (Section 5.10.4 of the Zoning Ordinance)

(1) Internal Street Connectivity

- All new Developments shall maintain internal street connectivity through the use of a connectivity index in accordance with the following standards:
 - Development shall achieve a connectivity index score of 1.65 or greater
 - Connectivity Index = Links/Nodes
 - Nodes are street intersection and cul-de-sac heads.
 - Links are stretches of road that connect nodes.

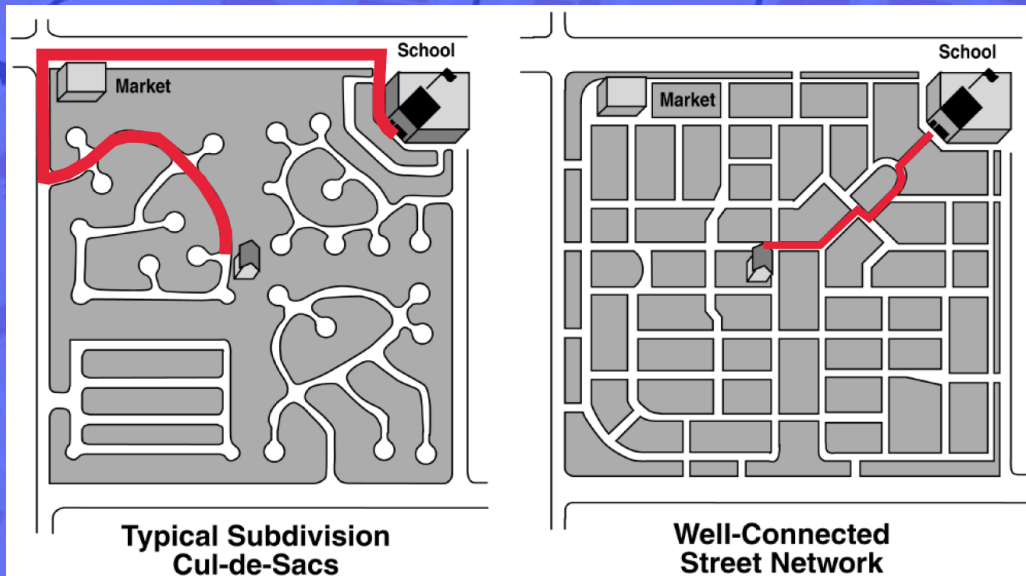
(2) External Street Connectivity

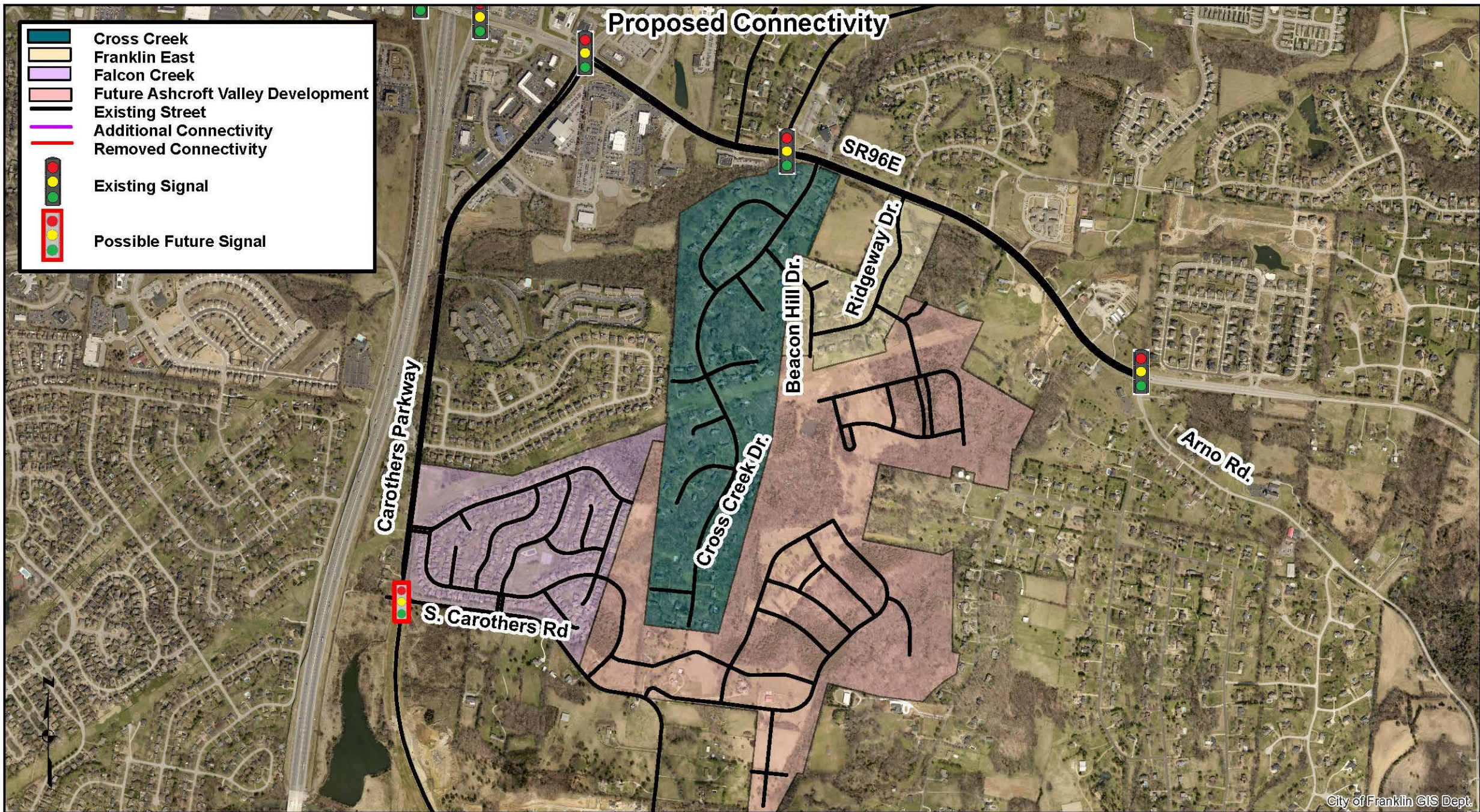
- The arrangement of streets in a development shall provide for the alignment and continuation of existing or proposed streets into adjoining lands in those cases in which the adjoin lands are undeveloped and intended for future development or in which the adjoin lands are developed and include opportunities for such connections.
- Traffic calming measures shall be integrated in the development to mitigate the impact of potential future “cut – through” traffic.
- Street rights-of-way shall be extended to or along adjoining property boundaries such that a roadway connection or street stub shall be provided for development at least every 1,500 feet for each direction (north, south, east and west) in which development abuts vacant lands. Such street stubs shall not be required to abut adjacent development lacking existing or planned street connections, floodplains, wetlands, HHO Districts, riparian buffers, required Tree Projection Zones, slopes exceeding 14 percent, or other unique site conditions preventing a street connection in the determination of the DRT.

Connectivity Requirements				
Community	Connectivity Requirements?	Are Street Stubs Required?	Are cul-de-sacs allowed?	Max. cul-de-sac length
Franklin, TN	Yes	Yes	Yes	500'
Williamson County, TN	Yes	Yes	Yes	800' (Lots Less 14,000 SF)
Nashville, TN	Yes	Yes	Generally prohibited	250'
Chattanooga, TN	Yes	Yes	Yes, Limited	<600' and provides access to < 10 lots
Boulder, CO	Yes	Yes	Yes, Limited	500'
Fort Collins, CO	Yes	Yes	Yes, Limited	660'
Cary, NC	Yes	Yes	Yes	900'
Raleigh, NC	Yes	Yes	Yes	400' for residential
Charlotte, NC	Yes	Yes	Yes, Limited	600'
Austin, TX	Yes	Yes	Yes, Limited	2000' and < 30 single-family residential dwellings

What is the purpose of connectivity requirements?

- Supports the creation of a highly connected transportation system within the City, in order to provide choices for drivers, bicyclists and pedestrians
- Connects neighborhoods to each other and to local destinations such as schools, parks and shopping centers
- Distributes traffic throughout the network and provides options for routes of travel
- Free up arterial road capacity to better serve regional long distance travel needs.
- Improves routing for transit and delivery vehicles (solid waste, recycling, mail, etc.)
- Reduces vehicles miles of travel and travel times
- Reduces emergency response times
- Promote higher levels of physical activity (walking and cycling)
- Improves air quality



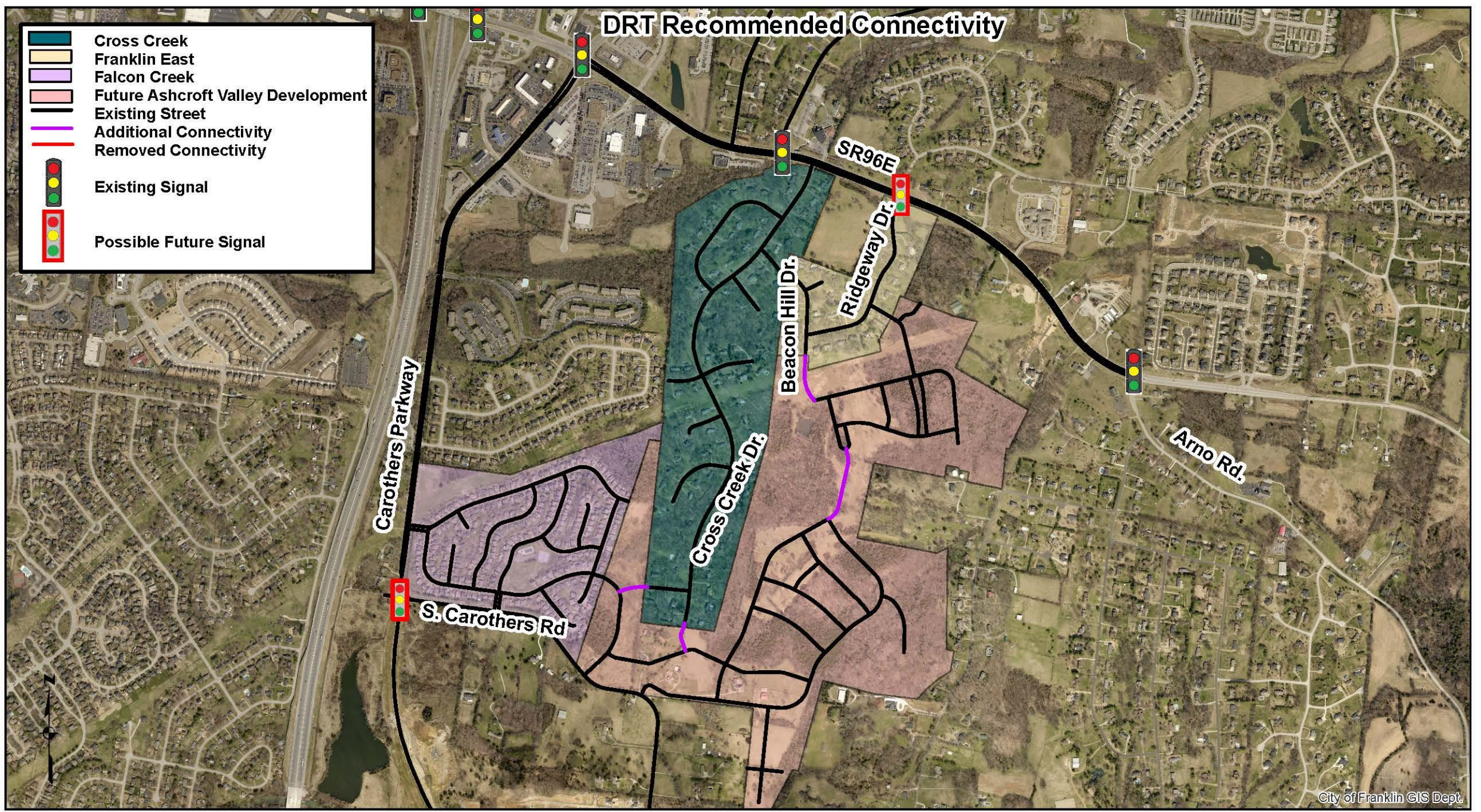


DRT Recommended Connectivity

Cross Creek
Franklin East
Falcon Creek
Future Ashcroft Valley Development
Existing Street
Additional Connectivity
Removed Connectivity

Existing Signal

Possible Future Signal



Planned - Activity Center Map 1

- Cross Creek
- Franklin East
- Falcon Creek
- Future Ashcroft Valley Development
- Future Park
- Future Neighborhood Commercial
- Existing/Future Commercial Development

Summary of Approved Development:

Proposed Retail = 1.95 Million SF

Proposed Office = 3.1 Million SF

Without connectivity you:

- You increase delay at SR96E/Clovercroft and SR96E/Carothers
- Concentrate and direct traffic to the arterial roadways vs. distribute traffic throughout the network
- Increase vehicle miles of travel and travel times
- Decrease routing options for transit, local delivery vehicles and emergency response times

Planned - Activity Center Map 2

- Cross Creek
- Franklin East
- Falcon Creek
- Future Ashcroft Valley Development
- Future Park
- Future Neighborhood Commercial
- Existing/Future Commercial Development

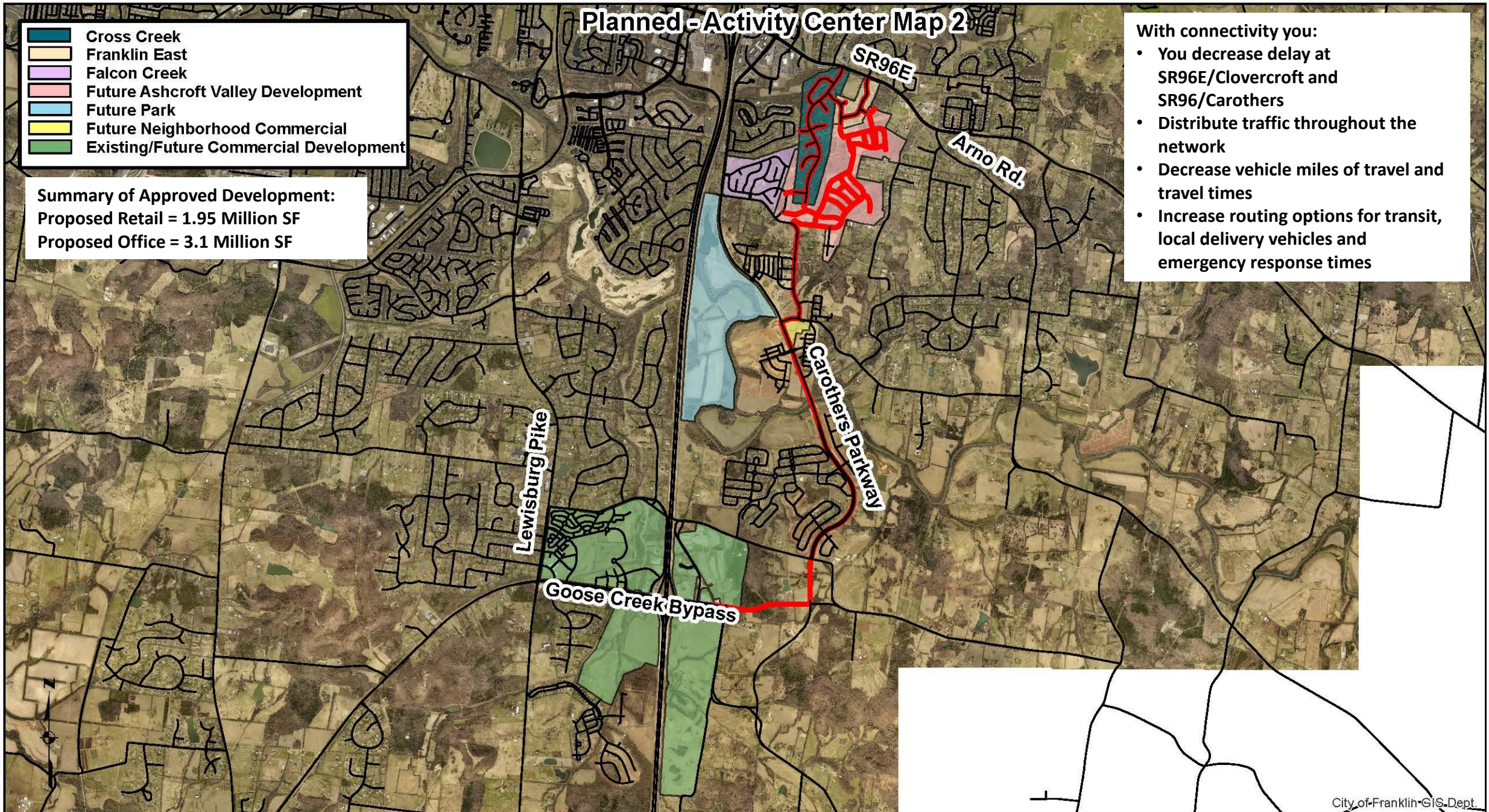
Summary of Approved Development:

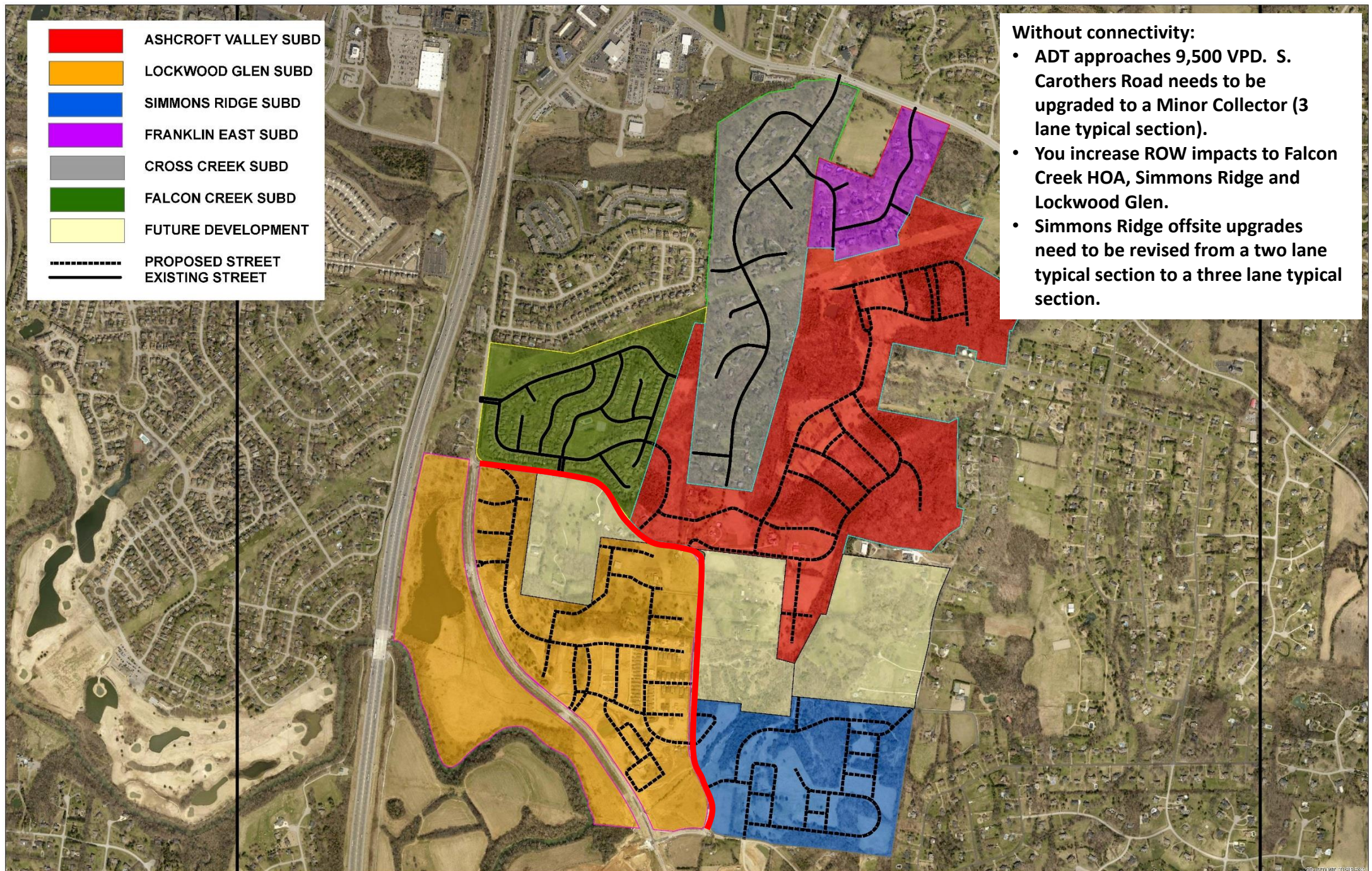
Proposed Retail = 1.95 Million SF

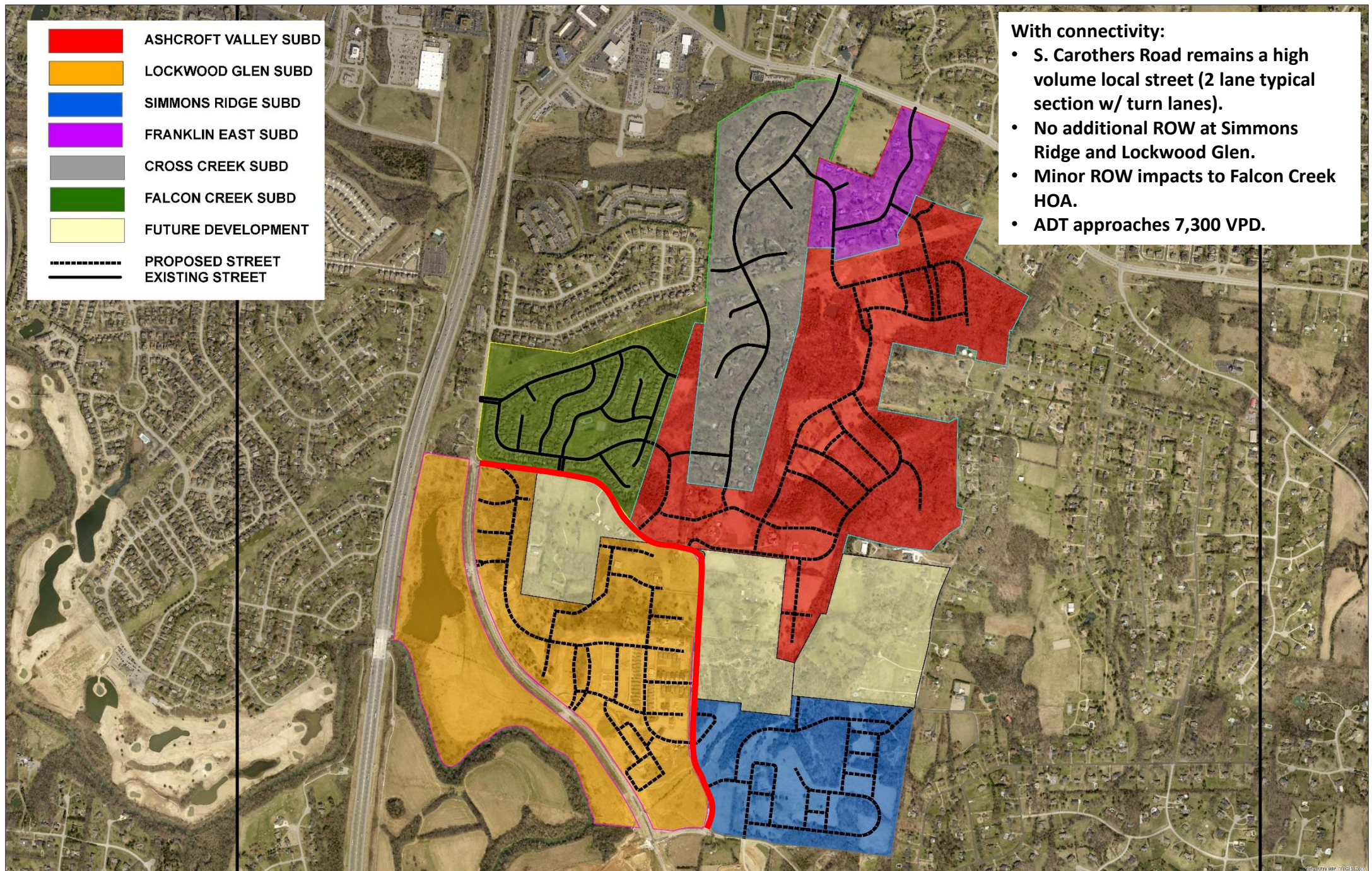
Proposed Office = 3.1 Million SF

With connectivity you:

- You decrease delay at SR96E/Clovercroft and SR96/Carothers
- Distribute traffic throughout the network
- Decrease vehicle miles of travel and travel times
- Increase routing options for transit, local delivery vehicles and emergency response times









December 9, 2016

**City of Franklin
Board of Mayor and Alderman
Franklin, Tennessee**

Regarding: Ashcroft Valley PUD Subdivision Proposal

Dear Mayor and Alderman,

My client has filed a proposal for Ashcroft Valley, a Master Planned Neighborhood with 376 homes proposed on 226 acres. On November 22, 2016, the Board of Mayor and Alderman voted to approve the Plan of Services, approve the Annexation request, and establish a zoning for the property of R1. As a result of the decision by BOMA to zone the property as R1, my client elected to defer the vote on the Development Plan to the December 13th meeting.

We have reviewed our application and the decision by the Board to rezone the property to R1. We are pleased that City will annex the property and will establish a zone for the property. Since the proposed Development Plan for Ashcroft Valley no longer complies with this base zone of R1, it will need to be withdrawn.

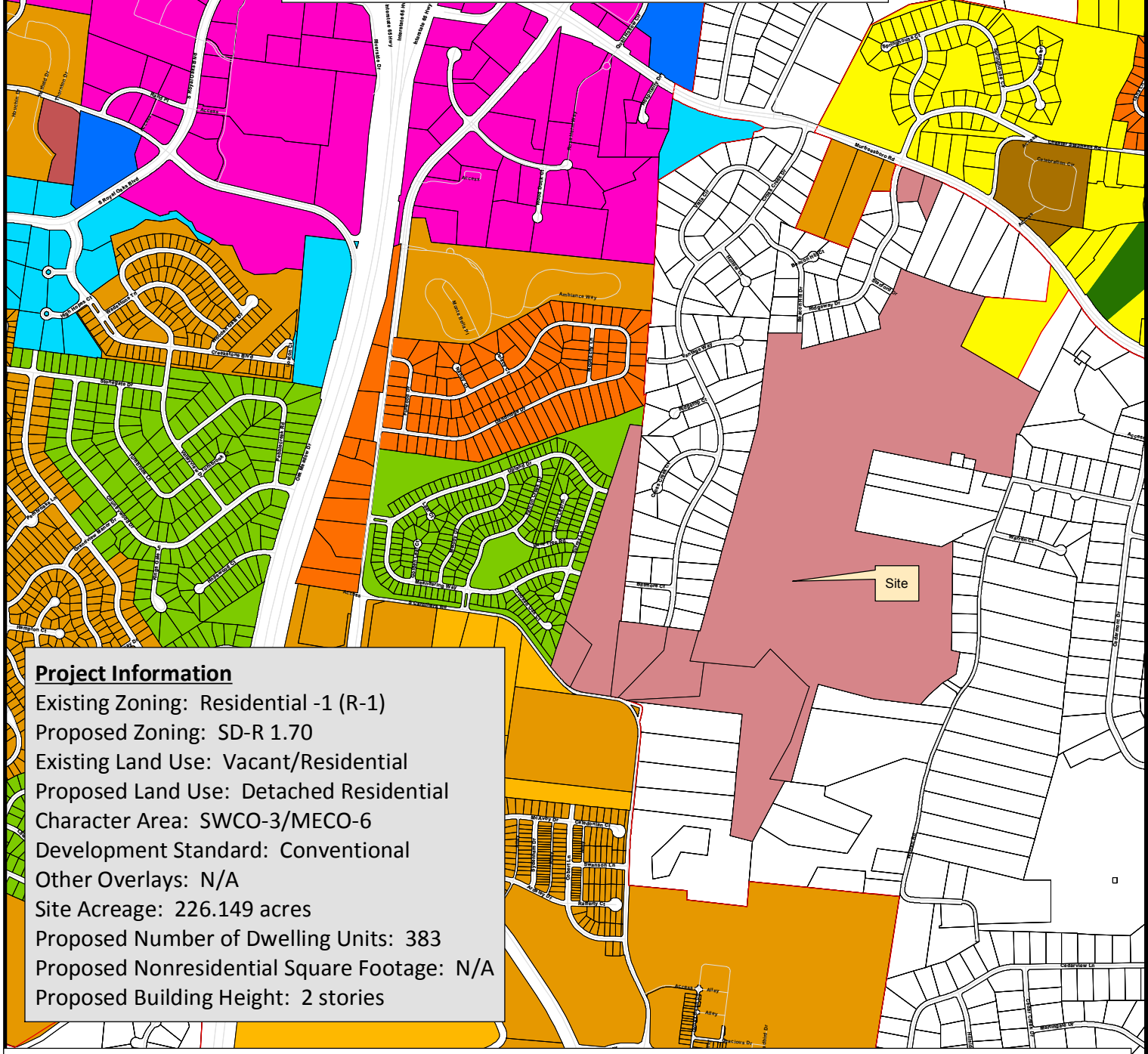
Please accept this letter as notice to withdraw the Development Plan.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Greg Gamble', is written over a light blue horizontal line.

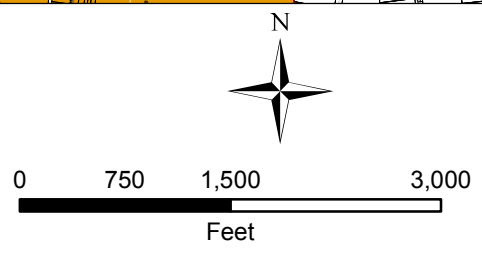
Greg Gamble
Gamble Design Collaborative

ASHCROFT VALLEY PUD SUBDIVISION, DEVELOPMENT PLAN
 RESOLUTION 2016-42
 FRANKLIN MUNICIPAL PLANNING COMMISSION
 9/22/2016



Project Information
 Existing Zoning: Residential -1 (R-1)
 Proposed Zoning: SD-R 1.70
 Existing Land Use: Vacant/Residential
 Proposed Land Use: Detached Residential
 Character Area: SWCO-3/MECO-6
 Development Standard: Conventional
 Other Overlays: N/A
 Site Acreage: 226.149 acres
 Proposed Number of Dwelling Units: 383
 Proposed Nonresidential Square Footage: N/A
 Proposed Building Height: 2 stories

- | | |
|--|---------------------------------------|
| Ashcroft Valley Subdivision | SD-R Specific Development-Residential |
| AG Agricultural District | SD-X Specific Development-Variety |
| ER Estate Residential | OR Office Residential District |
| R-1 Residential District | GO General Office District |
| R-2 Residential District | CC Central Commercial District |
| R-3 Residential District | NC Neighborhood Commercial District |
| R-6 Residential District | GC General Commercial District |
| RM-10 Attached 10 Residential District | LI Light Industrial District |
| RM-15 Attached 15 Residential District | HI Heavy Industrial District |
| RM-20 Attached 20 Residential District | CI Civic and Institutional District |



This map was created by the Franklin Planning Department. It was compiled from the most authentic information available. The City is not responsible for any errors or omissions contained hereon. All data and materials (c) copyright 2016. All rights reserved.

RESOLUTION 2016-42

TO BE ENTITLED: "A RESOLUTION APPROVING A DEVELOPMENT PLAN FOR ASHCROFT VALLEY PUD SUBDIVISION WITH 6 MODIFICATIONS OF DEVELOPMENT STANDARDS (CHARACTER AREA LOT SIZE, WARREN ROAD CONNECTION, BEACON HILL DRIVE STREET CONNECTION, INTERNAL STREET CONNECTION, CROSS CREEK DRIVE STREET CONNECTION, AND BILTMORE COURT STREET CONNECTION), FOR THE PROPERTY LOCATED SOUTH OF MURFREESBORO ROAD AND NORTH OF SOUTH CAROTHERS DRIVE."

WHEREAS, Glenn Adams, Rob Adams, James E. Adams Jr, George Durnin, Patti Sue Watkins, Ralph H. Peden Jr, ("Owner(s)") of property located as described below ("Property") petitioned the Board of Mayor and Aldermen (BOMA) of the City of Franklin, Tennessee ("City"), to annex 204.081 acres adjoining the City limits and located within the Franklin Urban Growth Boundary (UGB); and

WHEREAS, Jean Marie Glass and Harry Gregory Glass ("Owner(s)") of property located at 4338 and 4340 South Carothers Road ("Property") consisting of 22.068 acres, are located within the Franklin City Limits; and

WHEREAS, the BOMA has adopted a Plan of Services and annexed the Property as described in Resolution 2016-41 and Resolution 2016-40/Ordinance 2016-27; and

WHEREAS, the BOMA has, or will, approve zoning for the Property as part of Ordinance 2016-28; and

WHEREAS, the Planned Unit Development (PUD) process is a review procedure that is intended to encourage innovative land planning and design and avoid the monotony sometimes associated with large developments by:

- (a) Reducing or eliminating the inflexibility that sometimes results from strict application of zoning standards that were designed primarily for individual lots;
- (b) Allowing greater freedom in selecting the means to provide access, light, open space, and design amenities;
- (c) Encouraging a sensitive design that respects the surrounding established land use character and natural or man-made features of the site including, but not limited to, trees, historic features, streams, hillsides, and floodplains;
- (d) Promoting quality design and environmentally sensitive development by allowing development to take advantage of special site characteristics, locations, and land uses; and
- (e) Allowing deviations from certain zoning standards that would otherwise apply if not contrary to the general spirit and intent of this ordinance; and

WHEREAS, the PUD process requires the approval of a Development Plan that is reviewed and approved by BOMA, after a public hearing and a recommendation by the Franklin Municipal Planning Commission (FMPC); and

WHEREAS, in accordance with the provisions of *Tennessee Code Annotated* § 13-4-310, as amended, and subject to the exceptions set forth in said statute, the approval of the Development Plan by the BOMA will initiate a vesting period during which the development standards adopted by the City

and in effect on the date of approval shall remain the standards applicable to the approved Development Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS:

SECTION I. That the legal description of the Property included in the Development Plan is as follows:

PREMISES CONSIDERED	
Map-Parcel	Acres
079M---B02800	2.7
079M---B02900	
089---05500	201.381
089---04304	
089---04303	
089---04302	
089---03001	22.068
089---03000	
Total	226.149

LEGAL DESCRIPTION – PARCELS 28.00 AND 29.00 ON MAP 79 M GROUP B

LAND LYING IN THE FOURTEENTH CIVIL DISTRICT OF WILLIAMSON COUNTY, BEING LOTS 127 AND 128 ON THE FINAL PLAT FOR SECTION 1 OF FRANKLIN EAST, OF RECORD IN PLAT BOOK 6, PAGE 91, REGISTER'S OFFICE OF WILLIAMSON COUNTY, TENNESSEE, AND CONTAINING 2.7 ACRES MORE OR LESS.

LEGAL DESCRIPTION – PARCELS 43.02, 43.03, 43.04, 55.00 ON MAP 89

THE FOLLOWING LEGAL DESCRIPTION IS FOR LAND IN THE FOURTEENTH CIVIL DISTRICT OF WILLIAMSON COUNTY, LOCATED ON THE LANDS OF JAMES E. ADAMS, JR., OF RECORD IN DEED BOOK 2008, PAGE 702, R.O.W.C., TN, RALPH H PEDEN, JR., OF RECORD IN DEED BOOK 4590, PAGE 436, R.O.W.C., TN, PATTI SUE WATKINS, OF RECORD IN DEED BOOK 6074, PAGE 249, R.O.W.C., TN, AND GEORGE V. DURNIN, OF RECORD IN DEED BOOK 1607, PAGE 1006, R.O.W.C., TN, AND MORE PARTICULARLY DESCRIBED IN AS FOLLOW:

BEGINNING AT A POINT IN THE NORTH MARGIN OF SOUTH CAROTHERS ROAD, APPROXIMATELY 1600 FEET SOUTHEAST OF THE INTERSECTION OF FALCON CREEK DRIVE AND SAID SOUTH CAROTHERS ROAD;

THENCE, LEAVING THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD, NORTH 06 DEGREES 20 MINUTES 18 SECONDS EAST, A DISTANCE OF 716.81 FEET TO A POINT;

THENCE SOUTH 82 DEGREES 56 MINUTES 59 SECONDS EAST, A DISTANCE OF 753.05 FEET TO A POINT;

THENCE NORTH 15 DEGREES 32 MINUTES 59 SECONDS EAST, A DISTANCE OF 2,025.58 FEET TO A POINT;

THENCE NORTH 06 DEGREES 33 MINUTES 34 SECONDS EAST, A DISTANCE OF 861.42 FEET TO A POINT;

THENCE SOUTH 89 DEGREES 39 MINUTES 10 SECONDS EAST, A DISTANCE OF 319.84 FEET TO A POINT;

THENCE SOUTH 02 DEGREES 23 MINUTES 32 SECONDS WEST, A DISTANCE OF 149.73 FEET TO A POINT;

THENCE NORTH 75 DEGREES 48 MINUTES 17 SECONDS EAST, A DISTANCE OF 768.48 FEET TO A POINT;
THENCE NORTH 09 DEGREES 39 MINUTES 11 SECONDS WEST, A DISTANCE OF 117.87 FEET TO A POINT;
THENCE NORTH 29 DEGREES 14 MINUTES 05 SECONDS EAST, A DISTANCE OF 293.60 FEET TO A POINT;
THENCE NORTH 20 DEGREES 05 MINUTES 58 SECONDS EAST, A DISTANCE OF 210.10 FEET TO A POINT;
THENCE SOUTH 62 DEGREES 38 MINUTES 15 SECONDS EAST, A DISTANCE OF 48.00 FEET TO A POINT;
THENCE SOUTH 69 DEGREES 38 MINUTES 11 SECONDS EAST, A DISTANCE OF 509.70 FEET TO A POINT;
THENCE SOUTH 76 DEGREES 09 MINUTES 25 SECONDS EAST, A DISTANCE OF 277.18 FEET TO A POINT;
THENCE SOUTH 26 DEGREES 11 MINUTES 34 SECONDS WEST, A DISTANCE OF 520.34 FEET TO A POINT;
THENCE SOUTH 59 DEGREES 49 MINUTES 41 SECONDS EAST, A DISTANCE OF 862.61 FEET TO A POINT;
THENCE SOUTH 26 DEGREES 16 MINUTES 06 SECONDS WEST, A DISTANCE OF 444.04 FEET TO A POINT;
THENCE NORTH 70 DEGREES 59 MINUTES 36 SECONDS WEST, A DISTANCE OF 28.01 FEET TO A POINT;
THENCE SOUTH 06 DEGREES 10 MINUTES 51 SECONDS WEST, A DISTANCE OF 403.96 FEET TO A POINT;
THENCE SOUTH 20 DEGREES 12 MINUTES 18 SECONDS WEST, A DISTANCE OF 14.56 FEET TO A POINT;
THENCE NORTH 78 DEGREES 25 MINUTES 28 SECONDS WEST, A DISTANCE OF 356.81 FEET TO A POINT;
THENCE NORTH 09 DEGREES 56 MINUTES 19 SECONDS EAST, A DISTANCE OF 100.04 FEET TO A POINT;
THENCE NORTH 78 DEGREES 25 MINUTES 28 SECONDS WEST, A DISTANCE OF 110.05 FEET TO A POINT;
THENCE NORTH 09 DEGREES 56 MINUTES 27 SECONDS EAST, A DISTANCE OF 25.01 FEET TO A POINT;
THENCE NORTH 78 DEGREES 25 MINUTES 30 SECONDS WEST, A DISTANCE OF 125.05 FEET TO A POINT;
THENCE SOUTH 09 DEGREES 56 MINUTES 17 SECONDS WEST, A DISTANCE OF 125.05 FEET TO A POINT;
THENCE NORTH 78 DEGREES 25 MINUTES 29 SECONDS WEST, A DISTANCE OF 734.65 FEET TO A POINT;
THENCE SOUTH 12 DEGREES 44 MINUTES 58 SECONDS WEST, A DISTANCE OF 784.89 FEET TO A POINT;
THENCE SOUTH 79 DEGREES 24 MINUTES 14 SECONDS EAST, A DISTANCE OF 830.08 FEET TO A POINT;
THENCE NORTH 62 DEGREES 28 MINUTES 37 SECONDS EAST, A DISTANCE OF 119.56 FEET TO A POINT;
THENCE SOUTH 00 DEGREES 37 MINUTES 45 SECONDS WEST, A DISTANCE OF 1,031.05 FEET TO A POINT;
THENCE SOUTH 76 DEGREES 31 MINUTES 22 SECONDS EAST, A DISTANCE OF 81.00 FEET TO A POINT;
THENCE SOUTH 09 DEGREES 52 MINUTES 41 SECONDS WEST, A DISTANCE OF 206.49 FEET TO A POINT;

THENCE SOUTH 57 DEGREES 04 MINUTES 46 SECONDS WEST, A DISTANCE OF 151.05 FEET TO A POINT;
 THENCE SOUTH 49 DEGREES 16 MINUTES 17 SECONDS WEST, A DISTANCE OF 170.39 FEET TO A POINT;
 THENCE SOUTH 41 DEGREES 39 MINUTES 12 SECONDS WEST, A DISTANCE OF 123.05 FEET TO A POINT;
 THENCE NORTH 83 DEGREES 17 MINUTES 12 SECONDS WEST, A DISTANCE OF 441.91 FEET TO A POINT;
 THENCE NORTH 75 DEGREES 19 MINUTES 30 SECONDS WEST, A DISTANCE OF 540.96 FEET TO A POINT;
 THENCE SOUTH 15 DEGREES 23 MINUTES 08 SECONDS WEST, A DISTANCE OF 951.14 FEET TO A POINT;
 THENCE NORTH 82 DEGREES 39 MINUTES 38 SECONDS WEST, A DISTANCE OF 60.79 FEET TO A POINT;
 THENCE SOUTH 28 DEGREES 07 MINUTES 56 SECONDS WEST, A DISTANCE OF 646.53 FEET TO A POINT;
 THENCE NORTH 75 DEGREES 15 MINUTES 25 SECONDS WEST, A DISTANCE OF 215.00 FEET TO A POINT;
 THENCE NORTH 05 DEGREES 42 MINUTES 26 SECONDS EAST, A DISTANCE OF 1,148.85 FEET TO A POINT;
 THENCE NORTH 83 DEGREES 26 MINUTES 21 SECONDS WEST, A DISTANCE OF 1,067.76 FEET TO A POINT, SAID POINT BEING IN THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD;
 THENCE, WITH THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD, NORTH 71 DEGREES 12 MINUTES 56 SECONDS WEST, A DISTANCE OF 97.37 FEET TO A POINT;
 THENCE NORTH 81 DEGREES 09 MINUTES 29 SECONDS WEST, A DISTANCE OF 74.53 FEET TO THE POINT OF BEGINNING, AND CONTAINING 8,772,174.99 SQUARE FEET OR 201.381 ACRES.

LEGAL DESCRIPTION – PARCELS 30.00 AND 30.01 ON MAP 89

THE FOLLOWING LEGAL DESCRIPTION IS FOR LAND IN THE FOURTEENTH CIVIL DISTRICT OF WILLIAMSON COUNTY, BEING A TRACT OF LAND OWNED BY HARRY GREGORY GLASS, JEAN MARIE GILES GLASS AND GEORGIA ANN SPENCER, OF RECORD IN DEED BOOK 6156, PAGE 670, R.O.W.C., TN, AND DEED BOOK 6526, PAGE 568, R.O.W.C., TN, AND BEING MORE PARTICULARLY DESCRIBED PER A SURVEY PROVIDED BY CLINT T. ELLIOTT, TN R.L.S. NUMBER 2347, DATED NOVEMBER 16, 2015, AND AS FOLLOWS:

BEGINNING AT A POINT IN THE CENTERLINE OF SOUTH CAROTHERS ROAD, SAID POINT BEING THE SOUTHEAST CORNER OF FALCON CREEK PUD SUBDIVISION, SECTION ONE, REVISION ONE, OF RECORD IN PLAT BOOK 19, PAGE 10, R.O.W.C., TN;
 THENCE, LEAVING THE CENTERLINE OF SAID SOUTH CAROTHERS ROAD AND FOLLOWING THE EAST LINE OF SAID FALCON CREEK, NORTH 18 DEGREES 55 MINUTES 35 SECONDS EAST, A DISTANCE OF 303.81 FEET TO A POINT;
 THENCE NORTH 19 DEGREES 01 MINUTES 53 SECONDS EAST, A DISTANCE OF 159.41 FEET TO A POINT;
 THENCE NORTH 17 DEGREES 49 MINUTES 04 SECONDS EAST, A DISTANCE OF 139.57 FEET TO A POINT;
 THENCE NORTH 18 DEGREES 23 MINUTES 37 SECONDS EAST, A DISTANCE OF 301.52 FEET TO A POINT;
 THENCE NORTH 18 DEGREES 27 MINUTES 42 SECONDS EAST, A DISTANCE OF 298.99 FEET TO A POINT;
 THENCE NORTH 18 DEGREES 12 MINUTES 19 SECONDS EAST, A DISTANCE OF 113.92 FEET TO A POINT;

THENCE NORTH 18 DEGREES 15 MINUTES 25 SECONDS EAST, A DISTANCE OF 499.41 FEET TO A POINT;
 THENCE NORTH 18 DEGREES 06 MINUTES 31 SECONDS EAST, A DISTANCE OF 292.79 FEET TO A POINT;
 THENCE NORTH 17 DEGREES 52 MINUTES 06 SECONDS EAST, A DISTANCE OF 298.64 FEET TO A POINT;
 THENCE SOUTH 83 DEGREES 16 MINUTES 42 SECONDS EAST, A DISTANCE OF 129.60 FEET TO A POINT, SAID POINT BEING IN THE WEST LINE OF CROSS CREEK SUBDIVISION SECTION THREE, PHASE TWO, OF RECORD IN PLAT BOOK 9, PAGE 17, R.O.W.C., TN;
 THENCE, LEAVING THE EAST LINE OF SAID FALCON CREEK AND FOLLOWING THE WEST LINE OF SAID CROSS CREEK, SOUTH 06 DEGREES 56 MINUTES 52 SECONDS WEST, AND ALONG THE WAY FOLLOWING THE WEST LINES OF CROSS CREEK SUBDIVISION SECTION FOUR, OF RECORD IN PLAT BOOK 9, PAGE 39, R.O.W.C., TN, CROSS CREEK SUBDIVISION SECTION FIVE, OF RECORD IN PLAT BOOK 9, PAGE 49, R.O.W.C., TN, AND RALPH H. PEDEN, JR., OF RECORD IN DEED BOOK 4590, PAGE 436, R.O.W.C., TN, A TOTAL DISTANCE OF 2,579.78 FEET TO A POINT, SAID POINT BEING IN THE CENTERLINE OF SAID SOUTH CAROTHERS ROAD;
 THENCE, WITH THE CENTERLINE OF SAID SOUTH CAROTHERS ROAD, NORTH 80 DEGREES 55 MINUTES 37 SECONDS WEST, A DISTANCE OF 239.49 FEET TO A POINT;
 THENCE ALONG A CURVE TO THE RIGHT, HAVING A DELTA OF 41 DEGREES 25 MINUTES 37 SECONDS, A RADIUS OF 400.00 FEET, A TANGENT OF 151.25 FEET, AN ARC LENGTH OF 289.21 FEET, A CHORD BEARING OF NORTH 60 DEGREES 12 MINUTES 48 SECONDS WEST, AND A CHORD LENGTH OF 282.96 FEET TO A POINT;
 THENCE NORTH 39 DEGREES 30 MINUTES 00 SECONDS WEST, A DISTANCE OF 145.14 FEET TO THE POINT OF BEGINNING, AND CONTAINING 961,263.34 SQUARE FEET OR 22.068 ACRES.

SECTION II: That the attached Location Map shall serve the purpose of further delimiting the geographical boundaries as described by this Resolution.

SECTION III: That the overall entitlements for the Ashcroft Valley PUD Subdivision are as follows:

Entitlements	Ashcroft Valley PUD Subdivision
Base Zone District	Specific Development – Residential District (SD-R 1.66)
Character Area Overlay	MECO-6, SWCO-3
Other Zoning Overlays	N/A
Development Standard	Conventional
Number of Dwelling Units	376
Connectivity Index	1.47
Open Space Requirements	33.90 Acres
Number of Phases in Development	8

SECTION IV: That the Development Plan, the exhibits accompanying the Development Plan, and all conditions and restrictions placed upon the Development Plan by the Franklin Municipal Planning Commission and this Board shall be made a part of this Resolution as though copied verbatim herein,

and that a permanent record of the Development Plan, the exhibits accompanying the Development Plan, and all such conditions and restrictions shall be kept in the Franklin Planning and Sustainability Department.

SECTION V: That the following Modifications of Development Standards (MOS) were requested and acted upon by the Board of Mayor and Aldermen, after review and recommendation by the Franklin Municipal Planning Commission:

MOS 1: Character Area Lot Size Requirement Approved: _____ Denied: _____	Request to Approve. <i>Staff recommended approval.</i>
MOS 2: Warren Road Connection Approved: _____ Denied: _____	Request to Approve. <i>Staff recommended approval.</i>
MOS 3: Beacon Hill Drive Connection Approved: _____ Denied: _____	Request to Approve. <i>Staff recommended denial.</i>
MOS 4: Internal Street Connection Approved: _____ Denied: _____	Request to Approve. <i>Staff recommended denial.</i>
MOS 5: Cross Creek Drive Connection Approved: _____ Denied: _____	Request to Approve. <i>Staff recommended denial.</i>
MOS 6: Biltmore Court Connection Approved: _____ Denied: _____	Request to Approve. <i>Staff recommended denial.</i>

SECTION VI. That this Resolution shall take effect from and after its passage on its first and final reading, the health, safety, and welfare of the citizens requiring it.

ERIC S. STUCKEY
City Administrator

DR. KEN MOORE
Mayor

Approved as to form by:

Shauna R. Billingsley
City Attorney

PREAPPLICATION CONFERENCE: _____ 6/21/2016

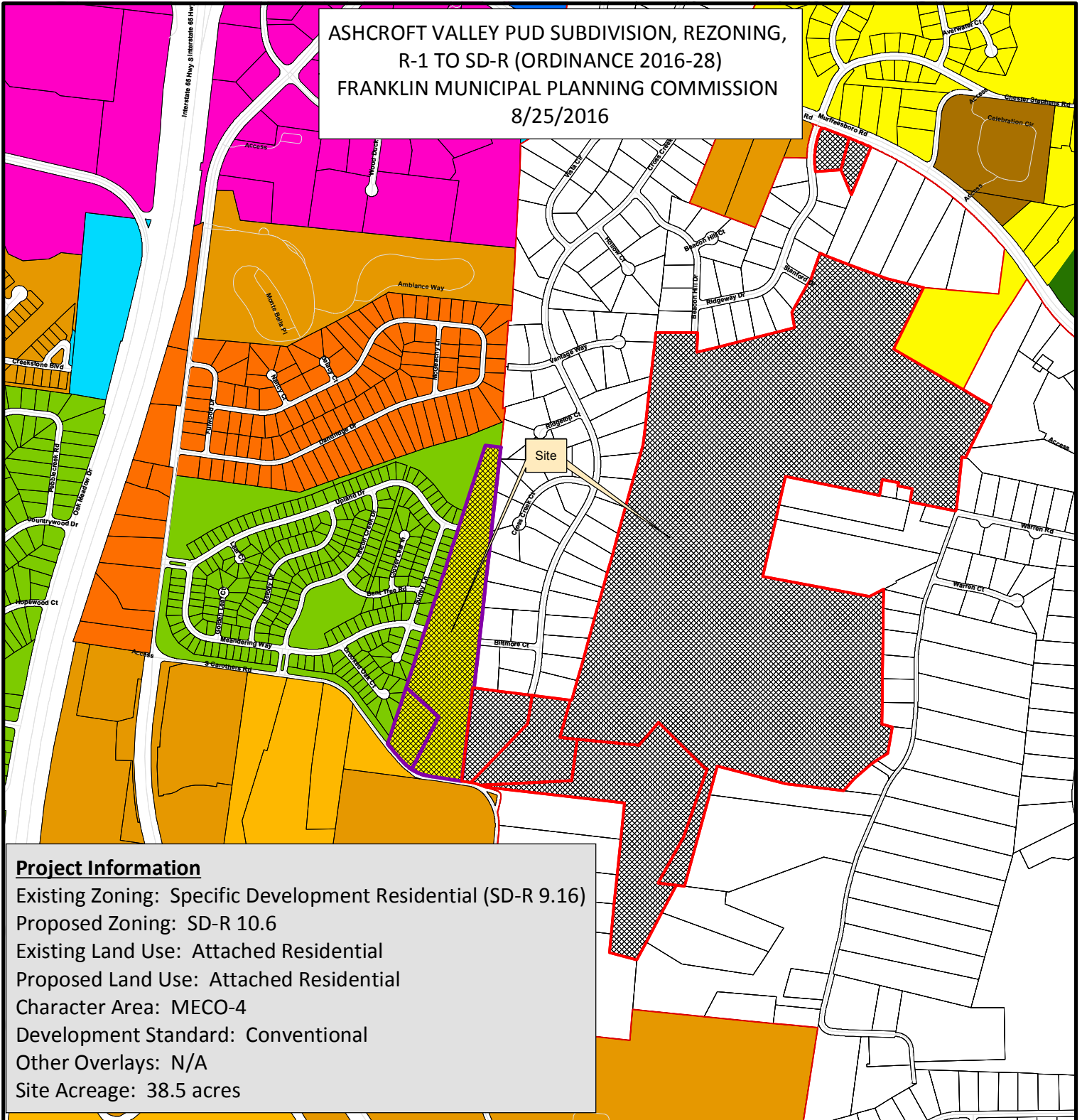
BOMA/FMPC JOINT CONCEPTUAL WORKSHOP: _____ 6/23/2016

NEIGHBORHOOD MEETING: _____ 6/21/2016

PLANNING COMMISSION RECOMMENDED _____: _____

PUBLIC HEARING AND BOMA APPROVAL: _____

ASHCROFT VALLEY PUD SUBDIVISION, REZONING,
R-1 TO SD-R (ORDINANCE 2016-28)
FRANKLIN MUNICIPAL PLANNING COMMISSION
8/25/2016



Project Information

Existing Zoning: Specific Development Residential (SD-R 9.16)
Proposed Zoning: SD-R 10.6
Existing Land Use: Attached Residential
Proposed Land Use: Attached Residential
Character Area: MECO-4
Development Standard: Conventional
Other Overlays: N/A
Site Acreage: 38.5 acres

ANNEXED PROPERTY	SD-R Specific Development-Residential
Glass Parcels	SD-X Specific Development-Variety
AG Agricultural District	OR Office Residential District
ER Estate Residential	GO General Office District
R-1 Residential District	CC Central Commercial District
R-2 Residential District	NC Neighborhood Commercial District
R-3 Residential District	GC General Commercial District
R-6 Residential District	LI Light Industrial District
RM-10 Attached 10 Residential District	HI Heavy Industrial District
RM-15 Attached 15 Residential District	CI Civic and Institutional District
RM-20 Attached 20 Residential District	



0 500 1,000 2,000
Feet

This map was created by the Franklin Planning Department.
It was compiled from the most authentic information available.
The City is not responsible for any errors or omissions contained hereon.
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CONDITIONS OF APPROVAL:

Open Issues: 14 These issues are currently being filtered

Engineering - PUD Plan Checklist

General Issues

1. F. Development Plan

kevin.long@franklintn.gov The applicant shall address the need for a connection to Cross Creek Drive following the approval or denial of the Modification of Standards Request by BOMA, either with the required connection, or with a right-of-way dedication to allow for such a connection at an indeterminate time in the future. The applicant shall dedicate 50' right-of-way for a future street connection to Cross Creek Drive. In the event that MOS #5 is approved by BOMA, the unimproved right-of-way shall be maintained as open space by the HOA until improved upon by the City.
[Edited By Kevin Long]

2. F. Development Plan

kevin.long@franklintn.gov The applicant shall address the need for a connection to Warren Road following the approval or denial of the Modification of Standards Request by BOMA, either with the required connection or with a permanent access easement.
In the event that MOS #2 is approved by BOMA, the applicant shall dedicate a 30' access easement from Local Road G to Warren Road.
[Edited By Kevin Long]

3. F. Development Plan

kevin.long@franklintn.gov The applicant shall be required to make improvements along South Carothers Road as recommended by the traffic impact analysis and as deemed necessary to bring South Carothers Road up to the necessary standards for public safety, including but not limited to the addition of curb and gutter along with a multi-use trail. This will be addressed at the site plan stage.

4. F. Development Plan

kevin.long@franklintn.gov The applicant shall address the need for a connection to Beacon Hill Drive following the approval or denial of the Modification of Standards Request by BOMA, either with the required connection, or with a right-of-way dedication to allow for such a connection at an indeterminate time in the future. The applicant shall dedicate 50' of right-of-way for a future street connection to Beacon Hill Drive. In the event that MOS #3 is approved by BOMA, the unimproved right-of-way shall be maintained as open space by the HOA until improved upon by the City.
[Edited By Kevin Long]

5. F. Development Plan

kevin.long@franklintn.gov The applicant shall address the need for a connection between Meandering Way and Biltmore Court following the approval or denial of the Modification of Standards Request by BOMA, either with the required connection, or with a right-of-way dedication to allow for such a connection at an indeterminate time in the future. In the event that MOS #6 is approved by BOMA, the applicant shall dedicate 50' right-of-way for a future street connection between Meandering Way and Biltmore Court. The unimproved right-of-way shall be maintained as open space by the HOA until improved upon by the City.
[Edited By Kevin Long]

6. F. Development Plan

lance.fittro@franklintn.gov The previous comment, "*Per Section 5.10.4(1)(b)(i) of the Zoning Ordinance, all development shall achieve a connectivity index score of 1.65 or greater. Applicant shall provide additional connectivity, or request a Design Modification for connectivity which does not meet this standard.*" is to remain open pending BOMA approval of the requested Modification of Standards.

7. H. Stormwater Management Plan

lance.fittro@franklintn.gov Applicant shall show the location of the spring, dam, stream, and wet weather conveyance identified in the revised hydrologic determination for the southern portion of the property on the plans. Applicant shall be advised that any proposed buffer averaging shall be shown as part of a Buffer Management Plan submitted to the City's Stormwater Coordinator, Jeff Willoughby, and approved prior to the Initial Submittal of any associated Site Plan.

8. D. Statement of Impacts

carlb@franklintn.gov The review of this 9-1-2016 TIA by the COF on-call traffic consultant is on hold pending the resolution of several MOS requests by the FMPC.

Engineering - Site Plan Checklist

General Issues

9. E. Roadway Design and Plan & Profile

lance.fittro@franklintn.gov At the scale presented, the turning movements at the T-alley intersections are difficult to evaluate, but the added note regarding the additional concrete apron treatment at these intersections is acknowledged. Applicant shall work with Engineering at Site Plan stage to ensure all necessary service vehicle turning movements are accommodated at these intersections.

Planning

General Issues

10. Modifications of Standards

josh.king@franklintn.gov Applicant shall submit a revised development plan should BOMA deny any of the modification of standards related to connectivity that shows how the roadway network will connect.
[Edited By Joshua King]

josh.king@franklintn.gov Applicant shall submit a revised development plan should BOMA deny any of the modification of standards related to connectivity that shows how the roadway network will connect.

11. Off Site Improvements

josh.king@franklintn.gov Applicant shall refer to memo from Engineering Department regarding off site improvements.

Ashcroft Valley PUD Dev Plan Submittal 7.11.2016.pdf

12. Non-Buildable Lots

josh.king@franklintn.gov Applicant shall at final plat stage provide a written notification for future owners of non buildable lots 1,2, and 3 (Stanford Drive and Beacon Hill Drive) of their status of being in the City Limits of the City of Franklin. These unbuildable lots shall not be combined into the existing county lot(s).
[Edited By Joshua King]

josh.king@franklintn.gov Applicant shall at final plat stage provide a written notification for future owners of non buildable lots 1,2, and 3 (Stanford Drive and Beacon Hill Drive) of their status of being in the City Limits of the City of Franklin. These unbuildable lots shall not be combined into the existing county lot(s).

Planning (Landscape)

General Issues

13. Connectivity

larry.mizell@franklintn.gov This shall remain unto FMPC makes a decision on this request.

Water/Sewer

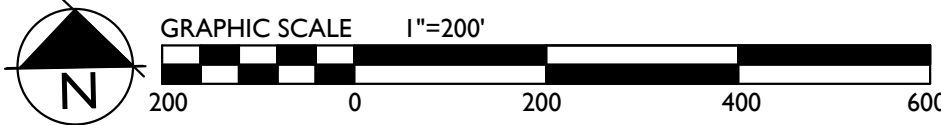
General Issues

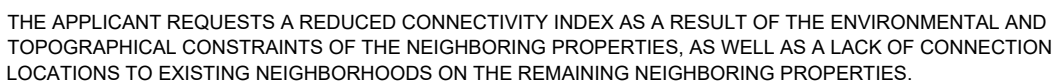
14. Sanitary a Sewer Outfall

ben.mcneil@franklintn.gov Applicant failed to address the previous comment, due to the comment not being clear. The below comment will be a condition of approval. Applicant shall revise as noted below.

- The sewer system must be designed to prevent excessive sewer line depth. The sewer serving lots 103 – 107 and 125 – 146 must flow into an existing offsite system located west of lot 132. The sewer collection system serving lots 93 – 102 and 147 – 169 may also be served by the same offsite line. Revise the sewer collection system as shown on the development plan to meet these requirements.
- The applicant shall agree to make a gravity connection to Lockwood Glen, removing the existing Falcon Creek pump station and abandoning the existing infrastructure.

[Edited By Lance Fittro]





	60' STREAM BUFFER
	100' STREAM BUFFER
	150' STREAM BUFFER
	200' STREAM BUFFER
	250' STREAM BUFFER
	300' STREAM BUFFER
	350' STREAM BUFFER
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	4050' STREAM BUFFER
	4100' STREAM BUFFER
	4150' STREAM BUFFER
	4200' STREAM BUFFER

C 2.1

COF 6189

A



TYPICAL HOME ELEVATION 'A'

1. HOME STYLE WITH GARAGE LOCATED AT THE REAR OF THE LOT THAT IS ACCESSED FROM AN ALLEY, OR FROM THE FRONT STREET WITH AN EXTENDED DRIVEWAY.
2. ONE TO TWO STORIES IN HEIGHT.
3. MATERIALS INCLUDE BRICK, SIMULATED STONE, CEMENTATIOUS SIDING, AND ARCHITECTURAL SHINGLES.
4. THESE ELEVATIONS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS AND THE APPROVAL OF THE PLANNING COMMISSION/CITY OF FRANKLIN. CHANGES SHALL NOT BE MADE TO THE APPROVED ELEVATIONS UNLESS APPROVED BY EITHER THE CODES DIRECTOR OR THE PLANNING COMMISSION.
5. ELEVATIONS SHOWN ARE TYPICAL FOR THIS DEVELOPMENT. FINAL DESIGN PLANS SHALL BE SUBMITTED WITH THE REQUEST FOR BUILDING PERMITS AND SHALL INDICATE COMPLIANCE WITH THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS, SPECIFICALLY THE REQUIREMENT FOR EXPOSED FOUNDATIONS OR WATER TABLES/ELEVATED FINISHED FLOORS AND GARAGE DOOR SEPARATION/MAXIMUM WIDTHS.
6. BUILDINGS WITH SIDE ELEVATIONS FACING A PUBLIC RIGHT-OF-WAY SHALL HAVE WINDOWS AND ARCHITECTURAL FEATURES SIMILAR TO THE FRONT ELEVATION.
7. SINGLE FAMILY HOME SQUARE FOOTAGE RANGE: 1500 SF TO 2200 SF
8. THE FINISHED FLOOR ELEVATION OF THE FRONT FACADE TO BE A MINIMUM OF 18 INCHES ABOVE THE FINISHED GRADE.

C



TYPICAL HOME ELEVATION 'C'

1. HOME STYLE WITH GARAGE ACCESSED FROM THE FRONT FACING STREET. GARAGE IS RECESSED A MINIMUM OF 10 FEET FROM THE FRONT ELEVATION AND DRIVEWAYS ARE A MINIMUM OF 22' FROM THE SIDEWALK.
2. ONE TO TWO STORIES IN HEIGHT.
3. MATERIALS INCLUDE BRICK, SIMULATED STONE, CEMENTATIOUS SIDING, AND ARCHITECTURAL SHINGLES.
4. THESE ELEVATIONS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS AND THE APPROVAL OF THE PLANNING COMMISSION/CITY OF FRANKLIN. CHANGES SHALL NOT BE MADE TO THE APPROVED ELEVATIONS UNLESS APPROVED BY EITHER THE CODES DIRECTOR OR THE PLANNING COMMISSION.
5. ELEVATIONS SHOWN ARE TYPICAL FOR THIS DEVELOPMENT. FINAL DESIGN PLANS SHALL BE SUBMITTED WITH THE REQUEST FOR BUILDING PERMITS AND SHALL INDICATE COMPLIANCE WITH THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS, SPECIFICALLY THE REQUIREMENT FOR EXPOSED FOUNDATIONS OR WATER TABLES/ELEVATED FINISHED FLOORS AND GARAGE DOOR SEPARATION/MAXIMUM WIDTHS.
6. BUILDINGS WITH SIDE ELEVATIONS FACING A PUBLIC RIGHT-OF-WAY SHALL HAVE WINDOWS AND ARCHITECTURAL FEATURES SIMILAR TO THE FRONT ELEVATION.
7. SINGLE FAMILY HOME SQUARE FOOTAGE RANGE: 2200 SF TO 4500 SF
8. THE FINISHED FLOOR ELEVATION OF THE FRONT FACADE TO BE A MINIMUM OF 18 INCHES ABOVE THE FINISHED GRADE.
9. FRONT FACING GARAGES ARE REQUIRED TO HAVE GARAGE DOORS NO LARGER THAN 9' IN WIDTH WITH A 2' SEPARATION BETWEEN THE DOORS.

B



TYPICAL HOME ELEVATION 'B'

1. HOME STYLE WITH GARAGE LOCATED AT THE REAR OF THE LOT THAT IS ACCESSED FROM AN ALLEY, OR FROM THE FRONT STREET WITH AN EXTENDED DRIVEWAY.
2. ONE TO TWO STORIES IN HEIGHT.
3. MATERIALS INCLUDE BRICK, SIMULATED STONE, CEMENTATIOUS SIDING, AND ARCHITECTURAL SHINGLES.
4. THESE ELEVATIONS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS AND THE APPROVAL OF THE PLANNING COMMISSION/CITY OF FRANKLIN. CHANGES SHALL NOT BE MADE TO THE APPROVED ELEVATIONS UNLESS APPROVED BY EITHER THE CODES DIRECTOR OR THE PLANNING COMMISSION.
5. ELEVATIONS SHOWN ARE TYPICAL FOR THIS DEVELOPMENT. FINAL DESIGN PLANS SHALL BE SUBMITTED WITH THE REQUEST FOR BUILDING PERMITS AND SHALL INDICATE COMPLIANCE WITH THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS, SPECIFICALLY THE REQUIREMENT FOR EXPOSED FOUNDATIONS OR WATER TABLES/ELEVATED FINISHED FLOORS AND GARAGE DOOR SEPARATION/MAXIMUM WIDTHS.
6. BUILDINGS WITH SIDE ELEVATIONS FACING A PUBLIC RIGHT-OF-WAY SHALL HAVE WINDOWS AND ARCHITECTURAL FEATURES SIMILAR TO THE FRONT ELEVATION.
7. SINGLE FAMILY HOME SQUARE FOOTAGE RANGE: 1700 SF TO 3600 SF
8. THE FINISHED FLOOR ELEVATION OF THE FRONT FACADE TO BE A MINIMUM OF 18 INCHES ABOVE THE FINISHED GRADE.



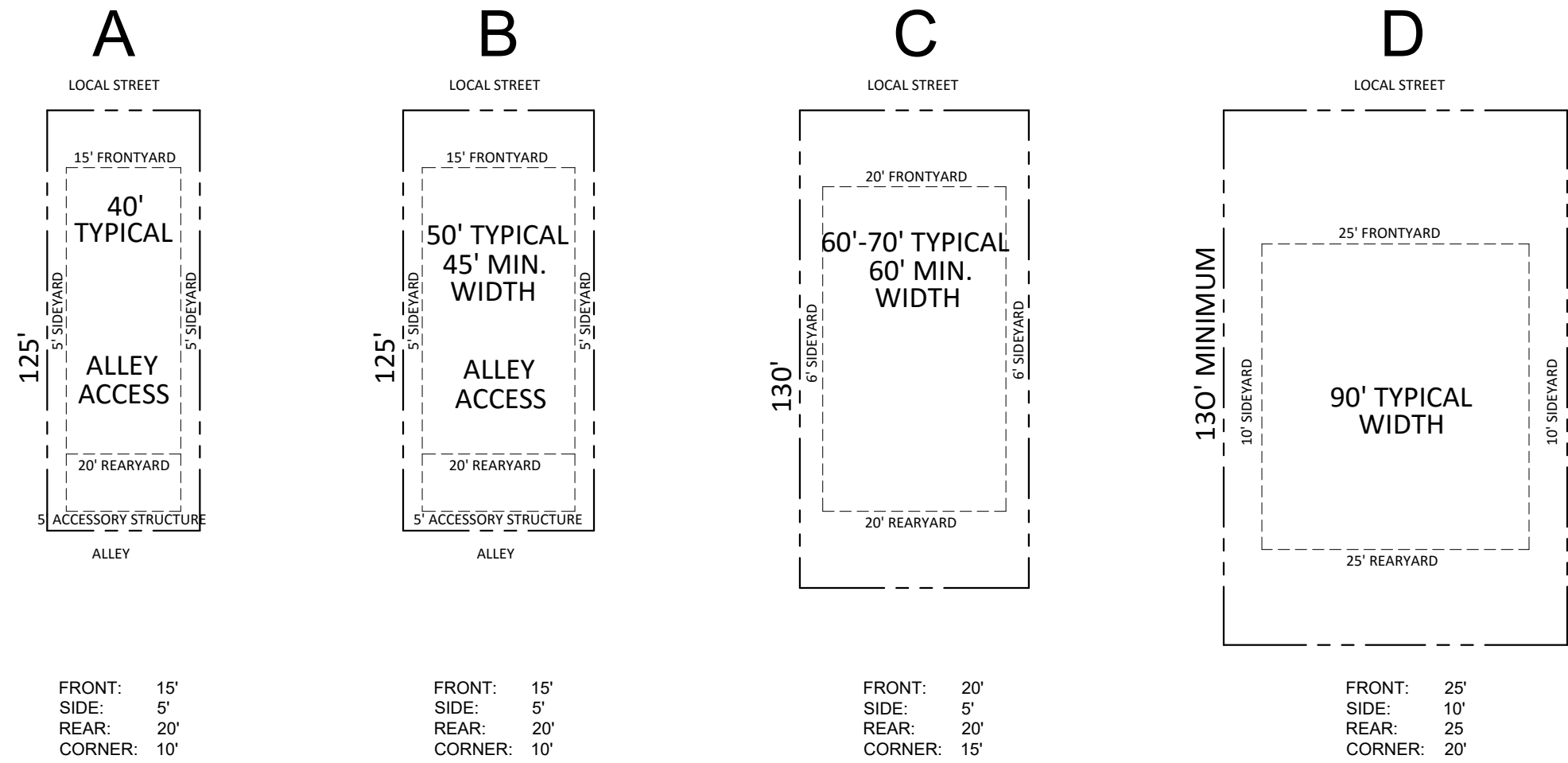
TYPICAL HOME ELEVATION 'D'

1. HOME STYLE FOR LOTS WITH GARAGE ACCESSED FROM THE STREET WITH SIDE LOADED GARAGE.
2. ONE TO TWO STORIES IN HEIGHT.
3. MATERIALS INCLUDE BRICK, SIMULATED STONE, CEMENTATIOUS SIDING, AND ARCHITECTURAL SHINGLES.
4. GARAGE IS SETBACK 10 FEET FROM THE FRONT FACADE.
5. DRIVEWAY IS A MINIMUM OF 22' FROM THE SIDEWALK TO THE GARAGE DOORS.
6. ALL TWO CAR GARAGES SHALL HAVE TWO GARAGE DOORS WITH A MAXIMUM WIDTH OF 9' WIDE WITH A 2 FOOT MINIMUM SEPARATION BETWEEN.
7. THESE ELEVATIONS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS AND THE APPROVAL OF THE PLANNING COMMISSION/CITY OF FRANKLIN. CHANGES SHALL NOT BE MADE TO THE APPROVED ELEVATIONS UNLESS APPROVED BY EITHER THE CODES DIRECTOR OR THE PLANNING COMMISSION.
8. ELEVATIONS SHOWN ARE TYPICAL FOR THIS DEVELOPMENT. FINAL DESIGN PLANS SHALL BE SUBMITTED WITH THE REQUEST FOR BUILDING PERMITS AND SHALL INDICATE COMPLIANCE WITH THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS, SPECIFICALLY THE REQUIREMENT FOR EXPOSED FOUNDATIONS OR WATER TABLES/ELEVATED FINISHED FLOORS AND GARAGE DOOR SEPARATION/MAXIMUM WIDTHS.
9. BUILDINGS WITH SIDE ELEVATIONS FACING A PUBLIC RIGHT-OF-WAY SHAL HAVE WINDOWS AND ARCHITECTURAL FEATURES SIMILAR TO THE FRONT ELEVATION.
10. SINGLE FAMILY HOME SQUARE FOOTAGE RANGE: 2800 SF TO 5000 SF
11. THE FINISHED FLOOR ELEVATION OF THE FRONT FACADE TO BE A MINIMUM OF 18 INCHES ABOVE THE FINISHED GRADE.

The home elevations shown here are representative of the homes planned for Ashcroft Valley. They are the basis for design review by the City of Franklin at the time of Site Plan Submittal. Based on my professional experience, the plans presented meet or exceed the design standards set forth by the City of Franklin.

Greg Gamble, Registered Landscape Architect.

TYPICAL LOT DIAGRAMS AND SETBACKS



Revisions:

Drawing Notes:

GDC
GAMBLE
DESIGN COLLABORATIVE
DEVELOPMENT PLANNING AND
LANDSCAPE ARCHITECTURE
Date: JUNE 10, 2015

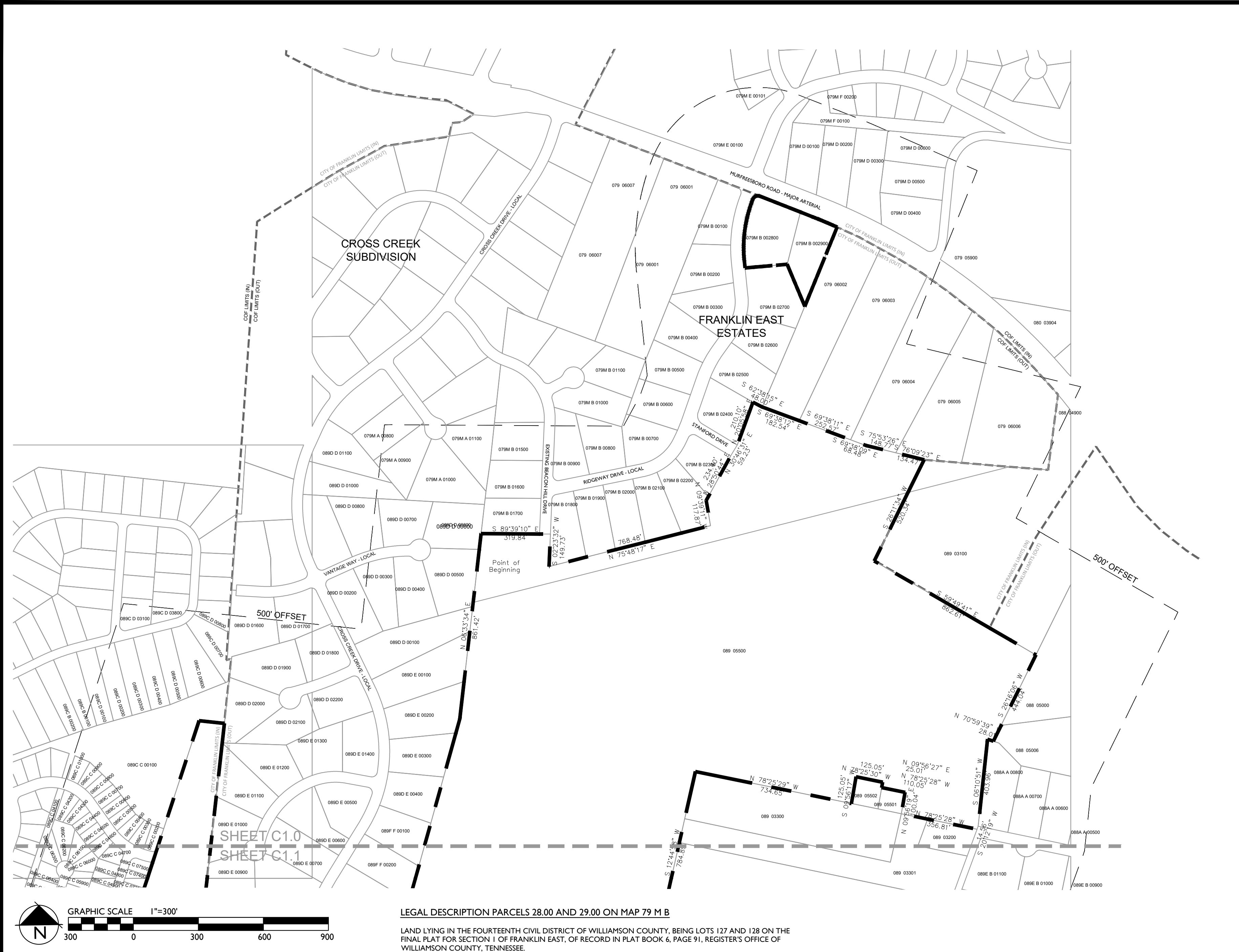
ASHCROFT VALLEY PUD SUBDIVISION
DEVELOPMENT PLAN
Franklin, Williamson County, Tennessee



GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 230
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
ggreg@mbic209@gmail.com
615.975.5765

TYPICAL
ARCHITECTURE

C 2.3



LEGAL DESCRIPTION PARCELS 28.00 AND 29.00 ON MAP 79 M B

LAND LYING IN THE FOURTEENTH CIVIL DISTRICT OF WILLIAMSON COUNTY, BEING LOTS 127 AND 128 ON THE FINAL PLAT FOR SECTION 1 OF FRANKLIN EAST, OF RECORD IN PLAT BOOK 6, PAGE 91, REGISTER'S OFFICE OF WILLIAMSON COUNTY, TENNESSEE.

LEGAL DESCRIPTION PARCELS 30.00, 30.01, 43.02, 43.03, 43.04, AND 55.00 ON MAP 89

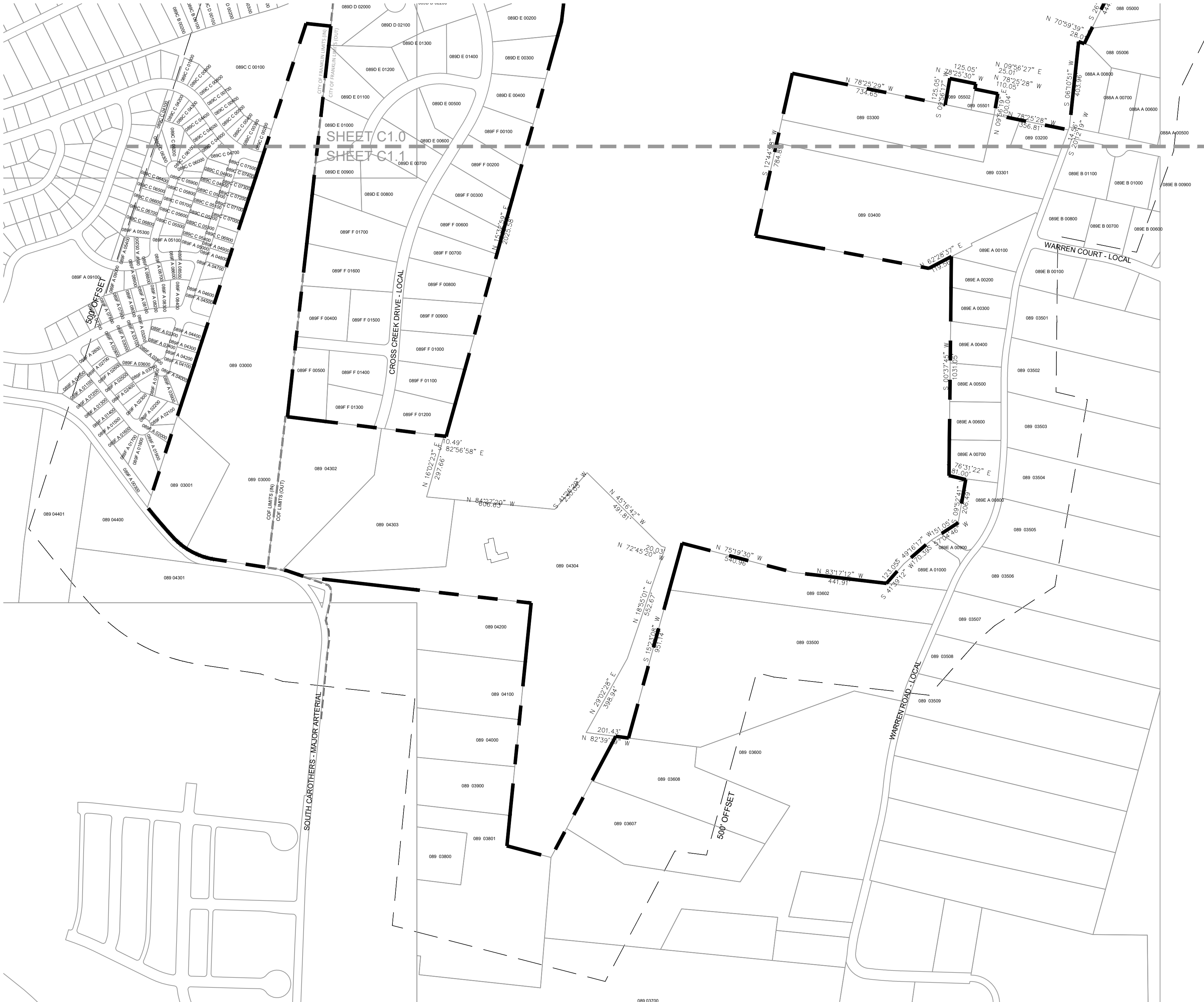
THE FOLLOWING LEGAL DESCRIPTION IS FOR LAND IN THE FOURTEENTH CIVIL DISTRICT OF WILLIAMSON COUNTY, LOCATED ON THE LANDS OF JAMES E. ADAMS, JR., OF RECORD IN DEED BOOK 2008, PAGE 702, R.O.W.C., TN, JEAN MARIE GILES GLASS, OF RECORD IN DEED BOOK 6526, PAGE 568, R.O.W.C., TN, HARRY GREGORY GLASS, OF RECORD IN DEED BOOK 4156, PAGE 670, R.O.W.C., TN, RALPH H. PEDEN, JR., OF RECORD IN DEED BOOK 4590, PAGE 436, R.O.W.C., TN, PATTI SUE WATKINS, OF RECORD IN DEED BOOK 6074, PAGE 249, R.O.W.C., TN, AND GEORGE V. DURNIN, OF RECORD IN DEED BOOK 1607, PAGE 1006, R.O.W.C., TN, AND MORE PARTICULARLY DESCRIBED IN AS FOLLOWS:

BEGINNING AT A POINT IN THE NORTH MARGIN OF SOUTH CAROTHERS ROAD, APPROXIMATELY 1200 FEET SOUTHEAST OF THE INTERSECTION OF FALCON CREEK DRIVE AND SAID SOUTH CAROTHERS ROAD; THENCE, LEAVING THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD, NORTH 18 DEGREES 09 MINUTES 26 SECONDS EAST, A DISTANCE OF 2,397.47 FEET TO A POINT; THENCE SOUTH 83 DEGREES 50 MINUTES 54 SECONDS EAST, A DISTANCE OF 117.23 FEET TO A POINT; THENCE SOUTH 06 DEGREES 20 MINUTES 18 SECONDS WEST, A DISTANCE OF 1,850.41 FEET TO A POINT; THENCE SOUTH 82 DEGREES 56 MINUTES 59 SECONDS EAST, A DISTANCE OF 753.05 FEET TO A POINT; THENCE NORTH 15 DEGREES 32 MINUTES 59 SECONDS WEST, A DISTANCE OF 2,025.58 FEET TO A POINT; THENCE NORTH 06 DEGREES 33 MINUTES 34 SECONDS EAST, A DISTANCE OF 861.42 FEET TO A POINT; THENCE SOUTH 89 DEGREES 39 MINUTES 10 SECONDS EAST, A DISTANCE OF 319.84 FEET TO A POINT; THENCE SOUTH 02 DEGREES 23 MINUTES 32 SECONDS WEST, A DISTANCE OF 149.73 FEET TO A POINT; THENCE NORTH 75 DEGREES 48 MINUTES 17 SECONDS EAST, A DISTANCE OF 768.48 FEET TO A POINT; THENCE NORTH 09 DEGREES 39 MINUTES 11 SECONDS WEST, A DISTANCE OF 117.87 FEET TO A POINT; THENCE NORTH 29 DEGREES 14 MINUTES 05 SECONDS EAST, A DISTANCE OF 293.60 FEET TO A POINT; THENCE NORTH 20 DEGREES 05 MINUTES 58 SECONDS WEST, A DISTANCE OF 210.10 FEET TO A POINT; THENCE SOUTH 62 DEGREES 38 MINUTES 15 SECONDS EAST, A DISTANCE OF 48.00 FEET TO A POINT; THENCE SOUTH 69 DEGREES 38 MINUTES 11 SECONDS EAST, A DISTANCE OF 509.70 FEET TO A POINT; THENCE SOUTH 76 DEGREES 09 MINUTES 25 SECONDS EAST, A DISTANCE OF 277.18 FEET TO A POINT; THENCE SOUTH 26 DEGREES 11 MINUTES 34 SECONDS WEST, A DISTANCE OF 403.96 FEET TO A POINT; THENCE SOUTH 59 DEGREES 49 MINUTES 41 SECONDS EAST, A DISTANCE OF 862.61 FEET TO A POINT; THENCE NORTH 26 DEGREES 16 MINUTES 06 SECONDS WEST, A DISTANCE OF 444.04 FEET TO A POINT; THENCE NORTH 70 DEGREES 59 MINUTES 36 SECONDS WEST, A DISTANCE OF 280.01 FEET TO A POINT; THENCE SOUTH 06 DEGREES 10 MINUTES 31 SECONDS WEST, A DISTANCE OF 403.96 FEET TO A POINT; THENCE SOUTH 20 DEGREES 12 MINUTES 18 SECONDS WEST, A DISTANCE OF 14.56 FEET TO A POINT; THENCE NORTH 78 DEGREES 25 MINUTES 28 SECONDS WEST, A DISTANCE OF 356.81 FEET TO A POINT; THENCE NORTH 09 DEGREES 54 MINUTES 19 SECONDS EAST, A DISTANCE OF 100.04 FEET TO A POINT; THENCE NORTH 78 DEGREES 25 MINUTES 28 SECONDS WEST, A DISTANCE OF 110.05 FEET TO A POINT; THENCE NORTH 09 DEGREES 54 MINUTES 27 SECONDS EAST, A DISTANCE OF 250.01 FEET TO A POINT; THENCE NORTH 78 DEGREES 25 MINUTES 30 SECONDS WEST, A DISTANCE OF 125.05 FEET TO A POINT;

THENCE SOUTH 09 DEGREES 54 MINUTES 17 SECONDS WEST, A DISTANCE OF 125.05 FEET TO A POINT; THENCE NORTH 78 DEGREES 25 MINUTES 29 SECONDS WEST, A DISTANCE OF 734.65 FEET TO A POINT; THENCE SOUTH 12 DEGREES 44 MINUTES 58 SECONDS WEST, A DISTANCE OF 784.89 FEET TO A POINT; THENCE SOUTH 79 DEGREES 24 MINUTES 14 SECONDS EAST, A DISTANCE OF 830.08 FEET TO A POINT; THENCE NORTH 62 DEGREES 38 MINUTES 37 SECONDS EAST, A DISTANCE OF 119.56 FEET TO A POINT; THENCE SOUTH 00 DEGREES 37 MINUTES 45 SECONDS WEST, A DISTANCE OF 1,031.05 FEET TO A POINT; THENCE SOUTH 76 DEGREES 31 MINUTES 22 SECONDS EAST, A DISTANCE OF 81.00 FEET TO A POINT; THENCE SOUTH 09 DEGREES 52 MINUTES 41 SECONDS WEST, A DISTANCE OF 206.49 FEET TO A POINT; THENCE SOUTH 57 DEGREES 04 MINUTES 46 SECONDS WEST, A DISTANCE OF 151.05 FEET TO A POINT; THENCE SOUTH 49 DEGREES 16 MINUTES 17 SECONDS WEST, A DISTANCE OF 170.39 FEET TO A POINT; THENCE SOUTH 41 DEGREES 39 MINUTES 12 SECONDS WEST, A DISTANCE OF 123.05 FEET TO A POINT; THENCE NORTH 83 DEGREES 17 MINUTES 12 SECONDS WEST, A DISTANCE OF 441.91 FEET TO A POINT; THENCE NORTH 75 DEGREES 19 MINUTES 30 SECONDS WEST, A DISTANCE OF 540.96 FEET TO A POINT; THENCE SOUTH 15 DEGREES 23 MINUTES 08 SECONDS WEST, A DISTANCE OF 951.14 FEET TO A POINT; THENCE NORTH 82 DEGREES 39 MINUTES 38 SECONDS WEST, A DISTANCE OF 60.79 FEET TO A POINT; THENCE SOUTH 82 DEGREES 07 MINUTES 56 SECONDS WEST, A DISTANCE OF 646.53 FEET TO A POINT; THENCE NORTH 28 DEGREES 15 MINUTES 25 SECONDS WEST, A DISTANCE OF 215.00 FEET TO A POINT; THENCE NORTH 05 DEGREES 42 MINUTES 26 SECONDS EAST, A DISTANCE OF 1,148.85 FEET TO A POINT; THENCE NORTH 83 DEGREES 26 MINUTES 21 SECONDS WEST, A DISTANCE OF 1,067.76 FEET TO A POINT, SAID POINT BEING IN THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD; THENCE, WITH THE NORTH MARGIN OF SAID SOUTH CAROTHERS ROAD, NORTH 71 DEGREES 12 MINUTES 56 SECONDS WEST, A DISTANCE OF 97.37 FEET TO A POINT; THENCE NORTH 81 DEGREES 09 MINUTES 29 SECONDS WEST, A DISTANCE OF 342.75 FEET TO A POINT; THENCE ALONG A CURVE TO THE RIGHT, HAVING A DELTA OF 38 DEGREES 34 MINUTES 48 SECONDS, A RADIUS OF 332.15 FEET, A TANGENT OF 116.25 FEET, AN ARC LENGTH OF 223.65 FEET, A CHORD BEARING OF NORTH 61 DEGREES 58 MINUTES 32 SECONDS WEST, AND A CHORD LENGTH OF 219.45 FEET TO A POINT; THENCE ALONG A CURVE TO THE RIGHT, HAVING A DELTA OF 94 DEGREES 21 MINUTES 00 SECONDS, A RADIUS OF 2,458.63 FEET, A TANGENT OF 93.38 FEET, AN ARC LENGTH OF 186.47 FEET, A CHORD BEARING OF NORTH 40 DEGREES 36 MINUTES 59 SECONDS WEST, AND A CHORD LENGTH OF 186.62 FEET TO THE POINT OF BEGINNING, AND CONTAINING 9,726,771.27 SQUARE FEET OR 223.296 ACRES.

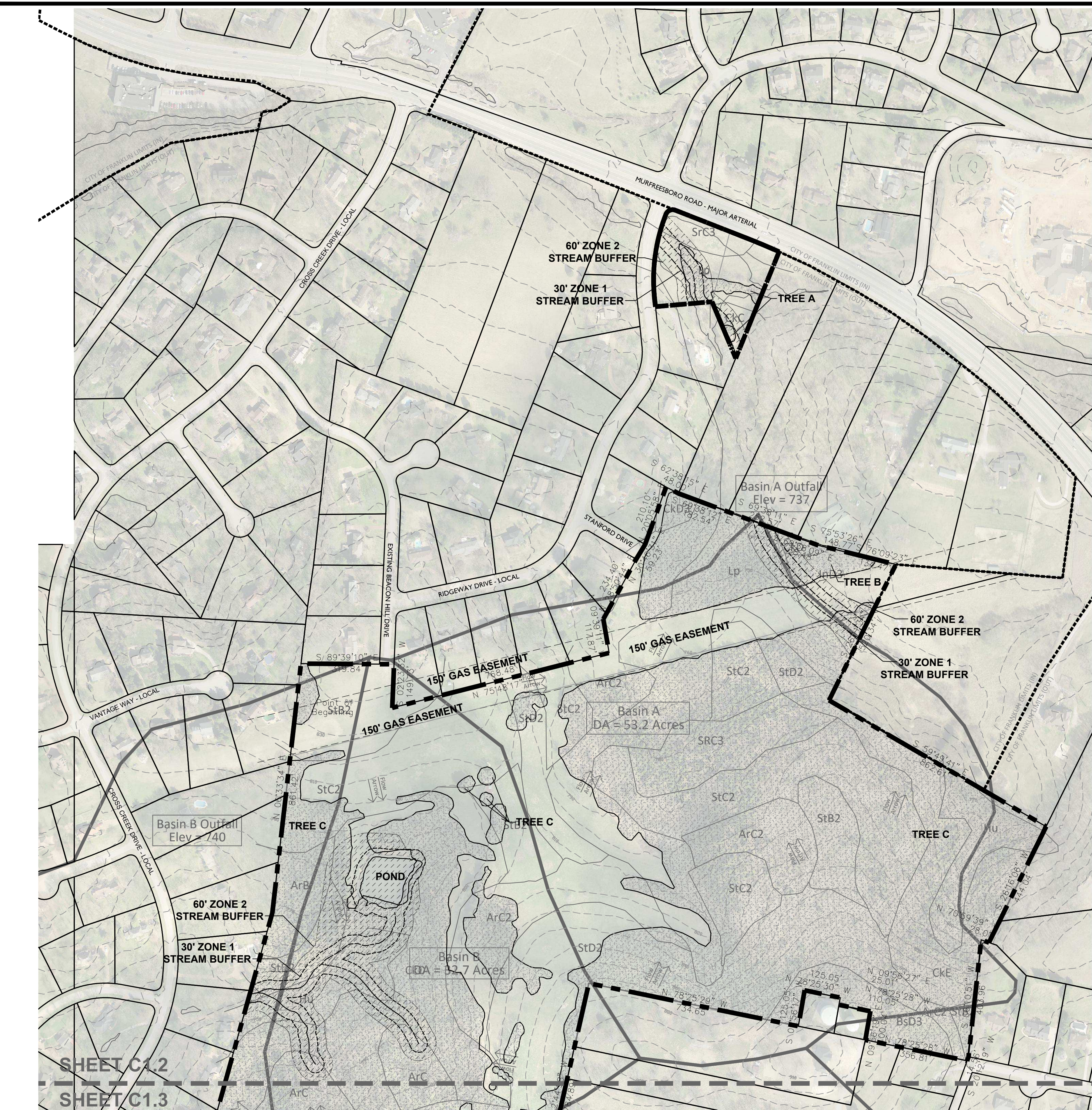
500' NEIGHBORS LIST:

PARCEL ID	OWNER ADDRESS	OWNER	CITY	STATE	ZIP	ZONE	CHARACTER AREA	LAND-USE	DEV STANDARD
1 089F-A-01400	310 CROOKED OAK CT	AHR I TN LLC	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
2 089F-A-03100	1066 MEANDERING WAY	AMH 2014-3 BORROWER LLC	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
3 089F-A-03900	2339 SURREY LN	AHR I TN LLC	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
4 089C-C-05000	2306 SURREY LN	CAFFYN-PARSONS RYAN R	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
5 089F-A-03000	1064 MEANDERING WAY	CAFFYN-PARSONS RYAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
6 089-05500	MURFREESBORO RD	ADAMS JAMES E JR	Brentwood	TN	37027	MGA-1	SWCO-3	Vacant	Conventional
7 089C-C-00200	2073 UPLAND DR	RIDINGS DANIEL SCOTT	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
8 089C-C-07300	2305 SURREY LN	RIDINGS DAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
9 089F-A-02600	305 CROOKED OAK CT	CONROY PATRICK	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
10 089C-C-07500	2301 SURREY LN	CAFFYN-PARSONS CHRISTOPHER	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
11 089C-C-06500	511 CLOVER LEAF LN	ELIZER CHRISTOPHER DILON	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
12 079-05900	4100 MURFREESBORO RD	FOUNTAINS OF FRANKLIN LLC	Franklin	TN	37064	SD-X	SWCO-3	Multi-Family	Conventional
13 079-06003	MURFREESBORO RD	FRENZEL G CHARLES	Franklin	TN	37067	MGA-1	SWCO-3	Vacant	Conventional
14 079-06004	4091 MURFREESBORO RD	FRENZEL GERALD CHARLES JR	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
15 079-06005	4095 MURFREESBORO RD	COOD WALTER EARLE SR	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
16 079M-A-00900	109 HOLLOW CT	KEENAN COLUM	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
17 079M-A-01000	113 HOLLOW CT	LUNA JONES W	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
18 079M-A-01100	115 HOLLOW CT	LUNA JONES W	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
19 079M-B-00200	1104 RIDGEWAY DR	PEIFFER LEONARD M	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
20 079M-B-00300	1108 RIDGEWAY DR	BRADSHAW ANTHONY W	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
21 079M-B-00500	1112 RIDGEWAY DR	FERGUSON MATTHEW ALLEN	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
22 079M-B-00600	1114 RIDGEWAY DR	LAMBERT OLIVER J	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
23 079M-B-00700	1200 RIDGEWAY DR	O'CONNELL PHILIP	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
24 079M-B-00800	1206 RIDGEWAY DR	RHEA KATHRYN L	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
25 079M-B-00900	1210 RIDGEWAY DR	HANNIGAN PAUL D	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
26 079M-B-01500	2001 BEACON HILL DR	VILLIUS WADE A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
27 079M-B-01600	1995 BEACON HILL DR	PRUITT JAY R	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
28 079M-B-01700	1991 BEACON HILL DR	CAPLEN BRIAN GEORGE	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
29 079M-B-01800	1211 RIDGEWAY DR	SUNGERLAND RUTH	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
30 079M-B-01900	1209 RIDGEWAY DR	BRITTAIN THOMAS DAVID	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
31 079M-B-02000	1207 RIDGEWAY DR	SHOEMAKE JULIUS S	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
32 079M-B-02100	1205 RIDGEWAY DR	PACKARD DONALD A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
33 079M-B-02200	1203 RIDGEWAY DR	OWENS MICHAEL A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
34 079M-B-02300	1101 STANFORD DR	BURNS WILLIAM C JR	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
35 079M-B-02400	1115 RIDGEWAY DR	MOEHLE MARK A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
36 079M-B-02500	1111 RIDGEWAY DR	RICH DALE	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
37 079M-B-02600	1109 RIDGEWAY DR	BUSELMER NORMAN T III	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
38 079M-B-02700	1105 RIDGEWAY DR	GOERZEN LAURIE	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
39 079M-B-02800	1101 RIDGEWAY DR	ADAMS R GLENN	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
40 079M-B-02900	MURFREESBORO RD	ADAMS ROB G	Franklin	TN	37067	NC	SWCO-3	Vacant	Conventional
41 079M-D-00100	4068 MURFREESBORO RD	BETTS CHRISTOPHER E	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
42 079M-D-00200	4072 MURFREESBORO RD	SALAZAR MARY ELLEN	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
43 079M-D-00300	4076 MURFREESBORO RD	BOZEWAH H ANDREW	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
44 079M-D-00400	107 CHESTER STEPHENS CT	CAVENDER DAVID O	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
45 079M-D-00500	111 CHESTER STEPHENS CT	MCQUIRE W GARY AND JANE M REV TRUST	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
46 079M-D-00600	115 CHESTER STEPHENS CT	TAYLOR ROBERT P AND JAN J TAYLOR REV TRUST	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
47 079M-E-00101	205 SPRINGHOUSE CIR	AWAD GEORGE	Franklin	TN	37067	R-1 (COF)	SWCO-3	Residential	Either
48 079M-F-00200	102 CHESTER STEPHENS RD	BERREY THOMAS S	Franklin	TN	37067	R-1 (COF)	SWCO-2	Residential	Either
49 088-04900	4115 MURFREESBORO RD	WRIGHT GLEN EFFERSON	Franklin	TN	37067	MGA-1	SWCO-2	Residential	Either
50 088-05000	1980 CEDAR MONT DR	MIZELL TROY A	Thompson Station	TN	37179	MGA-1	SWCO-3	Est. Residential	Conventional
51 088-05001	4119 MURFREESBORO RD	CHURCH ST DUNSTANS EPISCOPAL	Franklin	TN	37213	MGA-1	SWCO-2	Residential	Either
52 088-05002	1972 CEDAR MONT DR	MIZELL TROY A	Franklin	TN	37067	MGA-1	SWCO-2	Residential	Either
53 088-05005	1982 CEDAR MONT DR	SLAUGHTER JAMES C	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
54 088-05007	MURFREESBORO RD	CEMETERY HOLY CROSS-MARSHALL	Franklin	TN	37067	MGA-1	SWCO-3	Cmc	Conventional
55 088-05008	MURFREESBORO RD	CEMETERY MARSHALL	Franklin	TN	37067	MGA-1	SWCO-3	Cmc	Conventional
56 088A-A-00500	4209 WARREN RD	POMEROY DAVE GLENN JR	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
57 088A-A-00600	4211 WARREN RD	DOSUMMU BASIL OLUWAJIDE	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
58 088A-A-00700	4213 WARREN RD	PORTER JERRI L	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
59 088A-A-00800	4215 WARREN RD	ROBERTS HALL M	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
60 089-03000	4340 S CAROTHERS RD	GLASS JEAN MARIE GILES	Franklin	TN	37067	R-1 (COF)	MECO-6	Agriculture	Conventional
61 089-03001	4338 S CAROTHERS RD	GLASS HARRY GREGORY	Franklin	TN	37067	R-1 (COF)	MECO-6	Residential	Conventional
62 089-03100	4113 MURFREESBORO RD	MIZELL TROY A	Thompson Station	TN	37179	MGA-1	SWCO-3	Est. Residential	Conventional
63 089-03200	4217 WARREN RD	HICKERSON LOU WILLIE	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
64 089-03300	4221 WARREN RD	HICKERSON ROBERT JR	Franklin	TN	37064	MGA-1	SWCO-3	Est. Residential	Conventional
65 089-03301	4223 WARREN RD	HICKERSON LOU WILLIE	Franklin	TN	37067	MGA-1	SWCO-3	Vacant	Conventional
66 089-03500	4269 WARREN RD	KING WILLIAM ROBERT	Franklin	TN	37067	MGA-1	SWCO-3	Agriculture	Conventional
67 089-03501	4240 WARREN RD	HUMPHREY ROALD	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
68 089-03502	4244 WARREN RD	OFMAN LEE	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
69 089-03503	4248 WARREN RD	LASTER KELLY D	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
70 089-03504	4252 WARREN RD	SKAGGS FRANK P IV	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
71 089-03505	4256 WARREN RD	KANDEL MARY E REVOCABLE TRUST	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
72 089-03506	4260 WARREN RD	DESANTIS DEREK T	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
73 089-03507	4264 WARREN RD	HOOD JONATHAN S	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
74 089-03508	4268 WARREN RD	MCGRATH ROBERT PAUL	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
75 089-03509	4272 WARREN RD	GREGUS JOSEPH A	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
76 089-03600	4279 WARREN RD	HOOD JAMES ROBERT	Franklin	TN	37067	MGA-1	SWCO-3	Agriculture	Conventional
77 089-03602	4261 WARREN RD	PEREZ ANDRES	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
78 089-03607	4287 WARREN RD	HOOD JAMES ROBERT JR	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
79 089-03608	4283 WARREN RD	MOORE JERRY ADDISON JR	Franklin	TN	37067	MGA-1	SWCO-3	Est. Residential	Conventional
80 089-03700	4408 S CAROTHERS RD	SIMMONS RIDGE JOINT VENTURE	Franklin	TN	37067	R-2 (COF)	MECO-6	Agriculture	Conventional
81 089-03800	4378 S CAROTHERS RD	SMITH STERLING C	Franklin	TN	37067	MGA-1	SWCO-3	Open Space	Conventional
82 089-03801	4379 S CAROTHERS RD	SMITH STERLING C	Franklin	TN	37064	MGA-1	SWCO-3	Vacant	Conventional
83 089-03900	4372 S CAROTHERS RD	RIEDEL BERNHARD	Franklin	TN	37064	MGA-1	SWCO-3	Residential	Conventional
84 089-04000	4364 S CAROTHERS RD	HEITHCOCK JAMES G	Franklin	TN	37064	MGA-1	SWCO-3	Mixed-Use	Conventional
85 089-04200	4352 S CAROTHERS RD	ANDERSON WILMA JUNE TRUST	Franklin	TN	37064	MGA-1	SWCO-3	Est. Residential	Conventional
86 089-04301	S CAROTHERS RD	LOCKWOOD DEXTER	Franklin	TN	37067	R-2 (COF)	MECO-6	Agriculture	Conventional
87 089-04302	4348 S CAROTHERS RD	PEDEEN RALPH H JR	Franklin	TN	37064	MGA-1	SWCO-3	Est. Residential	Conventional
88 089-04303	4344 S CAROTHERS RD	WATKINS PATTI SUE	Franklin	TN	37064	MGA-1	SWCO-3	Est. Residential	Conventional
89 089-04304	4350 S CAROTHERS RD	DURNIN GEORGE V	Franklin	TN	37064	MGA-1	SWCO-3	Agriculture	Conventional
90 089-04400	4341 S CAROTHERS RD	RUSSELL ROBERT	Franklin	TN	37067	ER	MECO-6	Agriculture	Conventional
91 089-04401	4335 S CAROTHERS RD	STRAIN COLLIE	Franklin	TN	37067	ER	MECO-6	Vacant	Conventional
92 089-05501	WARREN RD	MILCROFTON UTILITY DIST	Franklin	TN	37064	MGA-1	SWCO-3	Utilities	Conventional
93 089-05502	MURFREESBORO RD	MILCROFTON UTILITY DIST	Franklin	TN	37064	MGA-1	SWCO-3	Utilities	Conventional
94 089-06000	277 DANDRIDGE DR	PERKINS LUGER DAVID	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
95 089-06002	73 DANDRIDGE DR	RINKER JOHN R	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
96 089C-C-01000	UPLAND DR	FIRST TN BANK NATIONAL ASSOC	Franklin	TN	37067	R-3 (COF)	MECO-6	Open Space	Conventional
97 089C-C-00300	2071 UPLAND DR	HENCHY PATRICK J	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
98 089C-C-00400	2069 UPLAND DR	POWELL MELISSA B	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
99 089C-C-00500	2067 UPLAND DR	WHITER MEAKA R	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
100 089C-C-00600	2065 UPLAND DR	WALSH DONNA S	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
101 089C-C-00700	2063 UPLAND DR	RADDER MARK A	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
102 089C-C-00800	2061 UPLAND DR	YOUNG REV LIVING TRUST	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
103 089C-C-00900	2059 UPLAND DR	BALDING JONATHAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
104 089C-C-01000	2057 UPLAND DR	CLAXTON ALAN L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
105 089C-C-01100	UPLAND DR	FIRST TN BANK NATIONAL ASSOC	Franklin	TN	37067	R-3 (COF)	MECO-6	Open Space	Conventional
106 089C-C-04200	2044 UPLAND DR	WALACE JENNIFER J	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
107 089C-C-04300	2046 UPLAND DR	SANCHEZ TIFANY	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
108 089C-C-04400	2048 UPLAND DR	HUNTER KAREN L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
109 089C-C-04500	2050 UPLAND DR	BRATTON DAVID A	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
110 089C-C-04600	2052 UPLAND DR	HOOD JAMES P	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
111 089C-C-04700	2300 SURREY LN	CHERRY CHEVIL SAUNDRA	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
112 089C-C-04800	2302 SURREY LN	FRASURE DOUGLAS	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
113 089C-C-04900	2304 SURREY LN	HERRON LACY	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
114 089C-C-05100	2308 SURREY LN	JONES ANDREW J JR	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
115 089C-C-05200	2310 SURREY LN	STOVAL DAVID W	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
116 089C-C-05300	2312 SURREY LN	JAMES RONALD D	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
117 089C-C-05400	2314 SURREY LN	HARRIS DANIEL V	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
118 089C-C-05500	502 CLOVER LEAF LN	WOODING MATTIE E	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
119 089C-C-05600	504 CLOVER LEAF LN	GIESIN JAMES W	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
120 089C-C-05700	506 CLOVER LEAF LN	COWMAN MATTHEW T	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
121 089C-C-05800	508 CLOVER LEAF LN	SPIRGAL STEPHEN P	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
122 089C-C-05900	510 CLOVER LEAF LN	MORRIS STEVE E							



NOTES:
1. PARCEL LINES PROVIDED BY CITY OF FRANKLIN G.I.S.
2. SITE BOUNDARY PROVIDED BY LAND SOLUTIONS COMPANY

138	089C-D00400	293 DANDRIDGE DR	ROLAND ROBERT LEE	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
139	089C-D00500	297 DANDRIDGE DR	CURLEE SUSAN M	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
140	089C-D00600	301 DANDRIDGE DR	OLSEN KAREN	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
141	089C-D00700	305 DANDRIDGE DR	VALTUTTI THOMAS	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
142	089C-D00800	309 DANDRIDGE DR	KECK LEROY A	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
143	089C-D03100	800 MCGEECHY LN	BOOKER CHARLES	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
144	089C-D03800	284 DANDRIDGE DR	MILLER DAVID C	Franklin	TN	37067	R-2 (COF)	MECO-6	Residential	Conventional
145	089C-D00100	1149 CROSS CREEK DR	CRANSTON WALTER KEITH	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
146	089C-D00200	213 VANTAGE WAY	CHRISTOFFERSEN B MICHON	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
147	089C-D00300	209 VANTAGE WAY	MURPHY JOHN L	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
148	089C-D00400	205 VANTAGE WAY	WEL MICHAEL P	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
149	089C-D00500	201 VANTAGE WAY	RAMOS TIFFANY A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
150	089C-D00600	200 VANTAGE WAY	JORDAN MARGARET	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
151	089C-D00700	204 VANTAGE WAY	JOHNSON VAL	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
152	089C-D00800	208 VANTAGE WAY	BEASLEY EVERETT L JR	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
153	089C-D01000	1133 CROSS CREEK DR	HASSLER MICHAEL C	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
154	089C-D01100	1133 CROSS CREEK DR	OKERSON ALBERT	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
155	089C-D01600	221 VANTAGE WAY	HOOS RICHARD T	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
156	089C-D01700	1146 CROSS CREEK DR	STRUNCE TODD	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
157	089C-D01800	300 RIDGETOP CT	HUGHES CARROLL L	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
158	089C-D01900	304 RIDGETOP CT	NABER CLIFORD A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
159	089C-D02000	308 RIDGETOP CT	WINDHAM FORREST GREGORY	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
160	089C-D02100	305 RIDGETOP CT	GITHENS EILEEN S	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
161	089C-D02200	301 RIDGETOP CT	HILL SARAH	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
162	089C-E00100	1153 CROSS CREEK DR	BRASEL MIKE T	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
163	089C-E00200	1151 CROSS CREEK DR	GLEASON ALAN R	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
164	089C-E00300	1159 CROSS CREEK DR	YOUNG CLAYTON S	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
165	089C-E00400	1183 CROSS CREEK DR	MCINCHAW ALAN B	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
166	089C-E00500	1162 CROSS CREEK DR	PRUITT TIMOTHY A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
167	089C-E00600	405 CROSS CREEK CT	CASE STEVEN H	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
168	089C-E00700	409 CROSS CREEK CT	EVANS MICHAEL D	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
169	089C-E00800	1114 CROSS CREEK DR	WOOD CHARLES A JR	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
170	089C-E00900	416 CROSS CREEK CT	MADDUX RICHARD L	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
171	089C-E01000	414 CROSS CREEK CT	WILSON BRADLEY D	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
172	089C-E01100	412 CROSS CREEK CT	PATRICK JOSEPH M	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
173	089C-E01200	408 CROSS CREEK CT	WILSON BRENT A	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
174	089C-E01300	404 CROSS CREEK CT	JOHNSON DAVID E	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
175	089C-E01400	400 CROSS CREEK CT	DONAHOE JOHN R	Concord	MS	37421	NC	SWCO-3	Residential	Conventional
176	089E-A00100	4229 WARREN RD	HENSON HEATHER	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
177	089E-A00200	4233 WARREN RD	REINFRIED DANA	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
178	089E-A00300	4237 WARREN RD	GLMORF JOE H	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
179	089E-A00400	4241 WARREN RD	EBB DANIEL KEVIN	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
180	089E-A00500	4245 WARREN RD	KUEKER MICHAEL	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
181	089E-A00600	4249 WARREN RD	ALLINSON JOHN E	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
182	089E-A00700	4253 WARREN RD	THOMPSON TIMOTHY W	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
183	089E-A00800	4257 WARREN RD	ROMEO CLAUDIO	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
184	089E-A00900	4261 WARREN RD	VALLEY VIEW DEV INC	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
185	089E-A01000	4259 WARREN RD	COGHLAN PATRICK W	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
186	089E-B00100	4201 WARREN CT	KRENGEL NORMAN K	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
187	089E-B00600	4210 WARREN CT	EDGE SAMUEL S	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
188	089E-B00700	4208 WARREN CT	BROWN ROGER LEE	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
189	089E-B00800	4202 WARREN CT	REEVES TOMMY	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
190	089E-B00900	4220 WARREN RD	CARLAND ROBERT MORGAN	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
191	089E-B01000	4218 WARREN RD	CAMERON JAMES	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
192	089E-B01100	4216 WARREN RD	NEWMAN ANDREW J	Franklin	TN	37067	MGA-1	SWCO-3	Residential	Conventional
193	089E-A00300	S CAROTHERS RD	FALCON CREEK HOMEOWNERS ASSOC INC	Franklin	TN	37067	R-3 (COF)	MECO-6	Open Space	Conventional
194	089F-A01000	302 CROOKED OAK CT	GREER WILLIAM P	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
195	089F-A01100	304 CROOKED OAK CT	SCRIPPSHIRE JACOB	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
196	089F-A01200	306 CROOKED OAK CT	ROE MITCHELL GREGG	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
197	089F-A01300	308 CROOKED OAK CT	NANCE MATTHEW	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
198	089F-A01600	314 CROOKED OAK CT	NIX CLYDE M	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
199	089F-A01700	316 CROOKED OAK CT	ASADER GREGG S	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
200	089F-A01800	318 CROOKED OAK CT	SANISTER DEBORAH EVANS	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
201	089F-A01900	320 CROOKED OAK CT	CHEN JAN Z	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
202	089F-A02000	317 CROOKED OAK CT	ZIMMERMAN PHILIP M	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
203	089F-A02100	315 CROOKED OAK CT	FLAGG CRAIG F	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
204	089F-A02200	313 CROOKED OAK CT	UHLER LESTER H	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
205	089F-A02300	311 CROOKED OAK CT	MCSEE AMY B	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
206	089F-A02400	309 CROOKED OAK CT	HOSHIED HAROLD DEAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
207	089F-A02500	307 CROOKED OAK CT	MARTIN MARY LOU	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
208	089F-A02700	303 CROOKED OAK CT	YOUNG RUSSELL	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
209	089F-A02800	301 CROOKED OAK CT	FARKAS SUSAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
210	089F-A02900	1062 MEANDERING WAY	BROWN AARON L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
211	089F-A03000	1068 MEANDERING WAY	CLARABITTO JORDAN L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
212	089F-A03300	1070 MEANDERING WAY	DUFRECHOU SCOTT J	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
213	089F-A03400	2330 SURREY LN	ARAUJO FRANK JR	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
214	089F-A03500	2332 SURREY LN	RAINES DANIEL R	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
215	089F-A03600	2334 SURREY LN	LAYMAN ROGER W	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
216	089F-A03700	2336 SURREY LN	DALTON AUDREY	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
217	089F-A03800	2338 SURREY LN	SEEVERS MICHAEL E	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
218	089F-A04000	2337 SURREY LN	ELSWICK ROBERT A	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
219	089F-A04100	2335 SURREY LN	COBB REBECCA DAWN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
220	089F-A04200	2333 SURREY LN	MUNSCAL DON	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
221	089F-A04300	2331 SURREY LN	PAIVA LUISE D	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
222	089F-A04400	2329 SURREY LN	BIES MICHAEL C	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
223	089F-A04500	2323 SURREY LN	WHITE RONALD L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
224	089F-A04700	2319 SURREY LN	SHELTON CHARLES V	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
225	089F-A04800	2317 SURREY LN	DALESSANDRO FRED J	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
226	089F-A04900	2315 SURREY LN	CHESSMAN CHRISTINE M TR	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
227	089F-A05100	3008 BENT TREE RD	TUTT RONALD	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
228	089F-A05200	3007 BENT TREE RD	AHN BYUNG PIL	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
229	089F-A05300	503 CLOVER LEAF LN	ODEN SETH A	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
230	089F-A05400	3005 BENT TREE RD	KILLAWEE SUSAN L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
231	089F-A07100	1063 MEANDERING WAY	ZALUD LAWRENCE R	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
232	089F-A07800	1065 MEANDERING WAY	SMITH BRIAN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
233	089F-A07900	1067 MEANDERING WAY	WATERS MICHAEL	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
234	089F-A08000	1069 MEANDERING WAY	LOCKWOOD PROP LLC	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
235	089F-A08100	1071 MEANDERING WAY	PITTS GLENN S	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
236	089F-A08200	1073 MEANDERING WAY	HUYNH KHANH	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
237	089F-A08400	1071 MEANDERING WAY	ROBINSON ROBERT L	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
238	089F-A08500	2320 SURREY LN	BERNARD LINDA M	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
239	089F-A08600	3016 BENT TREE RD	JENKINS KENNETH	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
240	089F-A08700	3014 BENT TREE RD	MANIER M LISA	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
241	089F-A08800	3012 BENT TREE RD	SAWYER BERNICE B	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
242	089F-A08900	3010 BENT TREE RD	SMITH DENNIS E	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
243	089F-A09000	3008 BENT TREE RD	WEST KEVIN	Franklin	TN	37067	R-3 (COF)	MECO-6	Residential	Conventional
244	089F-A09100	2231 FALCON CREEK DR	FALCON CREEK HOMEOWNERS ASSOC INC	Franklin	TN	37067	R-3 (COF)	MECO-6	Open Space	Conventional
245	089F-F00100	1176 CROSS CREEK DR	SYBERT JAMES G	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
246	089F-F00200	1178 CROSS CREEK DR	MONTEATH DAVID B	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
247	089F-F00300	1182 CROSS CREEK DR	HELTON MICHAEL GLENN	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
248	089F-F00400	504 BLTMOORE CT	DEBOLT SHARON	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
249	089F-F00500	505 BLTMOORE CT	HORECKA DANIEL P	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
250	089F-F00600	501 BLTMOORE CT	JOSLIN REBECCA P	Franklin	TN	37064	NC	SWCO-3	Residential	Conventional
251	089F-F00700	1190 CROSS CREEK DR	JAMESON ZACHARY	Pasadena	CA	91101	NC	SWCO-3	Residential	Conventional
252	089F-F00800	1191 CROSS CREEK DR	STYLYS LAWRENCE G	Franklin	TN	37067	NC	SWCO-3	Residential	Conventional
253	089F-F00900	1187 CROSS CREEK DR	BYRNE DANIEL W	Franklin	TN					



NOTES:

1. THERE ARE NO FLOODPLAINS EXISTING ON THE SITE BASED ON FEMA MAP 47187C0220F & 47187C0214F.
3. AERIAL PHOTO, PARCEL LINES AND TOPOGRAPHIC INFORMATION PROVIDED BY CITY OF FRANKLIN G.I.S.
4. SITE BOUNDARY CALLS PROVIDED BY LAND SOLUTIONS COMPANY.
5. NO THIRD PARTY MINERAL RIGHTS ARE ASSOCIATED WITH THIS PROPERTY.

EXISTING TREE CANOPY

BASED ON AERIAL PHOTOGRAPHS OF THE PROPERTY THE EXISTING TREE CANOPY IS APPROXIMATELY 151 ACRES WHICH IS 66.83% OF THE TOTAL SITE

TREE CANOPY DATA

TREE AREA	EXISTING
TREE A	20,501 SF
TREE B	184,596 SF
TREE C	5,661,645 SF
TREE D	221,073 SF
TREE E	491,876 SF
TOTAL SF	6,579,691 SF

EXISTING TREE CANOPY: 6,579,691 SF
6,579,691 SF/9,844,942.09 SF = .668 (66.8%) OF TOTAL SITE

REQUIRED CANOPY PRESERVATION =
36% OF TOTAL CANOPY
6,579,691 SF * 36% = 2,368,689 SF

LEGEND

	SLOPES 14%-20%
	SLOPES >20%
	EXISTING TREE CANOPY
	STREAM BUFFER

EXISTING STORMWATER MANAGEMENT SUMMARY

TOTAL PROPERTY AREA = 226.01 ACRES
TOTAL PROPOSED DISTURBED AREA = 143.51 ACRES

SOIL TYPES: 54.6% TYPE A SOIL
25.8% TYPE B SOIL
17.2% TYPE C SOIL
0.0% TYPE D SOIL
2.4% NON-SOIL AREAS

STORMWATER NARRATIVES

BASIN A:
STORMWATER IS CURRENTLY ROUTED BY WAY OF WET WEATHER CONVEYANCES TO THE NORTHEAST CORNER OF THE SITE, WHERE IT FLOWS INTO A BLUE-LINE STREAM OFFSITE.
BASIN AREA: 53.2 AC.
OUTFALL ELEVATION: 737'

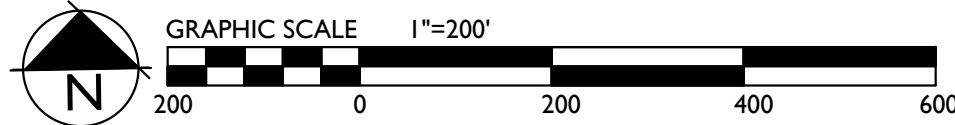
BASIN B:
STORMWATER IS CURRENTLY COLLECTED IN A POND ON THE WEST SIDE OF THE SITE WHERE IT IS CARRIED OFF SITE BY A BLUE-LINE STREAM.
BASIN AREA: 32.7 AC.
OUTFALL ELEVATION: 740'

BASIN C:
STORMWATER IS CURRENTLY ROUTED BY WAY OF A BLUE-LINE STREAM TO THE FAR WEST PROPERTY LINE. THIS BASIN IS AN EXTENSION OF THE PREVIOUS, BASIN B.
BASIN AREA: 80.8 AC.
OUTFALL ELEVATION: 694'

BASIN D:
STORMWATER IS CURRENTLY ROUTED BY WAY OF WET WEATHER CONVEYANCES TO THE SOUTH OF THE SITE ALONG S CAROTHERS ROAD, WHERE IT EVENTUALLY FLOWS INTO THE SAME STREAM AS THE FOLLOWING, BASIN E.
BASIN AREA: 15.2 AC.
OUTFALL ELEVATION: 726'

BASIN E:
STORMWATER IS CURRENTLY ROUTED BY WAY OF WET WEATHER CONVEYANCES TO THE SOUTH SIDE OF THE SITE AND EVENTUALLY FLOWS INTO THE SAME STREAM AS THE PREVIOUS, BASIN D. A BLUE-LINE STREAM COMES ONTO THIS BASIN FROM THE NORTHEAST BUT ENDS IN AN EXISTING SINKHOLE AND DRY POND, WHICH LIES TO THE NORTHEAST OF WHERE LOTS ARE TO BE DEVELOPED.
BASIN AREA: 167.0 AC.
OUTFALL ELEVATION: 673'

Map Unit Symbol	Map Unit Name
ArB	Armour silt loam, 2 to 5 percent slopes
ArB2	Armour silt loam, 2 to 5 percent slopes, eroded
ArC	Armour silt loam, 5 to 12 percent slopes
ArC2	Armour silt loam, 5 to 12 percent slopes, eroded
BrB2	Braxton cherty silt loam, 2 to 5 percent slopes, eroded
BrC2	Braxton cherty silt loam, 5 to 12 percent slopes, eroded
BsC3	Braxton cherty silty clay loam, 5 to 12 percent slopes, severely eroded
BsD3	Braxton cherty silty clay loam, 12 to 20 percent slopes, severely eroded
CkC	Culleoka silt loam, 5 to 12 percent slopes
CkD	Culleoka silt loam, 12 to 20 percent slopes
CkD3	Culleoka silt loam, 12 to 20 percent slopes, severely eroded
CkE	Culleoka silt loam, 20 to 35 percent slopes
CkE3	Culleoka silt loam, 20 to 35 percent slopes, severely eroded
Eg	Egam silt loam, phosphatic
Gu	Gullied land
HcC3	Hampshire silty clay loam, 5 to 12 percent slopes, severely eroded
HeB2	Hampshire-colbert silt loams, 2 to 5 percent slopes, eroded
HeC2	Hampshire-colbert silt loams, 5 to 12 percent lopes, eroded
HhC3	Hampshire-colbert silty clay loams, 5 to 12 percent slopes, severely eroded
Hu	Huntington silt loam, phosphatic
InD3	Inman silty clay loam, 12 to 20 percent slopes, severely eroded
Lp	Lindell silt loam, 0 to 2 percent slopes, occasionally flooded
MbC2	Maury silt loam, 5 to 12 percent slopes, eroded
MnE	Mimosa-Rock outcrop complex, 20 to 40 percent slopes
MoD	Ashwood-Mimosa-Rock outcrop complex, 5 to 15 percent slopes
Rc	Rockland
SrC3	Stiversville clay loam, 5 to 12 percent slopes, severely eroded
SrD3	Stiversville clay loam, 12 to 20 percent slopes, severely eroded
StB2	Stiversville silt loam, 2 to 5 percent slopes, eroded
StC2	Stiversville silt loam, 5 to 12 percent slopes, eroded
StD2	Stiversville silt loam, 12 to 20 percent slopes, eroded
TvD	Talbott very rocky soils, 2 to 15 percent slopes



Revisions:

Drawing Notes:



GAMBLE

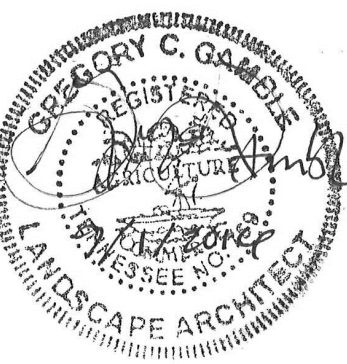
DESIGN COLLABORATIVE

DEVELOPMENT PLANNING AND

LANDSCAPE ARCHITECTURE

Date: JUNE 10, 2016

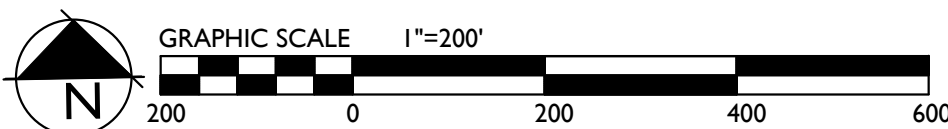
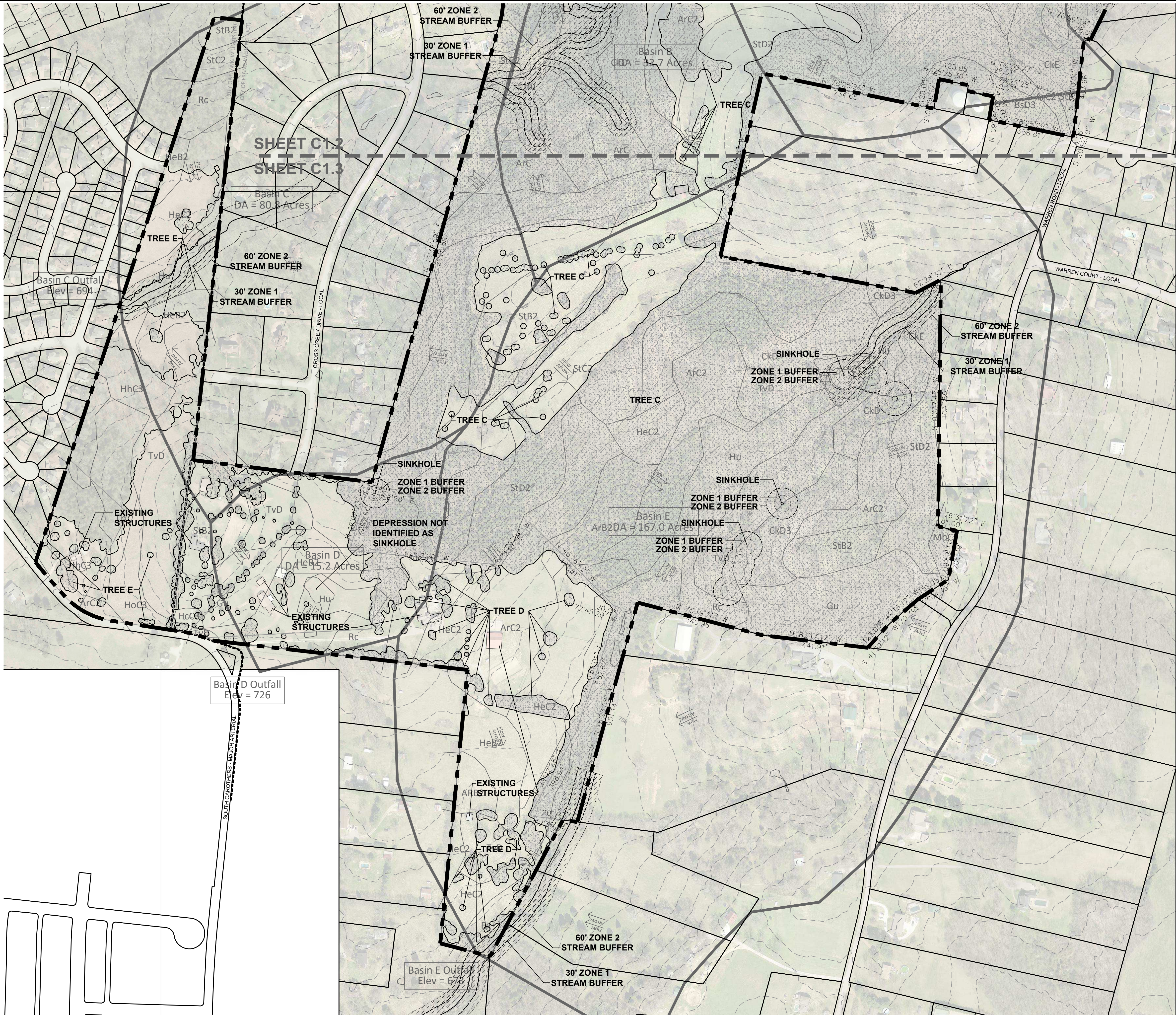
ASHCROFT VALLEY PUD SUBDIVISION
DEVELOPMENT PLAN
Franklin, Williamson County, Tennessee



GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 230
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
gg@gamblecdp@gmail.com
615.975.5765

OVERALL
EXISTING
CONDITIONS
PLAN

C 1.2



NOTES:

1. THERE ARE NO FLOODPLAINS EXISTING ON THE SITE BASED ON FEMA MAP 47187C0220F & 47187C0214F.
2. AERIAL PHOTO, PARCEL LINES AND TOPOGRAPHIC INFORMATION PROVIDED BY CITY OF FRANKLIN G.I.S.
3. SITE BOUNDARY CALLS PROVIDED BY LAND SOLUTIONS COMPANY.
4. NO THIRD PARTY MINERAL RIGHTS ARE ASSOCIATED WITH THIS PROPERTY.

EXISTING TREE CANOPY

BASED ON AERIAL PHOTOGRAPHS OF THE PROPERTY THE EXISTING TREE CANOPY IS APPROXIMATELY 151 ACRES WHICH IS 66.83% OF THE TOTAL SITE

TREE CANOPY DATA

TREE AREA	EXISTING
TREE A	20,501 SF
TREE B	184,596 SF
TREE C	5,661,645 SF
TREE D	221,073 SF
TREE E	491,878 SF
TOTAL SF	6,579,691 SF

EXISTING TREE CANOPY: 6,579,691 SF
6,579,691 SF/9,844,942.09 SF = .668 (66.8%) OF TOTAL SITE

REQUIRED CANOPY PRESERVATION =
36% OF TOTAL CANOPY
6,579,691 SF * 36% = 2,368,689 SF

LEGEND

	SLOPES 14%-20%
	SLOPES >20%
	EXISTING TREE CANOPY
	STREAM BUFFER

Map Unit Symbol	Map Unit Name
ArB	Armour silt loam, 2 to 5 percent slopes
ArB2	Armour silt loam, 2 to 5 percent slopes, eroded
ArC	Armour silt loam, 5 to 12 percent slopes
ArC2	Armour silt loam, 5 to 12 percent slopes, eroded
BrB2	Braxton cherty silt loam, 2 to 5 percent slopes, eroded
BrC2	Braxton cherty silt loam, 5 to 12 percent slopes, eroded
BsC3	Braxton cherty silty clay loam, 5 to 12 percent slopes, severely eroded
BsD3	Braxton cherty silty clay loam, 12 to 20 percent slopes, severely eroded
CkC	Culleoka silt loam, 5 to 12 percent slopes
CkD	Culleoka silt loam, 12 to 20 percent slopes
CkD3	Culleoka silt loam, 12 to 20 percent slopes, severely eroded
CkE	Culleoka silt loam, 20 to 35 percent slopes
CkE3	Culleoka silt loam, 20 to 35 percent slopes, severely eroded
Eg	Egam silt loam, phosphatic
Gu	Gullied land
HcC3	Hampshire silty clay loam, 5 to 12 percent slopes, severely eroded
HeB2	Hampshire-colbert silt loams, 2 to 5 percent slopes, eroded
HeC2	Hampshire-colbert silt loams, 5 to 12 percent slopes, eroded
HhC3	Hampshire-colbert silty clay loams, 5 to 12 percent slopes, severely eroded
Hu	Huntington silt loam, phosphatic
InD3	Inman silty clay loam, 12 to 20 percent slopes, severely eroded
Lp	Lindell silt loam, 0 to 2 percent slopes, occasionally flooded
MbC2	Maury silt loam, 5 to 12 percent slopes, eroded
MnE	Mimosa-Rock outcrop complex, 20 to 40 percent slopes
MoD	Ashwood-Mimosa-Rock outcrop complex, 5 to 15 percent slopes
Rc	Rockland
SrC3	Stiversville clay loam, 5 to 12 percent slopes, severely eroded
SrD3	Stiversville clay loam, 12 to 20 percent slopes, severely eroded
StB2	Stiversville silt loam, 2 to 5 percent slopes, eroded
StC2	Stiversville silt loam, 5 to 12 percent slopes, eroded
StD2	Stiversville silt loam, 12 to 20 percent slopes, eroded
TvD	Talbott very rocky soils, 2 to 15 percent slopes

Revisions:

Drawing Notes:

GDC

GAMBLE

DESIGN COLLABORATIVE

DEVELOPMENT PLANNING AND

LANDSCAPE ARCHITECTURE

Date: JUNE 10, 2016

ASHCROFT VALLEY PUD SUBDIVISION DEVELOPMENT PLAN

Franklin, Williamson County, Tennessee

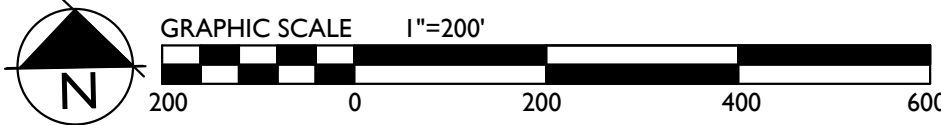


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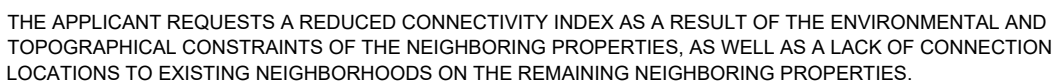
OVERALL
EXISTING
CONDITIONS
PLAN

C 1.3

COF 6189



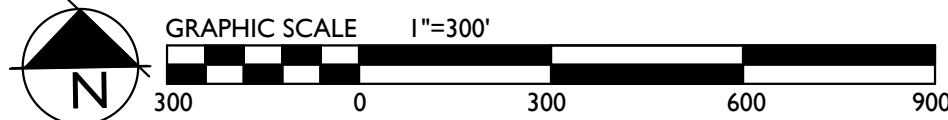
COF 6189



60' STREAM BUFFER

C 2.1

COF 6189



REQUESTED MODIFICATIONS OF STANDARDS ASHCROFT VALLEY PUD SUBDIVISION

MOS 1

Section 3.5.10 (2)(d)(ii) Request to develop detached residential dwellings on lots with a lot area as proposed in the Development Plan. Item (d)(vi) states that if an applicant can demonstrate that a sufficient buffer will be provided between the existing development and the proposed, or offer other means to mitigate potential conflicts, these alternatives may be approved with a Development Plan.

Item (d)(vi) is consistent with the Land Use Plan for Seward Hall, Special Area 3. Item (d)(iii) is only listed in Chapter 3 of Zoning Ordinance, and is not mentioned in the Land Use Plan.

The Land Use Plan provides the following guiding principles:

1. Density of new development is recognized as being an important consideration in community quality of life, but it is only one factor that must be considered. Of greater concern is the quality and design of development. Low-quality development is undesirable at any density.
2. Land is viewed as a limited resource, and the efficiency of its use must be considered in establishing desired future density.

Ashcroft Valley proposes a diverse mix of residential lot types to foster a greater sense of community. The master plan contains open space buffers along the Development boundaries, and transitions from large lots to smaller lots in the interior. The smallest lots in the proposal are located to the south as a transition to the Carrother's corridor neighborhoods. The proposed lots that are smaller than 1 acre in size allow for the preservation of larger expanses of interconnected open space that are made accessible to all residents. The open space preservation is key to the character of the neighborhood and high quality design. The master plan promotes the preservation of large open space areas interconnected with formal neighborhood parks.

The adjacent neighborhoods along Warren Road, in Franklin East, and in Crosscreek were developed at a time when City of Franklin sewer was not available. Today access to City sewer is available to the north on Highway 96 and to the south on South Carothers Road near Simmons Ridge. For this reason, lots smaller than 1 acre are possible so long as transition mitigates potential conflicts with the adjacent neighborhoods.

MOS 2 (See location A on map)

Section 5.10.4 (2)(b) External street connectivity.

Request to remove external street connection to Warren Road.

Neighbors on Warren Road and the Williamson County Subdivisions of Franklin East and Cross Creek continue to express concern regarding connections to Warren Road, Stanford Drive, Beacon Hill Drive, and Cross Creek Drive.

The concerns on Warren Road include safety issues due to the narrow 18 foot width of the roadway, and steep banks located at the narrow roadway edge. The second concern is the loss of the rural character of Warren Road that is subject to change with the additional connection. On December 2, 2015, the applicant presented the proposed development to the Williamson County Highway Commission. It was made known at the meeting that an emergency only connection would be proposed for the connection to Warren Road. This approach was widely accepted by both the Commission and the neighbors.

Franklin East and Cross Creek subdivisions are established neighborhoods, currently in Williamson County jurisdiction. Full unrestricted connectivity to these neighborhoods will increase through traffic North, South, and through the neighborhoods. This increase will change the character of the communities and will affect the quality of life of the residents.

MOS 3 (See location B on map)

Section 5.10.4 (2)(a) External street connectivity.

Request to remove connection to existing stub street to the North, Beacon Hill Drive.

Neighbors on Warren Road and the Williamson County Subdivisions of Franklin East and Cross Creek continue to express concern regarding connections to Warren Road, Stanford Drive, Beacon Hill Drive, and Cross Creek Drive.

The Ashcroft Valley PUD proposes a gated secluded neighborhood to the North with only one access connecting to Stanford Drive. This secluded neighborhood will have a gross density of 1 DU/AC and will be completely surrounded by open space and tree preservation buffers.

This limited connection and low impact development approach will reduce the negative relationship with the Franklin East subdivision.

The streets within the gated neighborhood will be built to City of Franklin street standards and will be privately maintained by the Ashcroft Valley HOA.

MOS 4 (See location C on map)

Section 5.10.4 (1) Internal street connectivity.

Request to remove vehicular, internal street connection between the Northern and Southern proposed neighborhoods.

Neighbors on Warren Road and the Williamson County Subdivisions of Franklin East and Cross Creek continue to express concern regarding connections to Warren Road, Stanford Drive, Beacon Hill Drive, and Cross Creek Drive.

Franklin East and Cross Creek subdivisions are established neighborhoods, currently in Williamson County jurisdiction. Full unrestricted connectivity to these neighborhoods will increase through traffic North, South, and through the neighborhoods. This increase will change the character of the communities and will affect the quality of life of the residents.

The Ashcroft Valley PUD proposes a gated secluded neighborhood to the North with only one access connecting to Stanford Drive. This secluded neighborhood will have a gross density of 1 DU/AC and will be completely surrounded by open space and tree preservation buffers.

This limited connection and low impact development approach will reduce the negative relationship with the Franklin East subdivision.

The streets within the gated neighborhood will be built to City of Franklin street standards and will be privately maintained by the Ashcroft Valley HOA.

Proposed Development Plan shows a 12' asphalt pedestrian trail that will be constructed to the appropriate standards to serve as an emergency access route between the Northern and Southern neighborhoods.

MOS 5 (See location D on map)

Section 5.10.4 (2)(a) External street connectivity.

Request to remove connection to existing Cross Creek Drive.

Neighbors on Warren Road and the Williamson County Subdivisions of Franklin East and Cross Creek continue to express concern regarding connections to Warren Road, Stanford Drive, Beacon Hill Drive, and Cross Creek Drive.

Franklin East and Cross Creek subdivisions are established neighborhoods, currently in Williamson County jurisdiction. Full unrestricted connectivity to these neighborhoods will increase through traffic North, South, and through the neighborhoods. This increase will change the character of the communities and will affect the quality of life of the residents.

MOS 6 (See location E on map)

Section 5.10.4 (2)(a) External street connectivity.

Request to remove connection to existing Biltmore Court.

Neighbors on Warren Road and the Williamson County Subdivisions of Franklin East and Cross Creek continue to express concern regarding connections to Warren Road, Stanford Drive, Beacon Hill Drive, and Cross Creek Drive.

Franklin East and Cross Creek subdivisions are established neighborhoods, currently in Williamson County jurisdiction. Full unrestricted connectivity to these neighborhoods will increase through traffic North, South, and through the neighborhoods. This increase will change the character of the communities and will affect the quality of life of the residents.

Revisions:

Drawing Notes:



GAMBLE

DESIGN COLLABORATIVE

DEVELOPMENT PLANNING AND

LANDSCAPE ARCHITECTURE

Date: JUNE 10, 2016

ASHCROFT VALLEY PUD SUBDIVISION DEVELOPMENT PLAN

Franklin, Williamson County, Tennessee



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SUITE 230
FRANKLIN, TENNESSEE 37064
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MODIFICATION
OF STANDARDS
EXHIBIT

C 2.2

A



TYPICAL HOME ELEVATION 'A'

- HOME STYLE WITH GARAGE LOCATED AT THE REAR OF THE LOT THAT IS ACCESSED FROM AN ALLEY, OR FROM THE FRONT STREET WITH AN EXTENDED DRIVEWAY.
- ONE TO TWO STORIES IN HEIGHT.
- MATERIALS INCLUDE BRICK, SIMULATED STONE, CEMENTATIOUS SIDING, AND ARCHITECTURAL SHINGLES.
- THESE ELEVATIONS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS AND THE APPROVAL OF THE PLANNING COMMISSION/CITY OF FRANKLIN. CHANGES SHALL NOT BE MADE TO THE APPROVED ELEVATIONS UNLESS APPROVED BY EITHER THE CODES DIRECTOR OR THE PLANNING COMMISSION.
- ELEVATIONS SHOWN ARE TYPICAL FOR THIS DEVELOPMENT. FINAL DESIGN PLANS SHALL BE SUBMITTED WITH THE REQUEST FOR BUILDING PERMITS AND SHALL INDICATE COMPLIANCE WITH THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS, SPECIFICALLY THE REQUIREMENT FOR EXPOSED FOUNDATIONS OR WATER TABLES/ELEVATED FINISHED FLOORS AND GARAGE DOOR SEPARATION/MAXIMUM WIDTHS.
- BUILDINGS WITH SIDE ELEVATIONS FACING A PUBLIC RIGHT-OF-WAY SHALL HAVE WINDOWS AND ARCHITECTURAL FEATURES SIMILAR TO THE FRONT ELEVATION.
- SINGLE FAMILY HOME SQUARE FOOTAGE RANGE: 1500 SF TO 2200 SF
- THE FINISHED FLOOR ELEVATION OF THE FRONT FACADE TO BE A MINIMUM OF 18 INCHES ABOVE THE FINISHED GRADE.

C



TYPICAL HOME ELEVATION 'C'

- HOME STYLE WITH GARAGE ACCESSED FROM THE FRONT FACING STREET. GARAGE IS RECESSED A MINIMUM OF 10 FEET FROM THE FRONT ELEVATION AND DRIVEWAYS ARE A MINIMUM OF 22' FROM THE SIDEWALK.
- ONE TO TWO STORIES IN HEIGHT.
- MATERIALS INCLUDE BRICK, SIMULATED STONE, CEMENTATIOUS SIDING, AND ARCHITECTURAL SHINGLES.
- THESE ELEVATIONS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS AND THE APPROVAL OF THE PLANNING COMMISSION/CITY OF FRANKLIN. CHANGES SHALL NOT BE MADE TO THE APPROVED ELEVATIONS UNLESS APPROVED BY EITHER THE CODES DIRECTOR OR THE PLANNING COMMISSION.
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- BUILDINGS WITH SIDE ELEVATIONS FACING A PUBLIC RIGHT-OF-WAY SHALL HAVE WINDOWS AND ARCHITECTURAL FEATURES SIMILAR TO THE FRONT ELEVATION.
- SINGLE FAMILY HOME SQUARE FOOTAGE RANGE: 2200 SF TO 4500 SF
- THE FINISHED FLOOR ELEVATION OF THE FRONT FACADE TO BE A MINIMUM OF 18 INCHES ABOVE THE FINISHED GRADE.
- FRONT FACING GARAGES ARE REQUIRED TO HAVE GARAGE DOORS NO LARGER THAN 9' IN WIDTH WITH A 2' SEPARATION BETWEEN THE DOORS.

B

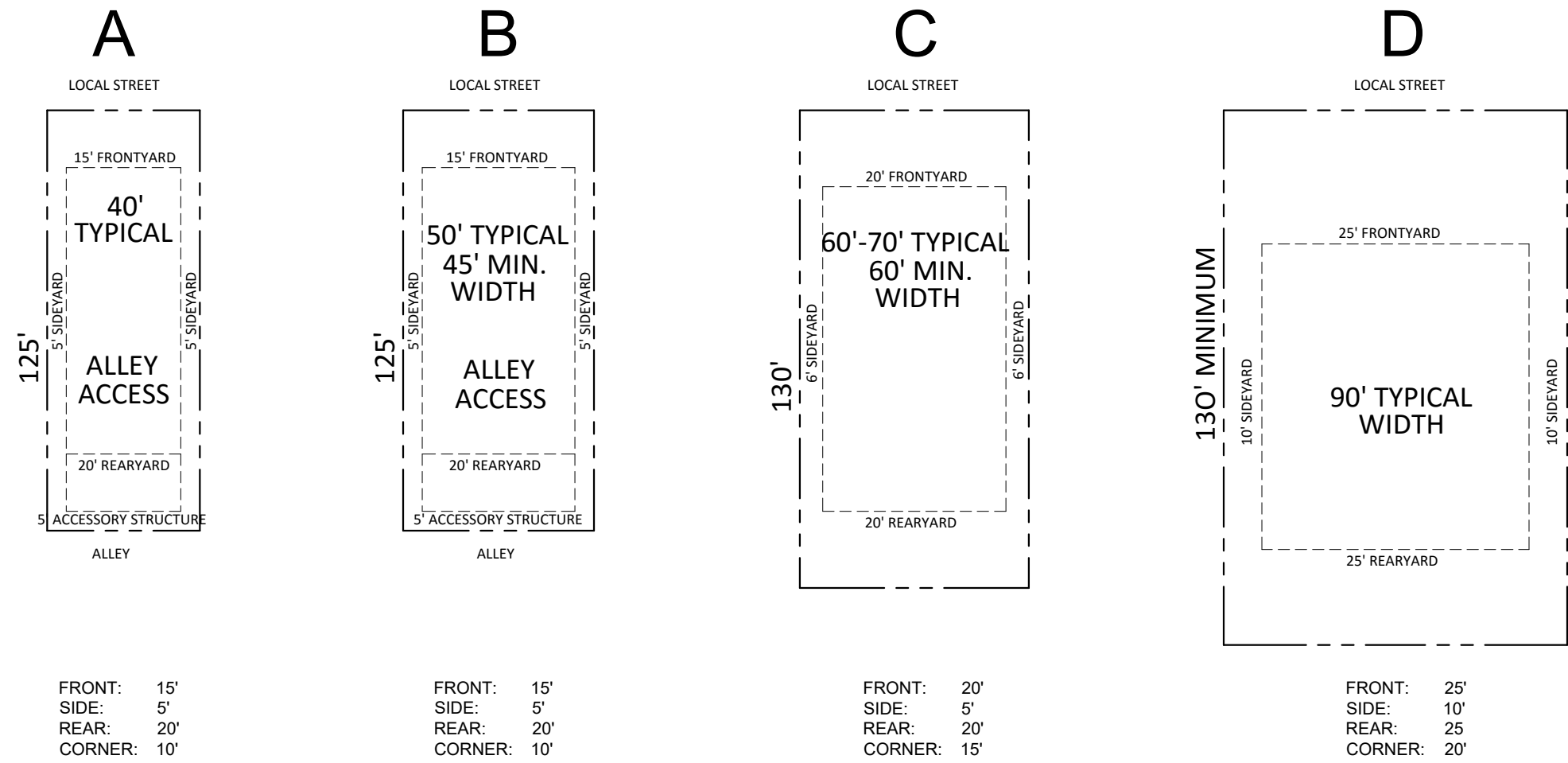


TYPICAL HOME ELEVATION 'B'

- HOME STYLE WITH GARAGE LOCATED AT THE REAR OF THE LOT THAT IS ACCESSED FROM AN ALLEY, OR FROM THE FRONT STREET WITH AN EXTENDED DRIVEWAY.
- ONE TO TWO STORIES IN HEIGHT.
- MATERIALS INCLUDE BRICK, SIMULATED STONE, CEMENTATIOUS SIDING, AND ARCHITECTURAL SHINGLES.
- THESE ELEVATIONS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS AND THE APPROVAL OF THE PLANNING COMMISSION/CITY OF FRANKLIN. CHANGES SHALL NOT BE MADE TO THE APPROVED ELEVATIONS UNLESS APPROVED BY EITHER THE CODES DIRECTOR OR THE PLANNING COMMISSION.
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- BUILDINGS WITH SIDE ELEVATIONS FACING A PUBLIC RIGHT-OF-WAY SHALL HAVE WINDOWS AND ARCHITECTURAL FEATURES SIMILAR TO THE FRONT ELEVATION.
- SINGLE FAMILY HOME SQUARE FOOTAGE RANGE: 1700 SF TO 3600 SF
- THE FINISHED FLOOR ELEVATION OF THE FRONT FACADE TO BE A MINIMUM OF 18 INCHES ABOVE THE FINISHED GRADE.



TYPICAL LOT DIAGRAMS AND SETBACKS



D



TYPICAL HOME ELEVATION 'D'

- HOME STYLE FOR LOTS WITH GARAGE ACCESSED FROM THE STREET WITH SIDE LOADED GARAGE.
- ONE TO TWO STORIES IN HEIGHT.
- MATERIALS INCLUDE BRICK, SIMULATED STONE, CEMENTATIOUS SIDING, AND ARCHITECTURAL SHINGLES.
- GARAGE IS SETBACK 10 FEET FROM THE FRONT FACADE.
- DRIVEWAY IS A MINIMUM OF 22' FROM THE SIDEWALK TO THE GARAGE DOORS.
- ALL TWO CAR GARAGES SHALL HAVE TWO GARAGE DOORS WITH A MAXIMUM WIDTH OF 9' WIDE WITH A 2 FOOT MINIMUM SEPARATION BETWEEN.
- THESE ELEVATIONS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE CITY OF FRANKLIN'S ARCHITECTURAL DESIGN STANDARDS AND THE APPROVAL OF THE PLANNING COMMISSION/CITY OF FRANKLIN. CHANGES SHALL NOT BE MADE TO THE APPROVED ELEVATIONS UNLESS APPROVED BY EITHER THE CODES DIRECTOR OR THE PLANNING COMMISSION.
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- BUILDINGS WITH SIDE ELEVATIONS FACING A PUBLIC RIGHT-OF-WAY SHAL HAVE WINDOWS AND ARCHITECTURAL FEATURES SIMILAR TO THE FRONT ELEVATION.
- SINGLE FAMILY HOME SQUARE FOOTAGE RANGE: 2800 SF TO 5000 SF
- THE FINISHED FLOOR ELEVATION OF THE FRONT FACADE TO BE A MINIMUM OF 18 INCHES ABOVE THE FINISHED GRADE.

The home elevations shown here are representative of the homes planned for Ashcroft Valley. They are the basis for design review by the City of Franklin at the time of Site Plan Submittal. Based on my professional experience, the plans presented meet or exceed the design standards set forth by the City of Franklin.

Greg Gamble, Registered Landscape Architect.

Revisions:

Drawing Notes:

GDC

GAMBLE
DESIGN COLLABORATIVE
DEVELOPMENT PLANNING AND
LANDSCAPE ARCHITECTURE

Date: JUNE 10, 2015

ASHCROFT VALLEY PUD SUBDIVISION
DEVELOPMENT PLAN
Franklin, Williamson County, Tennessee



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144 SOUTHEAST PARKWAY
SUITE 230
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
gg@gregmbledc.com
615.975.5765

TYPICAL
ARCHITECTURE

C 2.3

PRELIMINARY STORMWATER MANAGEMENT SUMMARY

Total Property Area = 226.01 Acres
Total Disturbed Area = 143.51 Acres

Soil Types: 54.6% Type A Soil
25.8% Type B Soil
17.2% Type C Soil
0.0% Type D Soil
2.4% Non-Soil Areas

Post-Treatment Stormwater Narrative
Stormwater to be treated via a combination of Bioretention, Water Quality Swales, and Detention Ponds and then released into a Stream or Wet Weather Conveyance.

Basin Area 1
Total Drainage Area = 40.0 Acres
Subbasin A-1: 3.7 Acres
Treatment: Bioretention
Subbasin A-2: 4.3 Acres
Treatment: Bioretention
Subbasin B-1: 6.9 Acres
Treatment: Bioretention
Subbasin B-2: 6.2 Acres
Treatment: Detention Pond
Subbasin C: 9.0 Acres
Treatment: Bioretention

All Subbasins combine and are treated with an additional 9.8 Acres in a Bioretention/Detention Pond

Basin Area 2
Total Drainage Area = 15.3 Acres
Subbasin A: 5.6 Acres
Treatment: Bioretention
Subbasin B: 7.0 Acres
Treatment: Bioretention
Subbasin C: 2.7 Acres
Treatment: Water Quality Swale

Basin Area 3
Drainage Area = 9.3 Acres
Treatment: Bioretention/Detention Pond

Basin Area 4
Total Drainage Area = 69.0 Acres
Subbasin A: 11.0 Acres
Treatment: Bioretention
Subbasin B-1: 9.3 Acres
Treatment: Bioretention
Subbasin B-2: 4.3 Acres
Treatment: Bioretention
Subbasin C: 6.3 Acres
Treatment: Bioretention
Subbasin D: 10.7 Acres
Treatment: Bioretention
Subbasin E: 9.1 Acres
Treatment: Bioretention

All Subbasins combine and are treated with an additional 18.3 Acres in a Bioretention/Detention Pond

Basin Area 5
Total Drainage Area = 33.1 Acres
Subbasin A: 6.7 Acres
Treatment: Bioretention
Subbasin B-1: 4.9 Acres
Treatment: Bioretention
Subbasin B-2: 7.9 Acres
Treatment: Bioretention
Subbasin B-3: 4.7 Acres
Treatment: Bioretention
Subbasin C: 6.1 Acres
Treatment: Bioretention
Subbasin D: 2.8 Acres
Treatment: Bioretention

All Subbasins combine and are treated in a Detention Pond

Basin Area 6
Drainage Area = 3.7 Acres
Treatment: Bioretention Pond

Basin Area 7
Total Drainage Area = 6.8 Acres
Subbasin A: 4.8 Acres
Treatment: Bioretention
Subbasin B: 2.0 Acres
Treatment: Bioretention

Basin Area 8
Total Drainage Area = 6.4 Acres
Subbasin A: 5.3 Acres
Treatment: Bioretention
Subbasin B: 1.1 Acres
Treatment: Water Quality Swale



- Grading & Drainage General Notes**
1. Grading Permit is required for any project disturbing more than 10,000 sf, adding more than 5,000 sf of impervious surface or for any site grading requiring stockpiling of material.
 2. The Developer shall provide the necessary labor and supervision required to support field testing by the independent testing firm and inspections by City officials at no cost to the City. Test reports of field testing if applicable shall be submitted directly to the Street Department. Defects disclosed by tests shall be rectified.
 3. An authorized representative of the City shall make a final inspection of the project after completion to determine acceptability of the work and for release of performance bonds if required. Before this final inspection can be made, the Engineer responsible for the project shall certify in writing to the City Engineer that the work has been completed in accordance with approved plans and specifications.
 4. Drainage facilities including, but not limited to, culverts, detention basins and ditches, as well as the roadway sub-grade, base stone and binder & surface coarse shall be inspected, tested and given approval at each stage of installation prior to proceeding to the next stage of construction. Final construction inspection for approval and acceptance of streets and drainage systems will not be granted until all work has been completed in accordance with the approved plans.
 5. Locating and coordination for the relocation of existing utilities is the responsibility of the contractor. Tennessee's One-Call and the City of Franklin utility location service shall be utilized in addition to coordination with local utility owners. The contractor shall at all times protect existing utilities and will be responsible for costs due to damage caused to any utility lines.

Post-Treatment Stormwater Narrative
Stormwater to be treated via a combination of Bioretention, Water Quality Swales, and Detention Ponds and then released into a Stream or Wet Weather Conveyance.

Statement of Impact
Post Construction Stormwater will have no additional impact on the surrounding drainage basins. Stormwater BMPs will be used to maintain or decrease existing stormwater flows.

Stream Buffer Note:
There shall be no mowing, clearing, grading, construction, storage, or disturbance of vegetation except as permitted by the City Engineer, or his designee.

Grading & Drainage Data Chart
Site Area: 226.01 Ac.
Impervious Area: 61.98 Ac.
Disturbed Area: 143.51 Ac.

Impervious Area Calculations:
The impervious area assumed for each lot type includes building, patio, & driveway.

90' Lot Type: 83 units x 5000 sq.ft. = 9.53 Ac.
70' Lot Type: 72 units x 3800 sq.ft. = 6.28 Ac.
50' Lot Type: 198 units x 3600 sq.ft. = 16.36 Ac.
40' Lot Type: 22 units x 2400 sq.ft. = 1.21 Ac.

ROW Area (includes road & sidewalks) = 28.60 Ac.

Revisions:

Drawing Notes:



GAMBLE
DESIGN COLLABORATIVE
DEVELOPMENT PLANNING AND
LANDSCAPE ARCHITECTURE

Date: JULY 11, 2016

**ASHCROFT VALLEY PUD SUBDIVISION
DEVELOPMENT PLAN**
Franklin, Williamson County, Tennessee



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144 SOUTHEAST PARKWAY
SUITE 230
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GREG GAMBLE
ggamble20@gmail.com
615.975.5765

**GRADING &
DRAINAGE
PLAN**

C 3.0

COF 6189

PRELIMINARY STORMWATER MANAGEMENT SUMMARY

Total Property Area = 226.01 Acres
Total Disturbed Area = 143.51 Acres

Soil Types: 54.6% Type A Soil
25.8% Type B Soil
17.2% Type C Soil
0.0% Type D Soil
2.4% Non-Soil Areas

Post-Treatment Stormwater Narrative
Stormwater to be treated via a combination of Bioretention, Water Quality Swales, and Detention Ponds and then released into a Stream or Wet Weather Conveyance.

Basin Area 1

Total Drainage Area = 40.0 Acres
Subbasin A-1: 3.7 Acres
Treatment: Bioretention
Subbasin A-2: 4.3 Acres
Treatment: Bioretention
Subbasin B-1: 6.9 Acres
Treatment: Bioretention
Subbasin B-2: 6.2 Acres
Treatment: Detention Pond
Subbasin C: 9.0 Acres
Treatment: Bioretention

All Subbasins combine and are treated with an additional 9.8 Acres in a Bioretention/Detention Pond

Basin Area 2

Total Drainage Area = 15.3 Acres
Subbasin A: 5.6 Acres
Treatment: Bioretention
Subbasin B: 7.0 Acres
Treatment: Bioretention
Subbasin C: 2.7 Acres
Treatment: Water Quality Swale

Basin Area 3

Drainage Area = 9.3 Acres
Treatment: Bioretention/Detention Pond

Basin Area 4

Total Drainage Area = 69.0 Acres
Subbasin A: 11.0 Acres
Treatment: Bioretention
Subbasin B-1: 9.3 Acres
Treatment: Bioretention
Subbasin B-2: 4.3 Acres
Treatment: Bioretention
Subbasin C: 6.3 Acres
Treatment: Bioretention
Subbasin D: 10.7 Acres
Treatment: Bioretention
Subbasin E: 9.1 Acres
Treatment: Bioretention

All Subbasins combine and are treated with an additional 18.3 Acres in a Bioretention/Detention Pond

Basin Area 5

Total Drainage Area = 33.1 Acres
Subbasin A: 6.7 Acres
Treatment: Bioretention
Subbasin B-1: 4.9 Acres
Treatment: Bioretention
Subbasin B-2: 7.9 Acres
Treatment: Bioretention
Subbasin B-3: 4.7 Acres
Treatment: Bioretention
Subbasin C: 6.1 Acres
Treatment: Bioretention
Subbasin D: 2.8 Acres
Treatment: Bioretention

All Subbasins combine and are treated in a Detention Pond

Basin Area 6

Drainage Area = 3.7 Acres
Treatment: Bioretention

Basin Area 7

Total Drainage Area = 6.8 Acres
Subbasin A: 4.8 Acres
Treatment: Bioretention
Subbasin B: 2.0 Acres
Treatment: Bioretention

Basin Area 8

Total Drainage Area = 6.4 Acres
Subbasin A: 5.3 Acres
Treatment: Bioretention
Subbasin B: 1.1 Acres
Treatment: Water Quality Swale



Grading & Drainage General Notes

1. Grading Permit is required for any project disturbing more than 10,000 sf, adding more than 5,000 sf of impervious surface or for any site grading requiring stockpiling of material.
2. The Developer shall provide the necessary labor and supervision required to support field testing by the independent testing firm and inspections by City officials at no cost to the City. Test reports of field testing if applicable shall be submitted directly to the Street Department. Defects disclosed by tests shall be rectified.
3. An authorized representative of the City shall make a final inspection of the project after completion to determine acceptability of the work and for release of performance bonds if required. Before this final inspection can be made, the Engineer responsible for the project shall certify in writing to the City Engineer that the work has been completed in accordance with approved plans and specifications.
4. Drainage facilities including, but not limited to, culverts, detention basins and ditches, as well as the roadway sub-grade, base stone and binder & surface course shall be inspected, tested and given approval at each stage of installation prior to proceeding to the next stage of construction. Final construction inspection for approval and acceptance of streets and drainage systems will not be granted until all work has been completed in accordance with the approved plans.
5. Locating and coordination for the relocation of existing utilities is the responsibility of the contractor. Tennessee's One-Call and the City of Franklin utility location service shall be utilized in addition to coordination with local utility owners. The contractor shall at all times protect existing utilities and will be responsible for costs due to damage caused to any utility lines.

Post-Treatment Stormwater Narrative
Stormwater to be treated via a combination of Bioretention, Water Quality Swales, and Detention Ponds and then released into a Stream or Wet Weather Conveyance.

Statement of Impact
Post Construction Stormwater will have no additional impact on the surrounding drainage basins. Stormwater BMPs will be used to maintain or decrease existing stormwater flows.

Stream Buffer Note:
There shall be no mowing, clearing, grading, construction, storage, or disturbance of vegetation except as permitted by the City Engineer, or his designee.

Grading & Drainage Data Chart

Site Area: 226.01 Ac.
Impervious Area: 61.98 Ac.
Disturbed Area: 143.51 Ac.

Impervious Area Calculations:

The impervious area assumed for each lot type includes building, patio, & driveway.

90' Lot Type: 83 units x 5000 sq.ft. = 9.53 Ac.
70' Lot Type: 72 units x 3800 sq.ft. = 6.28 Ac.
50' Lot Type: 198 units x 3600 sq.ft. = 16.36 Ac.
40' Lot Type: 22 units x 2400 sq.ft. = 1.21 Ac.

ROW Area (includes road & sidewalks) = 28.60 Ac.

Revisions:

Drawing Notes:

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DEVELOPMENT PLANNING AND
LANDSCAPE ARCHITECTURE

Date: JULY 11, 2016

**ASHCROFT VALLEY PUD SUBDIVISION
DEVELOPMENT PLAN**
Franklin, Williamson County, Tennessee

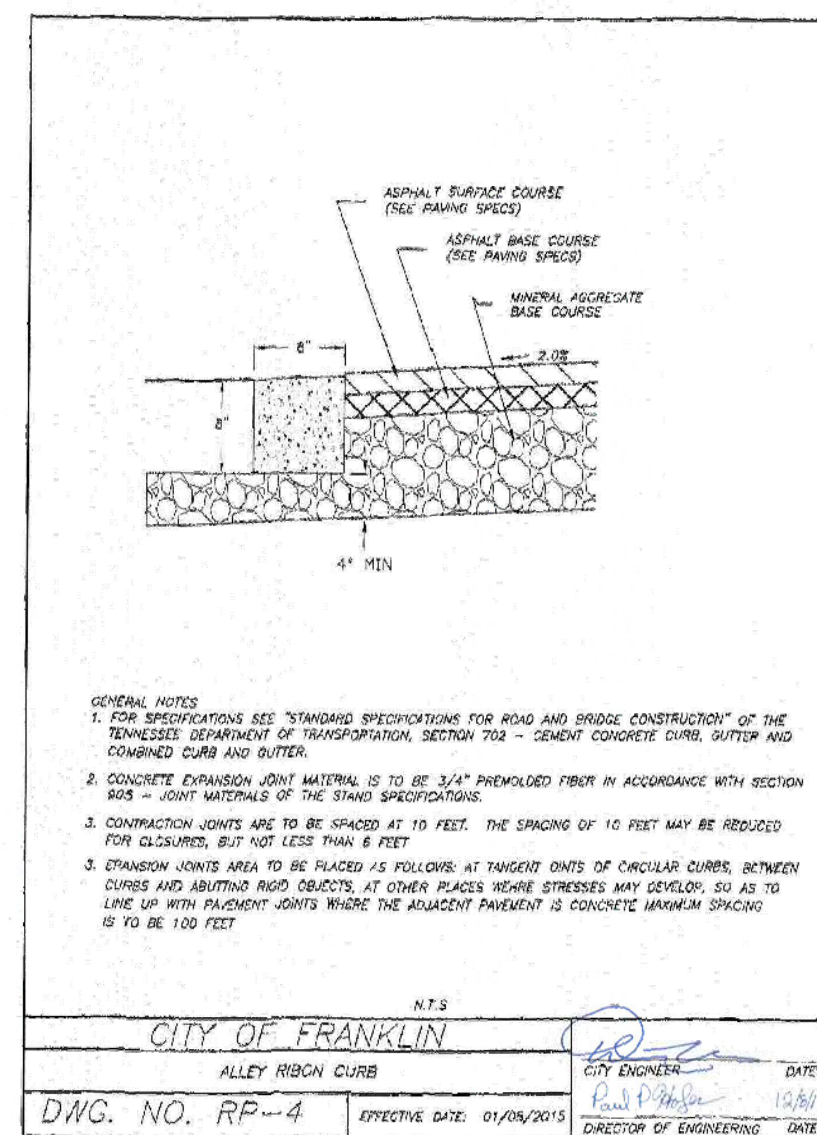
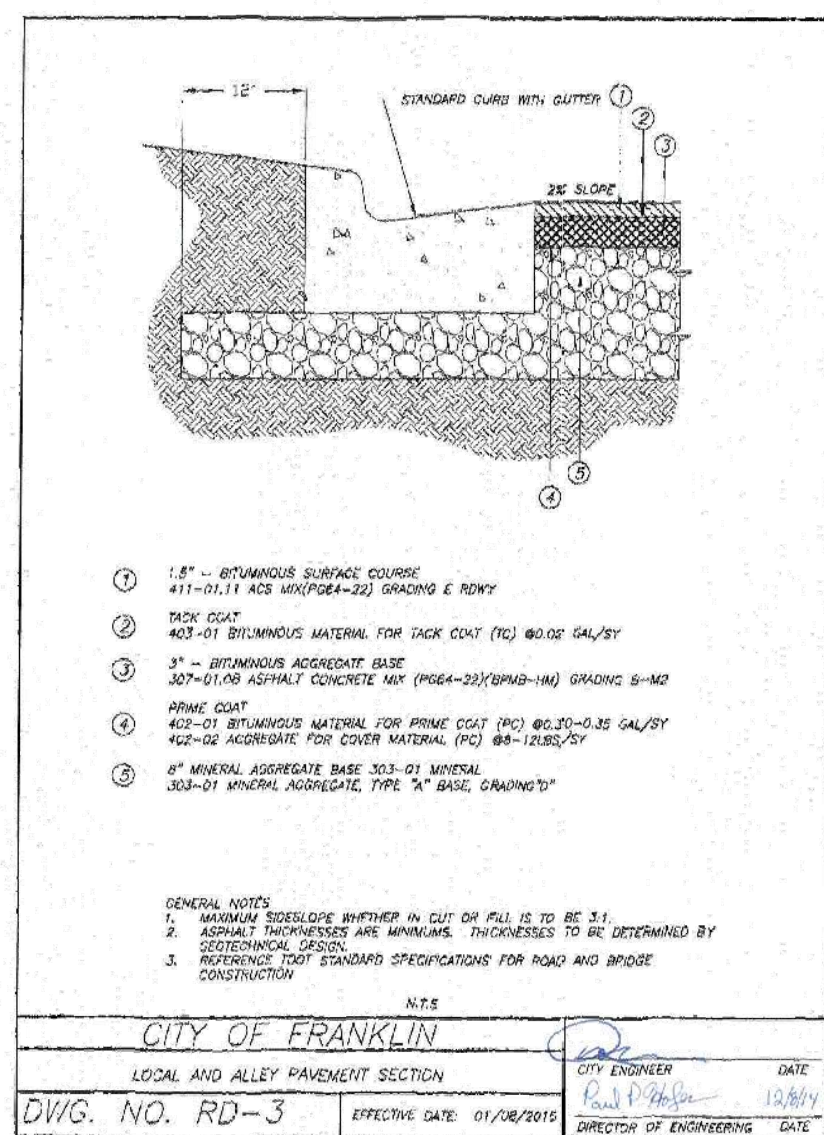
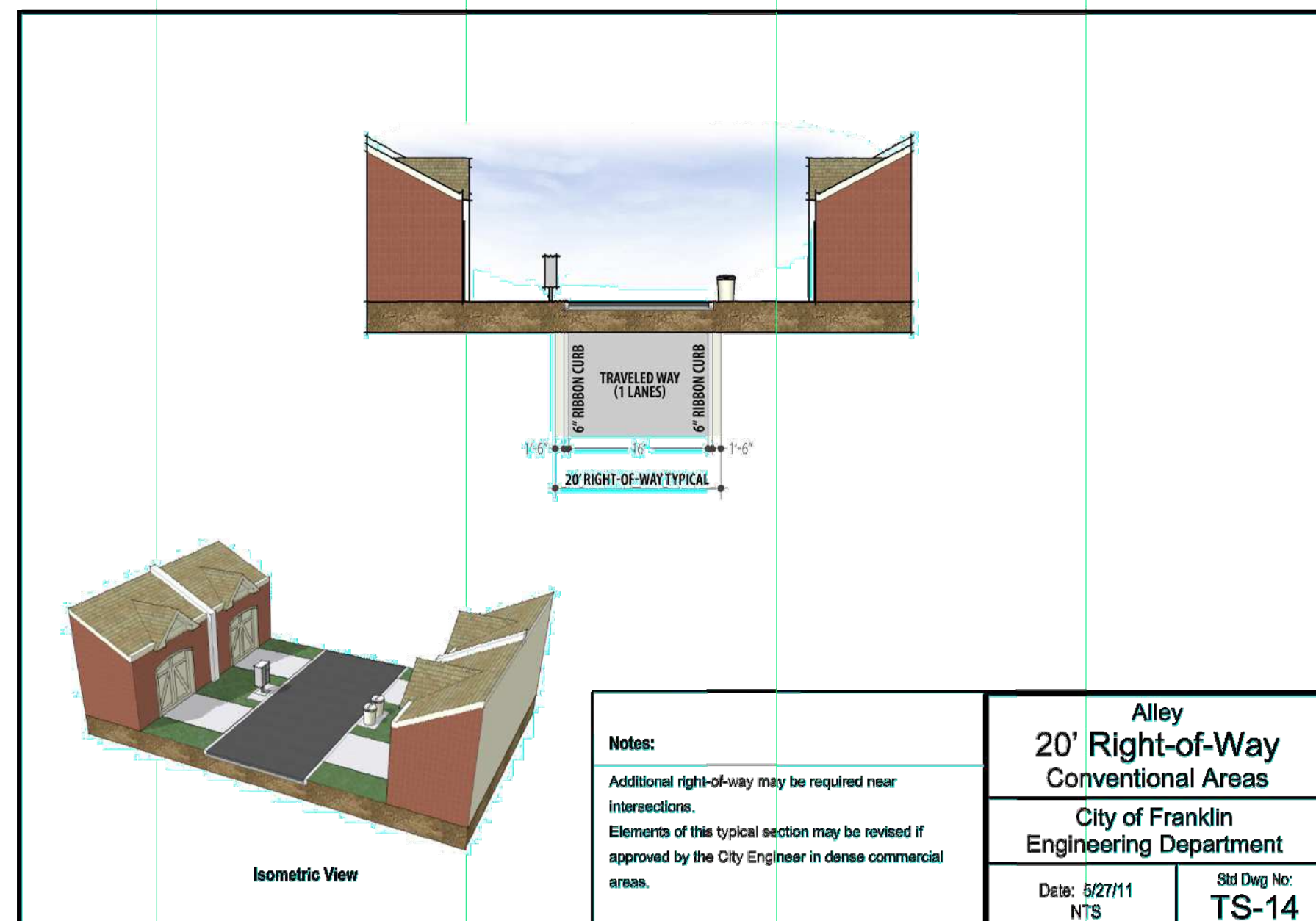


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**GRADING &
DRAINAGE
PLAN**

C 3.1

COF 6189

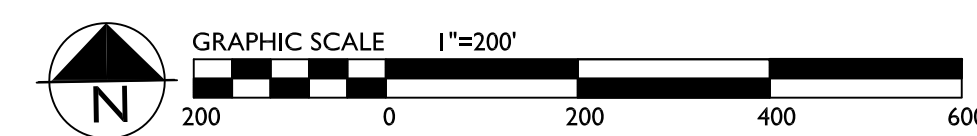


1. Prior to beginning any construction, the Developer and/or Contractor shall obtain all necessary permits as required by law. Such permits may include, but are not limited to, those required by State of Tennessee, Williamson County and other City of Franklin agencies.
2. All off-site work within the public right-of-way shall require an approved traffic control plan which complies with the MUTCD (Manual on Uniform Traffic Control Devices) for all street, road, alley or right-of-way of any utility or temporary construction easement of the City of Franklin by any entity unless 72-hour notice has been given to the City of Franklin Traffic Operations Department. The contractor shall have an approved traffic control plan on-site during construction.
3. Construction materials shall be fully tested in accordance with the designations and requirements within the referenced "DOT Standard Specifications" sections, unless otherwise noted within the "Standard Specifications" section of the City of Franklin Transportation & Street Technical Standards.
4. An authorized representative of the City shall make a final inspection of the project after completion to determine the quality of the work and for release of performance bonds if required. Before this final inspection can be made, the Engineer responsible for the project shall certify in writing to the City Engineer that the work has been completed in accordance with approved plans and specifications.
5. Locating and coordination for the relocation of existing utilities is the responsibility of the contractor. The Tennessee One-Call and the City of Franklin utility location service shall be utilized in addition to coordination with local utility owners. The contractor shall at all times protect existing utilities and will be responsible for costs due to damage caused to any utility lines.
6. All temporary striping shall conform to "Standard Specifications for Road and Street Construction" published by TDOT, the latest revision except as herein amended. When approved, temporary striping shall be required prior to the opening of a street for travel where pavement and/or permanent striping cannot be completed due to weather and/or time constraints.
7. Thermoplastic pavement markings should be used on all public and private City street projects. Thermoplastic traffic striping and pavement markings shall conform to Section 716.03 "Thermoplastic Pavement Markings," of the Tennessee Department of Transportation Manual of Specifications and to the City of Franklin Transportation & Street Technical Standards.

Stream Buffer Note:
There shall be no mowing, clearing, grading, construction, storage, or disturbance of vegetation except as permitted by the City Engineer, or his designee.

Connectivity Index: 1.43
Links (○): 43
Nodes (*): 30
 $43/30 = 1.43$

MODIFICATION OF DESIGN STANDARDS REQUEST
THE APPLICANT REQUESTS A REDUCED CONNECTIVITY INDEX AS A RESULT OF THE ENVIRONMENTAL AND TOPOGRAPHICAL CONSTRAINTS OF THE NEIGHBORING PROPERTIES, AS WELL AS A LACK OF CONNECTION LOCATIONS TO EXISTING NEIGHBORHOODS ON THE REMAINING NEIGHBORING PROPERTIES.



COF 6189

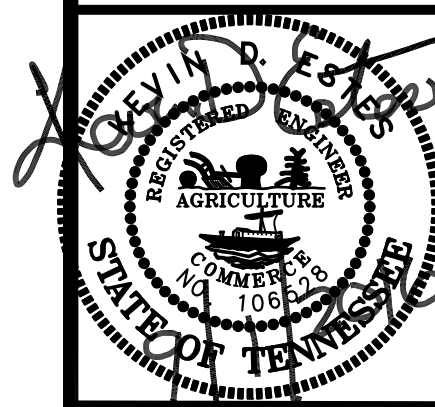
Revisions:

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ASHCROFT VALLEY PUD SUBDIVISION DEVELOPMENT PLAN

Franklin, Williamson County, Tennessee



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greggamble209@gmail.com
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OVERALL
ROW &
ACCESS
PLAN

IC 4.0



Statement of Impacts
The proposed Ashcroft Valley development is located between Major Arterials Highway 96 E and S Carothers Road. The northern portion of the site consists of 70 homes and will connect to Highway 96 E via Local Roads Stanford Drive and Ridgeway Drive. The southern portion of the site consists of 306 homes and will connect directly to S Carothers Road in two places, one by reconstructing the existing 30 degree curve and intersecting into the new, wider curve and the other by extending Meandering Way through the site.

Impact on Local Streets

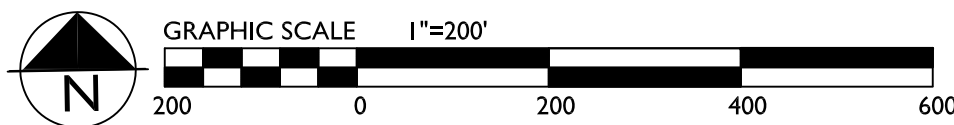
- At the intersection with Highway 96 E, the northbound approach of Ridgeway Drive should be widened to include two northbound turn lanes.
- At the intersection with Ridgeway Drive, an eastbound right turn lane should be provided on Highway 96 E. This turn lane should include at least 150 feet of storage and should be designated and constructed according to AASHTO standards.
- The western project access on S. Carothers Road should be constructed to include one entering lane and one existing lane.
- The eastern project access on S. Carothers Road should be constructed to include one entering lane and two exiting lanes.
- A northbound right turn lane should be provided on Carothers Parkway at the intersection with S. Carothers Road.
- A separate westbound left turn lane should be provided on S. Carothers Road at the intersection with Carothers Parkway.

TIA Report prepared by Fischbach Transportation Group, LLC

- R.O.W & Access General Notes**
- Prior to beginning any construction, the Developer and/or Contractor, shall obtain all necessary permits as required by law. Such permits may include, but are not limited to, those required by State of Tennessee, Williamson County and other City of Franklin agencies.
 - All off-site work within the public right-of-way shall require an approved traffic control plan which complies with the MUTCD. No off-site excavation may be undertaken in any street, road, alley or right-of-way of any utility or temporary construction easement of the City of Franklin by any entity unless 72-hour notice has been given to the City of Franklin Traffic Operations Center. The contractor shall have an approved traffic control plan onsite during construction.
 - Construction materials shall be fully tested in accordance with the designations and requirements within the referenced "TDOT Standard Specifications" sections, unless otherwise noted within the "Standard Specifications" section of the City of Franklin Transportation & Street Technical Standards.
 - An authorized representative of the City shall make a final inspection of the project after completion to determine acceptability of the work and for release of performance bonds if required. Before this final inspection can be made, the Engineer responsible for the project shall certify in writing to the City Engineer that the work has been completed in accordance with approved plans and specifications.
 - Locating and coordination for the relocation of existing utilities is the responsibility of the contractor. Tennessee's One-Call and the City of Franklin utility location service shall be utilized in addition to coordination with local utility owners. The contractor shall at all times protect existing utilities and will be responsible for costs due to damage caused to any utility lines.
 - All temporary striping shall conform to "Standard Specifications for Road and Bridge Construction," published by TDOT, the latest revision except as herein amended. When approved, temporary striping shall be required prior to the opening of a street for travel where pavement and/or permanent striping cannot be completed due to weather and/or time constraints.
 - Thermoplastic pavement markings should be used on all public and private City street projects. Thermoplastic traffic striping and pavement markings shall conform to Section 716.03 "Thermoplastic Pavement Markings", of the Tennessee Department of Transportation Specifications (TDOT), and to the City of Franklin Transportation & Street Technical Standards.
- Stream Buffer Note:**
There shall be no mowing, clearing, grading, construction, storage, or disturbance of vegetation except as permitted by the City Engineer, or his designee.

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 $43/30 = 1.43$

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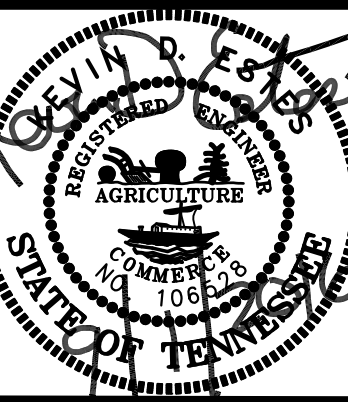


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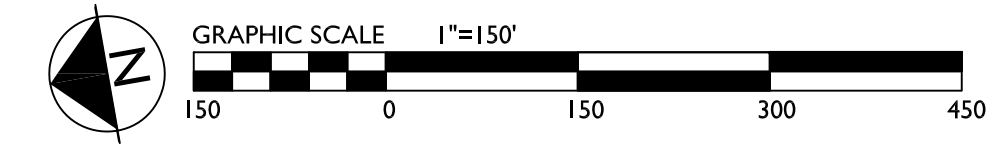
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Franklin, Williamson County, Tennessee



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OVERALL
ROW &
ACCESS
PLAN

C 4.1



Apparatus Specifications
Number of Front Axles 1
Front Track Width = 8'
Wheels on Each Front Axle = 2
Number of Rear Axles = 2
Rear Track Width = 8'
Wheel Base = 21.316'
(Front Axle to Front Rear Axle)
Rear Axle Spacing = 4.417'
Body Length = 50.0417'
Width = 8.333'
Rear Overhang = 22.1424'
Body Style = Fire Truck
Turning Radius Wall to Wall = 42'

Alley Apron to be installed at all T-Alley intersections to COF Standards to allow for increased Emergency Vehicle turning radii.

Alley Apron to be installed at all T-Alley intersections to COF Standards to allow for increased Emergency Vehicle turning radii.

Revisions:

Drawing Notes:

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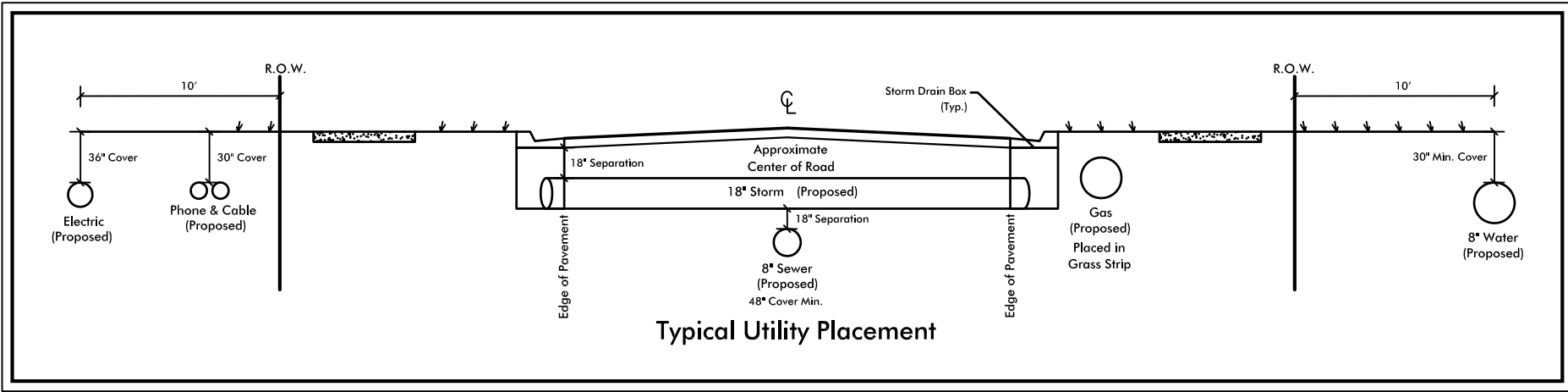
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Franklin, Williamson County, Tennessee

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**AUTOTURN
PLAN**

C 4.2

COF 6189



- Water & Sewer General Notes
- All persons who undertake the construction of water, sewer and/or reclaimed water lines located in, or affecting services provided by the City of Franklin shall comply with the requirements and regulations set forth in the "General Requirements & Technical Specifications, Water Management Department, City of Franklin, Tennessee" latest edition, along with any amendments, additions, or alteration that may thereafter be adopted by the board of mayor and aldermen by resolution.
 - Contractor shall obtain Water & Sewer Infrastructure Installation Permit prior to scheduling required Pre-Construction Site Meeting. Contractor shall complete the Pre-Construction Site Meeting prior to commencing with construction.
 - Contractor shall obtain and keep all of the following items on the jobsite at all times during construction:
 - Approved, Stamped and Signed Water and/or Sewer Plans
 - Water & Sewer Infrastructure Installation Permit, with all steps completed and signed by appropriate City employees.
 - Copy of approved availability request response letter.
 - A copy of all approved Cut Sheets.
 - Acceptance of City of Franklin public water infrastructure, sanitary sewer infrastructure and/or reclaimed water infrastructure shall become the responsibility of the City of Franklin, TN following approval from the City of Franklin Inspectors and acceptance by the Franklin Municipal Planning Commission. The Acceptance date shall be based on the day maintenance sureties are established by the Franklin Municipal Planning Commission.

- Prior to the acceptance of City of Franklin public water infrastructure, sanitary sewer infrastructure and/or reclaimed water infrastructure the contractor shall be required to submit as-built drawings to the Water Management Department.
- All off-site work within the public right-of-way shall require an approved traffic control plan which complies with the MUTCD. No off-site excavation may be undertaken in any street, road, alley or right-of-way of any utility or temporary construction easement of the City of Franklin by any entity unless 72-hour notice has been given to the City of Franklin Traffic Operations Center. The contractor shall have an approved traffic control plan onsite during construction.
- Any damages caused to existing utilities during construction shall, at his own expense, be replaced or repaired to original condition and quality, as approved by the owner and representative of the appropriate utility company, by the Contractor.
- Location of Water Line is approximate. True location of water line, fire hydrants, water valves, etc. to be designed by Microfton Utility District during sectional Site Plan phase of development.

When required, permanent exclusive easements must be provided with a minimum width of 20 feet. Easement width requirements are as follows:

- 0'-12' depth requires 20' easement.
- 13'-20' depth requires 30' easement.
- Depths greater than 20' requires prior approval.

A minimum 10-foot wide temporary construction easement on each side of the permanent easement must also be provided. No trees shall be planted within the permanent easements.

Water Service Provided by:
Microfton Utility District
633 Arno Road
Franklin, TN 37064
615-794-5047

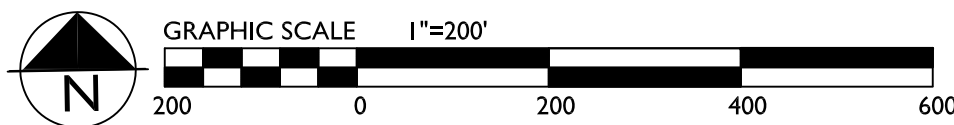
Sewer Service Provided by:
Water Management
124 Lumber Drive
Franklin, TN 37064
615-794-4554

Water & Sewer Data Chart
Water: Unit Flow in GPD: 350 GPD per [unit]
Number of Units: 376
Total Flow in GPD: 131,600 GPD

Sewer (to October Park) Unit Flow in GPD: 350 GPD per [unit]
Number of Units: 70
Total Flow in GPD: 24,500 GPD

Sewer (Simmons Ridge) Unit Flow in GPD: 350 GPD per [unit]
Number of Units: 306
Total Flow in GPD: 107,100 GPD

Stream Buffer Note:
There shall be no mowing, clearing, grading, construction, storage, or disturbance of vegetation except as permitted by the City Engineer, or his designee.



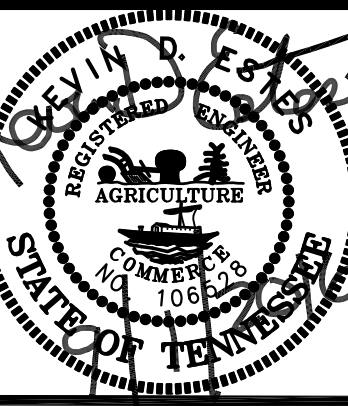
Revisions:

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ASHCROFT VALLEY PUD SUBDIVISION DEVELOPMENT PLAN

Franklin, Williamson County, Tennessee



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OVERALL
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F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning

Traffic Impact Study

Ashcroft Valley Residential Development
Highway 96E and S. Carothers Road
Franklin, TN

Prepared September 2016
For Land Solutions Company

FTG, LLC
P.O. Box 682736
Franklin, TN 37068
(615) 771-8022 phone
Gillian@FTGtraffic.com

Traffic Impact Study

Ashcroft Valley Residential Development Highway 96E and S. Carothers Road

Franklin, Tennessee

Prepared September 2016

PREPARED FOR:

Land Solutions, LLC
2925 Berry Hill Rd
Nashville, TN 37204

PREPARED BY:

Ms. Gillian L. Fischbach, P.E., PTOE
Fischbach Transportation Group (FTG, LLC)
P.O. Box 682736
Franklin, TN 37068
Phone: (615) 771-8022
FTG Project Number: 10647



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1. INTRODUCTION

This traffic study has been prepared in order to identify the traffic impacts of a single-family residential development that is proposed to be constructed between Highway 96E and S. Carothers Road in Franklin, Tennessee.

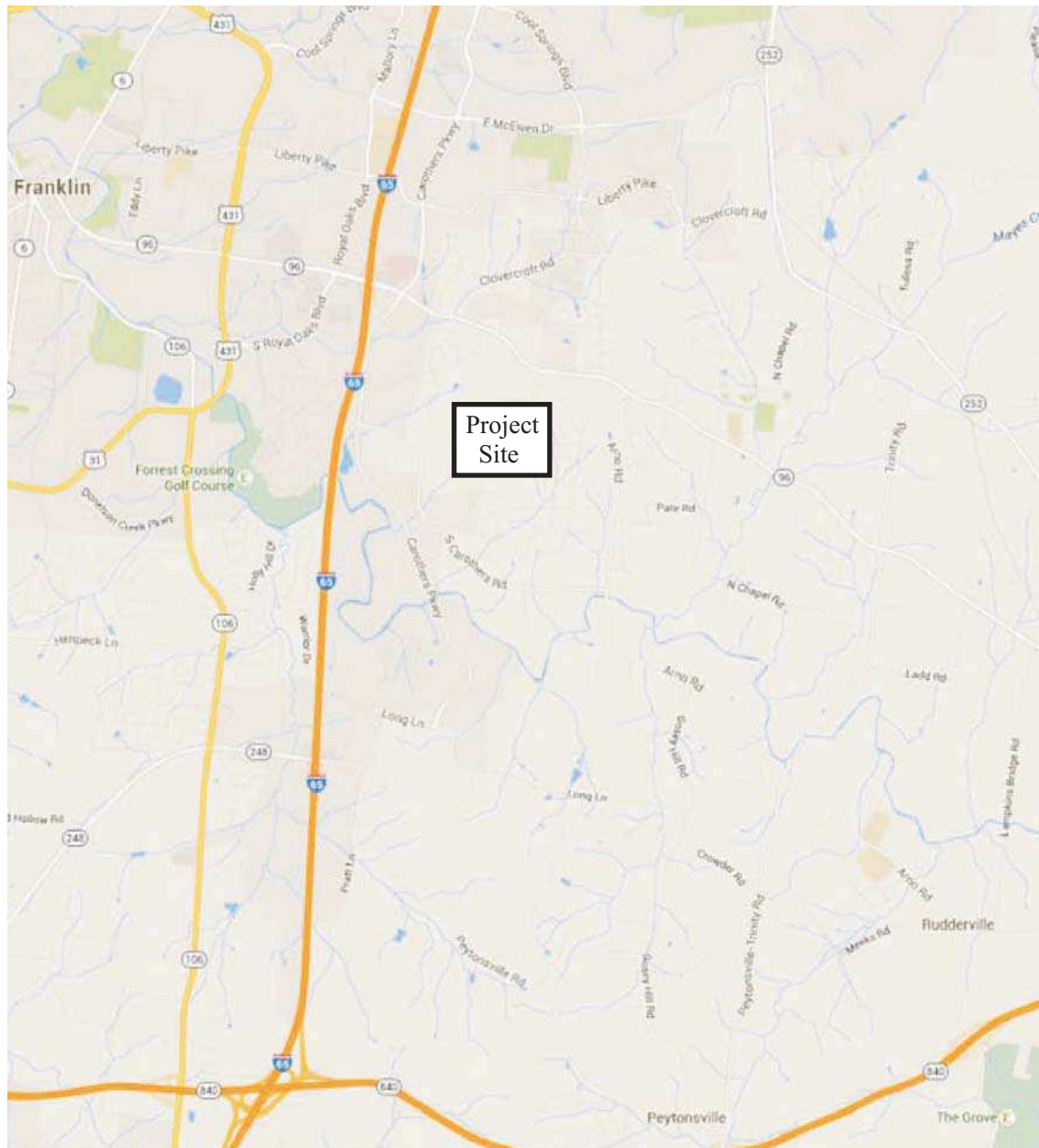
For the purposes of this study, existing and background traffic volumes were established, and capacity analyses were conducted for these conditions. Also, trip generation calculations were performed, and the trips which are expected to be generated by the proposed project were distributed to the roadway system and added to the background traffic volumes. The roadways and intersections which provide access to the site were then re-evaluated to determine the traffic impacts of the proposed project. Access needs for the project were evaluated, and the necessary roadway and/or traffic control improvements were identified. This report presents the results of these analyses and the subsequent recommendations.

2. PROJECT DESCRIPTION

The location of the proposed project is shown in [Figure 1](#). As shown, the project site is located between Highway 96E and S. Carothers Road in Franklin, Tennessee. The current project site plans are shown in [Figures 2A and 2B](#).

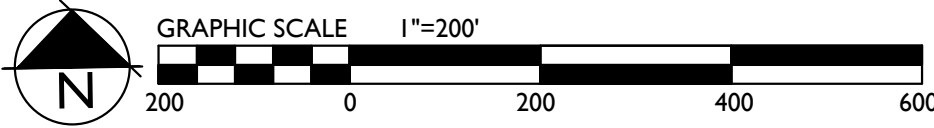
As shown, the northern portion of the project site includes 70 single-family homes. Access for the proposed project will be provided by extending Stanford Drive into the project site. The southern portion of the project site includes 306 single-family homes, and access for the proposed project will be provided at two locations on S. Carothers Road. Also, minor access will be provided by extending Upland Drive and Meandering Way east into the project site.

F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning



No Scale

Figure 1.
Location of the Project Site



BUILDABLE LOTS:	
AREA	
31,744 SF	
37,036 SF	
36,085 SF	

TOTAL NON-BUILDABLE LOT AREA: 2.41 AC
 TOTAL OPEN SPACE PROVIDED: 121.47 AC (54%)
 TOTAL FORMAL OPEN SPACE PROVIDED: 12.65 AC
 TOTAL INFORMAL OPEN SPACE PROVIDED: 108.82 AC

STREAM BUFFER

 60' STREAM BUFFER

MODIFICATION OF DESIGN STANDARDS REQUEST

STATEMENT OF IMPACTS:

SEWER: SEWER SERVICE WILL BE PROVIDED BY THE CITY OF FRANKLIN. FOR THE PORTION OF THE SITE IN THE MAYS CREEK BASIN, CONNECTION TO THE SEWER MAIN WILL BE MADE IN SIMMONS RIDGE TO THE SOUTH. FOR THE PORTION OF THE SITE IN THE WATKINS CREEK BASIN, CONNECTION WILL BE MADE TO THE NORTH TO THE SEWER MAIN IN OCTOBER PARK ON RIDGEWAY DRIVE.

STREET NETWORK:
AS SHOWN ON THE MAJOR THOROUGHFARE PLAN - SEE SHEET C 4.0 OVERALL ROW AND ACCESS
PLAN INCLUDING CONNECTIVITY ELEMENTS.

THE SOUTHERN PORTION OF ASHCROFT VALLEY WILL HAVE CONNECTIONS TO SOUTH CAROTHERS ROAD. THE PORTION OF SOUTH CAROTHERS WHICH CURRENTLY HAS A HARD 90 DEGREE BEND WILL BE RECONSTRUCTED INTO A 4-WAY INTERSECTION COMPLIANT WITH THE CITY OF FRANKLIN STREET STANDARDS.

DRAINAGE FACILITIES:
THE PROPERTY HAS THREE PRIMARY DRAINAGE BASINS. ONE DRAINS NORTH TO WATKINS CREEK. ONE DRAINS WEST THROUGH CROSS CREEK SUBDIVISION AND ONE DRAINS SOUTH TOWARDS SOUTH CAROTHERS ROAD.

RECREATIONAL FACILITIES:
LIBERTY PARK - 3.0 MILES DRIVING DISTANCE

PROJECTED STUDENT POPULATION:
371 HOMES X .64 STUDENTS = 238 PROJECTED STUDENTS

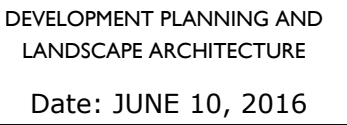
REFUSE COLLECTION:
PROVIDED BY THE CITY OF FRANKLIN SOLID WASTE.

RESTRICTIVE COVENANTS:
A HOME OWNER'S ASSOCIATION WILL BE ESTABLISHED PRIOR TO THE FIRST OCCUPANCY OF RESIDENTS. THE HOA WILL REGULATE ARCHITECTURAL STANDARDS AND THE MAINTENANCE OF THE COMMUNITY. THE HOA WILL MAINTAIN ALL COMMON OPEN SPACE AND RECREATIONAL AREAS. THE HOA WILL MAINTAIN ALL STREETS AND SIDEWALKS WITHIN THE GATED NEIGHBORHOOD WHERE THE STREETS WILL BE PRIVATE.

TOTAL ACREAGE BY USE, PER SECTION:

1.67 UNITS/AC
2.190 UNITS/AC
2.035 UNITS/AC
376 SINGLE FAMILY HOMES
40 LOTS: 22
50 LOTS: 186
60-70 LOTS: 72
80 LOTS: 83
ESTATE: 1
N/A
89.7 AC RESIDENTIAL
SECTION 1
108.4 AC OPEN SPACE
2.41 AC NON-BUILDABLE LOTS
10.8 AC RESIDENTIAL (44 UNITS)
9.7 AC OPEN SPACE
SECTION 2
14.6 AC RESIDENTIAL (64 UNITS)
7.7 AC OPEN SPACE
SECTION 3
5.2 AC RESIDENTIAL (36 UNITS)
7.9 AC OPEN SPACE
SECTION 4
8.0 AC RESIDENTIAL (33 UNITS)
4.5 AC OPEN SPACE
SECTION 5
13.3 AC RESIDENTIAL (72 UNITS)
9.1 AC OPEN SPACE
SECTION 6
9.4 AC RESIDENTIAL (37 UNITS)
36.3 AC OPEN SPACE
SECTION 7
20.5 AC RESIDENTIAL (48 UNITS)
22.8 AC OPEN SPACE
SECTION 8
7.8 AC RESIDENTIAL (22 UNITS)
15.9 AC OPEN SPACE

Drawing Notes:



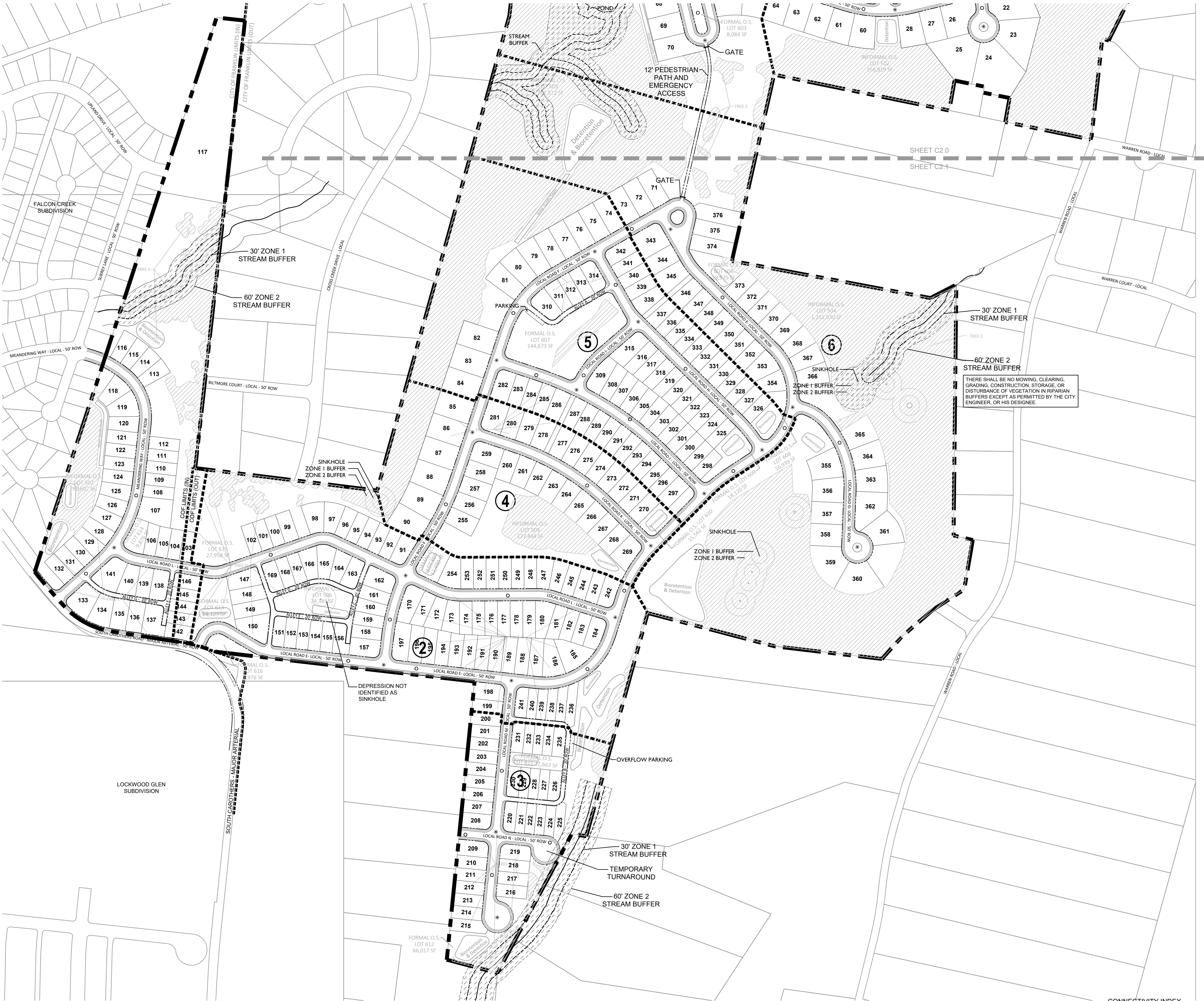
Franklin, Williamson County, Tennessee



DEVELOPEMENT PLAN

C 2.0

COF 6189



SITE DATA:

PROJECT NAME:
PROJECT NUMBER:
SUBDIVISION:
LOT NUMBER:
ADDRESS:

CITY:
COUNTY:
STATE:
CIVIL DISTRICT:
MAP, GROUP, PARCEL NUMBERS:

ASHCROFT VALLEY PUD SUBDIVISION
6189
NA
1-376, 501-507, 601-616
1101 RIDGEWAY DRIVE,
MURFREESBORO ROAD
FRANKLIN
TENNESSEE
14TH CIVIL DISTRICT
079 MB 002800
079 MB 002900
089 03500
089 03000
089 03001
089 04302
089 04303
089 04304
WILLIAMSON COUNTY
NC (079079 MB 002800, 079 MB 002900),
MGA-1 (079 05500, 089 04302, 089 04303,
089 04304)
CITY OF FRANKLIN
R-1 (089 03000, 089 03001)
SD-R (1.67)
MECO-6
NONE
CONVENTIONAL
226.01 AC
9,844,942.09 SF

EXISTING ZONING:

PROPOSED ZONING:
CHARACTER AREA OVERLAY:
OTHER APPLICABLE OVERLAYS:
APPLICABLE DEVELOPMENT STANDARD:
TOTAL ACREAGE:
TOTAL SQUARE FOOTAGE:

MINIMUM REQUIRED SETBACKS:
FRONT YARD:
REAR YARD:
SIDE YARD:

APPLICANT:
ADDRESS:

OFFICE PHONE
EMAIL ADDRESS
CONTACT

BUILDING SQUARE FOOTAGE:
BUILDING HEIGHT:
LANDSCAPE SURFACE RATIO:
MINIMUM LANDSCAPE SURFACE RATIO:
MINIMUM PARKING REQUIREMENT:
MAXIMUM PARKING LIMIT:
EXISTING PARKING:
RESIDENTIAL DENSITY:
TREE CANOPY:
PARKLAND DEDICATION:

SEE LOT DIAGRAMS - SHEET C2.3
MINIMUM SETBACKS
ARE ESTABLISHED
AS PART OF THE P.U.D.

GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 200
FRANKLIN, TN 37064
615.975.5765
greggambledesign@gmail.com
GREG GAMBLE

OPEN SPACE:

OVERALL DENSITY:
NET DENSITY (MINUS ROW):
NET DENSITY (MINUS ROW AND STREAM BUFFERS):
NUMBER OF RESIDENTIAL UNITS BY USE TYPE:

1.67 UNITS/AC
1.90 UNITS/AC
2.03 UNITS/AC
376 SINGLE FAMILY HOMES
40' LOTS: 22
50' LOTS: 198
60'-70' LOTS: 72
90' LOTS: 83
ESTATE: 1
N/A
89.7 AC RESIDENTIAL
108.4 AC OPEN SPACE
2.41 AC NON-BUILDABLE LOTS
SECTION 1
10.8 AC RESIDENTIAL (44 UNITS)
9.7 AC OPEN SPACE
SECTION 2
14.6 AC RESIDENTIAL (84 UNITS)
7.2 AC OPEN SPACE
SECTION 3
5.2 AC RESIDENTIAL (36 UNITS)
2.9 AC OPEN SPACE
SECTION 4
8.0 AC RESIDENTIAL (33 UNITS)
4.5 AC OPEN SPACE
SECTION 5
13.3 AC RESIDENTIAL (72 UNITS)
9.1 AC OPEN SPACE
SECTION 6
9.4 AC RESIDENTIAL (37 UNITS)
36.3 AC OPEN SPACE
SECTION 7
20.5 AC RESIDENTIAL (48 UNITS)
22.8 AC OPEN SPACE
SECTION 8
17.9 AC RESIDENTIAL (22 UNITS)
15.9 AC OPEN SPACE

NONRESIDENTIAL SQUARE FOOTAGE:
TOTAL ACREAGE BY USE, ENTIRE SITE:

TOTAL ACREAGE BY USE, PER SECTION:

OPEN SPACE REQUIREMENT CHART:

MINIMUM OPEN SPACE REQUIREMENT: 15%
SITE AREA: 226.01 AC
OPEN SPACE ACREAGE REQUIRED: 33.90 AC
FORMAL OPEN SPACE REQUIRED: 34% (11.53 AC)
INFORMAL OPEN SPACE REQUIRED: 66% (22.37 AC)

OPEN SPACE PROVIDED:

KEY CLASSIFICATION	TYPE	AREA OF OPEN SPACE
501	INFORMAL GREEN BELT	1,086,703 SF
502	INFORMAL GREEN BELT	356,919 SF
503	INFORMAL GREEN BELT	1,781,272 SF
504	INFORMAL GREEN BELT	1,251,830 SF
505	INFORMAL GREEN BELT	139,078 SF
506	INFORMAL GREEN BELT	33,880 SF
507	INFORMAL GREEN BELT	90,802 SF
601	FORMAL ENTRY	117,895 SF
602	FORMAL PARK	25,543 SF
603	FORMAL PARK	8,084 SF
604	FORMAL ENTRY	24,746 SF
605	FORMAL PARK	13,589 SF
606	FORMAL PARK	18,975 SF
607	FORMAL PARK	144,673 SF
608	FORMAL PARK	22,185 SF
609	FORMAL PARK	10,423 SF
610	FORMAL PARK	10,362 SF
611	FORMAL PARK	12,693 SF
612	FORMAL PARK	66,017 SF
613	FORMAL PARK	28,129 SF
614	FORMAL PARK	9,876 SF
615	FORMAL PARK	27,858 SF
616	FORMAL PARK	9,976 SF

NON-BUILDABLE LOTS:

KEY AREA	AREA
1	31,744 SF
2	37,036 SF
3	36,085 SF

TOTAL NON-BUILDABLE LOT AREA: 2.41 AC
TOTAL OPEN SPACE PROVIDED: 121.47 AC (54%)
TOTAL FORMAL OPEN SPACE PROVIDED: 12.65 AC
TOTAL INFORMAL OPEN SPACE PROVIDED: 108.82 AC

TREE CANOPY RETENTION:

TREE AREA	EXISTING	REMOVED	RETAINED
TREE A	20,501 SF	0 SF	20,501 SF
TREE B	184,596 SF	53,921 SF	130,675 SF
TREE C	5,961,646 SF	3,943,325 SF	2,018,320 SF
TREE D	221,073 SF	169,300 SF	51,773 SF
TREE E	491,876 SF	329,599 SF	162,277 SF
TOTAL	6,579,691 SF	3,596,145 SF	2,983,546 SF

TREE CANOPY DATA

EXISTING TREE CANOPY: 6,579,691 SF
6,579,691 SF/9,844,942.09 SF = .668 (66.8%) OF TOTAL SITE

REQUIRED CANOPY PRESERVATION =
36% OF TOTAL CANOPY
6,579,691 SF * 36% = 2,368,689 SF

PROVIDED CANOPY PRESERVED =
2,983,546 SF (45.3%) OF TOTAL EXISTING CANOPY

TREE PRESERVATION AREA

STREAM BUFFER

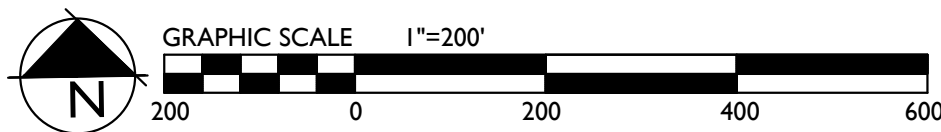
60' STREAM BUFFER

CONNECTIVITY INDEX

○ LINKS 44
* NODES 30
44 / 30 = 1.47 INDEX

MODIFICATION OF DESIGN STANDARDS REQUEST

THE APPLICANT REQUESTS A REDUCED CONNECTIVITY INDEX AS A RESULT OF THE ENVIRONMENTAL AND TOPOGRAPHICAL CONSTRAINTS OF THE NEIGHBORING PROPERTIES, AS WELL AS A LACK OF CONNECTION LOCATIONS TO EXISTING NEIGHBORHOODS ON THE REMAINING NEIGHBORING PROPERTIES.



Revisions:

Drawing Notes:



DESIGN COLLABORATIVE
DESIGN PLANNING AND
LANDSCAPE ARCHITECTURE

Date: JUNE 10, 2016

**ASHCROFT VALLEY PUD SUBDIVISION
DEVELOPMENT PLAN**
Franklin, Williamson County, Tennessee



GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 200
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
greggambledesign@gmail.com
615.975.5765

**DEVELOPEMENT
PLAN**

C 2.1

COF 6189

3. EXISTING CONDITIONS

3.1 PEAK HOUR TRAFFIC VOLUMES

In order to provide data for the traffic impact analysis, peak hour traffic volumes were counted at the following locations:

1. Highway 96E and Carothers Parkway
2. Highway 96E and Clovercroft Road
3. Highway 96E and Cross Creek Drive
4. Highway 96E and Ridgeway Drive / Chester Stevens Road
5. Highway 96E and Arno Road
6. Carothers Parkway and S. Carothers Road
7. S. Carothers Road in the vicinity of the project site.

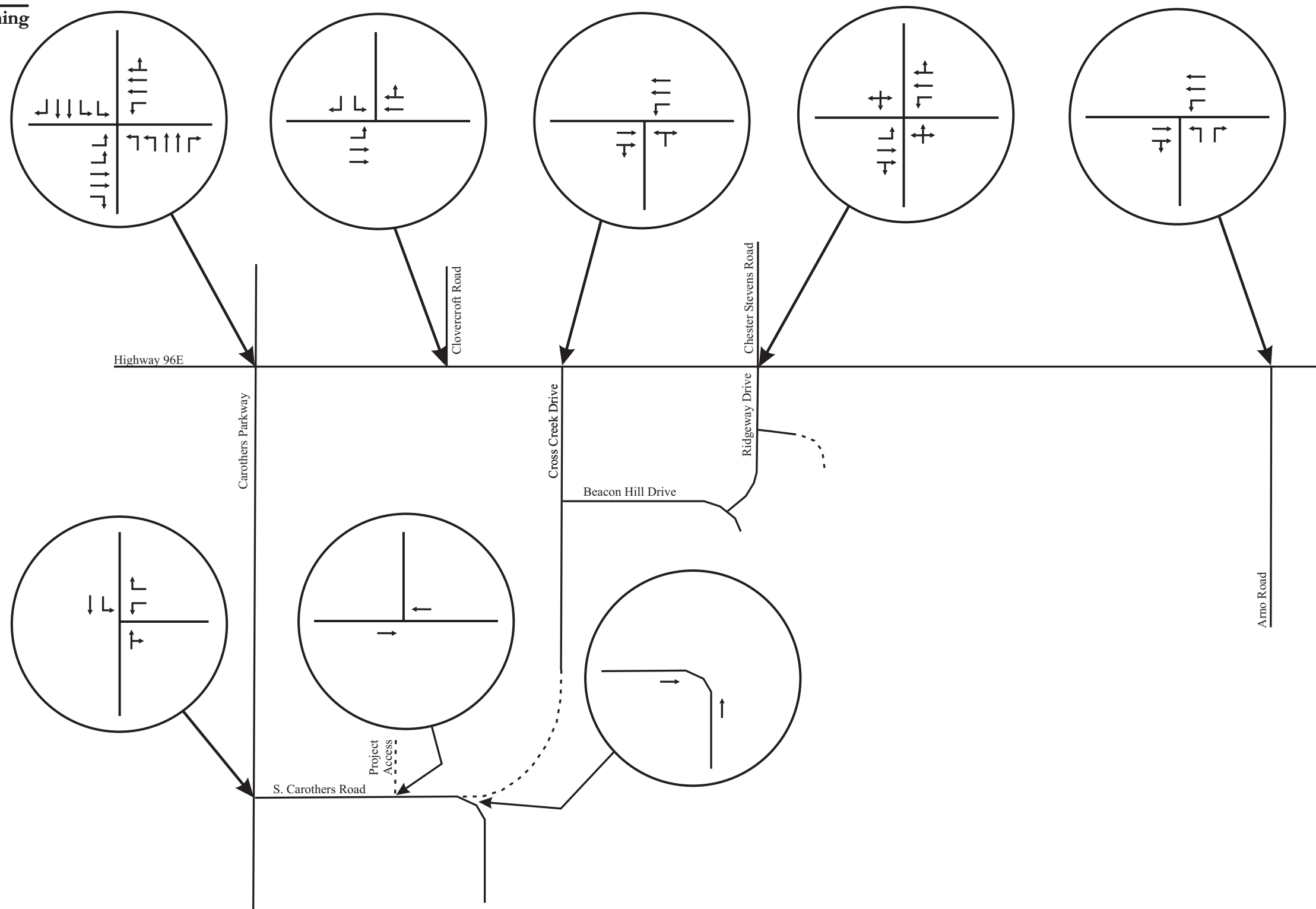
This data was collected during the morning and afternoon peak hours on typical weekdays in March 2015 and February 2016 when schools were in session. The raw traffic volumes are included in [Appendix A](#). The existing laneage at the intersections within the study area is shown in [Figure 3](#), and the existing peak hour traffic volumes are shown in [Figure 4](#).

Using the existing peak hour traffic volumes shown in [Figure 4](#), capacity analyses were conducted for the intersections counted. Specifically, in order to identify current peak hour levels of operation within the study area, the capacity calculations were performed according to the methods outlined in the [Highway Capacity Manual 2010](#) (HCM2010). These analyses result in the determination of a Level of Service (LOS), which is a measure of evaluation is used to describe how well an intersection or roadway operates. LOS A represents free flow traffic operations, and LOS F suggests that the traffic demand exceeds the available capacity. In an urbanized area, LOS D is typically considered to be the minimum acceptable LOS. [Table 1](#) presents the descriptions of LOS for signalized intersections, and [Table 2](#) presents the descriptions of LOS for unsignalized intersections.

The results of the capacity analyses for the existing peak hour traffic volumes are shown in [Table 3](#), and [Appendix B](#) includes the capacity analyses worksheets. These analyses indicate that the existing operations at the signalized intersections within the study area are dominated by the significant westbound through volumes on Highway 96E during the AM peak hour and reciprocal eastbound through volumes during the PM peak hour. For the signalized intersection of Highway 96E and Arno Road, the analyses and field observations indicate that the northbound left turn queue is significantly long during the AM peak hour, and the eastbound through and right turn queues are significantly long during the PM peak hour. Also, it is important to note that the significant eastbound and westbound volumes on Highway 96E, west of Arno Road, are split approximately evenly at the intersection with Arno Road. Specifically, during the AM peak hour, the westbound through volume and the northbound right turn volume are approximately equal. Reciprocally, during the PM peak hour, the eastbound through volume and right turn volume are approximately equal.

At the unsignalized intersections with Cross Creek Drive and Ridgeway Drive / Chester Stevens Road, most of the critical turning movements operate at acceptable LOS during both peak hours. Because of the significant traffic volumes on Highway 96E, the turning movements from the side streets operate at poor LOS, although the northbound and southbound vehicle queues are relatively short.

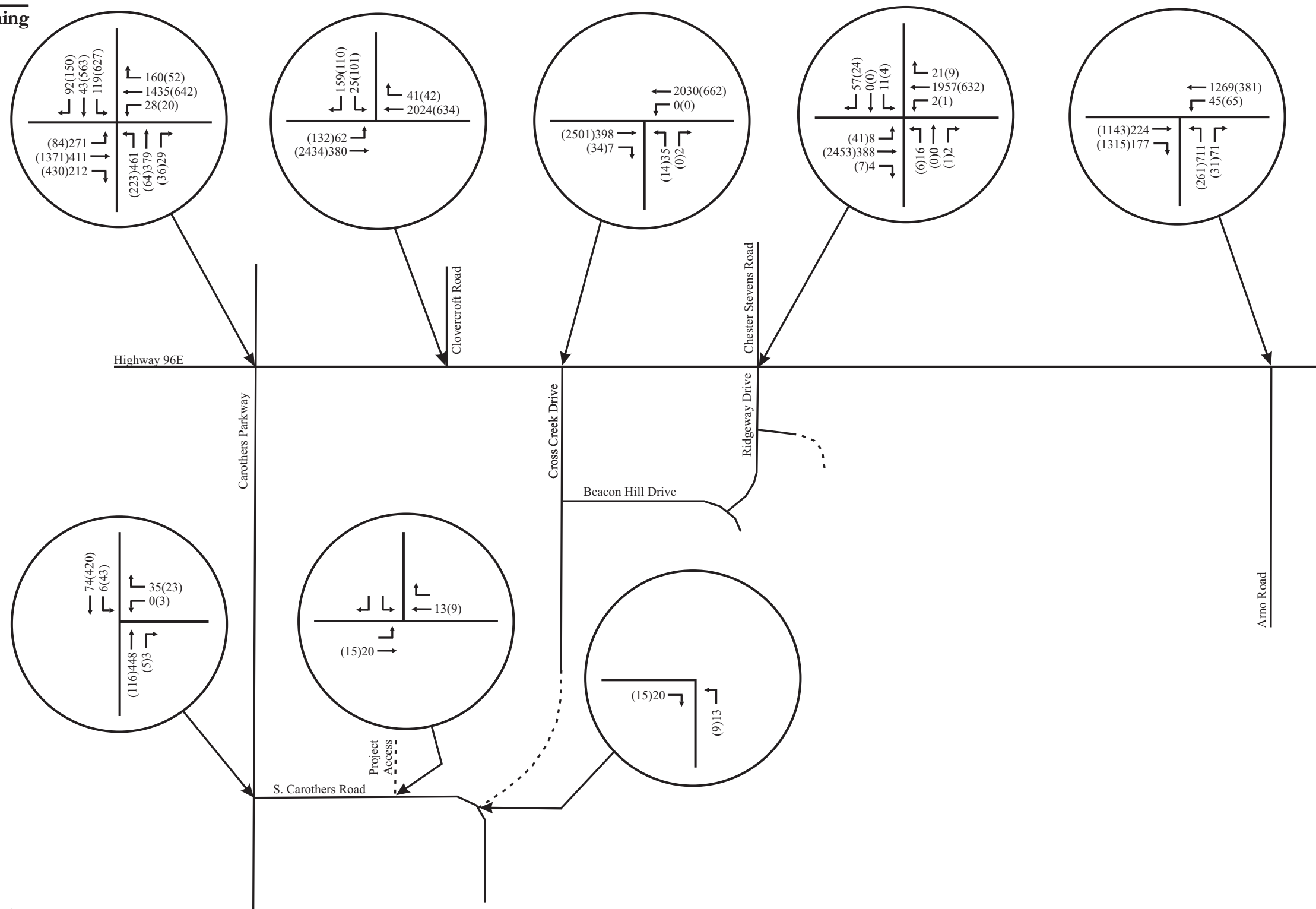
At the unsignalized intersection of Carothers Parkway and S. Carothers Road, all of the critical turning movements operate at acceptable LOS during both peak hours.



No Scale

Figure 3.
Existing Laneage within the Study Area

F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning



No Scale

XX - AM Peak Hour Volumes
 (XX) - PM Peak Hour Volumes

Figure 4.
Existing Peak Hour Traffic Volumes

TABLE 1. DESCRIPTIONS OF LOS FOR SIGNALIZED INTERSECTIONS

Level of Service	Description	Average Control Delay per Vehicle (sec)
A	Operations with very low control delay. Progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	≤ 10
B	Operations with stable flows. This generally occurs with good progression, short cycle lengths, or both. More vehicles stop than for LOS A, causing higher levels of average delay.	> 10 and ≤ 20
C	Operations with stable flow. Occurs with fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	> 20 and ≤ 35
D	Approaching unstable flow. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop.	> 35 and ≤ 55
E	Unstable flow. In many cases, this is considered to be the limit for acceptable delay. These high delays generally indicate poor progression, long cycle lengths, and high v/c ratios.	> 55 and ≤ 80
F	Unacceptable delay. This condition often occurs with oversaturation or with high v/c ratios. Poor progression and long cycle lengths may also cause such delay levels.	> 80

Source: Highway Capacity Manual 2010 (HCM2010)

TABLE 2. DESCRIPTIONS OF LOS FOR UNSIGNALIZED INTERSECTIONS

Level of Service	Description	Average Control Delay (sec/veh)
A	Minimal delay	≤ 10
B	Brief delay	> 10 and ≤ 15
C	Average delay	> 15 and ≤ 25
D	Significant delay	> 25 and ≤ 35
E	Long delay	> 35 and ≤ 50
F	Extreme delay	> 50

Source: Highway Capacity Manual 2010 (HCM 2010)

TABLE 3. EXISTING PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
		LEVEL OF SERVICE	95 TH %-ILE QUEUE	LEVEL OF SERVICE	95 TH %-ILE QUEUE
Highway 96E and Carothers Parkway (signalized)	Eastbound Left Turns	LOS F	111 feet	LOS A	18 feet
	Eastbound Thrus	LOS A	64 feet	LOS C	346 feet
	Eastbound Right Turns	LOS A	28 feet	LOS B	142 feet
	Westbound Left Turns	LOS A	7 feet	LOS A	9 feet
	Westbound Thru/Right Turns	LOS B	267 feet	LOS A	49 feet
	Northbound Left Turns	LOS B	93 feet	LOS B	54 feet
	Northbound Thrus	LOS B	71 feet	LOS B	16 feet
	Northbound Right Turns	LOS A	13 feet	LOS A	15 feet
	Southbound Left Turns	LOS B	27 feet	LOS B	136 feet
	Southbound Thrus	LOS B	12 feet	LOS B	106 feet
	Southbound Right Turns	LOS A	37 feet	LOS A	33 feet
	Overall Intersection	LOS B		LOS B	
Highway 96E and Clovercroft Road (signalized)	Eastbound Left Turns	LOS F	131 feet	LOS A	37 feet
	Eastbound Thrus	LOS A	70 feet	LOS B	1065 feet
	Westbound Thrus/Right Turns	LOS B	650 feet	LOS A	44 feet
	Southbound Left Turn Lane	LOS D	38 feet	LOS D	117 feet
	Southbound Right Turn Lane	LOS D	160 feet	LOS B	49 feet
	Overall Intersection	LOS B		LOS B	

Highway 96E and Cross Creek Drive (unsignalized)	Westbound Left Turn Lane	LOS A	1 veh	LOS D	1 veh
	Northbound Left / Right Turn Lane	LOS D	1 veh	LOS F	2 veh
Highway 96E and Ridgeway Drive / Chester Stevens Drive (unsignalized)	Eastbound Left Turn Lane	LOS C	1 veh	LOS A	1 veh
	Westbound Left Turn Lane	LOS A	1 veh	LOS C	1 veh
	Northbound Lane	LOS D	1 veh	LOS F	1 veh
	Southbound Lane	LOS E	2 veh	LOS B	1 veh
Highway 96E and Arno Road (signalized)	Eastbound Thrus / Right Turns	LOS B	82 feet	LOS C	1020 feet
	Westbound Left Turns	LOS B	43 feet	LOS F	90 veh
	Westbound Thrus	LOS D	575 feet	LOS A	53 veh
	Northbound Left Turns	LOS D	684 feet	LOS E	312 veh
	Northbound Right Turns	LOS A	24 feet	LOS B	26 veh
	Overall Intersection	LOS C		LOS C	
Carothers Parkway and S. Carothers Road (unsignalized)	Southbound Left Turns	LOS A	1 veh	LOS A	1 veh
	Westbound Left Turns	LOS B	1 veh	LOS B	1 veh
	Westbound Right Turns	LOS B	1 veh	LOS A	1 veh

3.2 TRAFFIC SIGNAL WARRANT ANALYSES

For the purposes of this study, traffic signal warrant analyses were conducted for the intersection of Carothers Parkway and S. Carothers Road. For these analyses, hourly turning movement counts were collected at this intersection in August 2016 when schools were in session. The raw traffic volumes are included in [Appendix A](#), and the hourly traffic volumes are shown in [Table 4](#).

The Federal Highway Administration has published the Manual on Uniform Traffic Control Devices (MUTCD 2010), which includes traffic signal warrants that help traffic engineering professionals to identify when a traffic signal installation is justified at a particular location. The warrants include minimum conditions that are compared to existing or projected traffic conditions, and typically, traffic signals should not be installed unless at least one of the MUTCD warrants, as described in [Appendix C](#), is met.

The Manual on Uniform Traffic Control Devices (MUTCD 2010) stipulates that the signal warrant thresholds may be reduced by 30% "...if the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph..." Since a 40 mph speed limit is currently posted on Carothers Parkway, full traffic signal warrant thresholds were considered appropriate for the intersection of Carothers Parkway and S. Carothers Road.

The hourly traffic volumes at the intersection of Carothers Parkway and S. Carothers Road were compared to the full signal warrant thresholds, and the results of these analyses are included in [Table 4](#). These results indicate that the existing traffic volumes do not satisfy any of the volume-related traffic signal warrants.

TABLE 4. TRAFFIC SIGNAL WARRANT ANALYSIS

HOUR	TOTAL VEHICLES BOTH DIRECTIONS OF CAROTHERS PARKWAY	WESTBOUND VEHICLES ON S. CAROTHERS ROAD	SATISFY FULL WARRANTS?		
			Warrant 1 Condition A	Warrant 1 Condition B	Warrant 2
6:00 - 7:00 AM	233	25	---	---	---
7:00 - 8:00 AM	588	41	---	---	---
8:00 - 9:00 AM	552	38	---	---	---
9:00 - 10:00 AM	299	20	---	---	---
10:00 - 11:00 AM	305	20	---	---	---
11:00 - 12:00 N	355	22	---	---	---
12:00 - 1:00 PM	348	30	---	---	---
1:00 - 2:00 PM	334	12	---	---	---
2:00 - 3:00 PM	335	19	---	---	---
3:00 - 4:00 PM	338	18	---	---	---
4:00 - 5:00 PM	496	31	---	---	---
5:00 - 6:00 PM	621	14	---	---	---
6:00 - 7:00 PM	430	23	---	---	---

4. PROJECTION OF BACKGROUND TRAFFIC VOLUMES

In order to account for the traffic growth which will occur within the study area because of typical growth, as well as other approved developments, background traffic volumes were established for the intersections within the study area.

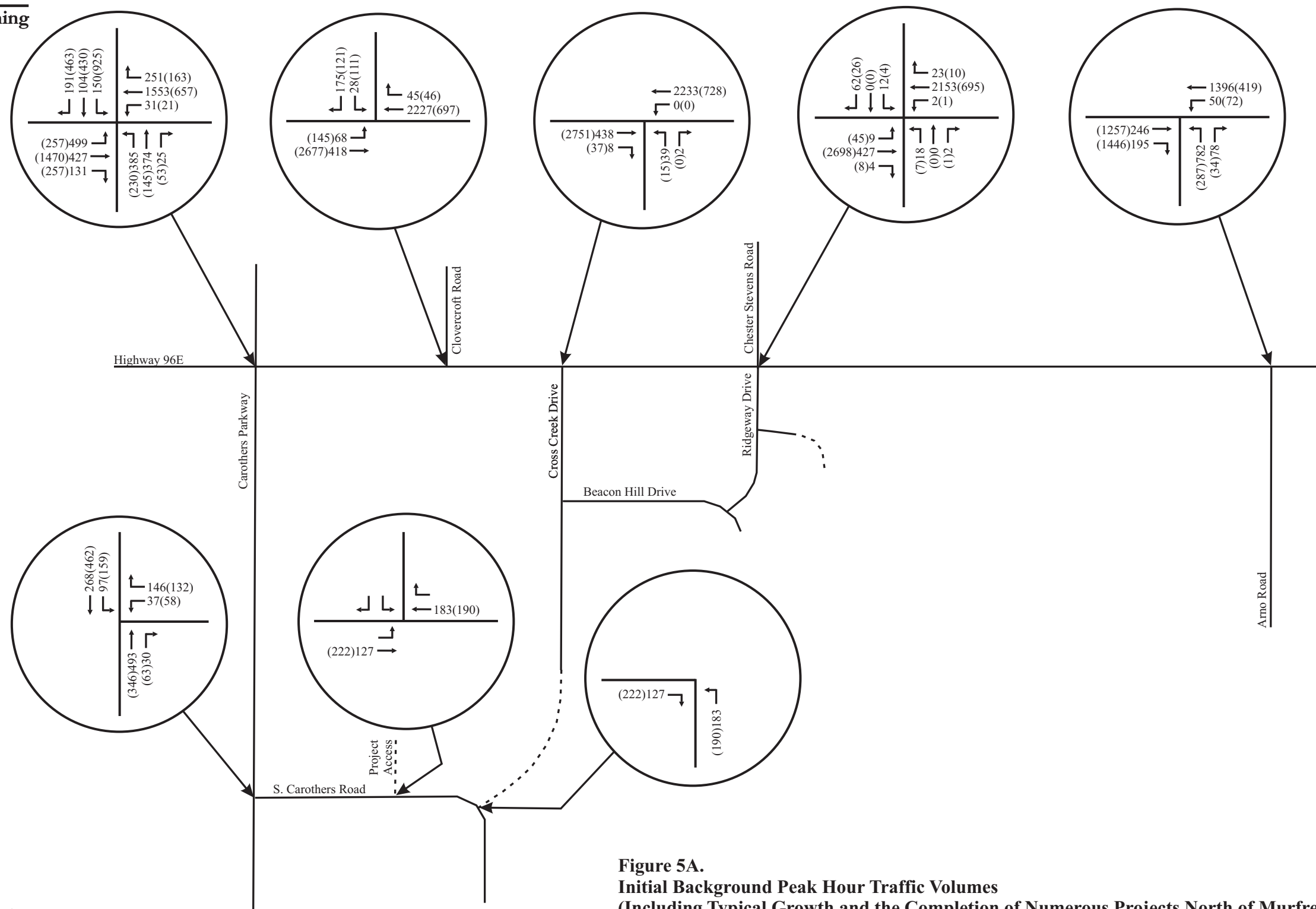
Specifically, in order to account for typical growth within the study area, consideration was given to the historical traffic volumes near the project site. The Tennessee Department of Transportation (TDOT) conducts an annual count program throughout the state. This count program includes the annual collection of average daily traffic (ADT) counts at numerous fixed locations. As shown in [Table 5](#), the daily traffic volumes within the study area have increased marginally since 2004. Based on this information, for the purposes of this study, the existing traffic volumes at the following intersections were increased by 10% to represent initial background traffic volumes, as shown in [Figure 5A](#):

1. Highway 96E and Cross Creek Drive
2. Highway 96E and Ridgeway Drive / Chester Stevens Drive
3. Carothers Parkway and S. Carothers Road

TABLE 5. HISTORICAL TRAFFIC VOLUMES IN THE STUDY AREA

Year	Station 40 Highway 96E ADT	Annual Growth	Overall Growth
2007	19,283		
2008	21,519	11.60%	
2009	19,501	-9.38%	
2010	22,312	14.41%	
2011	23,459	5.14%	
2012	23,343	-0.49%	
2013	23,968	2.68%	4.05%
Year	Station 41 Clovercroft Rd ADT	Annual Growth	Overall Growth
2007	2,570		
2008	2,862	11.36%	
2009	2,554	-10.76%	
2010	2,891	13.19%	
2011	3,092	6.95%	
2012	3,155	2.04%	
2013	3,151	-0.13%	3.77%

F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning



No Scale

XX - AM Peak Hour Volumes
 (XX) - PM Peak Hour Volumes

Figure 5A.
Initial Background Peak Hour Traffic Volumes
(Including Typical Growth and the Completion of Numerous Projects North of Murfreesboro Road,
as well as Nichols Bend/Lockwood Glen and Simmon's Ridge, south of Murfreesboro Road)

Also, it is important to note that background traffic volumes for the intersection of Highway 96E and Carothers Parkway were identified from the Traffic Impact Study that was prepared for the Carothers Crossing project in November 2015 by Fischbach Transportation Group (FTG, LLC). Similarly, background traffic volumes for the intersection of Carothers Parkway and S. Carothers Road were identified from the Traffic Impact Study that was prepared for the Simmons Ridge project in July 2012 by Fischbach Transportation Group (FTG, LLC). These traffic volumes are shown in [Figure 5A](#).

In addition, it is important to note that the following other projects are under construction within the study area:

1. Echelon Residential Development, located on the east side of Carothers Parkway, south of S. Carothers Road
2. Water's Edge Residential Development, located on the west side of Carothers Parkway, south of S. Carothers Road
3. October Woods Residential Development, located on the south side of Highway 96E and the west side of Ridgeway Drive
4. Silver Grace Assisted Living Facility, which is located on the north side of Highway 96E, east of Chester Stevens Road.

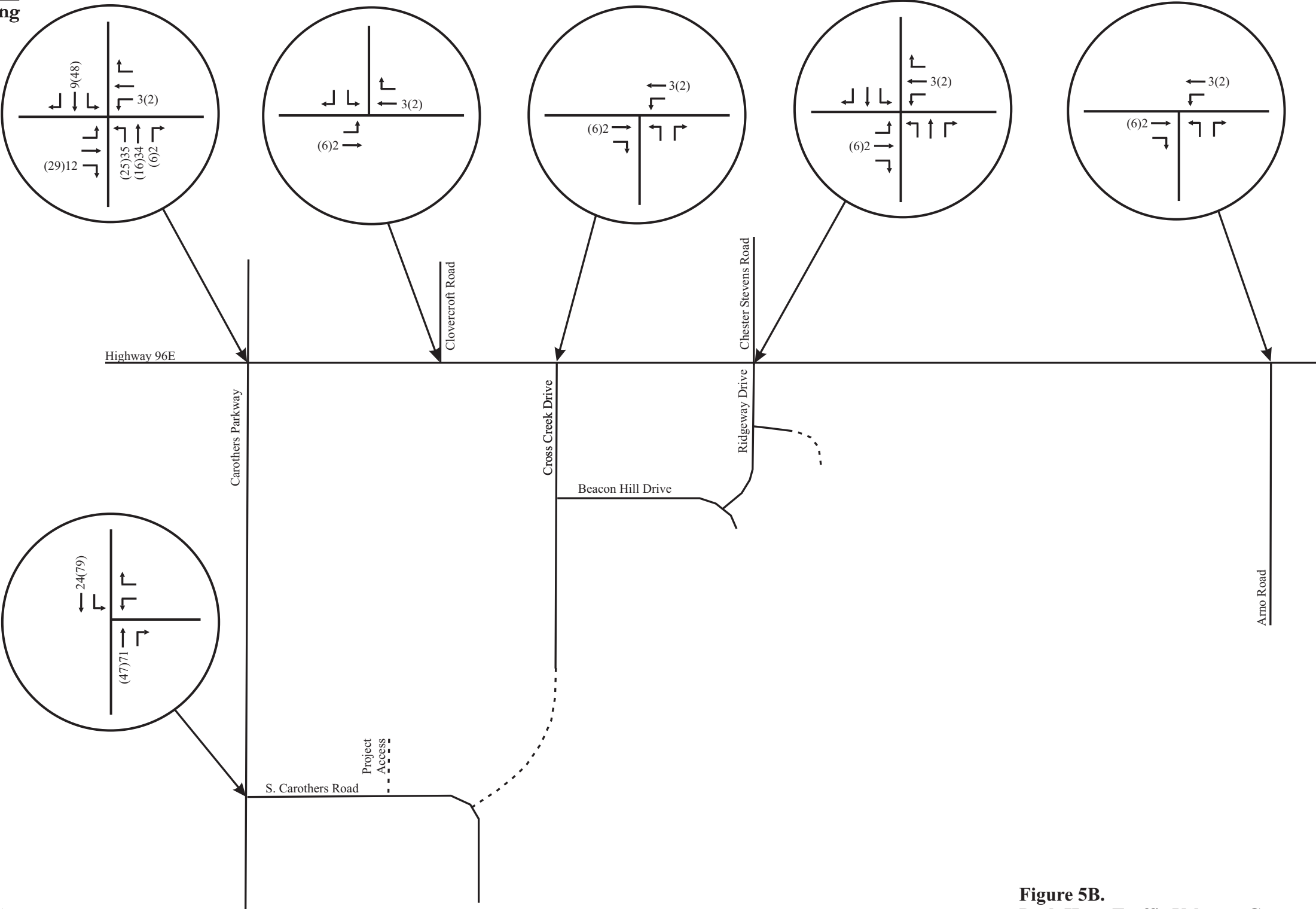
[Figures 5B, 5C, 5D, and 5E](#) include the peak hour traffic volumes that are expected to be generated by these other residential projects. Information about these other projects is included in [Appendix D](#).

The peak hour traffic volumes shown in [Figures 5B, 5C, 5D, and 5E](#) were added to the traffic volumes shown in [Figure 5A](#) in order to establish the final background traffic volumes shown in [Figure 5F](#). Using the final background peak hour traffic volumes, capacity analyses were conducted for the intersections within the study area. For these analyses, it was assumed that all existing laneage and traffic control will be maintained and no improvements will be provided.

The results of the capacity analyses for the background peak hour traffic volumes are shown in [Table 6](#), and [Appendix B](#) includes the capacity analyses worksheets. These analyses indicate that decreased levels of service are expected at the signalized intersections within the study area. However, the dominant traffic patterns are expected to remain consistent with the existing conditions within the study area.

At the unsignalized intersection of Carothers Parkway and S. Carothers Road, the westbound left and right turns are expected to operate at poor LOS and with moderate vehicle queues during both peak hours.

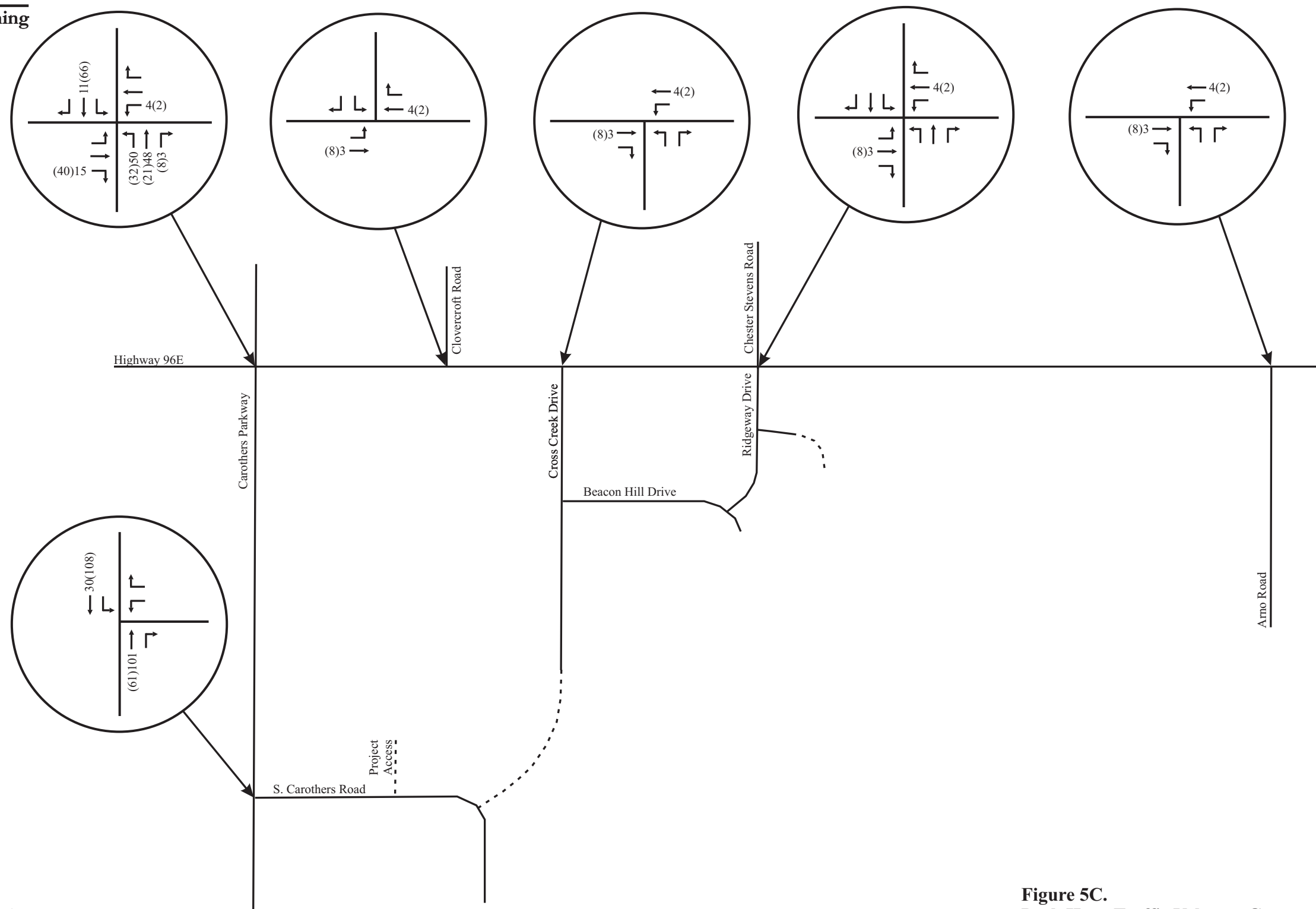
F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning



No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

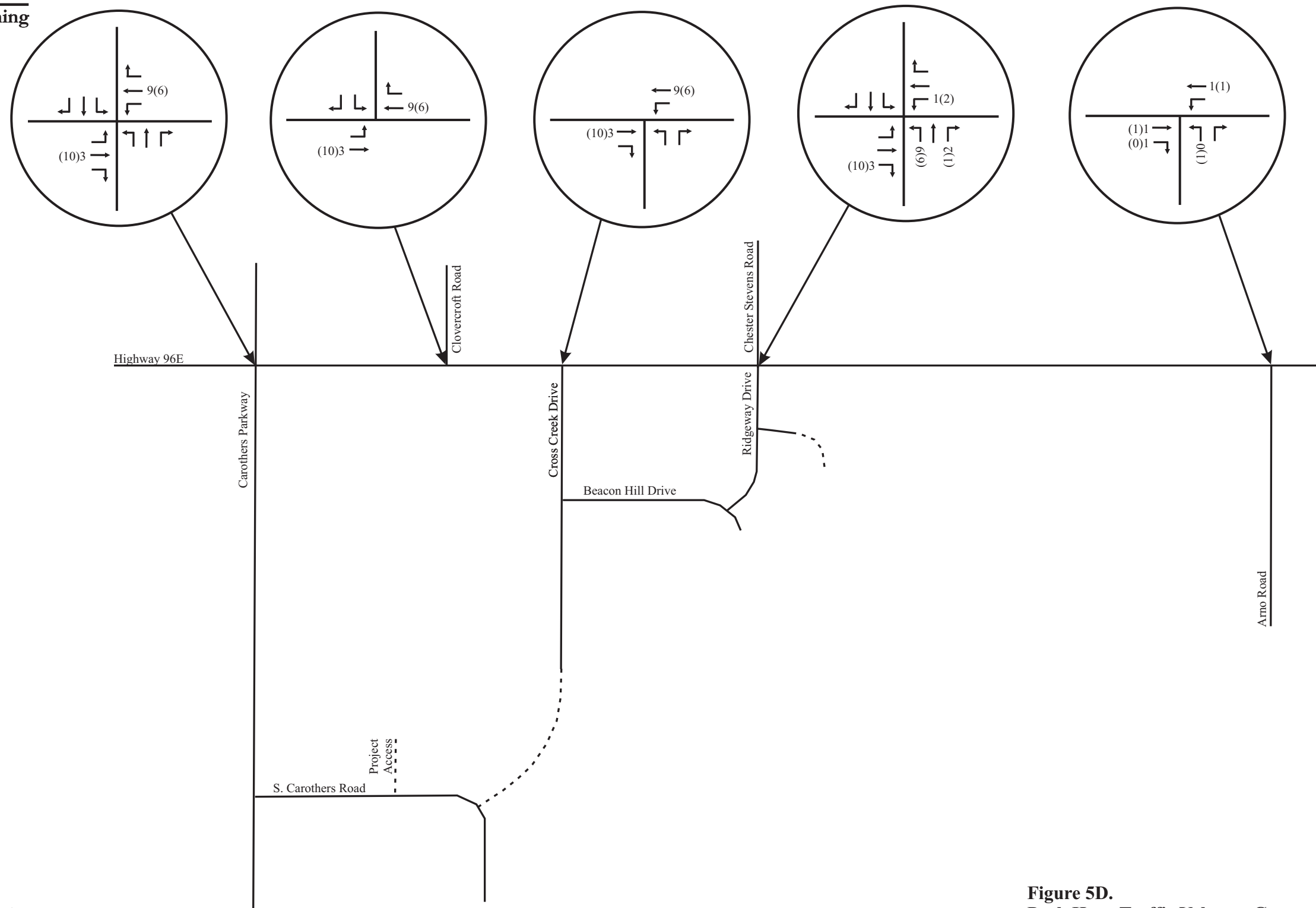
Figure 5B.
Peak Hour Traffic Volumes Generated by the
Echelon Residential Development



No Scale

XX - AM Peak Hour Volumes
 (XX) - PM Peak Hour Volumes

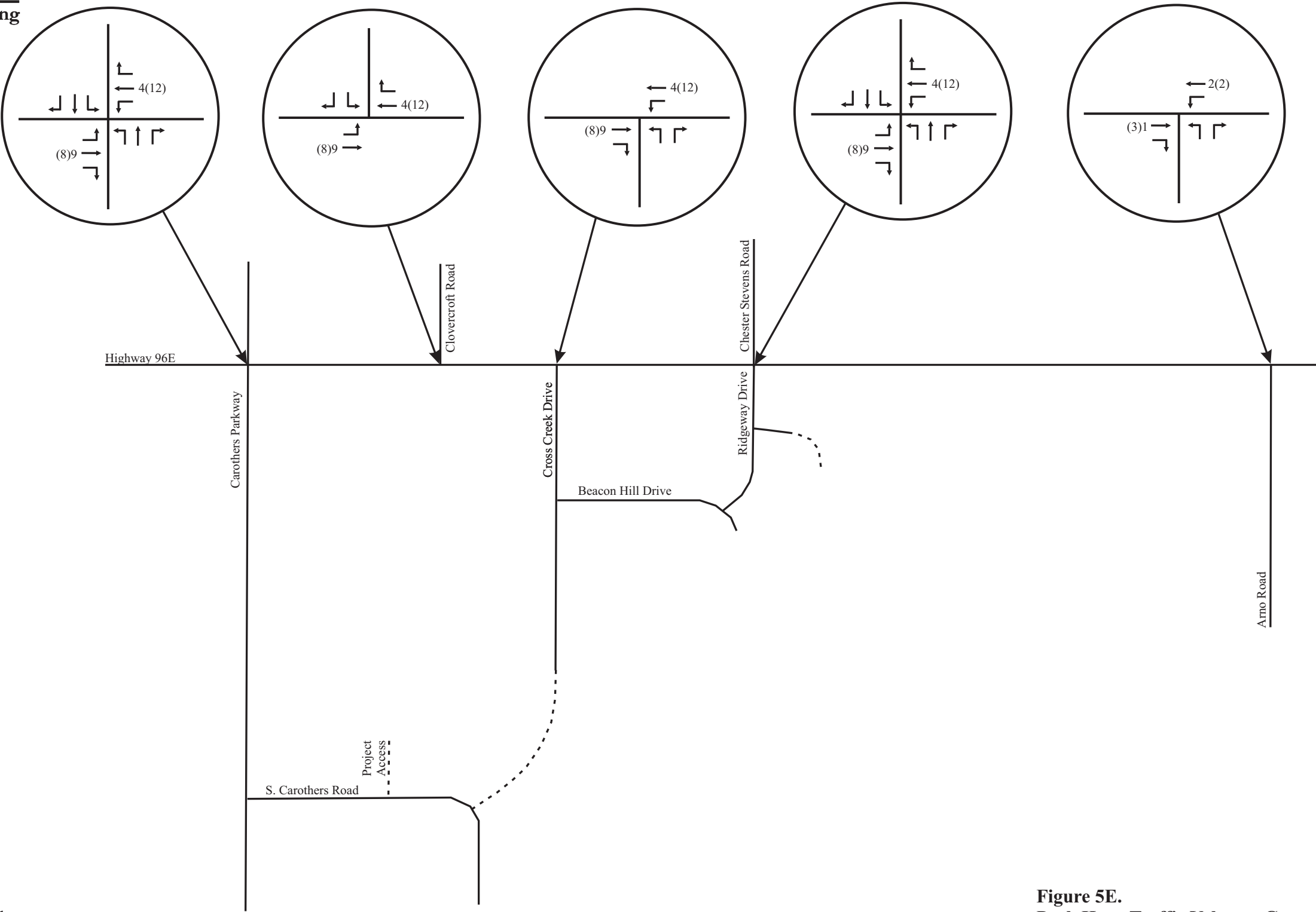
Figure 5C.
Peak Hour Traffic Volumes Generated by the
Water's Edge Residential Development



No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 5D.
Peak Hour Traffic Volumes Generated by the
October Woods Residential Development

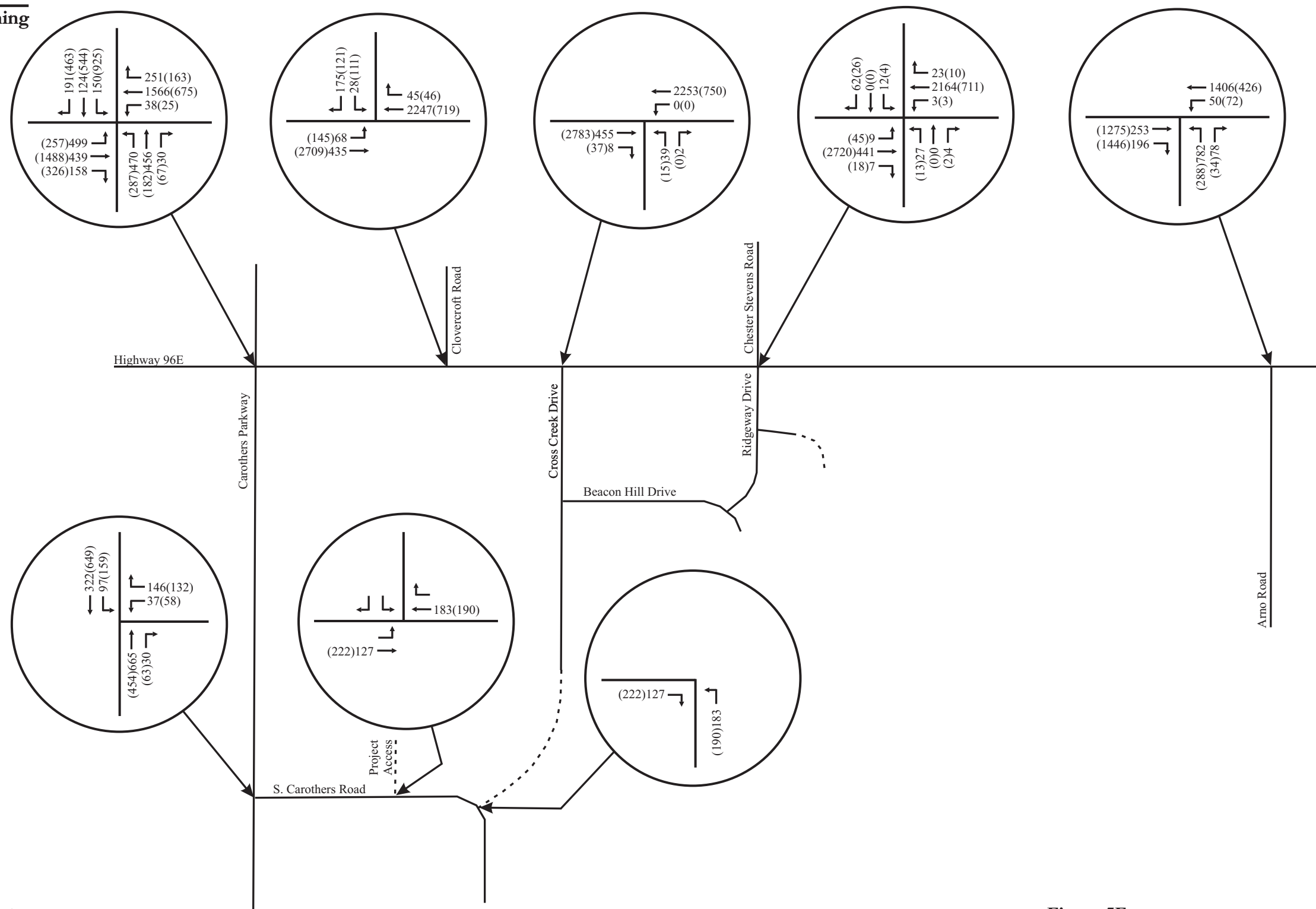


No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 5E.
Peak Hour Traffic Volumes Generated by the
Silver Grace Assisted Living Development

F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning



No Scale

XX - AM Peak Hour Volumes
 (XX) - PM Peak Hour Volumes

Figure 5F.
Final Background Peak Hour Traffic Volumes

TABLE 6. BACKGROUND PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
		LEVEL OF SERVICE	95 TH %-ILE QUEUE	LEVEL OF SERVICE	95 TH %-ILE QUEUE
Highway 96E and Carothers Parkway (signalized)	Eastbound Left Turns	LOS F	187 feet	LOS C	129 feet
	Eastbound Thrus	LOS B	68 feet	LOS D	745 feet
	Eastbound Right Turns	LOS A	26 feet	LOS A	137 feet
	Westbound Left Turns	LOS A	9 feet	LOS C	30 feet
	Westbound Thru/Right Turns	LOS C	229 feet	LOS B	80 feet
	Northbound Left Turns	LOS B	83 feet	LOS C	126 feet
	Northbound Thrus	LOS B	72 feet	LOS B	65 feet
	Northbound Right Turns	LOS A	11 feet	LOS B	51 feet
	Southbound Left Turns	LOS B	29 feet	LOS E	506 feet
	Southbound Thrus	LOS A	22 feet	LOS C	186 feet
	Southbound Right Turns	LOS A	64 feet	LOS C	313 feet
	Overall Intersection	LOS D		LOS C	
Highway 96E and Clovercroft Road (signalized)	Eastbound Left Turns	LOS F	132 feet	LOS A	27 feet
	Eastbound Thrus	LOS A	34 feet	LOS C	1303 feet
	Westbound Thrus/Right Turns	LOS B	811 feet	LOS A	50 feet
	Southbound Left Turn Lane	LOS C	37 feet	LOS E	137 feet
	Southbound Right Turn Lane	LOS D	161 feet	LOS B	53 feet
	Overall Intersection	LOS B		LOS C	

Highway 96E and Cross Creek Drive (unsignalized)	Westbound Left Turn Lane	LOS A	1 veh	LOS D	1 veh
	Northbound Left / Right Turn Lane	LOS D	1 veh	LOS F	2 veh
Highway 96E and Ridgeway Drive / Chester Stevens Drive (unsignalized)	Eastbound Left Turn Lane	LOS C	1 veh	LOS A	1 veh
	Westbound Left Turn Lane	LOS A	1 veh	LOS D	1 veh
	Northbound Lane	LOS E	1 veh	LOS F	2 veh
	Southbound Lane	LOS F	3 veh	LOS C	1 veh
Highway 96E and Arno Road (signalized)	Eastbound Thrus / Right Turns	LOS B	101 feet	LOS E	1137 veh
	Westbound Left Turns	LOS B	44 feet	LOS F	118 veh
	Westbound Thrus	LOS E	629 feet	LOS A	56 veh
	Northbound Left Turns	LOS E	732 feet	LOS F	416 veh
	Northbound Right Turns	LOS A	23 feet	LOS B	29 veh
	Overall Intersection	LOS D		LOS E	
Carothers Parkway and S. Carothers Road (unsignalized)	Southbound Left Turns	LOS A	1 veh	LOS A	1 veh
	Westbound Left Turns	LOS E	1 veh	LOS F	3 veh
	Westbound Right Turns	LOS C	2 veh	LOS B	1 veh

5. IMPACTS OF PROPOSED DEVELOPMENT

5.1 TRIP GENERATION

Trip generation calculations were conducted in order to identify how much traffic will be generated by the proposed project. Trip generation data for daily and peak hour trips were identified from Trip Generation, Ninth Edition, which was published by the Institute of Transportation Engineers (ITE) in 2012. [Table 7](#) presents the daily and peak hour trip generations for the proposed homes, and these calculations are included in [Appendix E](#).

TABLE 7. TRIP GENERATION

LAND USE	SIZE	DAILY TRAFFIC	GENERATED TRAFFIC			
			AM PEAK HOUR		PM PEAK HOUR	
			ENTER	EXIT	ENTER	EXIT
Single-Family (LUC 210) Northern Portion	70 homes	756	15	44	48	28
Single-Family (LUC 210) Southern Portion	306 homes	2,938	56	168	181	106
TOTAL	376 homes	3,694	71	212	229	134

5.2 TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

For the purposes of this study, it was estimated that the trips generated by the proposed project will access the project site according to the directional distributions shown in [Figures 6A and 6B](#). The development of these distributions was based on the following factors:

- existing land use characteristics,
- the directions of approach of the existing traffic,
- the access proposed for the project, and
- the locations of population centers in the area.

The peak hour trip generations and directional distributions were used to add the site-generated trips to the roadway system. [Figures 7A and 7B](#) include the peak hour traffic volumes that are expected to be generated by the proposed project.

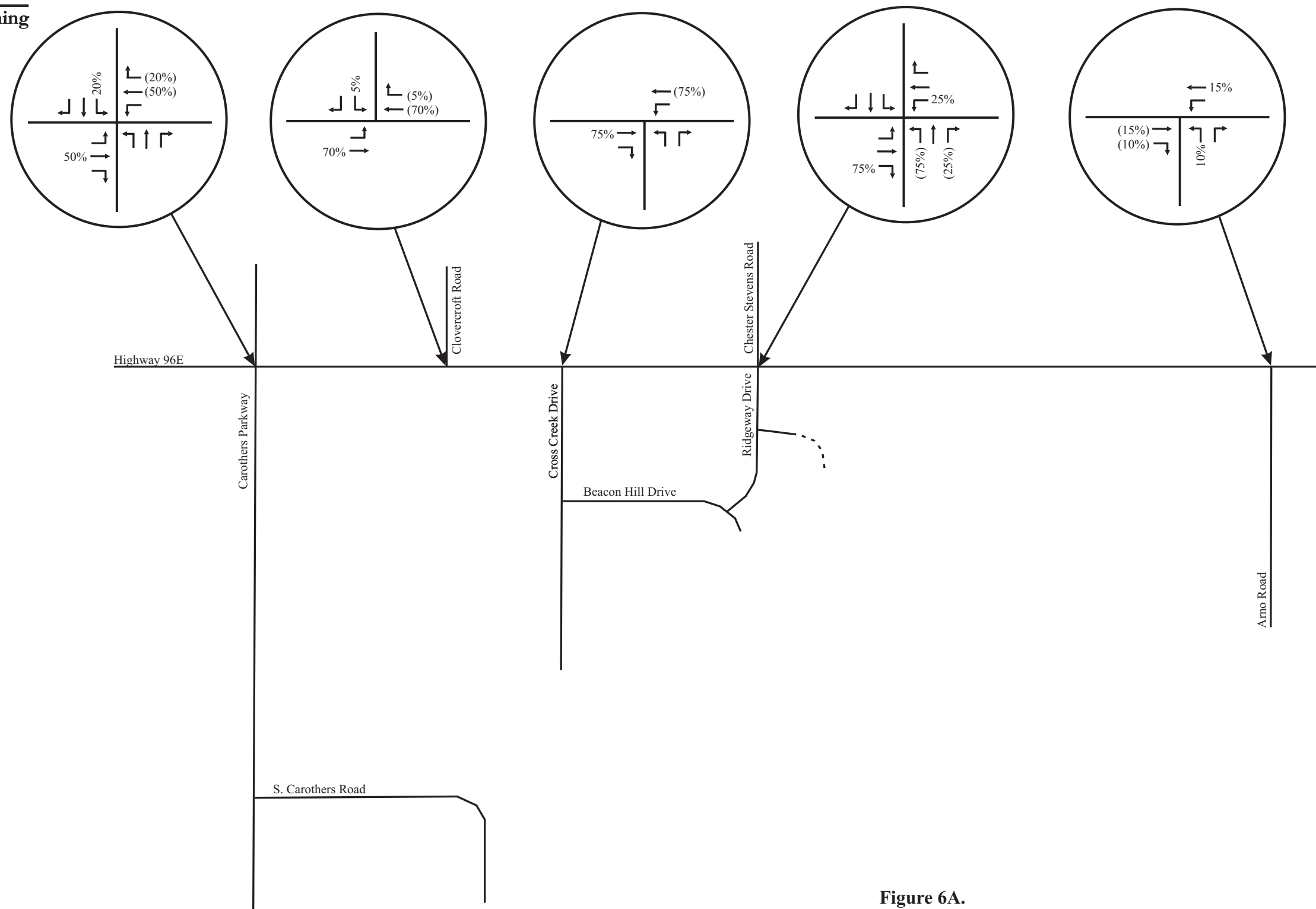
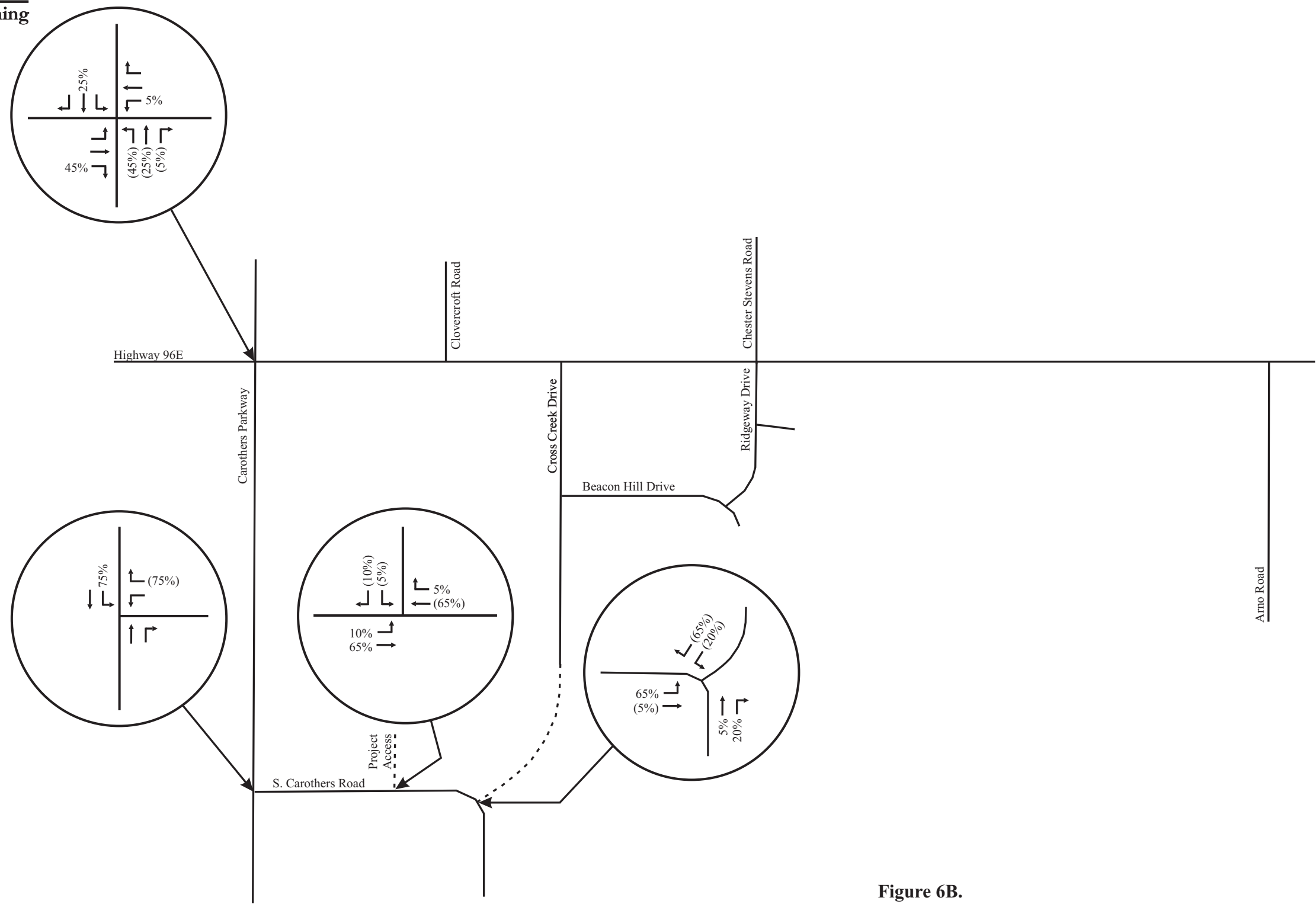


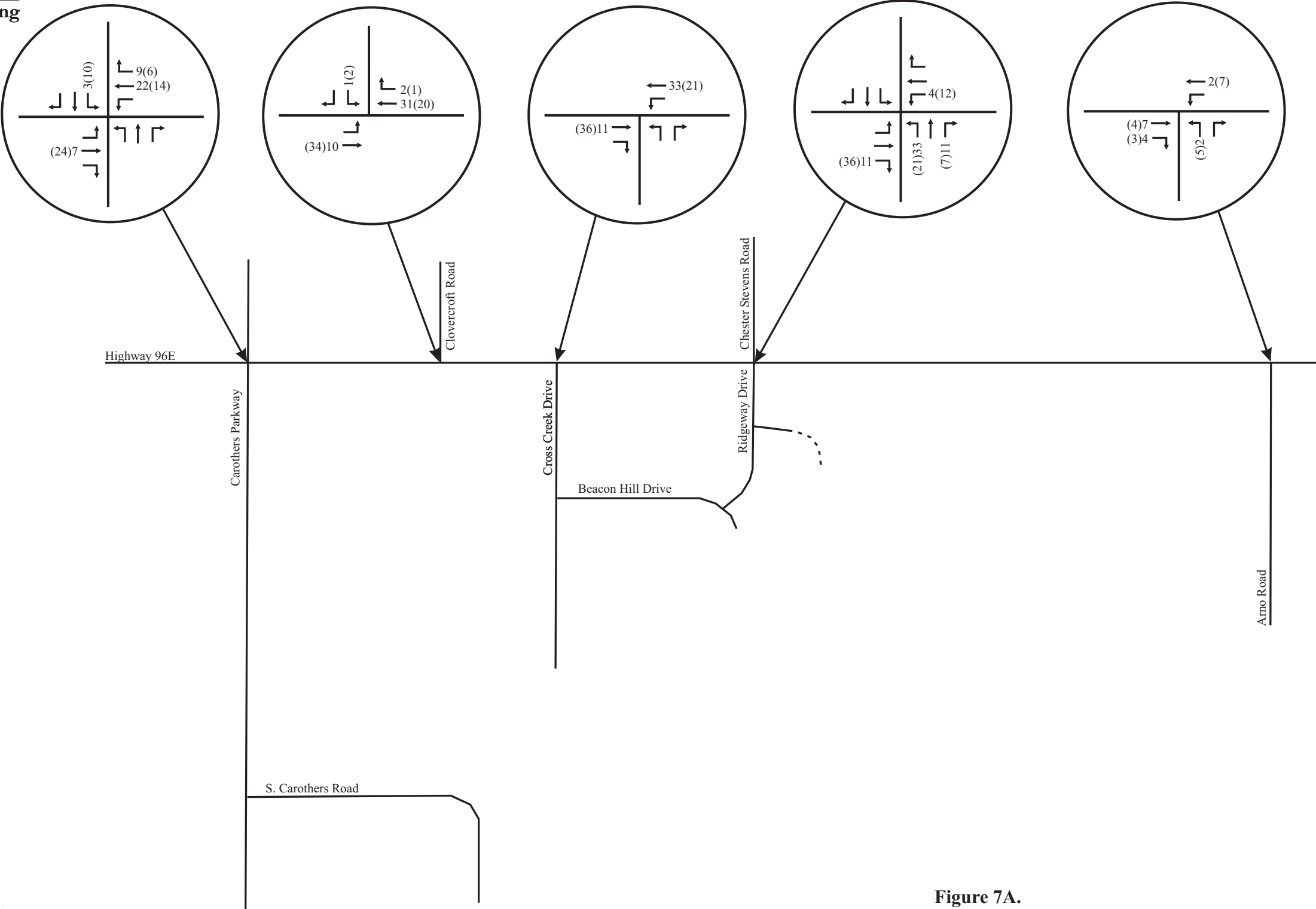
Figure 6A.
Directional Distribution of Peak Hour Traffic Volumes Generated
by the NORTHERN Portion of the Proposed Residential Project



No Scale

XX - Entering Volumes
(XX) - Exiting Volumes

Figure 6B.
Directional Distribution of Peak Hour Traffic Volumes Generated
by the SOUTHERN Portion of the Proposed Residential Project



No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 7A.
Peak Hour Traffic Volumes Generated by the
NORTHERN Portion of the Proposed Residential Project



No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

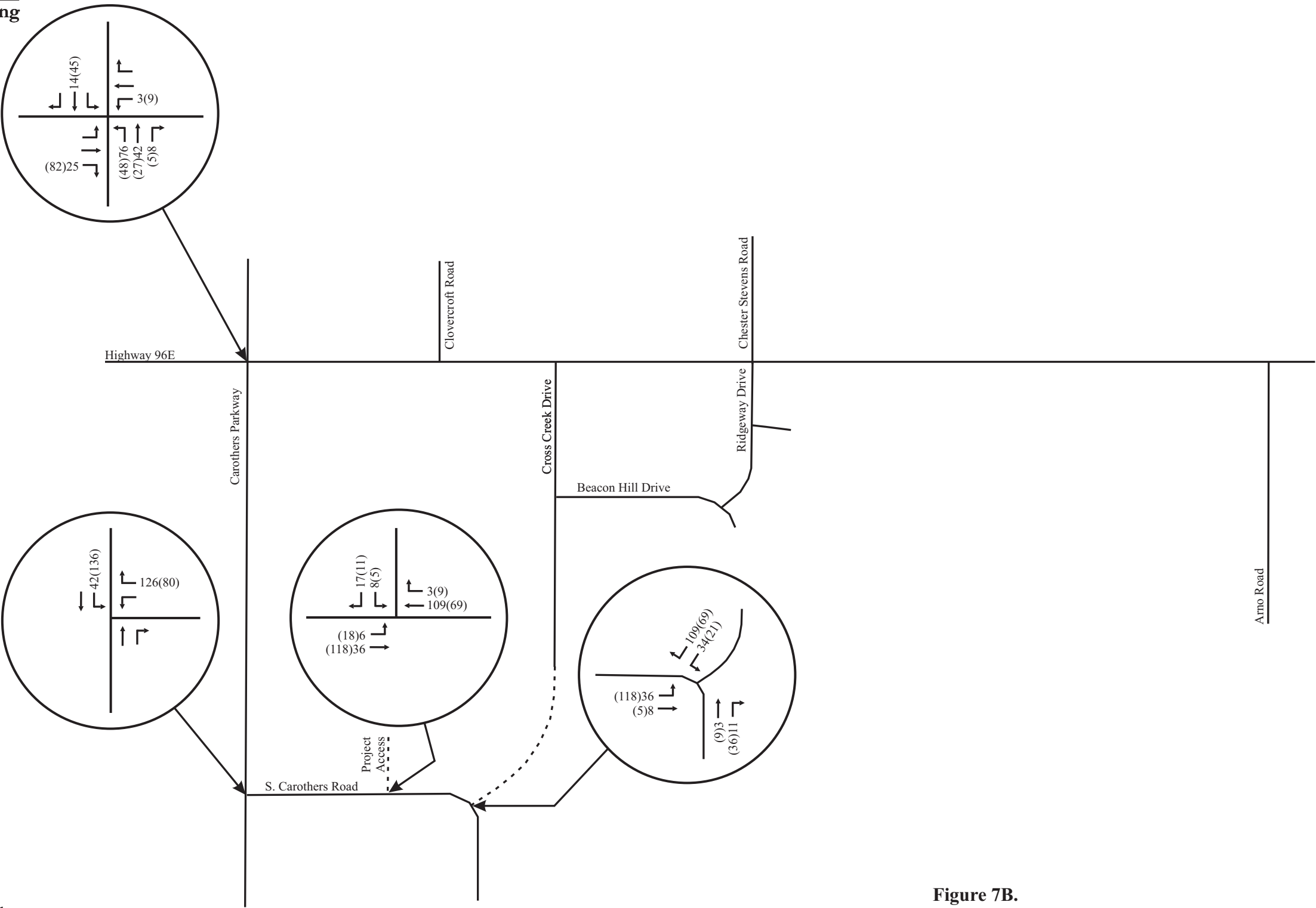


Figure 7B.
Peak Hour Traffic Volumes Generated by the
SOUTHERN Portion of the Proposed Residential Project

5.3 CAPACITY ANALYSES

In order to identify the projected peak hour traffic volumes at the completion of the proposed project, the trips generated by the project were added to the background peak hour traffic volumes. The resulting peak hour volumes are shown in [Figure 8](#).

Using the total projected peak hour traffic volumes, capacity analyses were conducted in order to determine the impact of the project on the roadway system. Specifically, these capacity analyses were used to evaluate the need for roadway and traffic control improvements within the study area. For these analyses, the following assumptions were made:

- All existing laneage and traffic control will be maintained and no improvements will be provided.
- Stanford Drive will be extended as a two-lane local roadway.
- Each of the project accesses on S. Carothers Road will be constructed to include one entering lane and one exiting lane.

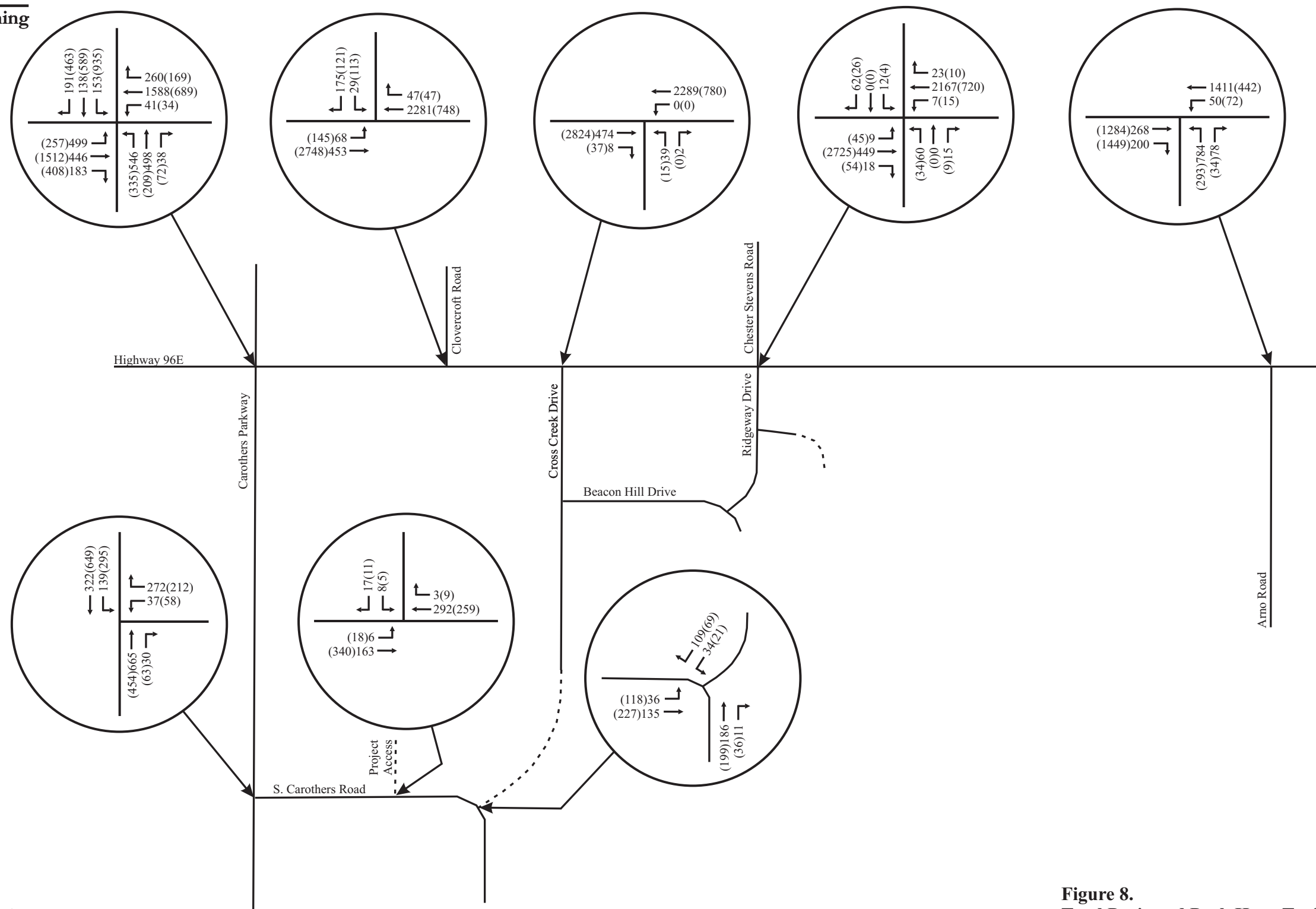
The results of the capacity analyses for the total projected peak hour traffic volumes are shown in [Table 8](#), and [Appendix B](#) includes the capacity analyses worksheets. These analyses indicate that the total projected conditions with full build-out of the project are consistent with the background conditions within the study area. Also, these analyses indicate that all of the critical turning movements at the intersections of S. Carothers Road and the project accesses will operate acceptably during both peak hours.

Further analyses were conducted to determine the need for the following dedicated turn lanes within the study area:

- A dedicated left turn lane on S. Carothers Road at the eastern (main) project access.
- A dedicated right turn lane on S. Carothers Road at the eastern (main) project access.
- A dedicated northbound right turn lane on Carothers Parkway at S. Carothers Road.
- A dedicated eastbound right turn lane on Highway 96E at Ridgeway Drive.

These analyses were based on the method outlined in *NCHRP Report 457: Engineering Study Guide for Evaluating Intersection Improvements*. The relevant charts are included in [Appendix F](#). The results of these analyses indicate that a dedicated right turn lane is not warranted for construction on S. Carothers Road at the eastern (main) project access. However, the other three dedicated turn lanes are warranted.

F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning



No Scale

XX - AM Peak Hour Volumes
 (XX) - PM Peak Hour Volumes

Figure 8.
Total Projected Peak Hour Traffic Volumes
at the Completion of the Proposed Project

TABLE 8. PROJECTED PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
		LEVEL OF SERVICE	95 TH %-ILE QUEUE	LEVEL OF SERVICE	95 TH %-ILE QUEUE
Highway 96E and Carothers Parkway (signalized)	Eastbound Left Turns	LOS F	187 feet	LOS D	168 feet
	Eastbound Thrus	LOS B	70 feet	LOS E	980 feet
	Eastbound Right Turns	LOS A	27 feet	LOS B	278 feet
	Westbound Left Turns	LOS A	10 feet	LOS F	108 feet
	Westbound Thru/Right Turns	LOS C	234 feet	LOS B	156 feet
	Northbound Left Turns	LOS B	100 feet	LOS D	209 feet
	Northbound Thrus	LOS B	78 feet	LOS C	94 feet
	Northbound Right Turns	LOS A	12 feet	LOS C	70 feet
	Southbound Left Turns	LOS B	30 feet	LOS E	681 feet
	Southbound Thrus	LOS A	24 feet	LOS C	267 feet
	Southbound Right Turns	LOS A	64 feet	LOS C	397 feet
	Overall Intersection	LOS D		LOS D	
Highway 96E and Clovercroft Road (signalized)	Eastbound Left Turns	LOS F	131 feet	LOS A	28 feet
	Eastbound Thrus	LOS A	35 feet	LOS C	1681 feet
	Westbound Thrus/Right Turns	LOS B	823 feet	LOS A	55 feet
	Southbound Left Turn Lane	LOS C	39 feet	LOS F	187 feet
	Southbound Right Turn Lane	LOS D	163 feet	LOS B	65 feet
	Overall Intersection	LOS B		LOS B	

Highway 96E and Cross Creek Drive (unsignalized)	Westbound Left Turn Lane	LOS A	0 veh	LOS D	0 veh
	Northbound Left / Right Turn Lane	LOS E	1 veh	LOS F	2 veh
Highway 96E and Ridgeway Drive / Chester Stevens Drive (unsignalized)	Eastbound Left Turn Lane	LOS C	1 veh	LOS A	1 veh
	Westbound Left Turn Lane	LOS A	1 veh	LOS D	1 veh
	Northbound Lane	LOS F	3 veh	LOS F	6 veh
	Southbound Lane	LOS F	3 veh	LOS C	1 veh
Highway 96E and Arno Road (signalized)	Eastbound Thrus / Right Turns	LOS B	102 feet	LOS E	1671 veh
	Westbound Left Turns	LOS B	44 feet	LOS F	173 veh
	Westbound Thrus	LOS E	631 feet	LOS A	74 veh
	Northbound Left Turns	LOS E	735 feet	LOS F	539 veh
	Northbound Right Turns	LOS A	24 feet	LOS B	34 veh
	Overall Intersection	LOS D		LOS E	
Carothers Parkway and S. Carothers Road (unsignalized)	Southbound Left Turns	LOS B	1 veh	LOS B	1 veh
	Westbound Left Turns	LOS F	1 veh	LOS F	6 veh
	Westbound Right Turns	LOS E	7 veh	LOS C	2 veh
S. Carothers Road and Western Project Access (unsignalized)	Eastbound Left Turns/Thrus	LOS A	1 veh	LOS A	1 veh
	Southbound Left and Right Turns	LOS B	1 veh	LOS B	1 veh
S. Carothers Road and Eastern Project Access (unsignalized)	Eastbound/Southbound Left Turns/Thrus	LOS A	1 veh	LOS A	1 veh
	Southbound/Westbound Left and Right Turns	LOS B	1 veh	LOS B	1 veh
S. Carothers Road and Eastern Project Access (unsignalized) FUTURE	Eastbound/Southbound Left Turns/Thrus	LOS A	1 veh	LOS A	1 veh
	Southbound/Westbound	LOS B	1 veh	LOS C	1 veh

	Left and Right Turns				
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5.4 FUTURE GROWTH ON S. CAROTHERS ROAD

This eastern (main) project access could be constructed by reconstructing the existing 90-degree curve as a conventional three-legged or four-legged intersection. Alternatively, the free-flowing nature of the traffic on S. Carothers Road could be preserved, and the project access could be constructed at the apex of the horizontal curve. Based on comments provided by the City of Franklin Engineering Department, the developer of the proposed project plans to preserve the free-flowing nature of the traffic on S. Carothers Road and construct the project access at the apex of the horizontal curve.

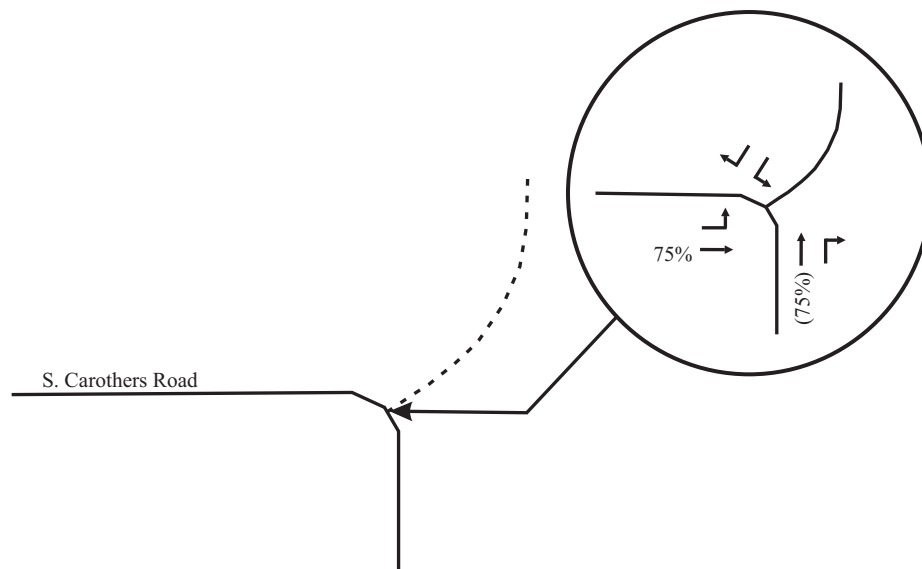
For the purposes of this study, additional analyses were conducted in order to identify how well the intersection of S. Carothers Road and the eastern (main) project access would operate if another 100 single-family homes were constructed on S. Carothers Road in the future. These 100 homes would be in addition to the approved residential projects of Simmon's Ridge, Lockwood Glen, Echelon, and Water's Edge. Trip generation data for daily and peak hour trips were identified from Trip Generation, Ninth Edition, which was published by the Institute of Transportation Engineers (ITE) in 2012. [Table 9](#) presents the daily and peak hour trip generations for 100 single-family homes that could be constructed on S. Carothers Road in the future.

TABLE 9. TRIP GENERATION (FUTURE HOMES)

LAND USE	SIZE	DAILY TRAFFIC	GENERATED TRAFFIC			
			AM PEAK HOUR		PM PEAK HOUR	
			ENTER	EXIT	ENTER	EXIT
Single-Family (LUC 210) Future Development	100 homes	1,050	20	60	66	39

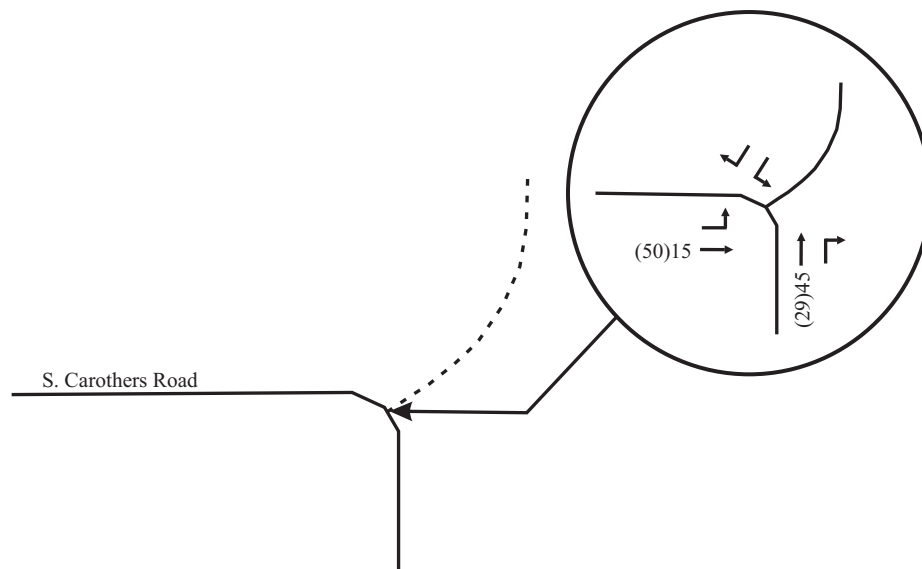
For the purposes of this study, it was estimated that the trips generated by the 100 future homes will travel through the intersection of S. Carothers Road and the eastern (main) project access for Ashcroft Valley according to the directional distribution shown in [Figure 9A](#). The peak hour trip generations and directional distribution were used to add the future trips to this intersection, and [Figure 9B](#) includes the peak hour traffic volumes that are expected to be generated by the future homes. These trips were added to the peak hour traffic volumes shown in [Figure 8](#), and the resulting peak hour volumes are shown in [Figure 9C](#).

Revised capacity analyses were conducted in order to determine the impact of 100 future homes on the intersection of S. Carothers Road and the eastern (main) project access. The results of the revised capacity analyses are shown in [Table 8](#), and [Appendix B](#) includes the capacity analyses worksheets. These analyses indicate that all of the critical turning movements at the intersection of S. Carothers Road and the eastern (main) project access will operate acceptably during both peak hours.



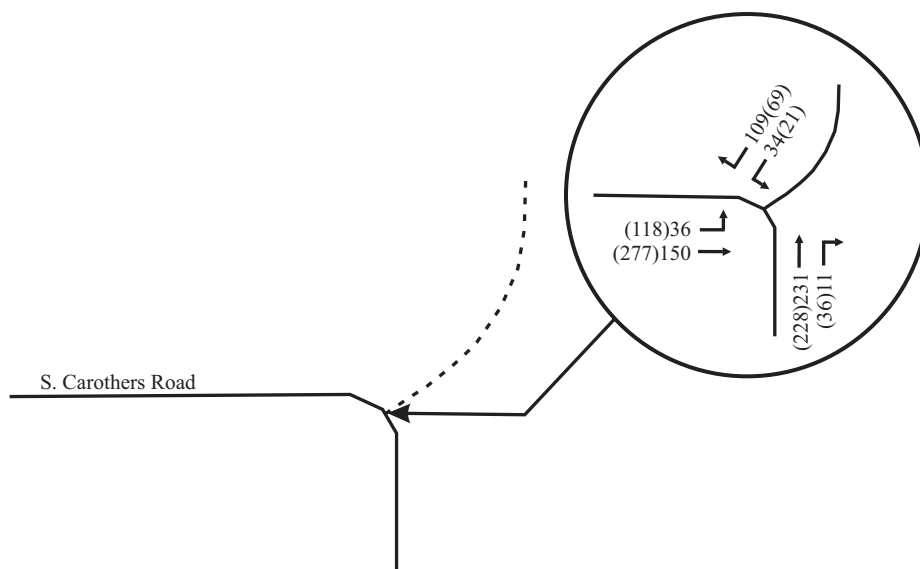
No Scale

Figure 9A.
Peak Hour Traffic Volumes Generated by 100 Future
Single-Family Homes Constructed on S. Carothers Road



No Scale

Figure 9B.
Peak Hour Traffic Volumes Generated by 100 Future
Single-Family Homes Constructed on S. Carothers Road



No Scale

Figure 9C.
Total Peak Hour Traffic Volumes with Ashcroft Valley
and 100 Future Single-Family Homes

5.5 TRAFFIC SIGNAL WARRANT ANALYSES

Based on the total projected conditions with the proposed project, as well as the residential projects that have already been approved for construction, updated traffic signal warrant analyses were conducted for the intersection of Carothers Parkway and S. Carothers Road.

Specifically, for the purposes of this study, it was estimated that the proposed Ashcroft Valley project and the approved residential projects (Simmon's Ridge, Lockwood Glen, Echelon, and Water's Edge) will include a total of 998 single-family homes, 613 townhomes, and 240 apartments, as shown below:

Ashcroft Valley (south) – 306 single-family homes

Simmons Ridge – 421 townhomes

Lockwood Glen – 347 single-family homes, 32 townhomes, and 240 apartments

Water's Edge – 211 single-family homes and 126 townhomes

Echelon – 134 single-family homes and 34 townhomes

Trip generation data for daily and peak hour trips were identified from Trip Generation, Ninth Edition, which was published by the Institute of Transportation Engineers (ITE) in 2012. [Table 10](#) presents the daily and peak hour trip generations for the homes that have been approved for construction on Carothers Parkway and S. Carothers Road.

TABLE 10. TRIP GENERATION (APPROVED AND PROPOSED HOMES)

LAND USE	SIZE	DAILY TRAFFIC	GENERATED TRAFFIC			
			AM PEAK HOUR		PM PEAK HOUR	
			ENTER	EXIT	ENTER	EXIT
Single-Family (LUC 210)	998 homes	9,500	187	561	628	340
Townhomes (LUC 230)	613 homes	3,562	46	224	214	105
Multi-Family (LUC 220)	240 homes	1,596	24	98	97	52
TOTAL	1,851 homes	14,658	257	883	939	527

Based on the daily trip generations shown in [Table 10](#), hourly traffic volumes entering and exiting the project sites were estimated as shown in [Table 11](#).

For the purposes of this study, it was assumed that 70% of the total traffic entering the project sites and 50% of the total traffic exiting the project sites will travel northbound and southbound on Carothers Parkway. Also, it was assumed that 20% of the total traffic exiting the project sites will travel westbound on S. Carothers Road. Based on these assumptions, the hourly traffic volumes on Carothers Parkway and S. Carothers Road were added to the existing traffic volumes in [Table 4](#) in order to establish the projected traffic volumes shown in [Table 12](#).

The results of these updated traffic signal warrant analyses are included in [Table 12](#). These results indicate that the projected traffic volumes will satisfy all of the volume-related signal warrants.

**TABLE 11. HOURLY TRAFFIC VOLUMES
EXPECTED TO BE GENERATED BY APPROVED AND PROPOSED HOMES**

HOUR	% OF DAILY TRAFFIC	TOTAL TRAFFIC	% ENTER	ENTERING TRAFFIC	% EXIT	EXITING TRAFFIC
12:00 - 1:00 AM	0.5%	73	50%	37	50%	37
1:00 - 2:00 AM	0.5%	73	45%	33	55%	40
2:00 - 3:00 AM	1.0%	147	40%	59	60%	88
3:00 - 4:00 AM	2.0%	293	35%	103	65%	191
4:00 - 5:00 AM	3.0%	440	30%	132	70%	308
5:00 - 6:00 AM	4.0%	586	25%	147	75%	440
6:00 - 7:00 AM	5.0%	733	25%	183	75%	550
7:00 - 8:00 AM	7.8%	1,141	23%	257	77%	883
8:00 - 9:00 AM	6.0%	880	35%	308	65%	572
9:00 - 10:00 AM	5.0%	733	40%	293	60%	440
10:00 - 11:00 AM	5.0%	733	50%	366	50%	366
11:00 - 12:00 N	5.0%	733	50%	366	50%	366
12:00 - 1:00 PM	5.0%	733	50%	366	50%	366
1:00 - 2:00 PM	5.0%	733	50%	366	50%	366
2:00 - 3:00 PM	5.0%	733	50%	366	50%	366
3:00 - 4:00 PM	5.0%	733	55%	403	45%	330
4:00 - 5:00 PM	7.0%	1,026	60%	616	40%	410
5:00 - 6:00 PM	10.0%	1,466	64%	939	36%	527
6:00 - 7:00 PM	8.0%	1,173	70%	821	30%	352
7:00 - 8:00 PM	5.0%	733	80%	586	20%	147
8:00 - 9:00 PM	3.0%	440	80%	352	20%	88
9:00 - 10:00 PM	1.0%	147	75%	110	25%	37
10:00 - 11:00 PM	0.6%	88	70%	62	30%	26
11:00 - 12:00 M	0.6%	88	65%	57	35%	31

TABLE 12. TRAFFIC SIGNAL WARRANT ANALYSIS

HOURL	TOTAL VEHICLES BOTH DIRECTIONS OF CAROTHERS PARKWAY	WESTBOUND VEHICLES ON S. CAROTHERS ROAD	SATISFY FULL WARRANTS?		
			Warrant 1 Condition A	Warrant 1 Condition B	Warrant 2
6:00 - 7:00 AM	636	135	Yes	Yes	---
7:00 - 8:00 AM	1,210	218	Yes	Yes	Yes
8:00 - 9:00 AM	1,053	152	Yes	Yes	Yes
9:00 - 10:00 AM	724	108	Yes	Yes	---
10:00 - 11:00 AM	745	93	Yes	Yes	---
11:00 - 12:00 N	795	95	Yes	Yes	---
12:00 - 1:00 PM	788	103	Yes	Yes	---
1:00 - 2:00 PM	774	85	Yes	Yes	---
2:00 - 3:00 PM	775	92	Yes	Yes	---
3:00 - 4:00 PM	785	84	Yes	Yes	---
4:00 - 5:00 PM	1,132	113	Yes	Yes	Yes
5:00 - 6:00 PM	1,542	119	Yes	Yes	Yes
6:00 - 7:00 PM	1,181	93	Yes	Yes	Yes

6. CONCLUSIONS AND RECOMMENDATIONS

The analyses presented in this study indicate that the following infrastructure improvements should be provided in order to accommodate the existing, background, and total projected traffic volumes with the completion of the proposed project:

In conjunction with the northern portion of the proposed project:

1. At the intersection with Highway 96E, the northbound approach of Ridgeway Drive should be widened to include two northbound turn lanes. Specifically, the existing northbound lane should be retained as left turn lane, and a separate through/right turn lane with at least 75 feet of storage should be constructed to the east.
2. At the intersection with Ridgeway Drive, an eastbound right turn lane should be provided on Highway 96E. This turn lane should include at least 150 feet of storage and should be designed and constructed according to AASHTO standards.

In conjunction with the southern portion of the proposed project:

3. A northbound right turn lane should be provided on Carothers Parkway at the intersection with S. Carothers Road. This turn lane should include at least 100 feet of storage and should be designed and constructed according to AASHTO standards.
4. A traffic signal will likely be warranted at the intersection of Carothers Parkway and S. Carothers Road as all of the approved residential projects on Carothers Parkway and S. Carothers Road are developed. If constructed, this traffic signal should be designed and constructed to include protected and permissive signal phases for southbound motorists, as well as right turn overlap signal phases for northbound and westbound approaches.
5. The western project access on S. Carothers Road should be constructed to include one entering lane and one exiting lane, striped as a shared left and right turn lane.
6. The eastern (main) project access on S. Carothers Road should be constructed to include one entering lane and two exiting lanes, striped as separate left and right turn lanes.

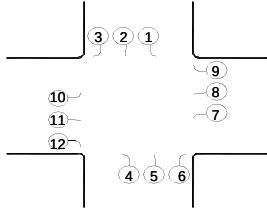
This project access could be constructed by reconstructing the existing 90-degree curve as a conventional three-legged or four-legged intersection. Alternatively, the free-flowing nature of the traffic on S. Carothers Road could be preserved, and the project access could be constructed at the apex of the horizontal curve. Based on comments provided by the City of Franklin Engineering Department, the developer of the proposed project plans to preserve the free-flowing nature of the traffic on S. Carothers Road and construct the project access at the apex of the horizontal curve. In conjunction with this configuration, a southbound/eastbound left turn lane should be provided on S. Carothers Road at the project access. This turn lane should include at least 100 feet of storage and should be designed and constructed according to AASHTO standards.

Finally, in conjunction with the preparation of final construction documents for the proposed project, sight triangles should be provided to identify the sight distances which will be available, based on the specific location of the project access and its design parameters. These sight triangles should be developed based on guidelines that are included in A Policy on Geometric Design of Highways and Streets, which is published by the American Association of State Highway and Transportation Officials (AASHTO) and commonly known as The Green Book. Specifically, The Green Book indicates that for a speed of 40 mph, the minimum stopping sight distance is 305 feet. This is the distance that motorists on S. Carothers Road will need to come to a stop if a vehicle turning from the project access creates a conflict. Also, based on The Green Book, the minimum intersection sight distance is 445 feet. This is the distance that motorists on the project access will need to safely complete a turn onto S. Carothers Road.

In conclusion, implementation of the above recommendations will facilitate safe and efficient traffic operations with the completion of the proposed project. However, it is important to note, that these recommendations may need to be updated if the development plan for the proposed project is modified as it is considered by the City of Franklin Staff, Planning Commission, and Board of Mayor and Aldermen.

**APPENDIX A
EXISTING TRAFFIC COUNTS**

INTERSECTION TRAFFIC VOLUME COUNTS



LOCATION: Highway 96 and Carothers Parkway
DATE: 29-Oct-15 Thu
RECORDER: Burns
NOTES: signalized

LOCATION	S/B Carothers Parkway			N/B Carothers Parkway			W/B Highway 96			E/B Highway 96		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
6:30-6:45	27	4	4	73	25	9	2	364	21	48	75	10
6:45-7:00	21	9	16	107	48	7	4	371	24	43	101	26
7:00-7:15	40	7	25	84	60	5	8	392	21	41	96	39
7:15-7:30	25	8	29	114	83	6	6	394	45	65	105	35
7:30-7:45	35	9	17	116	93	11	12	346	39	65	97	57
7:45-8:00	31	11	21	120	103	5	5	379	39	89	116	70
8:00-8:15	28	15	25	111	100	7	5	316	37	52	93	50
8:15-8:30	27	15	22	98	53	14	6	362	39	56	137	41
4:30-4:45	187	109	53	53	17	11	8	149	25	30	350	81
4:45-5:00	167	146	29	45	14	10	7	152	16	17	337	91
5:00-5:15	158	151	42	64	26	8	5	168	12	28	342	112
5:15-5:30	135	142	27	57	10	7	3	168	11	22	348	98
5:30-5:45	167	124	52	57	14	11	5	154	13	17	344	129
5:45-6:00	143	142	27	72	18	4	8	128	19	29	323	88
6:00-6:15	108	79	25	69	23	7	2	114	11	38	289	96
6:15-6:30	95	54	33	50	20	8	8	137	19	37	296	70
TOTAL	1,394	1,025	447	1,290	707	130	94	4,094	391	677	3,449	1,093
AM PK HR	119	43	92	461	379	29	28	1,435	160	271	411	212
PM PK HR	627	563	150	223	64	36	20	642	52	84	1,371	430

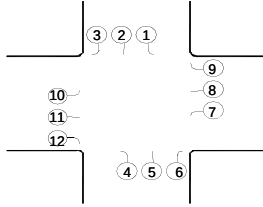
3,172 662
 3,407 777
 3,619 818
 3,640 915
 3,595 897
 989
 839
 870
 4,248 1,073
 4,262 1,031
 4,232 1,116
 3,977 1,028
 3,776 1,087
 1,001
 861
 827

7:15-8:15
 4:45-5:45

AM PK PHF	0.85	0.72	0.79	0.96	0.92	0.66	0.58	0.91	0.89	0.76	0.89	0.76
PM PK PHF	0.94	0.93	0.72	0.87	0.62	0.82	0.71	0.96	0.81	0.75	0.98	0.83

0.92
 0.95

INTERSECTION TRAFFIC VOLUME COUNTS



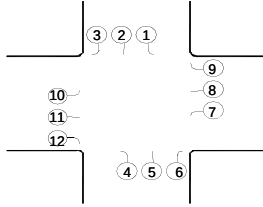
LOCATION: Murfreesboro Road and Clovercroft Road
DATE: 3-Mar-15 Tue
RECORDER: Burns
NOTES: signalized

LOCATION	S/B Clovercroft Rd			N/B			W/B Murfreesboro Rd			E/B Murfreesboro Rd		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
7:00-7:15	14		31					560	11	14	88	
7:15-7:30	8		34					524	10	16	103	
7:30-7:45	1		39					495	14	13	82	
7:45-8:00	2		55					445	6	19	107	
8:00-8:15	3		37					390	4	12	104	
8:15-8:30	3		40					344	6	14	124	
8:30-8:45	6		35					393	10	17	100	
8:45-9:00	6		42					361	12	29	118	
4:00-4:15	10		18					158	5	36	395	
4:15-4:30	14		27					179	1	44	539	
4:30-4:45	18		24					147	9	34	577	
4:45-5:00	23		19					160	13	38	574	
5:00-5:15	30		34					119	8	30	624	
5:15-5:30	30		33					150	12	30	583	
5:30-5:45	20		27					150	5	43	553	
5:45-6:00	16		20					179	5	26	517	
TOTAL	204		515					4,754	131	415	5,188	
AM PK HR	25		159					2,024	41	62	380	
PM PK HR	101		110					576	42	132	2,358	
AM PK PHF	0.45		0.72					0.90	0.73	0.82	0.89	
PM PK PHF	0.84		0.81					0.90	0.81	0.87	0.94	

2,691 718
2,523 695
2,359 644
2,276 634
2,210 550
531
561
568
3,062 622
3,285 804
3,319 809
3,308 827
3,244 845
838
798
763
7:00-8:00
4:30-5:30

0.94
0.98

INTERSECTION TRAFFIC VOLUME COUNTS



LOCATION: Murfreesboro Road and Cross Creek Drive
DATE: 3-Mar-15 Tue
RECORDER: Burns
NOTES: unsignalized

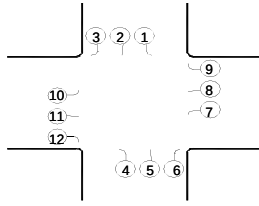
LOCATION	S/B			N/B Cross Creek Drive			W/B Murfreesboro Rd			E/B Murfreesboro Rd		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
7:00-7:15				9				479			105	3
7:15-7:30				9				541			91	
7:30-7:45				7		1		476			78	2
7:45-8:00				10		1		523			95	2
8:00-8:15				4				423			101	1
8:15-8:30				3				381			88	3
8:30-8:45				3				394			82	2
8:45-9:00				4				410			110	1
4:00-4:15				2				148			450	8
4:15-4:30				5				130			561	6
4:30-4:45				3				146			534	10
4:45-5:00				1				140			576	6
5:00-5:15				6				128			572	6
5:15-5:30				4				139			577	12
5:30-5:45				1				110			545	9
5:45-6:00				1		1	1	90			529	7
TOTAL				72		3	1	4,658			5,094	78
AM PK HR				35		2		2,019			369	7
PM PK HR				14				553			2,259	34

AM PK PHF				0.88		0.50		0.93			0.88	0.58
PM PK PHF				0.58				0.95			0.98	0.71

2,432 596
2,365 641
2,199 564
2,116 631
2,010 529
475
481
525
2,726 608
2,830 702
2,860 693
2,832 723
2,738 712
732
665
629
7:00-8:00
4:30-5:30

0.95
0.98

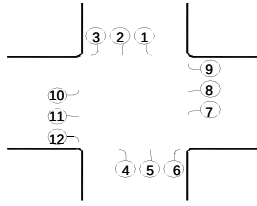
INTERSECTION TRAFFIC VOLUME COUNTS



LOCATION: Murfreesboro Road and Chester Stevens Rd / Ridgeway Dr
DATE: 3-Mar-15 Tue
RECORDER: Burns
NOTES: unsignalized

LOCATION	S/B Chester Stevens Rd			N/B Ridgeway Dr			W/B Murfreesboro Rd			E/B Murfreesboro Rd				
TIME	1	2	3	4	5	6	7	8	9	10	11	12		
7:00-7:15	8		12	3		2		490	1		116		2,465	632
7:15-7:30	1		11	4				476	12	1	107	1	2,333	613
7:30-7:45	1		12	4				486	2	3	91	2	2,204	601
7:45-8:00	1		22	5			2	495	6	4	83	1	2,118	619
8:00-8:15	2		11					384		5	97	1	1,982	500
8:15-8:30	3		20	2		2		351	1	6	99			484
8:30-8:45			11	2			1	402	2	6	90	1		515
8:45-9:00			13	1		1		363	2	7	95	1		483
4:00-4:15	4	1	3	1				130		9	410	1	2,617	559
4:15-4:30			6	1				130	1	9	513	1	2,823	661
4:30-4:45	1		9	1			1	152	4	8	512	2	2,895	690
4:45-5:00	1		6	1				129	1	7	559	3	2,921	707
5:00-5:15			4	2				151	3	9	595	1	2,887	765
5:15-5:30	1		7					135	3	12	573	2		733
5:30-5:45	2		7	3		1	1	119	2	13	567	1		716
5:45-6:00	2		10					135	2	17	507			673
TOTAL	27	1	164	30		6	5	4,528	42	116	5,014	18		
AM PK HR	11		57	16		2	2	1,947	21	8	397	4	7:00-8:00	
PM PK HR	4		24	6		1	1	534	9	41	2,294	7	4:45-5:45	
AM PK PHF	0.34		0.65	0.80		0.25	0.25	0.98	0.44	0.50	0.86	0.50	0.98	
PM PK PHF	0.50		0.86	0.50		0.25	0.25	0.88	0.75	0.79	0.96	0.58	0.95	

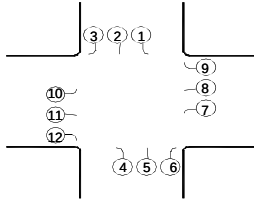
INTERSECTION TRAFFIC VOLUME COUNTS



LOCATION: Murfreesboro Road and Arno Road
DATE: 3-Mar-15 Tue
RECORDER: Burns
NOTES: signalized

LOCATION	S/B			N/B Arno Road			W/B Murfreesboro Rd			E/B Murfreesboro Rd				
TIME	1	2	3	4	5	6	7	8	9	10	11	12		
7:00-7:15				174		12	30	295			47	73	2,444	631
7:15-7:30				164		25	8	340			49	29	2,321	615
7:30-7:45				206		19	4	287			47	33	2,205	596
7:45-8:00				167		15	3	322			65	30	2,096	602
8:00-8:15				163		12	5	221			72	35	2,010	508
8:15-8:30				186		18	12	184			75	24		499
8:30-8:45				177		7	7	202			63	31		487
8:45-9:00				152		3	2	264			65	30		516
4:00-4:15				67		7	6	80			251	204	2,747	615
4:15-4:30				64		10	10	91			267	225	2,920	667
4:30-4:45				50		15	10	86			274	250	3,082	685
4:45-5:00				57		15	18	93			281	316	3,158	780
5:00-5:15				59		5	22	90			289	323	3,077	788
5:15-5:30				74		8	12	96			282	357		829
5:30-5:45				71		3	13	102			273	299		761
5:45-6:00				79		3	13	104			265	235		699
TOTAL				1,910		177	175	2,857			2,665	2,494		
AM PK HR				711		71	45	1,244			208	165	7:00-8:00	
PM PK HR				261		31	65	381			1,125	1,295	4:45-5:45	
AM PK PHF				0.86		0.71	0.38	0.91			0.80	0.57	0.97	
PM PK PHF				0.88		0.52	0.74	0.93			0.97	0.91	0.95	

INTERSECTION TRAFFIC VOLUME COUNTS

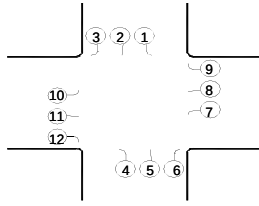


LOCATION: Carothers Parkway and S. Carothers Road
DATE: 2-Feb-16 Tue
RECORDER: Burns
NOTES: unsignalized

LOCATION	S/B Carothers Parkway			N/B Carothers Parkway			W/B S. Carothers Road			E/B				
TIME	1	2	3	4	5	6	7	8	9	10	11	12		
6:30-6:45	2	15			30	1	1		10				361	59
6:45-7:00	5	10			61				7				463	83
7:00-7:15	3	19			70				5				526	97
7:15-7:30	1	22			90	1	1		7				550	122
7:30-7:45	3	22			127	1			8				566	161
7:45-8:00	2	16			118				10					146
8:00-8:15	1	16			98	1			5					121
8:15-8:30		20			105	1			12					138
4:30-4:45	8	74			23	1			3				572	109
4:45-5:00	11	90			39	1			5				610	146
5:00-5:15	7	111			24	1			7				573	150
5:15-5:30	9	118			29	2	3		6				516	167
5:30-5:45	16	101			24	1			5				432	147
5:45-6:00	8	69			30	1			1					109
6:00-6:15	7	65			17	1			3					93
6:15-6:30	9	49			19		1		5					83
TOTAL	92	817			904	13	6		99					
AM PK HR	6	74			448	3			35				7:30-8:30	
PM PK HR	43	420			116	5	3		23				4:45-5:45	

AM PK PHF	0.50	0.84			0.88	0.75			0.73				0.88
PM PK PHF	0.67	0.89			0.74	0.63	0.25		0.82				0.91

INTERSECTION TRAFFIC VOLUME COUNTS



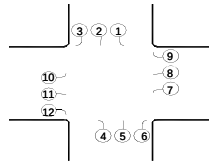
LOCATION: S. Carothers Road and Swanson Lane
DATE: 2-Feb-16 Tue
RECORDER: Burns
NOTES: unsignalized

LOCATION	S/B S. Carothers Road			N/B S. Carothers Road			W/B			E/B Swanson Lane		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
6:30-6:45		3	1		1							
6:45-7:00		8			1							
7:00-7:15		1	3		2					1		
7:15-7:30		3		1	4					1		
7:30-7:45		5			4							1
7:45-8:00		2	1		1					2		
8:00-8:15		2	1		4					1		
8:15-8:30					5					4		
4:30-4:45		1	1	1	2					1		
4:45-5:00		2			1							
5:00-5:15		1	3		2							
5:15-5:30		6	1	1	2					1		1
5:30-5:45		4	1									
5:45-6:00		1	1		1							
6:00-6:15			2		1							
6:15-6:30			2							1		
TOTAL		39	17	3	31					12		2
AM PK HR		17	3	1	11					2		1
PM PK HR		10	5	2	7					2		1
AM PK PHF		0.53	0.25	0.25	0.69					0.50		0.25
PM PK PHF		0.42	0.42	0.50	0.88					0.50		0.25

6:45-7:45
4:30-5:30

0.88
0.56

INTERSECTION TRAFFIC VOLUME COUNTS



LOCATION: Carothers Parkway and S. Carothers Road
 DATE: 23-Aug-16 Tue
 RECORDER: Burns
 NOTES: unsignalized

LOCATION	S/B Carothers Parkway			N/B Carothers Parkway			W/B S. Carothers Road			E/B		
TIME	1	2	3	4	5	6	7	8	9	10	11	12
6:00-6:15	3	23			17				1			
6:15-6:30	2	9			29				7			
6:30-6:45	1	23			45	2	1		8			
6:45-7:00		21			58		1		7			
7:00-7:15		26			87	2			5			
7:15-7:30	4	36			91		1		10			
7:30-7:45	2	29			120				9			
7:45-8:00	3	42			146		1		15			
8:00-8:15	1	24			161	1			7			
8:15-8:30	5	32			98	2			10			
8:30-8:45	3	35			76				8			
8:45-9:00	3	38			72	1			13			
9:00-9:15	1	36			39				1			
9:15-9:30	5	34			44	2			9			
9:30-9:45	1	27			37				5			
9:45-10:00	5	27			41				5			
10:00-10:15	5	28			41				5			
10:15-10:30	5	30			42				5			
10:30-10:45	4	31			42	2			5			
10:45-11:00	4	41			30				5			
11:00-11:15	10	41			42				7			
11:15-11:30	3	42			33				5			
11:30-11:45	8	39			45				5			
11:45-12:00	4	50			37	1	1		4			
12:00-12:15	3	28			50	1			6			
12:15-12:30	4	50			40				7			
12:30-12:45	7	57			32	1			7			
12:45-1:00	7	38			30				10			
1:00-1:15	9	56			33	2			2			
1:15-1:30	4	34			40		1		3			
1:30-1:45	7	39			33		1		1			
1:45-2:00	9	31			36	1			4			
2:00-2:15	8	32			32				7			
2:15-2:30	9	48			35	1			4			
2:30-2:45	9	46			32	1			4			
2:45-3:00	8	45			30	1			4			
3:00-3:15	8	43			27				4			
3:15-3:30	7	41			24				4			
3:30-3:45	12	55			39				7			
3:45-4:00	8	48			27				3			
4:00-4:15	5	57			24	2			9			
4:15-4:30	5	88			31	1			6			
4:30-4:45	11	89			29	2	1		6			
4:45-5:00	15	93			44		2		7			
5:00-5:15	7	112			39				3			
5:15-5:30	11	110			47	2			6			
5:30-5:45	16	99			45	1			2			
5:45-6:00	11	92			29				3			
6:00-6:15	13	89			34	1			7			
6:15-6:30	6	72			36				6			
6:30-6:45	9	44			39				6			
6:45-7:00	8	40			37	2	1		3			
TOTAL	317	2,440			2,447	31	11		302			
AM PK HR	11	127			525	3	1		41			
PM PK HR	49	414			175	3	2		18			

258 44
 334 47
 429 80
 509 87
 629 120
 703 142
 708 160
 670 207
 590 194
 473 147
 420 122
 368 127
 319 77
 321 94
 309 70
 323 78
 325 79
 346 82
 347 84
 360 80
 377 100
 365 83
 383 97
 390 97
 378 88
 392 101
 373 104
 350 85
 346 102
 323 82
 338 81
 349 81
 354 79
 356 97
 335 92
 357 87
 356 81
 372 76
 427 113
 452 86
 527 97
 591 131
 636 138
 661 161
 635 161
 618 176
 562 163
 497 135
 453 144
 120
 98
 91

7:30-8:30
 4:45-5:45

AM PK PHF	0.55	0.76			0.82	0.38	0.25		0.68			
PM PK PHF	0.77	0.92			0.93	0.38	0.25		0.64			

0.86
 0.94

**APPENDIX B
CAPACITY ANALYSES**

EXISTING CONDITIONS

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	271	411	212	28	1435	160	461	379	29	119	43	92
Future Volume (vph)	271	411	212	28	1435	160	461	379	29	119	43	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	2		1	1		0	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.91	0.91	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Frt			0.850		0.985				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	5009	0	3433	3539	1583	3433	3539	1583
Flt Permitted	0.176			0.493			0.725			0.510		
Satd. Flow (perm)	636	3539	1583	918	5009	0	2620	3539	1583	1843	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			230		50				33			33
Link Speed (mph)		45			45			35			40	
Link Distance (ft)		150			1130			3000			147	
Travel Time (s)		2.3			17.1			58.4			2.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	295	447	230	30	1560	174	501	412	32	129	47	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	295	447	230	30	1734	0	501	412	32	129	47	100
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	27.2	27.2	27.2	27.2	27.2		22.8	22.8	22.8	22.8	22.8	22.8
Total Split (%)	54.4%	54.4%	54.4%	54.4%	54.4%		45.6%	45.6%	45.6%	45.6%	45.6%	45.6%
Maximum Green (s)	22.7	22.7	22.7	22.7	22.7		18.3	18.3	18.3	18.3	18.3	18.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effect Green (s)	22.7	22.7	22.7	22.7	22.7		18.3	18.3	18.3	18.3	18.3	18.3
Actuated g/C Ratio	0.45	0.45	0.45	0.45	0.45		0.37	0.37	0.37	0.37	0.37	0.37
v/c Ratio	1.02	0.28	0.27	0.07	0.75		0.52	0.32	0.05	0.19	0.04	0.17
Control Delay	80.8	9.1	2.5	7.0	11.5		14.9	12.2	4.8	11.8	10.3	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.8	9.1	2.5	7.0	11.5		14.9	12.2	4.8	11.8	10.3	8.7
LOS	F	A	A	A	B		B	B	A	B	B	A
Approach Delay		29.3			11.4			13.4			10.4	
Approach LOS		C			B			B			B	
90th %ile Green (s)	22.7	22.7	22.7	22.7	22.7		18.3	18.3	18.3	18.3	18.3	18.3
90th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
70th %ile Green (s)	22.7	22.7	22.7	22.7	22.7		18.3	18.3	18.3	18.3	18.3	18.3
70th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
50th %ile Green (s)	22.7	22.7	22.7	22.7	22.7		18.3	18.3	18.3	18.3	18.3	18.3
50th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
30th %ile Green (s)	22.7	22.7	22.7	22.7	22.7		18.3	18.3	18.3	18.3	18.3	18.3
30th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
10th %ile Green (s)	22.7	22.7	22.7	22.7	22.7		18.3	18.3	18.3	18.3	18.3	18.3
10th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
Stops (vph)	198	234	24	13	1053		340	252	9	77	28	44
Fuel Used(gal)	7	4	1	0	29		14	11	1	1	0	1
CO Emissions (g/hr)	502	285	43	28	1995		974	772	51	81	29	48
NOx Emissions (g/hr)	98	55	8	6	388		190	150	10	16	6	9
VOC Emissions (g/hr)	116	66	10	7	462		226	179	12	19	7	11
Dilemma Vehicles (#)	0	41	0	0	148		0	38	0	0	4	0
Queue Length 50th (ft)	~43	40	0	6	185		56	43	0	12	4	13
Queue Length 95th (ft)	#111	64	28	m7	267		93	71	13	27	12	37
Internal Link Dist (ft)		70			1050			2920			67	
Turn Bay Length (ft)												
Base Capacity (vph)	288	1606	844	416	2301		958	1295	600	674	1295	600

Baseline

Synchro 9 Light Report
Page 2

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.28	0.27	0.07	0.75		0.52	0.32	0.05	0.19	0.04	0.17

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 50

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 16.2

Intersection LOS: B

Intersection Capacity Utilization 71.3%

ICU Level of Service C

Analysis Period (min) 15

Description: Hwy 96 and Carothers Pkwy

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

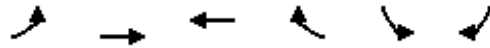
Splits and Phases: 1: Carothers Parkway & Murfreesboro Road

			
Ø2 (R)			Ø4
22.8 s			27.2 s
			
Ø6 (R)			Ø8
22.8 s			27.2 s

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016

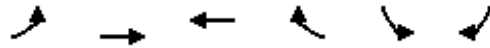


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	62	380	2024	41	25	159
Future Volume (vph)	62	380	2024	41	25	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.997			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3529	0	1770	1583
Flt Permitted	0.054				0.950	
Satd. Flow (perm)	101	3539	3529	0	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			5			16
Link Speed (mph)		45	45		40	
Link Distance (ft)		1130	160		355	
Travel Time (s)		17.1	2.4		6.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	67	413	2200	45	27	173
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	413	2245	0	27	173
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5
Total Split (s)	76.0	76.0	76.0		24.0	24.0
Total Split (%)	76.0%	76.0%	76.0%		24.0%	24.0%
Maximum Green (s)	71.5	71.5	71.5		19.5	19.5
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	None		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effect Green (s)	73.8	73.8	73.8		17.2	17.2
Actuated g/C Ratio	0.74	0.74	0.74		0.17	0.17
v/c Ratio	0.91	0.16	0.86		0.09	0.61
Control Delay	103.6	4.9	14.3		35.2	44.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	103.6	4.9	14.3		35.2	44.3
LOS	F	A	B		D	D
Approach Delay		18.6	14.3		43.1	
Approach LOS		B	B		D	
90th %ile Green (s)	71.5	71.5	71.5		19.5	19.5
90th %ile Term Code	Max	Max	Max		Coord	Coord
70th %ile Green (s)	73.3	73.3	73.3		17.7	17.7
70th %ile Term Code	Max	Max	Max		Coord	Coord
50th %ile Green (s)	75.8	75.8	75.8		15.2	15.2
50th %ile Term Code	Max	Max	Max		Coord	Coord
30th %ile Green (s)	74.8	74.8	74.8		16.2	16.2
30th %ile Term Code	Gap	Gap	Hold		Coord	Coord
10th %ile Green (s)	73.7	73.7	73.7		17.3	17.3
10th %ile Term Code	Hold	Hold	Gap		Coord	Coord
Stops (vph)	43	136	1370		22	131
Fuel Used(gal)	2	5	25		0	3
CO Emissions (g/hr)	161	339	1762		32	217
NOx Emissions (g/hr)	31	66	343		6	42
VOC Emissions (g/hr)	37	79	408		7	50
Dilemma Vehicles (#)	0	6	95		0	0
Queue Length 50th (ft)	24	46	410		15	96
Queue Length 95th (ft)	#131	70	650		38	160
Internal Link Dist (ft)		1050	80		275	
Turn Bay Length (ft)						
Base Capacity (vph)	74	2612	2606		345	321

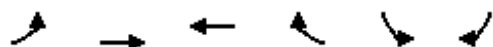
Baseline

Synchro 9 Light Report
Page 5

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.91	0.16	0.86		0.08	0.54

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 84 (84%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 17.0

Intersection LOS: B

Intersection Capacity Utilization 74.6%

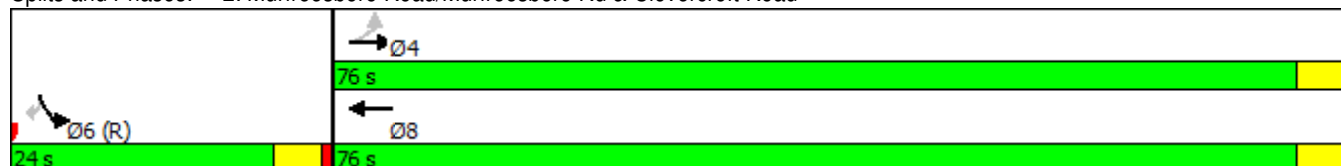
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road



Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

7/12/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↗
Traffic Volume (vph)	224	177	45	1269	711	71
Future Volume (vph)	224	177	45	1269	711	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.934					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3306	0	1770	3539	1770	1583
Flt Permitted			0.459		0.950	
Satd. Flow (perm)	3306	0	855	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	192					77
Link Speed (mph)	45			45	50	
Link Distance (ft)	1550			63	683	
Travel Time (s)	23.5			1.0	9.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	243	192	49	1379	773	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	435	0	49	1379	773	77
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Detector Phase	4		8	8	2	2
Switch Phase						

Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

7/12/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	47.0		47.0	47.0	53.0	53.0
Total Split (%)	47.0%		47.0%	47.0%	53.0%	53.0%
Maximum Green (s)	42.5		42.5	42.5	48.5	48.5
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0		0.0	0.0	0.0	0.0
Recall Mode	None		None	None	Min	Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effect Green (s)	40.4		40.4	40.4	44.1	44.1
Actuated g/C Ratio	0.43		0.43	0.43	0.47	0.47
v/c Ratio	0.28		0.13	0.90	0.93	0.10
Control Delay	10.3		18.7	35.1	42.6	3.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	10.3		18.7	35.1	42.6	3.7
LOS	B		B	D	D	A
Approach Delay	10.3			34.6	39.1	
Approach LOS	B			C	D	
90th %ile Green (s)	42.5		42.5	42.5	48.5	48.5
90th %ile Term Code	Hold		Max	Max	Max	Max
70th %ile Green (s)	42.5		42.5	42.5	48.5	48.5
70th %ile Term Code	Hold		Max	Max	Max	Max
50th %ile Green (s)	42.5		42.5	42.5	48.5	48.5
50th %ile Term Code	Hold		Max	Max	Max	Max
30th %ile Green (s)	42.5		42.5	42.5	43.6	43.6
30th %ile Term Code	Hold		Max	Max	Gap	Gap
10th %ile Green (s)	31.9		31.9	31.9	32.1	32.1
10th %ile Term Code	Hold		Gap	Gap	Gap	Gap
Stops (vph)	134		28	1087	602	9
Fuel Used(gal)	7		1	23	18	0
CO Emissions (g/hr)	456		38	1616	1293	35
NOx Emissions (g/hr)	89		7	314	251	7
VOC Emissions (g/hr)	106		9	374	300	8
Dilemma Vehicles (#)	17		0	63	0	0
Queue Length 50th (ft)	49		19	425	434	0
Queue Length 95th (ft)	82		43	#575	#684	24
Internal Link Dist (ft)	1470			1	603	
Turn Bay Length (ft)						
Base Capacity (vph)	1626		394	1631	930	869

Baseline

Synchro 9 Light Report
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Lanes, Volumes, Timings

5: Arno Road & Murfreesboro Rd

7/12/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.27		0.12	0.85	0.83	0.09

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 93.6

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 32.1

Intersection LOS: C

Intersection Capacity Utilization 82.0%

ICU Level of Service D

Analysis Period (min) 15

90th %ile Actuated Cycle: 100

70th %ile Actuated Cycle: 100

50th %ile Actuated Cycle: 100

30th %ile Actuated Cycle: 95.1

10th %ile Actuated Cycle: 73

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Arno Road & Murfreesboro Rd

↖ Ø2	→ Ø4
53 s	47 s
	↖ Ø8
	47 s

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	1371	430	20	642	52	223	64	36	627	563	150
Future Volume (vph)	84	1371	430	20	642	52	223	64	36	627	563	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	2		1	1		0	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.91	0.91	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Frt			0.850		0.989				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	5029	0	3433	3539	1583	3433	3539	1583
Flt Permitted	0.346			0.178			0.366			0.709		
Satd. Flow (perm)	1250	3539	1583	332	5029	0	1323	3539	1583	2562	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		34				33			141
Link Speed (mph)		45			45			35			40	
Link Distance (ft)		150			1130			3000			147	
Travel Time (s)		2.3			17.1			58.4			2.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	91	1490	467	22	698	57	242	70	39	682	612	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	91	1490	467	22	755	0	242	70	39	682	612	163
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	27.0	27.0	27.0	27.0	27.0		23.0	23.0	23.0	23.0	23.0	23.0
Total Split (%)	54.0%	54.0%	54.0%	54.0%	54.0%		46.0%	46.0%	46.0%	46.0%	46.0%	46.0%
Maximum Green (s)	22.5	22.5	22.5	22.5	22.5		18.5	18.5	18.5	18.5	18.5	18.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effect Green (s)	22.5	22.5	22.5	22.5	22.5		18.5	18.5	18.5	18.5	18.5	18.5
Actuated g/C Ratio	0.45	0.45	0.45	0.45	0.45		0.37	0.37	0.37	0.37	0.37	0.37
v/c Ratio	0.16	0.94	0.60	0.15	0.33		0.49	0.05	0.06	0.72	0.47	0.24
Control Delay	9.1	27.0	11.3	7.3	5.8		16.4	10.3	5.4	19.0	13.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	27.0	11.3	7.3	5.8		16.4	10.3	5.4	19.0	13.5	4.3
LOS	A	C	B	A	A		B	B	A	B	B	A
Approach Delay		22.6			5.8			14.0			15.0	
Approach LOS		C			A			B			B	
90th %ile Green (s)	22.5	22.5	22.5	22.5	22.5		18.5	18.5	18.5	18.5	18.5	18.5
90th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
70th %ile Green (s)	22.5	22.5	22.5	22.5	22.5		18.5	18.5	18.5	18.5	18.5	18.5
70th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
50th %ile Green (s)	22.5	22.5	22.5	22.5	22.5		18.5	18.5	18.5	18.5	18.5	18.5
50th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
30th %ile Green (s)	22.5	22.5	22.5	22.5	22.5		18.5	18.5	18.5	18.5	18.5	18.5
30th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
10th %ile Green (s)	22.5	22.5	22.5	22.5	22.5		18.5	18.5	18.5	18.5	18.5	18.5
10th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
Stops (vph)	49	1102	234	10	347		167	40	13	506	398	31
Fuel Used(gal)	1	23	4	0	10		7	2	1	8	6	1
CO Emissions (g/hr)	59	1578	302	21	715		478	127	64	560	420	41
NOx Emissions (g/hr)	12	307	59	4	139		93	25	12	109	82	8
VOC Emissions (g/hr)	14	366	70	5	166		111	30	15	130	97	10
Dilemma Vehicles (#)	0	130	0	0	34		0	6	0	0	56	0
Queue Length 50th (ft)	7	202	66	3	46		27	6	1	85	68	4
Queue Length 95th (ft)	18	#346	142	9	49		54	16	15	136	106	33
Internal Link Dist (ft)		70			1050			2920			67	
Turn Bay Length (ft)												
Base Capacity (vph)	562	1592	780	149	2281		489	1309	606	947	1309	674

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.94	0.60	0.15	0.33		0.49	0.05	0.06	0.72	0.47	0.24

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 50

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 16.8

Intersection LOS: B

Intersection Capacity Utilization 71.2%

ICU Level of Service C

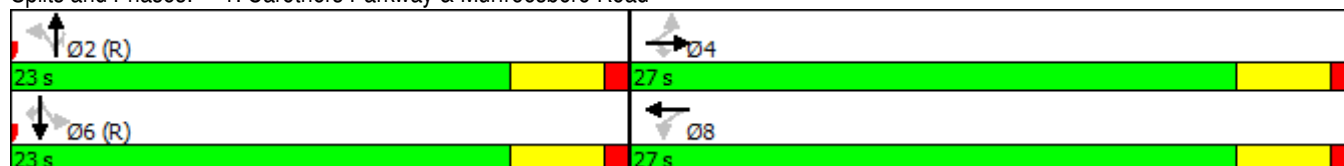
Analysis Period (min) 15

Description: Hwy 96 and Carothers Pkwy

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

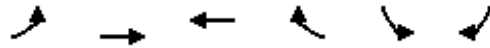
Splits and Phases: 1: Carothers Parkway & Murfreesboro Road



Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016

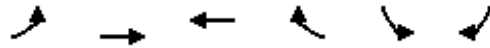


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	132	2434	634	42	101	110
Future Volume (vph)	132	2434	634	42	101	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.991			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3507	0	1770	1583
Flt Permitted	0.367				0.950	
Satd. Flow (perm)	684	3539	3507	0	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			18			120
Link Speed (mph)		45	45		40	
Link Distance (ft)		1130	160		355	
Travel Time (s)		17.1	2.4		6.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	143	2646	689	46	110	120
Shared Lane Traffic (%)						
Lane Group Flow (vph)	143	2646	735	0	110	120
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5
Total Split (s)	77.0	77.0	77.0		23.0	23.0
Total Split (%)	77.0%	77.0%	77.0%		23.0%	23.0%
Maximum Green (s)	72.5	72.5	72.5		18.5	18.5
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	None		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effect Green (s)	79.5	79.5	79.5		11.5	11.5
Actuated g/C Ratio	0.80	0.80	0.80		0.12	0.12
v/c Ratio	0.26	0.94	0.26		0.54	0.42
Control Delay	3.8	16.0	1.8		51.0	11.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	3.8	16.0	1.8		51.0	11.9
LOS	A	B	A		D	B
Approach Delay		15.3	1.8		30.6	
Approach LOS		B	A		C	
90th %ile Green (s)	75.0	75.0	75.0		16.0	16.0
90th %ile Term Code	Max	Max	Hold		Coord	Coord
70th %ile Green (s)	77.7	77.7	77.7		13.3	13.3
70th %ile Term Code	Max	Max	Hold		Coord	Coord
50th %ile Green (s)	79.5	79.5	79.5		11.5	11.5
50th %ile Term Code	Max	Max	Hold		Coord	Coord
30th %ile Green (s)	81.3	81.3	81.3		9.7	9.7
30th %ile Term Code	Max	Max	Hold		Coord	Coord
10th %ile Green (s)	84.0	84.0	84.0		7.0	7.0
10th %ile Term Code	Max	Max	Hold		Coord	Coord
Stops (vph)	36	1623	86		92	19
Fuel Used(gal)	2	46	2		2	1
CO Emissions (g/hr)	106	3212	141		153	50
NOx Emissions (g/hr)	21	625	27		30	10
VOC Emissions (g/hr)	25	744	33		36	12
Dilemma Vehicles (#)	0	79	17		0	0
Queue Length 50th (ft)	14	496	26		67	0
Queue Length 95th (ft)	m37	m#1065	m44		117	49
Internal Link Dist (ft)		1050	80		275	
Turn Bay Length (ft)						
Base Capacity (vph)	543	2813	2791		327	390

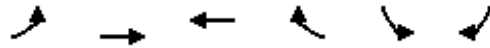
Baseline

Synchro 9 Light Report
Page 5

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.26	0.94	0.26		0.34	0.31

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 34 (34%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 13.6

Intersection LOS: B

Intersection Capacity Utilization 80.4%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road



Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

7/12/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↗
Traffic Volume (vph)	1143	1315	65	381	261	31
Future Volume (vph)	1143	1315	65	381	261	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.920					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3256	0	1770	3539	1770	1583
Flt Permitted			0.055		0.950	
Satd. Flow (perm)	3256	0	102	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	733					34
Link Speed (mph)	45			45	50	
Link Distance (ft)	1550			63	683	
Travel Time (s)	23.5			1.0	9.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1242	1429	71	414	284	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2671	0	71	414	284	34
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Detector Phase	4		8	8	2	2
Switch Phase						

Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

7/12/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	76.2		76.2	76.2	23.8	23.8
Total Split (%)	76.2%		76.2%	76.2%	23.8%	23.8%
Maximum Green (s)	71.7		71.7	71.7	19.3	19.3
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0		0.0	0.0	0.0	0.0
Recall Mode	None		None	None	C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effect Green (s)	72.5		72.5	72.5	18.5	18.5
Actuated g/C Ratio	0.72		0.72	0.72	0.18	0.18
v/c Ratio	1.04		0.96	0.16	0.87	0.11
Control Delay	30.9		118.8	4.6	66.0	12.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	30.9		118.8	4.6	66.0	12.3
LOS	C		F	A	E	B
Approach Delay	30.9			21.3	60.3	
Approach LOS	C			C	E	
90th %ile Green (s)	71.7		71.7	71.7	19.3	19.3
90th %ile Term Code	Max		Max	Max	Coord	Coord
70th %ile Green (s)	71.7		71.7	71.7	19.3	19.3
70th %ile Term Code	Max		Max	Max	Coord	Coord
50th %ile Green (s)	71.7		71.7	71.7	19.3	19.3
50th %ile Term Code	Max		Max	Max	Coord	Coord
30th %ile Green (s)	71.7		71.7	71.7	19.3	19.3
30th %ile Term Code	Max		Max	Max	Coord	Coord
10th %ile Green (s)	75.8		75.8	75.8	15.2	15.2
10th %ile Term Code	Max		Hold	Hold	Coord	Coord
Stops (vph)	1022		41	110	235	9
Fuel Used(gal)	53		2	2	8	0
CO Emissions (g/hr)	3698		147	131	576	24
NOx Emissions (g/hr)	719		29	26	112	5
VOC Emissions (g/hr)	857		34	30	134	6
Dilemma Vehicles (#)	104		0	19	0	0
Queue Length 50th (ft)	~906		36	38	176	0
Queue Length 95th (ft)	m#1020		#90	53	#312	26
Internal Link Dist (ft)	1470			1	603	
Turn Bay Length (ft)						
Base Capacity (vph)	2562		74	2566	341	332

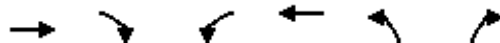
Baseline

Synchro 9 Light Report
Page 10

Lanes, Volumes, Timings

5: Arno Road & Murfreesboro Rd

7/12/2016



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.04		0.96	0.16	0.83	0.10

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 64 (64%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 32.3

Intersection LOS: C

Intersection Capacity Utilization 95.8%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

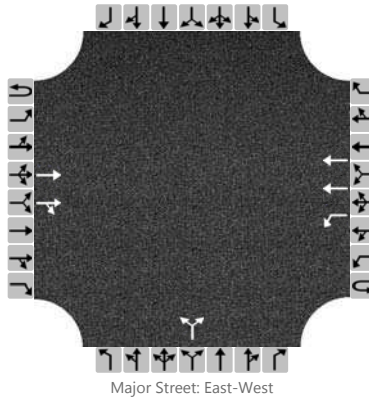
Splits and Phases: 5: Arno Road & Murfreesboro Rd

 Ø2 (L)	 Ø4
23.8 s	76.2 s
 Ø8	
	76.2 s

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Hwy 96E and Cross Creek
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	9/16/2015	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Cross Creek Drive
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	0	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			398	7		0	2030			35		2				
Percent Heavy Vehicles						0				0		0				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

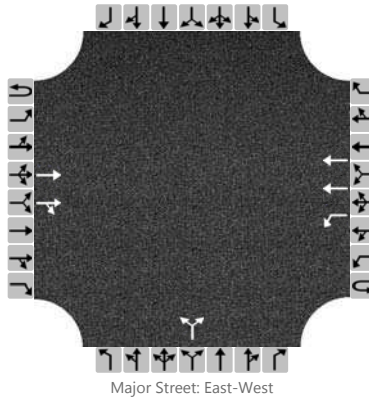
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)											39					
Capacity						1144					194					
v/c Ratio											0.20					
95% Queue Length											0.7					
Control Delay (s/veh)						8.1					28.1					
Level of Service (LOS)						A					D					
Approach Delay (s/veh)									28.1							
Approach LOS									D							

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Hwy 96E and Cross Creek
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	9/16/2015	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Cross Creek Drive
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	0	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			2501	34		0	662			14		0				
Percent Heavy Vehicles						0				0		0				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

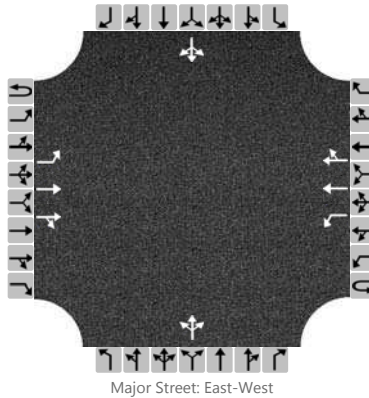
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)											14					
Capacity						171					24					
v/c Ratio											0.58					
95% Queue Length											1.7					
Control Delay (s/veh)						26.0					278.1					
Level of Service (LOS)						D					F					
Approach Delay (s/veh)									278.1							
Approach LOS									F							

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Highway 96E and Ridgeway
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	9/16/2015	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Chester Stevens/Ridgeway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)		8	388	4		2	1957	21		16	0	2		11	0	57
Percent Heavy Vehicles		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

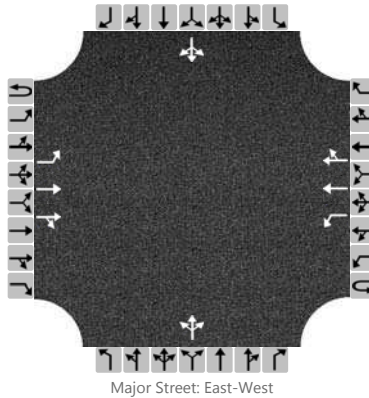
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		8				2					18				69	
Capacity		286				1170					170				157	
v/c Ratio		0.03				0.00					0.11				0.44	
95% Queue Length		0.1				0.0					0.3				2.0	
Control Delay (s/veh)		17.9				8.1					28.7				45.0	
Level of Service (LOS)		C				A					D				E	
Approach Delay (s/veh)	0.4				0.0				28.7				45.0			
Approach LOS	A				A				D				E			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Highway 96E and Ridgeway
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	9/16/2015	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Chester Stevens/Ridgeway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)		41	2453	7		1	632	9		6	0	1		4	0	24
Percent Heavy Vehicles		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

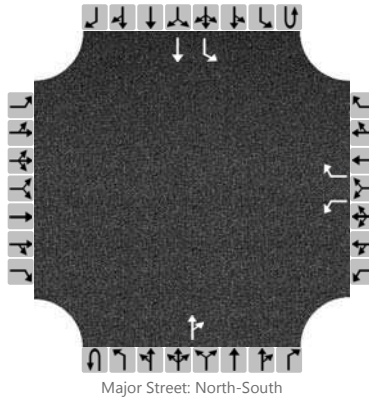
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		42				1					7					28
Capacity		943				184					26					400
v/c Ratio		0.04				0.01					0.27					0.07
95% Queue Length		0.1				0.0					0.8					0.2
Control Delay (s/veh)		9.0				24.7					192.5					14.7
Level of Service (LOS)		A				C					F					B
Approach Delay (s/veh)	0.1				0.0				192.5				14.7			
Approach LOS	A				A				F				B			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Carothers and S. Carother
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Carothers Parkway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.88
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	10647 (Existing)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	0
Configuration						L		R				TR		L	T	
Volume (veh/h)						0		35			448	3		6	74	
Percent Heavy Vehicles						0		0						0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

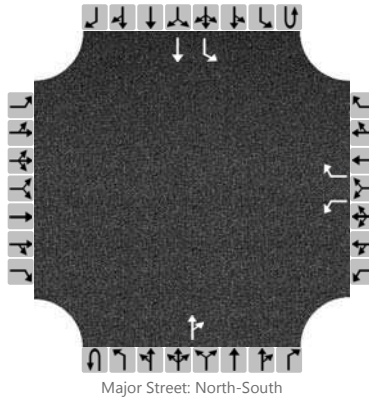
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)								40						7		
Capacity						459		561						1064		
v/c Ratio								0.07						0.01		
95% Queue Length								0.2						0.0		
Control Delay (s/veh)						12.8		11.9						8.4		
Level of Service (LOS)						B		B						A		
Approach Delay (s/veh)						11.9								0.6		
Approach LOS						B								A		

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Carothers and S. Carother
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Carothers Parkway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.91
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	10647 (Existing)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	0
Configuration						L		R				TR		L	T	
Volume (veh/h)						3		23			116	5		43	420	
Percent Heavy Vehicles						0		0						0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						3		25						47		
Capacity						403		925						1466		
v/c Ratio						0.01		0.03						0.03		
95% Queue Length						0.0		0.1						0.1		
Control Delay (s/veh)						14.0		9.0						7.5		
Level of Service (LOS)						B		A						A		
Approach Delay (s/veh)					9.5								0.7			
Approach LOS					A								A			

BACKGROUND CONDITIONS

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	499	439	158	38	1566	251	470	456	30	150	124	191
Future Volume (vph)	499	439	158	38	1566	251	470	456	30	150	124	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	2		1	1		0	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.91	0.91	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Frt			0.850		0.979				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	4979	0	3433	3539	1583	3433	3539	1583
Flt Permitted	0.222			0.479			0.666			0.468		
Satd. Flow (perm)	802	3539	1583	892	4979	0	2407	3539	1583	1691	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			172		81				36			36
Link Speed (mph)		45			45			35			40	
Link Distance (ft)		150			1130			3000			147	
Travel Time (s)		2.3			17.1			58.4			2.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	542	477	172	41	1702	273	511	496	33	163	135	208
Shared Lane Traffic (%)												
Lane Group Flow (vph)	542	477	172	41	1975	0	511	496	33	163	135	208
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effct Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	1.69	0.34	0.23	0.12	0.97		0.53	0.35	0.05	0.24	0.10	0.32
Control Delay	345.0	10.2	2.9	8.6	21.5		12.8	10.3	3.8	10.2	8.7	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	345.0	10.2	2.9	8.6	21.5		12.8	10.3	3.8	10.2	8.7	9.3
LOS	F	B	A	A	C		B	B	A	B	A	A
Approach Delay	161.5				21.2		11.3				9.4	
Approach LOS	F				C		B				A	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
90th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
70th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
70th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
50th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
50th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
30th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
30th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
10th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
10th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
Stops (vph)	418	278	23	25	1497		333	291	9	93	70	103
Fuel Used(gal)	41	5	1	1	40		14	13	1	1	1	2
CO Emissions (g/hr)	2847	335	37	46	2789		972	910	52	96	72	109
NOx Emissions (g/hr)	554	65	7	9	543		189	177	10	19	14	21
VOC Emissions (g/hr)	660	78	9	11	646		225	211	12	22	17	25
Dilemma Vehicles (#)	0	49	0	0	162		0	51	0	0	14	0
Queue Length 50th (ft)	~112	42	0	8	199		48	44	0	13	10	28
Queue Length 95th (ft)	#187	68	26	m9	m#229		83	72	11	29	22	64
Internal Link Dist (ft)	70				1050		2920				67	
Turn Bay Length (ft)												
Base Capacity (vph)	320	1415	736	356	2040		962	1415	654	676	1415	654

Baseline

Synchro 9 Light Report
Page 2

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.69	0.34	0.23	0.12	0.97		0.53	0.35	0.05	0.24	0.10	0.32

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.69

Intersection Signal Delay: 53.0

Intersection LOS: D

Intersection Capacity Utilization 82.7%

ICU Level of Service E

Analysis Period (min) 15

Description: Hwy 96 and Carothers Pkwy

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

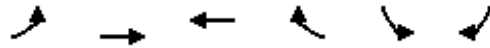
Splits and Phases: 1: Carothers Parkway & Murfreesboro Road

 Ø2 (R)	 Ø4
22.5 s	22.5 s
 Ø6 (R)	 Ø8
22.5 s	22.5 s

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016

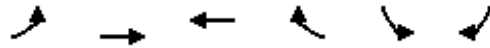


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	68	435	2247	45	28	175
Future Volume (vph)	68	435	2247	45	28	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.997			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3529	0	1770	1583
Flt Permitted	0.061				0.950	
Satd. Flow (perm)	114	3539	3529	0	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			5			8
Link Speed (mph)		45	45		40	
Link Distance (ft)		1130	160		355	
Travel Time (s)		17.1	2.4		6.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	74	473	2442	49	30	190
Shared Lane Traffic (%)						
Lane Group Flow (vph)	74	473	2491	0	30	190
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5
Total Split (s)	66.0	66.0	66.0		24.0	24.0
Total Split (%)	73.3%	73.3%	73.3%		26.7%	26.7%
Maximum Green (s)	61.5	61.5	61.5		19.5	19.5
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	None		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effect Green (s)	65.9	65.9	65.9		15.1	15.1
Actuated g/C Ratio	0.73	0.73	0.73		0.17	0.17
v/c Ratio	0.89	0.18	0.96		0.10	0.70
Control Delay	96.9	2.7	13.2		30.5	47.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	96.9	2.7	13.2		30.5	47.1
LOS	F	A	B		C	D
Approach Delay		15.4	13.2		44.8	
Approach LOS		B	B		D	
90th %ile Green (s)	61.5	61.5	61.5		19.5	19.5
90th %ile Term Code	Max	Max	Max		Coord	Coord
70th %ile Green (s)	62.9	62.9	62.9		18.1	18.1
70th %ile Term Code	Max	Max	Max		Coord	Coord
50th %ile Green (s)	65.4	65.4	65.4		15.6	15.6
50th %ile Term Code	Max	Max	Max		Coord	Coord
30th %ile Green (s)	68.0	68.0	68.0		13.0	13.0
30th %ile Term Code	Hold	Hold	Max		Coord	Coord
10th %ile Green (s)	71.7	71.7	71.7		9.3	9.3
10th %ile Term Code	Hold	Hold	Max		Coord	Coord
Stops (vph)	49	70	1064		25	154
Fuel Used(gal)	2	4	22		0	4
CO Emissions (g/hr)	171	301	1523		34	253
NOx Emissions (g/hr)	33	58	296		7	49
VOC Emissions (g/hr)	40	70	353		8	59
Dilemma Vehicles (#)	0	17	36		0	0
Queue Length 50th (ft)	33	22	257		14	98
Queue Length 95th (ft)	#132	34	m#811		37	161
Internal Link Dist (ft)		1050	80		275	
Turn Bay Length (ft)						
Base Capacity (vph)	83	2591	2585		383	349

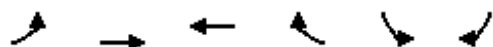
Baseline

Synchro 9 Light Report
Page 5

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.89	0.18	0.96		0.08	0.54

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 15.7

Intersection LOS: B

Intersection Capacity Utilization 81.9%

ICU Level of Service D

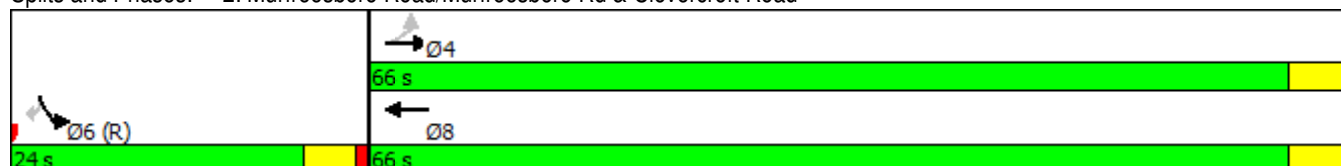
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road



Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

7/12/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↙	↗
Traffic Volume (vph)	253	196	50	1406	782	78
Future Volume (vph)	253	196	50	1406	782	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.935					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3309	0	1770	3539	1770	1583
Flt Permitted			0.421		0.950	
Satd. Flow (perm)	3309	0	784	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	213					85
Link Speed (mph)	45			45	50	
Link Distance (ft)	1550			63	683	
Travel Time (s)	23.5			1.0	9.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	275	213	54	1528	850	85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	488	0	54	1528	850	85
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Detector Phase	4		8	8	2	2
Switch Phase						

Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

7/12/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	42.2		42.2	42.2	47.8	47.8
Total Split (%)	46.9%		46.9%	46.9%	53.1%	53.1%
Maximum Green (s)	37.7		37.7	37.7	43.3	43.3
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0		0.0	0.0	0.0	0.0
Recall Mode	None		None	None	C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effect Green (s)	37.7		37.7	37.7	43.3	43.3
Actuated g/C Ratio	0.42		0.42	0.42	0.48	0.48
v/c Ratio	0.32		0.16	1.03	1.00	0.11
Control Delay	18.1		18.1	58.9	55.7	3.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	18.1		18.1	58.9	55.7	3.4
LOS	B		B	E	E	A
Approach Delay	18.1			57.5	50.9	
Approach LOS	B			E	D	
90th %ile Green (s)	37.7		37.7	37.7	43.3	43.3
90th %ile Term Code	Hold		Max	Max	Coord	Coord
70th %ile Green (s)	37.7		37.7	37.7	43.3	43.3
70th %ile Term Code	Hold		Max	Max	Coord	Coord
50th %ile Green (s)	37.7		37.7	37.7	43.3	43.3
50th %ile Term Code	Hold		Max	Max	Coord	Coord
30th %ile Green (s)	37.7		37.7	37.7	43.3	43.3
30th %ile Term Code	Hold		Max	Max	Coord	Coord
10th %ile Green (s)	37.7		37.7	37.7	43.3	43.3
10th %ile Term Code	Hold		Max	Max	Coord	Coord
Stops (vph)	328		31	1216	654	10
Fuel Used(gal)	10		1	33	22	1
CO Emissions (g/hr)	716		41	2276	1558	38
NOx Emissions (g/hr)	139		8	443	303	7
VOC Emissions (g/hr)	166		10	528	361	9
Dilemma Vehicles (#)	13		0	72	0	0
Queue Length 50th (ft)	58		19	~494	463	0
Queue Length 95th (ft)	101		44	#629	#732	23
Internal Link Dist (ft)	1470			1	603	
Turn Bay Length (ft)						
Base Capacity (vph)	1509		328	1482	851	805

Baseline

Synchro 9 Light Report
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Lanes, Volumes, Timings

5: Arno Road & Murfreesboro Rd

7/12/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.32		0.16	1.03	1.00	0.11

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 68 (76%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 49.1

Intersection LOS: D

Intersection Capacity Utilization 89.7%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: Arno Road & Murfreesboro Rd

↖ Ø2 (R)	→ Ø4
47.8 s	42.2 s
	← Ø8
	42.2 s

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	257	1488	326	25	675	163	287	182	67	925	544	463
Future Volume (vph)	257	1488	326	25	675	163	287	182	67	925	544	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	2		1	1		0	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.91	0.91	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Frt			0.850		0.971				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	4938	0	3433	3539	1583	3433	3539	1583
Flt Permitted	0.250			0.077			0.357			0.627		
Satd. Flow (perm)	903	3539	1583	143	4938	0	1290	3539	1583	2266	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			192		70				15			140
Link Speed (mph)		45			45			35			40	
Link Distance (ft)		150			1130			3000			147	
Travel Time (s)		2.3			17.1			58.4			2.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	279	1617	354	27	734	177	312	198	73	1005	591	503
Shared Lane Traffic (%)												
Lane Group Flow (vph)	279	1617	354	27	911	0	312	198	73	1005	591	503
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	56.4	56.4	56.4	56.4	56.4		53.6	53.6	53.6	53.6	53.6	53.6
Total Split (%)	51.3%	51.3%	51.3%	51.3%	51.3%		48.7%	48.7%	48.7%	48.7%	48.7%	48.7%
Maximum Green (s)	51.9	51.9	51.9	51.9	51.9		49.1	49.1	49.1	49.1	49.1	49.1
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effect Green (s)	51.9	51.9	51.9	51.9	51.9		49.1	49.1	49.1	49.1	49.1	49.1
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47		0.45	0.45	0.45	0.45	0.45	0.45
v/c Ratio	0.65	0.97	0.42	0.40	0.39		0.54	0.13	0.10	0.99	0.37	0.64
Control Delay	31.2	44.6	9.9	32.0	10.5		26.6	18.2	14.7	58.0	21.1	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	44.6	9.9	32.0	10.5		26.6	18.2	14.7	58.0	21.1	21.0
LOS	C	D	A	C	B		C	B	B	E	C	C
Approach Delay		37.5			11.1			22.3			38.7	
Approach LOS		D			B			C			D	
90th %ile Green (s)	51.9	51.9	51.9	51.9	51.9		49.1	49.1	49.1	49.1	49.1	49.1
90th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
70th %ile Green (s)	51.9	51.9	51.9	51.9	51.9		49.1	49.1	49.1	49.1	49.1	49.1
70th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
50th %ile Green (s)	51.9	51.9	51.9	51.9	51.9		49.1	49.1	49.1	49.1	49.1	49.1
50th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
30th %ile Green (s)	51.9	51.9	51.9	51.9	51.9		49.1	49.1	49.1	49.1	49.1	49.1
30th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
10th %ile Green (s)	51.9	51.9	51.9	51.9	51.9		49.1	49.1	49.1	49.1	49.1	49.1
10th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
Stops (vph)	199	1302	96	15	301		206	102	29	801	348	266
Fuel Used(gal)	4	31	2	1	12		9	5	2	20	6	5
CO Emissions (g/hr)	305	2178	151	37	816		652	376	131	1378	440	353
NOx Emissions (g/hr)	59	424	29	7	159		127	73	25	268	86	69
VOC Emissions (g/hr)	71	505	35	9	189		151	87	30	319	102	82
Dilemma Vehicles (#)	0	65	0	0	44		0	8	0	0	25	0
Queue Length 50th (ft)	75	566	65	8	83		80	42	23	355	142	194
Queue Length 95th (ft)	129	#745	137	#30	80		126	65	51	#506	186	313
Internal Link Dist (ft)		70			1050			2920			67	
Turn Bay Length (ft)												
Base Capacity (vph)	426	1669	848	67	2366		575	1579	714	1011	1579	784

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

7/12/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.97	0.42	0.40	0.39		0.54	0.13	0.10	0.99	0.37	0.64

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 32.2

Intersection LOS: C

Intersection Capacity Utilization 91.7%

ICU Level of Service F

Analysis Period (min) 15

Description: Hwy 96 and Carothers Pkwy

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

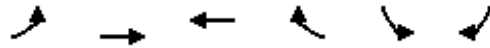
Splits and Phases: 1: Carothers Parkway & Murfreesboro Road

 Ø2 (R)	 Ø4
53.6 s	56.4 s
 Ø6 (R)	 Ø8
53.6 s	56.4 s

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016

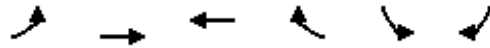


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	145	2709	719	46	111	121
Future Volume (vph)	145	2709	719	46	111	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.991			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3507	0	1770	1583
Flt Permitted	0.329				0.950	
Satd. Flow (perm)	613	3539	3507	0	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			17			132
Link Speed (mph)		45	45		40	
Link Distance (ft)		1130	160		355	
Travel Time (s)		17.1	2.4		6.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	158	2945	782	50	121	132
Shared Lane Traffic (%)						
Lane Group Flow (vph)	158	2945	832	0	121	132
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016

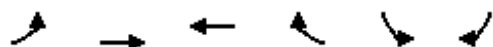


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5
Total Split (s)	87.4	87.4	87.4		22.6	22.6
Total Split (%)	79.5%	79.5%	79.5%		20.5%	20.5%
Maximum Green (s)	82.9	82.9	82.9		18.1	18.1
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	None		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effect Green (s)	88.2	88.2	88.2		12.8	12.8
Actuated g/C Ratio	0.80	0.80	0.80		0.12	0.12
v/c Ratio	0.32	1.04	0.30		0.59	0.44
Control Delay	3.5	33.3	1.9		57.1	12.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	3.5	33.3	1.9		57.1	12.1
LOS	A	C	A		E	B
Approach Delay		31.7	1.9		33.6	
Approach LOS		C	A		C	
90th %ile Green (s)	83.3	83.3	83.3		17.7	17.7
90th %ile Term Code	Max	Max	Hold		Coord	Coord
70th %ile Green (s)	86.2	86.2	86.2		14.8	14.8
70th %ile Term Code	Max	Max	Hold		Coord	Coord
50th %ile Green (s)	88.2	88.2	88.2		12.8	12.8
50th %ile Term Code	Max	Max	Hold		Coord	Coord
30th %ile Green (s)	90.2	90.2	90.2		10.8	10.8
30th %ile Term Code	Max	Max	Hold		Coord	Coord
10th %ile Green (s)	93.1	93.1	93.1		7.9	7.9
10th %ile Term Code	Max	Max	Hold		Coord	Coord
Stops (vph)	29	1224	100		102	19
Fuel Used(gal)	2	53	2		3	1
CO Emissions (g/hr)	107	3735	164		179	54
NOx Emissions (g/hr)	21	727	32		35	11
VOC Emissions (g/hr)	25	866	38		41	13
Dilemma Vehicles (#)	0	69	17		0	0
Queue Length 50th (ft)	17	~1186	34		82	0
Queue Length 95th (ft)	m27	m#1303	m50		137	53
Internal Link Dist (ft)		1050	80		275	
Turn Bay Length (ft)						
Base Capacity (vph)	491	2837	2815		291	370

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

7/12/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.32	1.04	0.30		0.42	0.36

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 16 (15%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 25.9

Intersection LOS: C

Intersection Capacity Utilization 88.5%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

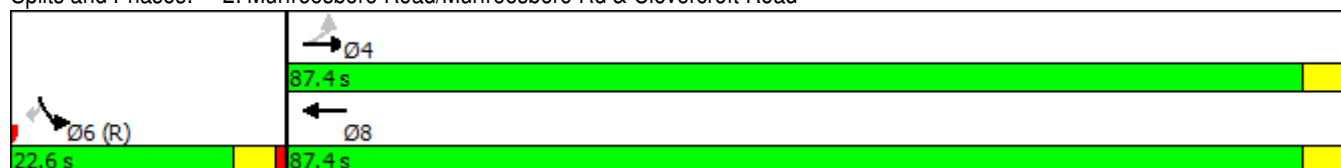
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road



Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

7/12/2016

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 		
Traffic Volume (vph)	1275	1446	72	426	288	34
Future Volume (vph)	1275	1446	72	426	288	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.920					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3256	0	1770	3539	1770	1583
Flt Permitted			0.048		0.950	
Satd. Flow (perm)	3256	0	89	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	743					37
Link Speed (mph)	45			45	50	
Link Distance (ft)	1550			63	683	
Travel Time (s)	23.5			1.0	9.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1386	1572	78	463	313	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2958	0	78	463	313	37
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Detector Phase	4		8	8	2	2
Switch Phase						

Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

7/12/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	87.0		87.0	87.0	23.0	23.0
Total Split (%)	79.1%		79.1%	79.1%	20.9%	20.9%
Maximum Green (s)	82.5		82.5	82.5	18.5	18.5
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0		0.0	0.0	0.0	0.0
Recall Mode	None		None	None	C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effect Green (s)	82.5		82.5	82.5	18.5	18.5
Actuated g/C Ratio	0.75		0.75	0.75	0.17	0.17
v/c Ratio	1.13		1.18	0.17	1.05	0.12
Control Delay	68.2		191.5	4.1	111.9	13.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	68.2		191.5	4.1	111.9	13.6
LOS	E		F	A	F	B
Approach Delay	68.2			31.1	101.5	
Approach LOS	E			C	F	
90th %ile Green (s)	82.5		82.5	82.5	18.5	18.5
90th %ile Term Code	Max		Max	Max	Coord	Coord
70th %ile Green (s)	82.5		82.5	82.5	18.5	18.5
70th %ile Term Code	Max		Max	Max	Coord	Coord
50th %ile Green (s)	82.5		82.5	82.5	18.5	18.5
50th %ile Term Code	Max		Max	Max	Coord	Coord
30th %ile Green (s)	82.5		82.5	82.5	18.5	18.5
30th %ile Term Code	Max		Max	Max	Coord	Coord
10th %ile Green (s)	82.5		82.5	82.5	18.5	18.5
10th %ile Term Code	Max		Max	Max	Coord	Coord
Stops (vph)	627		42	111	244	10
Fuel Used(gal)	73		3	2	12	0
CO Emissions (g/hr)	5099		235	134	808	28
NOx Emissions (g/hr)	992		46	26	157	5
VOC Emissions (g/hr)	1182		54	31	187	6
Dilemma Vehicles (#)	136		0	19	0	0
Queue Length 50th (ft)	~1215		~66	42	~242	0
Queue Length 95th (ft)	m#1137		#118	56	#416	29
Internal Link Dist (ft)	1470			1	603	
Turn Bay Length (ft)						
Base Capacity (vph)	2627		66	2654	297	297

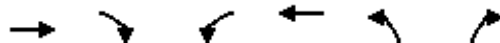
Baseline

Synchro 9 Light Report
Page 10

Lanes, Volumes, Timings

5: Arno Road & Murfreesboro Rd

7/12/2016



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.13		1.18	0.17	1.05	0.12

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 28 (25%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.18

Intersection Signal Delay: 66.0

Intersection LOS: E

Intersection Capacity Utilization 105.2%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

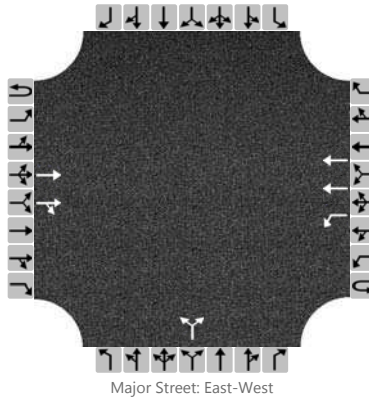
Splits and Phases: 5: Arno Road & Murfreesboro Rd

 Ø2 (L)	 Ø4
23 s	87 s
	 Ø8
	87 s

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Hwy 96E and Cross Creek
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	July 2016	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Cross Creek Drive
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Background)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	0	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			455	8		0	2253			39		2				
Percent Heavy Vehicles						0				0		0				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

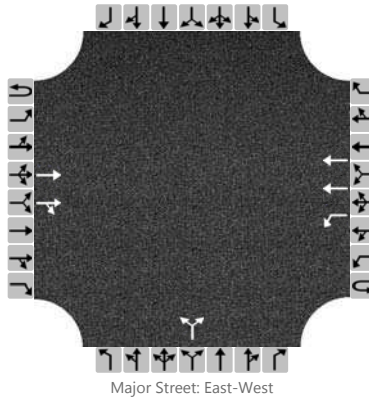
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)											43					
Capacity						1087					163					
v/c Ratio											0.26					
95% Queue Length											1.0					
Control Delay (s/veh)						8.3					34.8					
Level of Service (LOS)						A					D					
Approach Delay (s/veh)									34.8							
Approach LOS									D							

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Hwy 96E and Cross Creek
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	July 2016	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Cross Creek Drive
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Background)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	0	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			2783	37		0	750			15		0				
Percent Heavy Vehicles						0				0		0				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

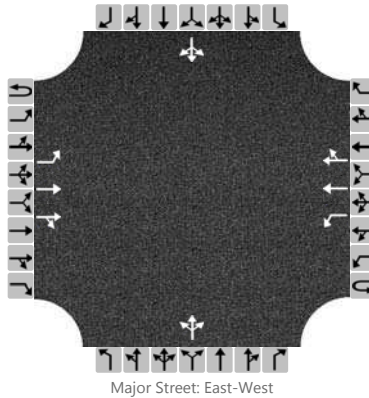
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)											15					
Capacity						131					16					
v/c Ratio											0.96					
95% Queue Length											2.3					
Control Delay (s/veh)						32.4					539.1					
Level of Service (LOS)						D					F					
Approach Delay (s/veh)									539.1							
Approach LOS									F							

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Highway 96E and Ridgeway
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	July 2016	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Chester Stevens/Ridgeway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Background		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)		9	441	7		3	2164	23		27	0	4		12	0	62
Percent Heavy Vehicles		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

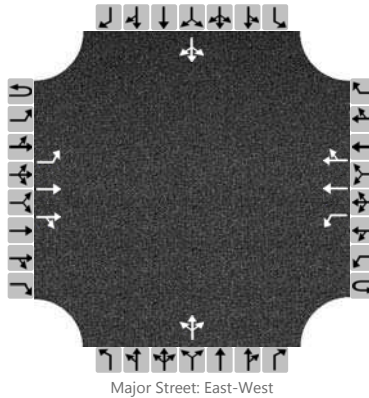
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		9				3					32				75	
Capacity		236				1115					134				124	
v/c Ratio		0.04				0.00					0.24				0.61	
95% Queue Length		0.1				0.0					0.9				3.1	
Control Delay (s/veh)		20.8				8.2					40.2				71.2	
Level of Service (LOS)		C				A					E				F	
Approach Delay (s/veh)	0.4				0.0				40.2				71.2			
Approach LOS	A				A				E				F			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Highway 96E and Ridgeway
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	July 2016	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Chester Stevens/Ridgeway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Background)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)		45	2720	18		3	711	10		13	0	2		4	0	26
Percent Heavy Vehicles		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

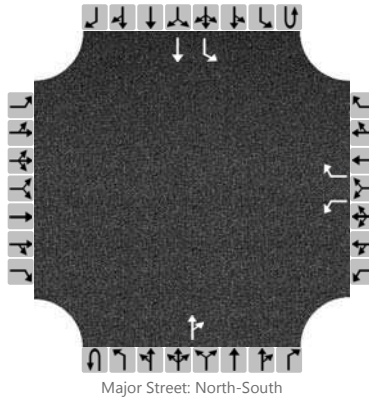
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		46				3					15				31	
Capacity		879				142					16				360	
v/c Ratio		0.05				0.02					0.91				0.09	
95% Queue Length		0.2				0.1					2.3				0.3	
Control Delay (s/veh)		9.3				31.0					506.7				16.0	
Level of Service (LOS)		A				D					F				C	
Approach Delay (s/veh)	0.2				0.1				506.7				16.0			
Approach LOS	A				A				F				C			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Carothers and S. Carother
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Carothers Parkway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.88
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	10647 (Background)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	0
Configuration						L		R				TR		L	T	
Volume (veh/h)						37		146			665	30		97	322	
Percent Heavy Vehicles						0		0						0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

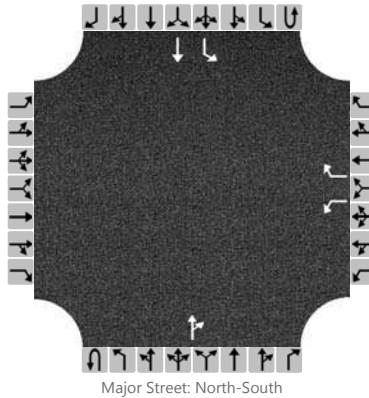
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						42		166						110		
Capacity						144		397						839		
v/c Ratio						0.29		0.42						0.13		
95% Queue Length						1.1		2.0						0.5		
Control Delay (s/veh)						40.0		20.4						9.9		
Level of Service (LOS)						E		C						A		
Approach Delay (s/veh)					24.4								2.3			
Approach LOS					C								A			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Carothers and S. Carother
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Carothers Parkway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.91
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	10647 (Background)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	0
Configuration						L		R				TR		L	T	
Volume (veh/h)						58		132			454	63		159	649	
Percent Heavy Vehicles						0		0						0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						64		145							175		
Capacity						98		550							1014		
v/c Ratio						0.65		0.26							0.17		
95% Queue Length						3.2		1.1							0.6		
Control Delay (s/veh)						93.3		13.9							9.3		
Level of Service (LOS)						F		B							A		
Approach Delay (s/veh)						38.2								1.8			
Approach LOS						E								A			

TOTAL PROJECTED CONDITIONS

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

9/1/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	499	446	183	41	1588	260	546	498	38	153	138	191
Future Volume (vph)	499	446	183	41	1588	260	546	498	38	153	138	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	2		1	1		0	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.91	0.91	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Frt			0.850		0.979				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	4979	0	3433	3539	1583	3433	3539	1583
Flt Permitted	0.222			0.476			0.657			0.436		
Satd. Flow (perm)	802	3539	1583	887	4979	0	2374	3539	1583	1576	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			199		83				41			36
Link Speed (mph)		45			45			35			40	
Link Distance (ft)		150			1130			3000			147	
Travel Time (s)		2.3			17.1			58.4			2.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	542	485	199	45	1726	283	593	541	41	166	150	208
Shared Lane Traffic (%)												
Lane Group Flow (vph)	542	485	199	45	2009	0	593	541	41	166	150	208
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												

Baseline

Synchro 9 Light Report
Page 1

Lanes, Volumes, Timings
1: Carothers Parkway & Murfreesboro Road

9/1/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effect Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40		0.40	0.40	0.40	0.40	0.40	0.40
v/c Ratio	1.69	0.34	0.26	0.13	0.98		0.62	0.38	0.06	0.26	0.11	0.32
Control Delay	345.0	10.3	2.9	8.7	23.6		14.4	10.6	3.8	10.5	8.8	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	345.0	10.3	2.9	8.7	23.6		14.4	10.6	3.8	10.5	8.8	9.3
LOS	F	B	A	A	C		B	B	A	B	A	A
Approach Delay	157.0				23.2		12.3				9.5	
Approach LOS	F				C		B				A	
90th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
90th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
70th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
70th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
50th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
50th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
30th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
30th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
10th %ile Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	18.0	18.0	18.0
10th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
Stops (vph)	418	283	25	26	1520		409	322	10	96	79	103
Fuel Used(gal)	41	5	1	1	41		17	14	1	1	1	2
CO Emissions (g/hr)	2847	341	42	49	2889		1153	998	65	99	81	109
NOx Emissions (g/hr)	554	66	8	9	562		224	194	13	19	16	21
VOC Emissions (g/hr)	660	79	10	11	669		267	231	15	23	19	25
Dilemma Vehicles (#)	0	49	0	0	161		0	55	0	0	15	0
Queue Length 50th (ft)	~112	43	0	9	203		59	48	0	13	12	28
Queue Length 95th (ft)	#187	70	27	m10	m#234		100	78	12	30	24	64
Internal Link Dist (ft)	70				1050		2920				67	
Turn Bay Length (ft)												
Base Capacity (vph)	320	1415	752	354	2041		949	1415	657	630	1415	654

Baseline

Synchro 9 Light Report
Page 2

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

9/1/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.69	0.34	0.26	0.13	0.98		0.62	0.38	0.06	0.26	0.11	0.32

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.69

Intersection Signal Delay: 52.1

Intersection LOS: D

Intersection Capacity Utilization 85.5%

ICU Level of Service E

Analysis Period (min) 15

Description: Hwy 96 and Carothers Pkwy

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

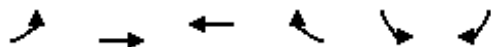
Splits and Phases: 1: Carothers Parkway & Murfreesboro Road

			
Ø2 (R)			Ø4
22.5 s			22.5 s
			
Ø6 (R)			Ø8
22.5 s			22.5 s

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

9/1/2016

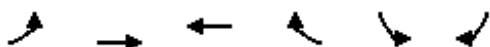


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	68	453	2281	47	29	175
Future Volume (vph)	68	453	2281	47	29	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.997			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3529	0	1770	1583
Flt Permitted	0.061				0.950	
Satd. Flow (perm)	114	3539	3529	0	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			5			8
Link Speed (mph)		45	45		40	
Link Distance (ft)		1130	160		355	
Travel Time (s)		17.1	2.4		6.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	74	492	2479	51	32	190
Shared Lane Traffic (%)						
Lane Group Flow (vph)	74	492	2530	0	32	190
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

9/1/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5
Total Split (s)	67.0	67.0	67.0		23.0	23.0
Total Split (%)	74.4%	74.4%	74.4%		25.6%	25.6%
Maximum Green (s)	62.5	62.5	62.5		18.5	18.5
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	None		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effect Green (s)	66.1	66.1	66.1		14.9	14.9
Actuated g/C Ratio	0.73	0.73	0.73		0.17	0.17
v/c Ratio	0.89	0.19	0.98		0.11	0.71
Control Delay	95.3	2.7	14.9		31.0	48.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	95.3	2.7	14.9		31.0	48.1
LOS	F	A	B		C	D
Approach Delay		14.8	14.9		45.7	
Approach LOS		B	B		D	
90th %ile Green (s)	62.5	62.5	62.5		18.5	18.5
90th %ile Term Code	Max	Max	Max		Coord	Coord
70th %ile Green (s)	62.9	62.9	62.9		18.1	18.1
70th %ile Term Code	Max	Max	Max		Coord	Coord
50th %ile Green (s)	65.4	65.4	65.4		15.6	15.6
50th %ile Term Code	Max	Max	Max		Coord	Coord
30th %ile Green (s)	68.0	68.0	68.0		13.0	13.0
30th %ile Term Code	Hold	Hold	Max		Coord	Coord
10th %ile Green (s)	71.7	71.7	71.7		9.3	9.3
10th %ile Term Code	Hold	Hold	Max		Coord	Coord
Stops (vph)	49	72	1070		24	155
Fuel Used(gal)	2	4	23		0	4
CO Emissions (g/hr)	170	312	1593		34	256
NOx Emissions (g/hr)	33	61	310		7	50
VOC Emissions (g/hr)	39	72	369		8	59
Dilemma Vehicles (#)	0	18	38		0	0
Queue Length 50th (ft)	33	23	268		15	98
Queue Length 95th (ft)	#131	35	m#823		39	163
Internal Link Dist (ft)		1050	80		275	
Turn Bay Length (ft)						
Base Capacity (vph)	83	2599	2593		363	331

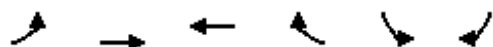
Baseline

Synchro 9 Light Report
Page 5

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

9/1/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.89	0.19	0.98		0.09	0.57

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 16.9

Intersection LOS: B

Intersection Capacity Utilization 82.9%

ICU Level of Service E

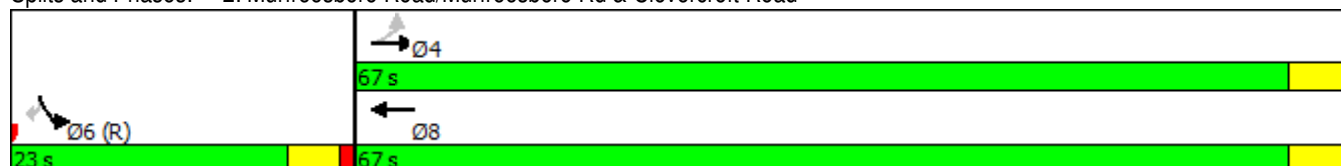
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road



Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

9/1/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↗
Traffic Volume (vph)	268	200	50	1411	784	78
Future Volume (vph)	268	200	50	1411	784	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.936					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3313	0	1770	3539	1770	1583
Flt Permitted			0.408		0.950	
Satd. Flow (perm)	3313	0	760	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	217					84
Link Speed (mph)	45			45	50	
Link Distance (ft)	1550			63	683	
Travel Time (s)	23.5			1.0	9.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	291	217	54	1534	852	85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	508	0	54	1534	852	85
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Detector Phase	4		8	8	2	2
Switch Phase						

Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

9/1/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	42.3		42.3	42.3	47.7	47.7
Total Split (%)	47.0%		47.0%	47.0%	53.0%	53.0%
Maximum Green (s)	37.8		37.8	37.8	43.2	43.2
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0		0.0	0.0	0.0	0.0
Recall Mode	None		None	None	C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effect Green (s)	37.8		37.8	37.8	43.2	43.2
Actuated g/C Ratio	0.42		0.42	0.42	0.48	0.48
v/c Ratio	0.33		0.17	1.03	1.00	0.11
Control Delay	18.1		18.2	59.2	56.9	3.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	18.1		18.2	59.2	56.9	3.5
LOS	B		B	E	E	A
Approach Delay	18.1			57.8	52.1	
Approach LOS	B			E	D	
90th %ile Green (s)	37.8		37.8	37.8	43.2	43.2
90th %ile Term Code	Hold		Max	Max	Coord	Coord
70th %ile Green (s)	37.8		37.8	37.8	43.2	43.2
70th %ile Term Code	Hold		Max	Max	Coord	Coord
50th %ile Green (s)	37.8		37.8	37.8	43.2	43.2
50th %ile Term Code	Hold		Max	Max	Coord	Coord
30th %ile Green (s)	37.8		37.8	37.8	43.2	43.2
30th %ile Term Code	Hold		Max	Max	Coord	Coord
10th %ile Green (s)	37.8		37.8	37.8	43.2	43.2
10th %ile Term Code	Hold		Max	Max	Coord	Coord
Stops (vph)	366		31	1220	655	10
Fuel Used(gal)	11		1	33	23	1
CO Emissions (g/hr)	767		41	2290	1575	38
NOx Emissions (g/hr)	149		8	446	306	7
VOC Emissions (g/hr)	178		10	531	365	9
Dilemma Vehicles (#)	13		0	73	0	0
Queue Length 50th (ft)	61		19	~497	~468	0
Queue Length 95th (ft)	102		44	#631	#735	24
Internal Link Dist (ft)	1470			1	603	
Turn Bay Length (ft)						
Base Capacity (vph)	1517		319	1486	849	803

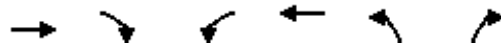
Baseline

Synchro 9 Light Report
Page 10

Lanes, Volumes, Timings

5: Arno Road & Murfreesboro Rd

9/1/2016



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.33		0.17	1.03	1.00	0.11

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 68 (76%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 49.4

Intersection LOS: D

Intersection Capacity Utilization 89.9%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: Arno Road & Murfreesboro Rd

 Ø2 (R)	 Ø4
47.7 s	42.3 s
	 Ø8
	42.3 s

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

9/1/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	257	1512	408	34	689	169	335	209	72	935	589	463
Future Volume (vph)	257	1512	408	34	689	169	335	209	72	935	589	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	2		1	1		0	2		1	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.91	0.91	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Frt			0.850		0.970				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	1770	4933	0	3433	3539	1583	3433	3539	1583
Flt Permitted	0.239			0.055			0.324			0.599		
Satd. Flow (perm)	864	3539	1583	102	4933	0	1171	3539	1583	2165	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			173		54				11			142
Link Speed (mph)		45			45			35			40	
Link Distance (ft)		150			1130			3000			147	
Travel Time (s)		2.3			17.1			58.4			2.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	279	1643	443	37	749	184	364	227	78	1016	640	503
Shared Lane Traffic (%)												
Lane Group Flow (vph)	279	1643	443	37	933	0	364	227	78	1016	640	503
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												

Baseline

Synchro 9 Light Report
Page 1

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

9/1/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	77.0	77.0	77.0	77.0	77.0		73.0	73.0	73.0	73.0	73.0	73.0
Total Split (%)	51.3%	51.3%	51.3%	51.3%	51.3%		48.7%	48.7%	48.7%	48.7%	48.7%	48.7%
Maximum Green (s)	72.5	72.5	72.5	72.5	72.5		68.5	68.5	68.5	68.5	68.5	68.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effect Green (s)	72.5	72.5	72.5	72.5	72.5		68.5	68.5	68.5	68.5	68.5	68.5
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.48		0.46	0.46	0.46	0.46	0.46	0.46
v/c Ratio	0.67	0.96	0.52	0.76	0.39		0.68	0.14	0.11	1.03	0.40	0.63
Control Delay	39.2	51.7	17.8	95.9	14.3		40.1	24.0	20.4	75.9	28.0	25.6
Queue Delay	0.0	5.5	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	57.2	17.8	95.9	14.3		40.1	24.0	20.4	75.9	28.0	25.6
LOS	D	E	B	F	B		D	C	C	E	C	C
Approach Delay		47.7			17.4			32.3			50.0	
Approach LOS		D			B			C			D	
90th %ile Green (s)	72.5	72.5	72.5	72.5	72.5		68.5	68.5	68.5	68.5	68.5	68.5
90th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
70th %ile Green (s)	72.5	72.5	72.5	72.5	72.5		68.5	68.5	68.5	68.5	68.5	68.5
70th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
50th %ile Green (s)	72.5	72.5	72.5	72.5	72.5		68.5	68.5	68.5	68.5	68.5	68.5
50th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord	Coord	Coord	Coord	Coord
30th %ile Green (s)	72.5	72.5	72.5	72.5	72.5		68.5	68.5	68.5	68.5	68.5	68.5
30th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
10th %ile Green (s)	72.5	72.5	72.5	72.5	72.5		68.5	68.5	68.5	68.5	68.5	68.5
10th %ile Term Code	Max	Max	Max	Hold	Hold		Coord	Coord	Coord	Coord	Coord	Coord
Stops (vph)	199	1351	173	25	326		263	117	34	822	379	260
Fuel Used(gal)	5	34	4	1	13		12	6	2	23	8	5
CO Emissions (g/hr)	334	2390	282	86	898		837	449	148	1640	536	380
NOx Emissions (g/hr)	65	465	55	17	175		163	87	29	319	104	74
VOC Emissions (g/hr)	77	554	65	20	208		194	104	34	380	124	88
Dilemma Vehicles (#)	0	49	0	0	18		0	7	0	0	20	0
Queue Length 50th (ft)	105	802	176	17	124		142	66	37	~545	215	269
Queue Length 95th (ft)	168	#980	278	#108	156		209	94	70	#681	267	397
Internal Link Dist (ft)		70			1050			2920			67	
Turn Bay Length (ft)												
Base Capacity (vph)	417	1710	854	49	2412		534	1616	728	988	1616	800

Baseline

Synchro 9 Light Report
Page 2

Lanes, Volumes, Timings

1: Carothers Parkway & Murfreesboro Road

9/1/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	61	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.67	1.00	0.52	0.76	0.39		0.68	0.14	0.11	1.03	0.40	0.63

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 42.1

Intersection LOS: D

Intersection Capacity Utilization 93.4%

ICU Level of Service F

Analysis Period (min) 15

Description: Hwy 96 and Carothers Pkwy

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

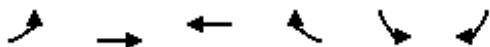
Splits and Phases: 1: Carothers Parkway & Murfreesboro Road

 Ø2 (R)	 Ø4
73 s	77 s
 Ø6 (R)	 Ø8
73 s	77 s

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

9/1/2016

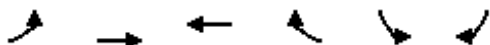


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	145	2748	748	47	113	121
Future Volume (vph)	145	2748	748	47	113	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.991			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3507	0	1770	1583
Flt Permitted	0.318				0.950	
Satd. Flow (perm)	592	3539	3507	0	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			17			132
Link Speed (mph)		45	45		40	
Link Distance (ft)		1130	160		355	
Travel Time (s)		17.1	2.4		6.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	158	2987	813	51	123	132
Shared Lane Traffic (%)						
Lane Group Flow (vph)	158	2987	864	0	123	132
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Detector Phase	4	4	8		6	6
Switch Phase						

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

9/1/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	22.5	22.5	22.5		22.5	22.5
Total Split (s)	127.0	127.0	127.0		23.0	23.0
Total Split (%)	84.7%	84.7%	84.7%		15.3%	15.3%
Maximum Green (s)	122.5	122.5	122.5		18.5	18.5
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	None		C-Min	C-Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
Act Effect Green (s)	125.9	125.9	125.9		15.1	15.1
Actuated g/C Ratio	0.84	0.84	0.84		0.10	0.10
v/c Ratio	0.32	1.01	0.29		0.69	0.48
Control Delay	3.1	21.9	1.8		84.7	15.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	3.1	21.9	1.8		84.7	15.0
LOS	A	C	A		F	B
Approach Delay		21.0	1.8		48.6	
Approach LOS		C	A		D	
90th %ile Green (s)	122.5	122.5	122.5		18.5	18.5
90th %ile Term Code	Max	Max	Hold		Coord	Coord
70th %ile Green (s)	122.9	122.9	122.9		18.1	18.1
70th %ile Term Code	Max	Max	Hold		Coord	Coord
50th %ile Green (s)	125.3	125.3	125.3		15.7	15.7
50th %ile Term Code	Max	Max	Hold		Coord	Coord
30th %ile Green (s)	127.7	127.7	127.7		13.3	13.3
30th %ile Term Code	Max	Max	Hold		Coord	Coord
10th %ile Green (s)	131.1	131.1	131.1		9.9	9.9
10th %ile Term Code	Max	Max	Hold		Coord	Coord
Stops (vph)	25	1176	87		108	17
Fuel Used(gal)	1	47	2		3	1
CO Emissions (g/hr)	103	3289	153		229	58
NOx Emissions (g/hr)	20	640	30		45	11
VOC Emissions (g/hr)	24	762	36		53	13
Dilemma Vehicles (#)	0	52	14		0	0
Queue Length 50th (ft)	20	~1627	43		118	0
Queue Length 95th (ft)	m28	m#1681	m55		187	65
Internal Link Dist (ft)		1050	80		275	
Turn Bay Length (ft)						
Base Capacity (vph)	496	2970	2946		218	310

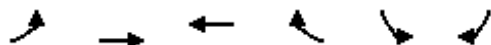
Baseline

Synchro 9 Light Report
Page 5

Lanes, Volumes, Timings

2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road

9/1/2016



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.32	1.01	0.29		0.56	0.43

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 16 (11%), Referenced to phase 2: and 6:SBL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 18.7

Intersection LOS: B

Intersection Capacity Utilization 89.7%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

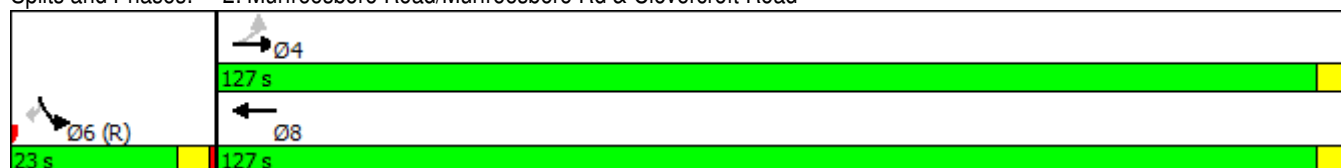
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Murfreesboro Road/Murfreesboro Rd & Clovercroft Road



Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

9/1/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↙	↗
Traffic Volume (vph)	1284	1449	72	442	293	34
Future Volume (vph)	1284	1449	72	442	293	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.920					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3256	0	1770	3539	1770	1583
Flt Permitted			0.035		0.950	
Satd. Flow (perm)	3256	0	65	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	589					37
Link Speed (mph)	45			45	50	
Link Distance (ft)	1550			63	683	
Travel Time (s)	23.5			1.0	9.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1396	1575	78	480	318	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2971	0	78	480	318	37
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	1
Detector Template	Thru		Left	Thru	Left	Right
Leading Detector (ft)	100		20	100	20	20
Trailing Detector (ft)	0		0	0	0	0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Detector Phase	4		8	8	2	2
Switch Phase						

Lanes, Volumes, Timings
5: Arno Road & Murfreesboro Rd

9/1/2016

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	120.0		120.0	120.0	30.0	30.0
Total Split (%)	80.0%		80.0%	80.0%	20.0%	20.0%
Maximum Green (s)	115.5		115.5	115.5	25.5	25.5
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0		3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0		0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0		0.0	0.0	0.0	0.0
Recall Mode	None		None	None	C-Min	C-Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effect Green (s)	115.5		115.5	115.5	25.5	25.5
Actuated g/C Ratio	0.77		0.77	0.77	0.17	0.17
v/c Ratio	1.15dr		1.56	0.18	1.06	0.12
Control Delay	67.4		351.2	4.8	126.4	16.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	67.4		351.2	4.8	126.4	16.1
LOS	E		F	A	F	B
Approach Delay	67.4			53.2	114.9	
Approach LOS	E			D	F	
90th %ile Green (s)	115.5		115.5	115.5	25.5	25.5
90th %ile Term Code	Max		Max	Max	Coord	Coord
70th %ile Green (s)	115.5		115.5	115.5	25.5	25.5
70th %ile Term Code	Max		Max	Max	Coord	Coord
50th %ile Green (s)	115.5		115.5	115.5	25.5	25.5
50th %ile Term Code	Max		Max	Max	Coord	Coord
30th %ile Green (s)	115.5		115.5	115.5	25.5	25.5
30th %ile Term Code	Max		Max	Max	Coord	Coord
10th %ile Green (s)	115.5		115.5	115.5	25.5	25.5
10th %ile Term Code	Max		Max	Max	Coord	Coord
Stops (vph)	1618		42	108	252	8
Fuel Used(gal)	85		6	2	13	0
CO Emissions (g/hr)	5951		398	136	886	27
NOx Emissions (g/hr)	1158		78	27	172	5
VOC Emissions (g/hr)	1379		92	32	205	6
Dilemma Vehicles (#)	46		0	15	0	0
Queue Length 50th (ft)	~1686		~58	57	~340	0
Queue Length 95th (ft)	m#1671		#173	74	#539	34
Internal Link Dist (ft)	1470			1	603	
Turn Bay Length (ft)						
Base Capacity (vph)	2642		50	2725	300	299

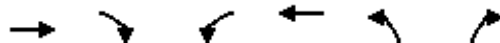
Baseline

Synchro 9 Light Report
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Lanes, Volumes, Timings

5: Arno Road & Murfreesboro Rd

9/1/2016



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.12		1.56	0.18	1.06	0.12

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 48 (32%), Referenced to phase 2:NBL and 6:, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.56

Intersection Signal Delay: 69.7

Intersection LOS: E

Intersection Capacity Utilization 105.8%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

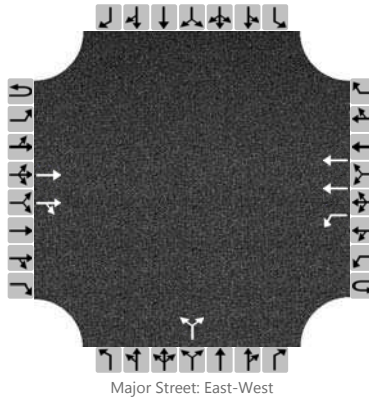
Splits and Phases: 5: Arno Road & Murfreesboro Rd

Ø2 (R)	Ø4
30 s	120 s
	Ø8
	120 s

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Hwy 96E and Cross Creek
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Cross Creek Drive
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	0	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			474	8		0	2289			39		2				
Percent Heavy Vehicles						0				0		0				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

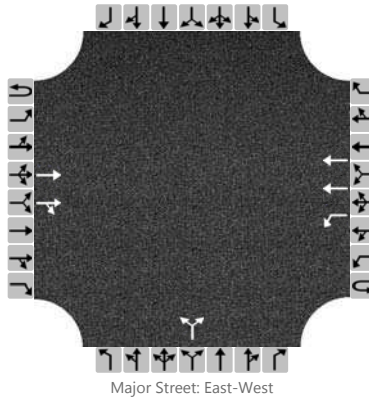
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)											43					
Capacity						1068					158					
v/c Ratio											0.27					
95% Queue Length											1.0					
Control Delay (s/veh)						8.4					36.1					
Level of Service (LOS)						A					E					
Approach Delay (s/veh)									36.1							
Approach LOS									E							

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Hwy 96E and Cross Creek
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Cross Creek Drive
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	2	0	0	1	2	0		0	0	0		0	0	0
Configuration			T	TR		L	T				LR					
Volume (veh/h)			2824	37		0	780			15		0				
Percent Heavy Vehicles						0				0		0				
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

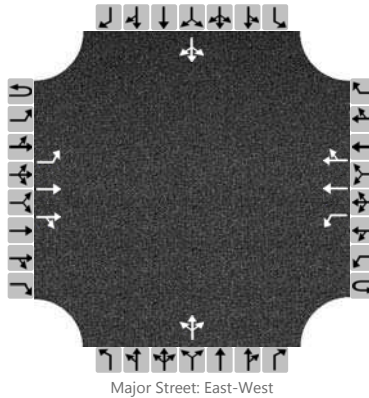
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)											15					
Capacity						126					15					
v/c Ratio											1.02					
95% Queue Length											2.4					
Control Delay (s/veh)						33.5					588.8					
Level of Service (LOS)						D					F					
Approach Delay (s/veh)									588.8							
Approach LOS									F							

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Highway 96E and Ridgeway
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Chester Stevens/Ridgeway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)		9	449	18		7	2167	23		60	0	15		12	0	62
Percent Heavy Vehicles		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

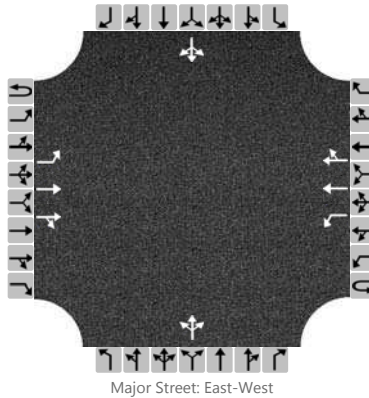
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		9				7					76				75	
Capacity		236				1097					141				122	
v/c Ratio		0.04				0.01					0.54				0.61	
95% Queue Length		0.1				0.0					2.7				3.1	
Control Delay (s/veh)		20.9				8.3					57.3				72.6	
Level of Service (LOS)		C				A					F				F	
Approach Delay (s/veh)	0.4				0.0				57.3				72.6			
Approach LOS	A				A				F				F			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Highway 96E and Ridgeway
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	Highway 96E
Analysis Year	2015	North/South Street	Chester Stevens/Ridgeway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.98
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	0
Configuration		L	T	TR		L	T	TR			LTR				LTR	
Volume (veh/h)		45	2725	54		15	720	10		34	0	9		4	0	26
Percent Heavy Vehicles		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Left Only															
Median Storage	1															

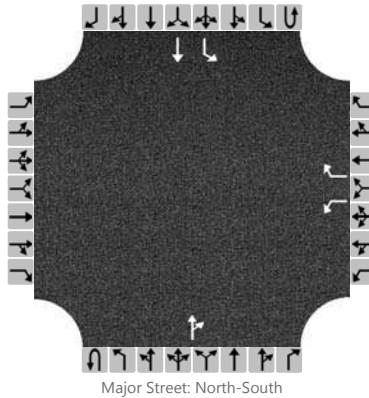
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		46				15					44				31	
Capacity		872				136					17				328	
v/c Ratio		0.05				0.11					2.59				0.09	
95% Queue Length		0.2				0.4					6.1				0.3	
Control Delay (s/veh)		9.4				34.6					1186.2				17.1	
Level of Service (LOS)		A				D					F				C	
Approach Delay (s/veh)	0.1				0.7				1186.2				17.1			
Approach LOS	A				A				F				C			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Carothers and S. Carother
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Carothers Parkway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.88
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	0
Configuration						L		R				TR		L	T	
Volume (veh/h)						37		272			665	30		139	322	
Percent Heavy Vehicles						0		0						0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

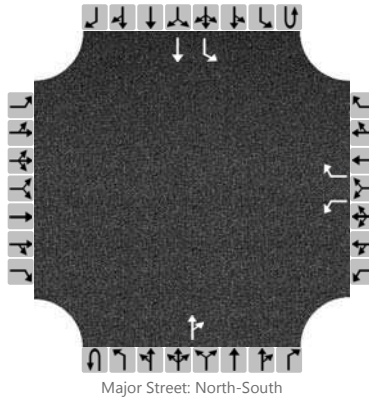
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						42		309						158		
Capacity						117		397						839		
v/c Ratio						0.36		0.78						0.19		
95% Queue Length						1.4		6.6						0.7		
Control Delay (s/veh)						51.8		39.4						10.3		
Level of Service (LOS)						F		E						B		
Approach Delay (s/veh)					40.9								3.1			
Approach LOS					E								A			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	Carothers and S. Carother
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Carothers Parkway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.91
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	0
Configuration						L		R				TR		L	T	
Volume (veh/h)						58		212			454	63		295	649	
Percent Heavy Vehicles						0		0						0		
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

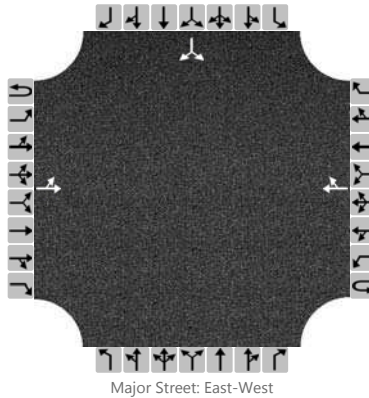
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)						64		233						324		
Capacity						53		550						1014		
v/c Ratio						1.21		0.42						0.32		
95% Queue Length						5.6		2.1						1.4		
Control Delay (s/veh)						318.9		16.3						10.2		
Level of Service (LOS)						F		C						B		
Approach Delay (s/veh)					81.5								3.2			
Approach LOS					F								A			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	S. Carothers and Project
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Western Project Access
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.80
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration		LT						TR							LR	
Volume (veh/h)		6	163				292	3						8		17
Percent Heavy Vehicles		0												0		0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

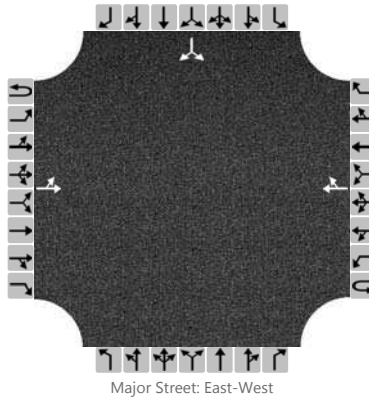
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		212													31	
Capacity		1201													569	
v/c Ratio		0.18													0.05	
95% Queue Length		0.0													0.2	
Control Delay (s/veh)		8.0													11.7	
Level of Service (LOS)		A													B	
Approach Delay (s/veh)	0.4												11.7			
Approach LOS	A												B			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	S. Carothers and Project
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Western Project Access
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.80
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration		LT						TR							LR	
Volume (veh/h)		18	340				259	9						5		11
Percent Heavy Vehicles		0												0		0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

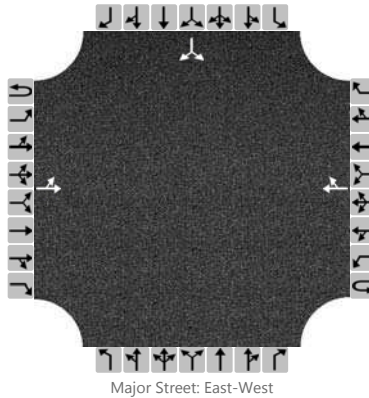
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		447													20	
Capacity		1236													507	
v/c Ratio		0.36													0.04	
95% Queue Length		0.1													0.1	
Control Delay (s/veh)		8.0													12.4	
Level of Service (LOS)		A													B	
Approach Delay (s/veh)	0.6												12.4			
Approach LOS	A												B			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	S. Carothers and Project
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Main Project Access
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.80
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration		LT						TR							LR	
Volume (veh/h)		36	135				186	11						34		109
Percent Heavy Vehicles		0												0		0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

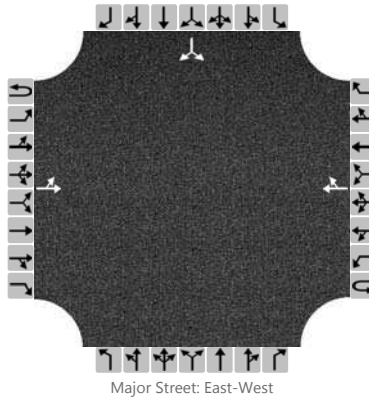
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		214													178	
Capacity		1332													690	
v/c Ratio		0.16													0.26	
95% Queue Length		0.1													1.0	
Control Delay (s/veh)		7.8													12.0	
Level of Service (LOS)		A													B	
Approach Delay (s/veh)	1.9												12.0			
Approach LOS	A												B			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	S. Carothers and Project
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Main Project Access
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.80
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration		LT						TR							LR	
Volume (veh/h)		118	227				199	36						21		69
Percent Heavy Vehicles		0												0		0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

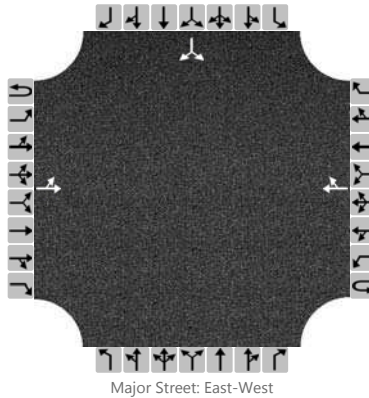
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		432													112	
Capacity		1279													522	
v/c Ratio		0.34													0.21	
95% Queue Length		0.4													0.8	
Control Delay (s/veh)		8.2													13.8	
Level of Service (LOS)		A													B	
Approach Delay (s/veh)	3.5												13.8			
Approach LOS	A												B			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	S. Carothers and Project
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Main Project Access
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.80
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration		LT						TR							LR	
Volume (veh/h)		36	150				231	11						34		109
Percent Heavy Vehicles		0												0		0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

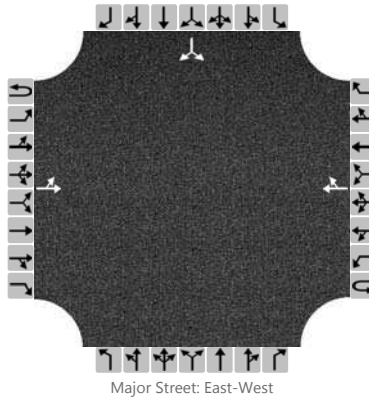
Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		233													178	
Capacity		1270													632	
v/c Ratio		0.18													0.28	
95% Queue Length		0.1													1.2	
Control Delay (s/veh)		7.9													12.9	
Level of Service (LOS)		A													B	
Approach Delay (s/veh)	1.8												12.9			
Approach LOS	A												B			

HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	FTG	Intersection	S. Carothers and Project
Agency/Co.	FTG	Jurisdiction	Franklin, TN
Date Performed	Aug 2016	East/West Street	S. Carothers Road
Analysis Year	2016	North/South Street	Main Project Access
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.80
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	10647 (Total)		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	0	0
Configuration		LT						TR							LR	
Volume (veh/h)		118	277				228	36						21		69
Percent Heavy Vehicles		0												0		0
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		494													112	
Capacity		1241													471	
v/c Ratio		0.40													0.24	
95% Queue Length		0.4													0.9	
Control Delay (s/veh)		8.3													15.0	
Level of Service (LOS)		A													C	
Approach Delay (s/veh)	3.3												15.0			
Approach LOS	A												C			

**APPENDIX C
TRAFFIC SIGNAL WARRANTS**

The Federal Highway Administration has published the Manual on Uniform Traffic Control Devices 2010 (MUTCD 2010), which includes eight traffic signal warrants that help traffic engineering professionals to identify when a traffic signal installation is justified at a particular location. These eight warrants include minimum conditions that are compared to existing or projected traffic conditions, and typically, traffic signals should not be installed unless at least one of the MUTCD warrants is met. Of the eight total signal warrants, the following are relevant to the intersection considered as part of this study:

Warrant 1, Eight-Hour Vehicular Volume

The Minimum Vehicular Volume, Condition A, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing a traffic signal. The Interruption of Continuous Traffic, Condition B, is intended for application where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Standard: The need for a traffic control signal shall be considered if an engineering study finds that one of the following conditions exists for each of any eight hours of an average day:

- A. The vehicles per hour given in both of the 100% columns of Condition A in Table C1 exist on the major street and on the higher volume minor-street approaches, respectively, to the intersection, or
- B. The vehicles per hour given in both of the 100% columns of Condition B in Table C1 exist on the major street and on the higher volume minor-street approaches, respectively, to the intersection.

In applying each condition, the major street and minor street volumes shall be for the same eight hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these eight hours.

Option: If the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 70% columns in Table C1 may be used in place of the 100% columns.

Standard: The need for a traffic control signal shall be considered if an engineering study finds that both of the following conditions exists for each of any eight hours of an average day:

- A. The vehicles per hour given in both of the 80% columns of Condition A in Table C1 exist on the major street and on the higher volume minor-street approaches, respectively, to the intersection, and
- B. The vehicles per hour given in both of the 80% columns of Condition B in Table C1 exist on the major street and on the higher volume minor-street approaches, respectively, to the intersection.

These major street and minor street volumes shall be for the same eight hours for each condition; however, the eight hours satisfied in Condition A shall not be required to be the same eight hours satisfied in Condition B. On the minor street, the higher volume shall not be required to be on the same approach during each of these eight hours.

TABLE C1. WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

CONDITION A – MINIMUM VEHICULAR VOLUME							
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)			Vehicles per hour on higher-volume minor street approach (one direction only)		
Major Street	Minor Street	100%	80%	70%	100%	80%	70%
1 lane	1 lane	500	400	350	150	120	105
2 or more lanes	1 lane	600	480	420	150	120	105
2 or more lanes	2 or more lanes	600	480	420	200	160	140
1 lane	2 or more lanes	500	400	350	200	160	140

CONDITION B – INTERRUPTION OF CONTINUOUS TRAFFIC							
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)			Vehicles per hour on higher-volume minor street approach (one direction only)		
Major Street	Minor Street	100%	80%	70%	100%	80%	70%
1 lane	1 lane	750	600	525	75	60	53
2 or more lanes	1 lane	900	720	630	75	60	53
2 or more lanes	2 or more lanes	900	720	630	100	80	70
1 lane	2 or more lanes	750	600	525	100	80	70

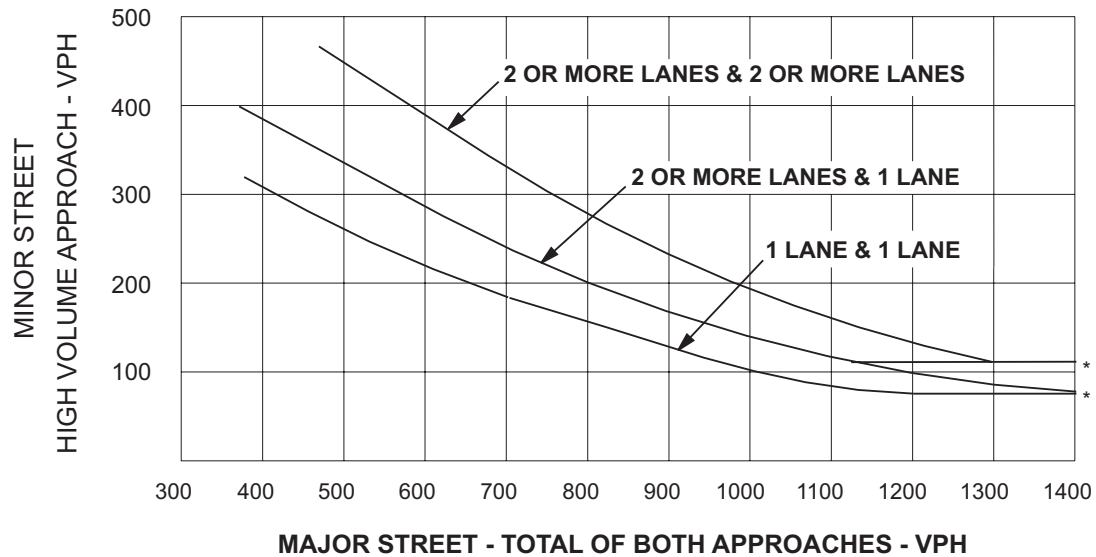
Warrant 2, Four-Hour Vehicular Volume

The Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic signal.

Standard: The need for a traffic control signal shall be considered if an engineering study finds that for each of any four hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) all fall above the applicable curve in Figure C1-Graph A for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these four hours.

Option: If the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, Figure C1-Graph B may be used in place of Figure C1-Graph A.

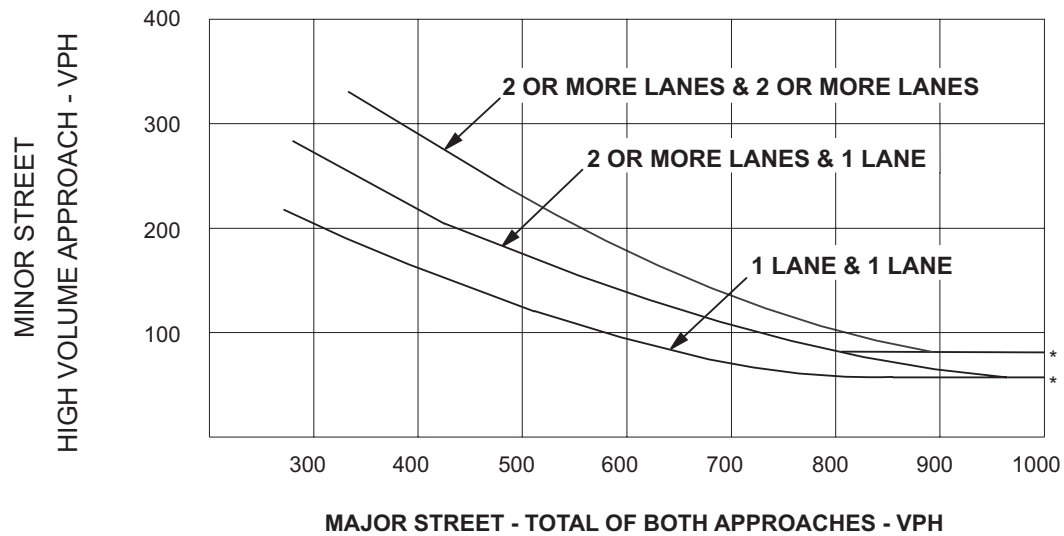
GRAPH A: FOUR HOUR VOLUME WARRANT



*NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

GRAPH B: FOUR HOUR VOLUME WARRANT

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

**APPENDIX D
INFORMATION ABOUT APPROVED PROJECTS
IN THE VICINITY OF THE PROJECT SITE**

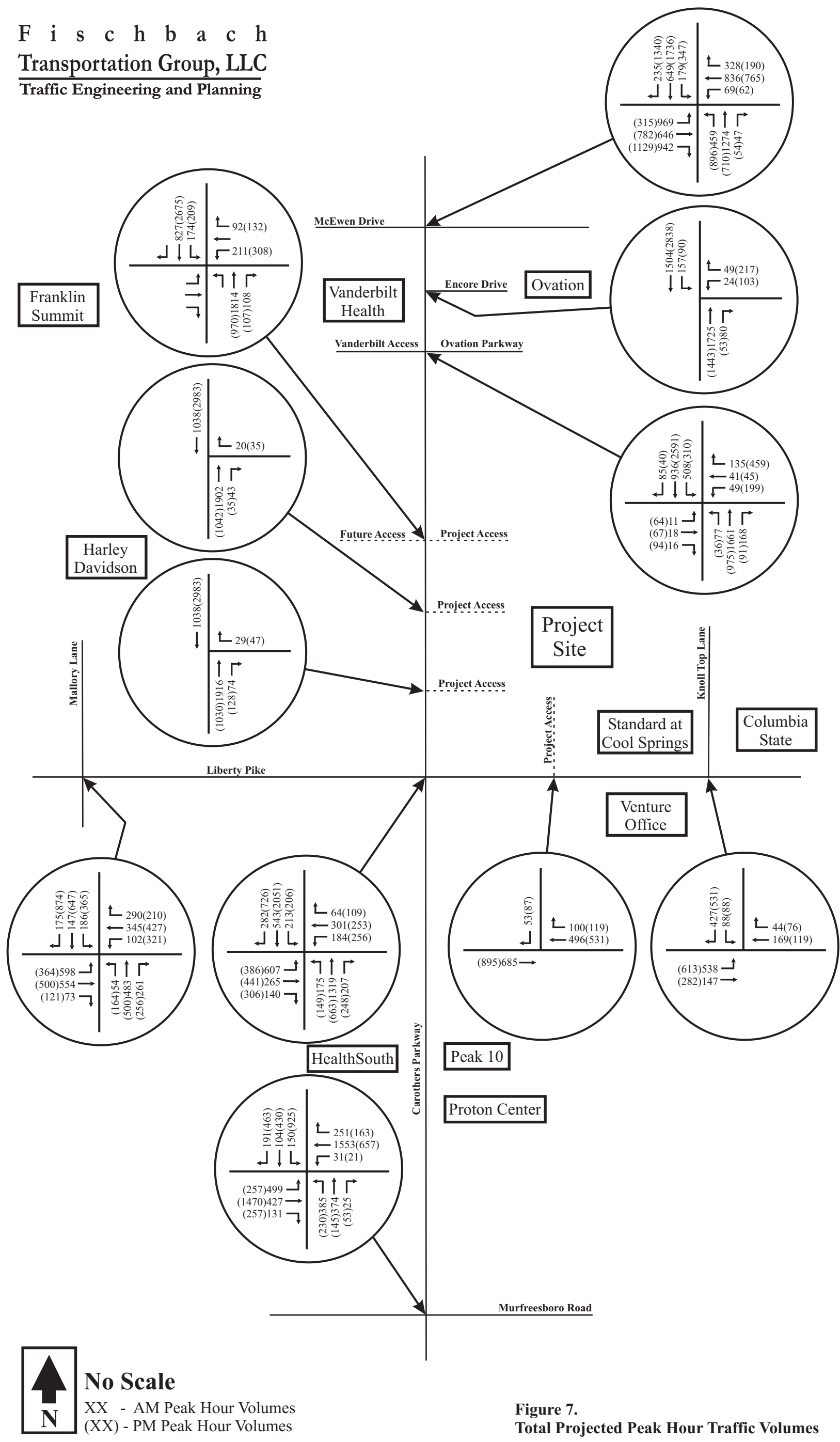
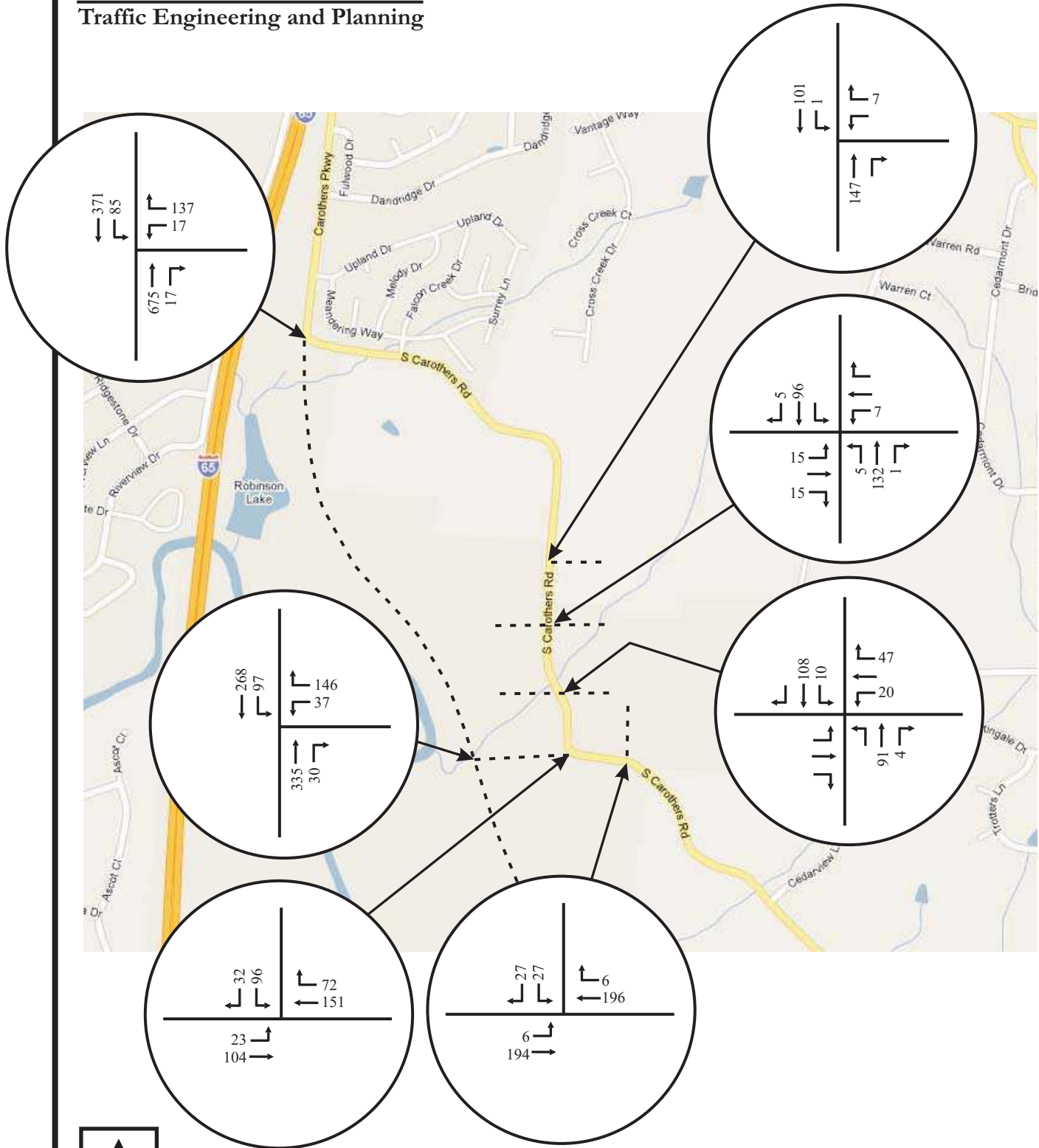


Figure 7.
Total Projected Peak Hour Traffic Volumes

F i s c h b a c h
Transportation Group, Inc.
 Traffic Engineering and Planning



No Scale

Figure 7A.
 Year 2016 AM Peak Hour
 Total Projected Peak Hour Traffic Volumes
 With Carothers Parkway

F i s c h b a c h
Transportation Group, Inc.
 Traffic Engineering and Planning

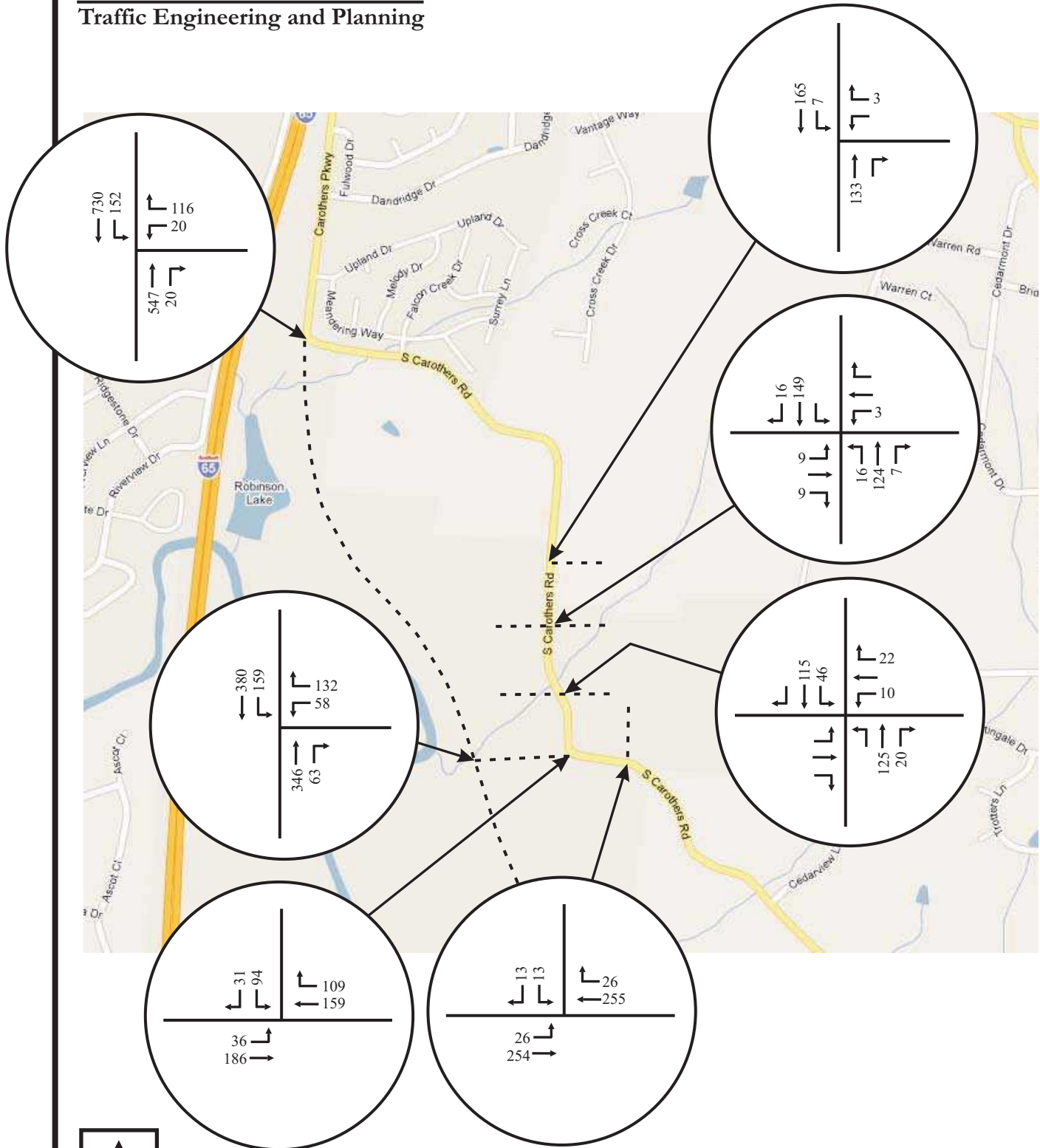
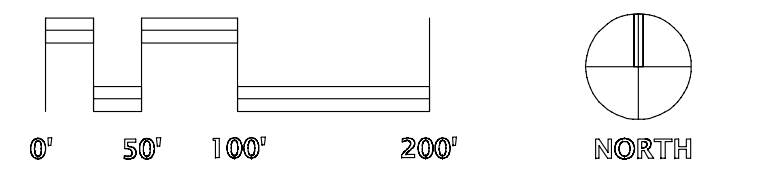
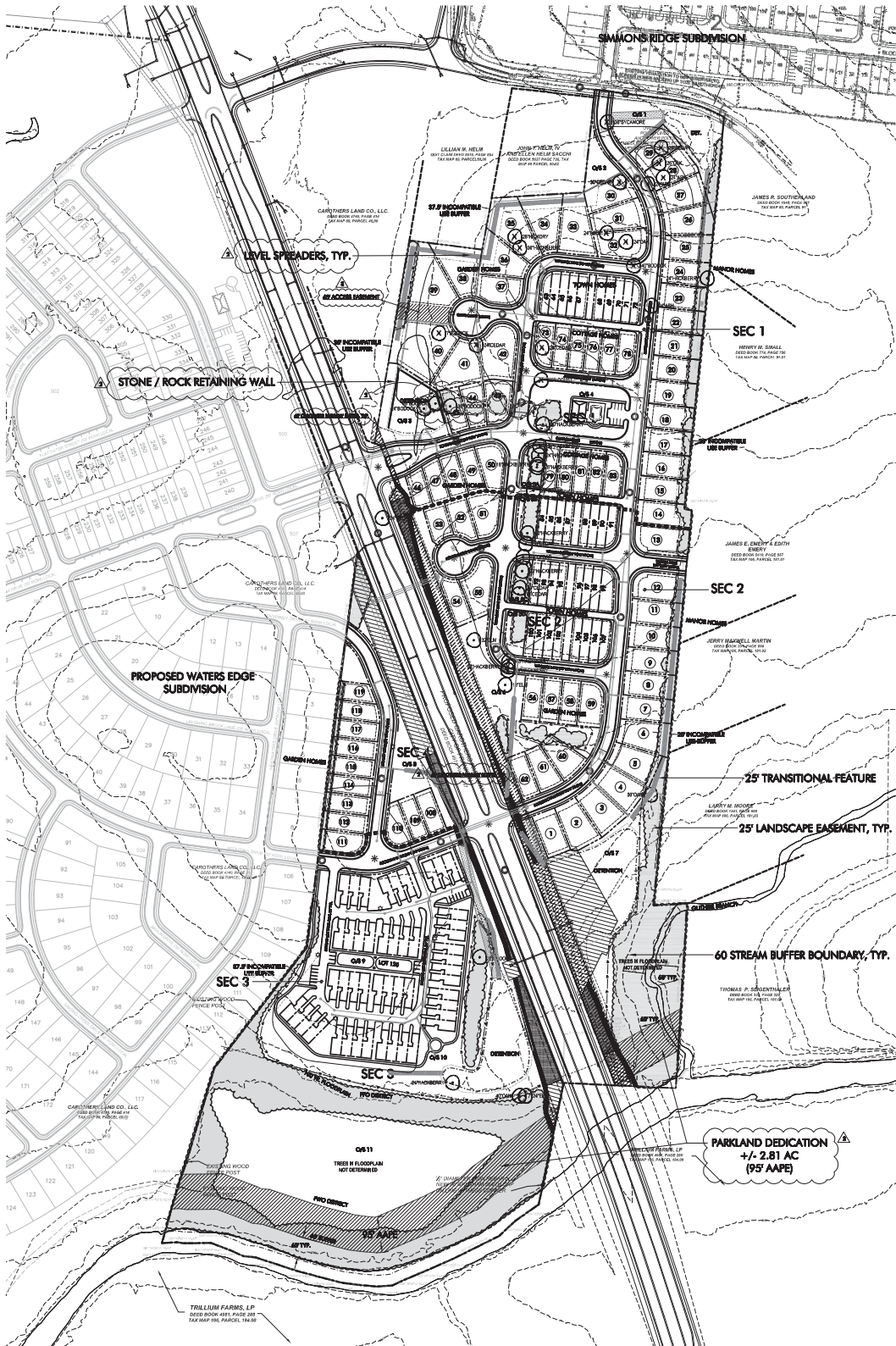


Figure 7C.
 Year 2016 PM Peak Hour
 Total Projected Peak Hour Traffic Volumes
 With Carothers Parkway





LEGEND:

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PARKLAND DEDICATION AREA
- CONNECTIVITY LINK
- CONNECTIVITY NODE
- 60' STREAM BUFFER
- SF SILT FENCE
- TP TREE PROTECTION FENCE
- PRESERVED TREE CANOPY
- STREET LIGHT

PROPOSED SOUTH CAROTHERS PKWY LEGEND:

- SLOPE EASEMENT
DEED BOOK 4971 PAGES 322-335
- TEMPORARY. CONSTRUCTION. EASEMENT
DEED BOOK 4971 PAGES 322-335
- PERMANENT DRAINAGE EASEMENT
DEED BOOK 4971 PAGES 335

- DEVELOPMENT PLAN NOTES:**
- BOUNDARY INFORMATION PROVIDED BY GRESHAM SMITH PARTNERS. TOPOGRAPHIC INFORMATION PROVIDED BY CITY OF FRANKLIN GIS DEPARTMENT.
 - THIS PROPERTY CAN BE REFERENCED AS TAX MAP 89 & 106, PARCELS 05001 & 18121.
 - THERE ARE NO HISTORICAL STRUCTURES ON THIS SITE.
 - THE PUD DEVELOPMENT PLAN WILL RESULT IN A TOTAL OF 168 PROPOSED UNITS. BASED ON AN AVERAGE OF 10 VEHICLE TRIPS PER DAY PER HOUSEHOLD UNIT, THIS WILL GENERATE A TOTAL OF 1,680 TOTAL VEHICLE TRIPS PER DAY.
 - ADEQUATE TURNING MOVEMENTS SHALL BE PROVIDED FOR UTILITY AND SERVICE VEHICLES. ALL STREETS SHALL MEET THE CITY OF FRANKLIN TRANSPORTATION AND STREET TECHNICAL STANDARDS.
 - INITIAL DISCUSSION WITH THE CITY OF FRANKLIN ENGINEERING INDICATES THERE IS ADEQUATE CAPACITY TO SERVE THE PROPOSED DEVELOPMENT WITH SEWER SERVICES.
 - ALL PUBLIC IMPROVEMENTS TO BE LOCATED WITHIN AN EASEMENT
 - THE APPLICANT WILL ENDEAVOR, TO THE EXTENT POSSIBLE, TO PRESERVE EXISTING SUITABLE TREES ALONG THE EDGES AND THE INTERIOR OF THE SITE. EXISTING TREES TO BE SAVED WILL BE FLAGGED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. DURING THE CONSTRUCTION PHASE, THREE PROTECTION FENCING SHALL BE INSTALLED NEAR THE DRIP LINE OF THE PRESERVED TREES. NO CONSTRUCTION ACTIVITY OR STORAGE SHALL OCCUR WITHIN THE TREE PROTECTION ZONES.
 - LIGHTING WILL BE PEDESTRIAN IN SCALE AND LOCATED TO ENSURE SAFE MOVEMENT OF PEDESTRIAN / VEHICLES AND FOR SECURITY PURPOSES WHILE ADHERING TO THE CITY OF FRANKLIN DESIGN STANDARDS. MIDDLE TENNESSEE ELECTRIC SHALL APPROVE STREET LIGHT STANDARDS. DIRECTIONAL LIGHTING WILL BE DESIGNED SO AS TO MINIMIZE GLARE AND REFLECTION ON ADJACENT PROPERTIES.
 - SIGNS WILL MEET THE REQUIREMENTS OF THE CITY OF FRANKLIN ZONING ORDINANCE, CHAPTER 8.7 SIGNS. SIGN CONTROLS WILL BE ESTABLISHED, FOR THE DEVELOPMENT, TO SAFELY FACILITATE PEDESTRIAN AND VEHICULAR MOVEMENT IN AN ATTRACTIVE AND EFFICIENT MANNER. SIGNAGE WILL BE COMPATIBLE WITH THE SURROUNDINGS, WILL BE APPROPRIATE TO RESIDENTIAL SCALE AND EXPRESS THE IDENTITY OF THE DEVELOPMENT.
 - WATER FACILITIES
WATER SERVICE WILL BE COORDINATED WITH THE CITY OF FRANKLIN TO PROVIDE ADEQUATE FLOW AND CAPACITY. ALL WATER MAINS SHALL BE LOCATED IN A 20' PUBLIC UTILITY EASEMENT.
 - SEWER FACILITIES - SEWER SERVICE WILL BE COORDINATED WITH THE CITY OF FRANKLIN TO PROVIDE ADEQUATE FLOW AND CAPACITY. ALL SEWER LINES SHALL BE LOCATED IN A 20' SANITARY SEWER EASEMENT.
 - A 25' TRANSITIONAL FEATURE HAS BEEN PROVIDED ON THE EASTERN BOUNDARY OF THE PROPERTY.
 - ALL FACILITIES SHALL BE DESIGNED TO MEET ALL CITY OF FRANKLIN ORDINANCE.
 - DEVELOPMENT STANDARDS WITHIN 500' OF THE SITE ARE CONVENTIONAL.
 - SIMMONS RIDGE IS A PLANNED DEVELOPMENT TO THE NORTH OF OUR PROJECT SITE. THERE IS ALSO A FUTURE PROPOSED DEVELOPMENT TO THE WEST OF PROJECT BOUNDARY. MEETINGS HAVE BEEN CONDUCTED WITH THE OWNER REPRESENTATIVES FOR THE ADJACENT PROPOSED DEVELOPMENTS TO COORDINATE ACCESS POINTS AND CONNECTIVITY BETWEEN THE PROPERTIES.
 - WATER, SEWER & REPURIFIED WATER FACILITIES
I) EXISTING FACILITIES
A) SANITARY SEWER SYSTEM
A) UTILITY DISTRICT JURISDICTION: CITY OF FRANKLIN
B) UTILITY DISTRICT ADDITIONAL FLOW IS 168 SFUE.
1 SFUE = 350 GALLONS/UNIT/DAY
SFUE - SINGLE FAMILY UNIT EQUIVALENT
A) UTILITY DISTRICT JURISDICTION: MILCROFTON
A) UTILITY DISTRICT JURISDICTION: ATMOS ENERGY
A) UTILITY DISTRICT JURISDICTION: MIDDLE TENNESSEE ELECTRIC MEMBERSHIP CORPORATION
II) PROPOSED FACILITIES
A) DEMAND IN GALLONS PER DAY
168 X 350 GPD = 58,800 GPD
 - THERE ARE NO ANTICIPATED IMPACTS ON STREETS SHOWN IN THE MAJOR THOROUGHFARE PLAN, THE LOCAL STREET PLAN, OR THE BIKE PEDESTRIAN PLAN.
 - FROM THIS SITE, IT IS APPROXIMATELY 2.5 MILES TO THE FIRE STATION ON HWY. 96/JORDAN ROAD AND 4 MILES TO THE CITY POLICE DEPARTMENT LOCATED DOWNTOWN AT CITY HALL. THE NEAREST PARK AND RECREATIONAL FACILITIES ARE LOCATED APPROXIMATELY 3.7 MILES WEST OF THE DEVELOPMENT ON HWY. 96 (PINKERTON PARK). CHEEK PARK AND THE WILLIAMSON COUNTY RECREATION CENTER ARE APPROXIMATELY 5.5 MILES FROM THE PROPOSED DEVELOPMENT.
 - THIS DEVELOPMENT WILL RESULT IN AN INCREASE OF 168 HOUSEHOLD UNITS. BASED ON AN AVERAGE OF 0.64 SCHOOL AGE STUDENTS PER SINGLE FAMILY HOUSEHOLD, THIS WILL INCREASE THE CURRENT STUDENT SCHOOL POPULATION BY A TOTAL OF +/- 108 STUDENTS WITHIN THE FOLLOWING CATEGORIES: PAGE HIGH SCHOOL, PAGE MIDDLE SCHOOL, AND TRINITY ELEMENTARY SCHOOL.
 - THE SUBJECT PROPERTY IS CONSISTENT WITH THE McEWEN CHARACTER AREA INCLUDING THE GUIDING PRINCIPALS OF SPECIAL AREA 6:

-REFLECTS SAME CHARACTER OF CURRENT AND PROPOSED DEVELOPMENT.
 - THE PROPOSED DEVELOPMENT PATTERN CONSISTS OF LOTS WHICH ARE COMPARABLE TO THE EXISTING AND PROPOSED SURROUNDING DEVELOPMENT.
 - ALL PARKING REQUIREMENTS SHALL BE MET WITH GARAGES AND DRIVEWAYS AT EACH RESIDENTIAL UNIT AS WELL AS SUPPLEMENTAL ONSTREET PARKING WHERE VILLA UNITS ARE PLANNED.
 - RESIDENTIAL FIRE SPRINKLER SYSTEMS SHALL BE PROVIDED IF 1,500 GPM / 20 PSI IS NOT AVAILABLE.

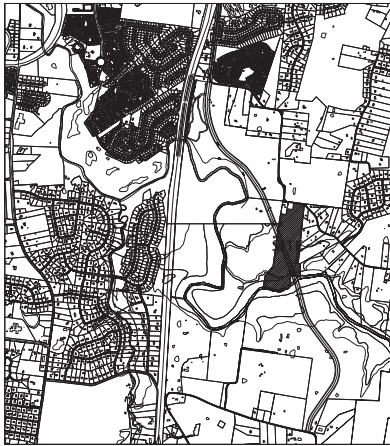
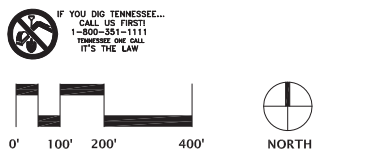
SITE DATA	
PROJECT NAME:	ECHOLON
TAX MAP:	89 & 106
PARCEL:	089-05001 & 106-18121
CITY:	FRANKLIN
COUNTY:	WILLIAMSON
STATE:	TENNESSEE
CIVIL DISTRICT:	14
LAND USE/ZONING:	AG (AGRICULTURAL DISTRICT)
ADDRESS:	4419 S CAROTHERS ROAD FRANKLIN, TENNESSEE
DEED BOOK:	
OWNER:	JOHN T. HELM IV & ELLEN HELM SACCHI
EXISTING ZONING AND CHARACTER AREA OVERLAY:	AG - McEWEN-6
PROPOSED ZONING:	PUD RX RESIDENTIAL VARIETY
OTHER APPLICABLE OVERLAYS:	FFO & FWO
APPLICABLE DEVELOPMENT STANDARD:	CONVENTIONAL
ACREAGE OF SITE	+/- 57.23
TOTAL UNITS:	168
DENSITY:	
SECTION 1:	3.55 DU/AC
SECTION 2:	2.91 DU/AC
SECTION 3:	2.02 DU/AC
SECTION 4:	2.55 DU/AC
RESIDENTIAL UNITS:	
MANOR:	32
GARDEN:	43
COTTAGE:	11
VILLA:	48
TOWN HOMES:	34
OPEN SPACE REQUIREMENTS	
FORMAL OPEN SPACE REQUIRED	+/- 2.86 AC.
INFORMAL OPEN SPACE REQUIRED	+/- 5.75 AC.
FORMAL OPEN SPACE PROVIDED	+/- 2.86 AC.
INFORMAL OPEN SPACE PROVIDED	+/- 11.80 AC.
OPEN SPACE CHART	
OPEN SPACE #1: INFORMAL	+/- 0.55 AC.
OPEN SPACE #2: INFORMAL	+/- 0.17 AC.
OPEN SPACE #3: INFORMAL	+/- 0.56 AC.
OPEN SPACE #4: FORMAL	+/- 0.68 AC.
OPEN SPACE #5A-5D: INFORMAL	+/- 0.05 AC.
OPEN SPACE #6: INFORMAL	+/- 1.25 AC.
OPEN SPACE #7: INFORMAL	+/- 1.73 AC.
OPEN SPACE #8: INFORMAL	+/- 0.75 AC.
OPEN SPACE #9: FORMAL	+/- 0.18 AC.
OPEN SPACE #10: FORMAL	+/- 2.00 AC.
OPEN SPACE #11: INFORMAL	+/- 6.74 AC.
PARKLAND DEDICATION PROVIDED (35 UN x 1,200SF)+(134 UN x 600SF) = 122,400SF (+/-2.81 AC)	+/- 2.81 AC. (122,400 SF)
CONNECTIVITY INDEX	1.73 (26 LINKS / x15NODES = 1.73)
PROPOSED BUILDING SETBACKS - MANOR LOTS	
FRONT BUILDING SETBACK:	15' MINIMUM
SIDE BUILDING SETBACK:	5' MINIMUM
REAR BUILDING SETBACK:	10' MINIMUM
PROPOSED BUILDING SETBACKS - GARDEN, COTTAGE LOTS LOTS	
FRONT BUILDING SETBACK:	8' MINIMUM
SIDE BUILDING SETBACK:	5' MINIMUM
REAR BUILDING SETBACK:	10' MINIMUM
PROPOSED BUILDING SETBACKS - VILLA, TOWN HOME LOTS	
FRONT BUILDING SETBACK:	5' / 8' MINIMUM (SEE SHEET A1.00)
SIDE BUILDING SETBACK:	5' MINIMUM
REAR BUILDING SETBACK:	4' MINIMUM

ENGINEERING PROVIDED BY:
MICHAEL RAY
FISHER & ARNOLD INC.
1420 DONELSON PIKE, SUITE A-12
NASHVILLE, TN. 37217
(615) 383-6300
mray@fisherarnold.com

APPLICANT:
JOHN HAAS
EDGE
210 12TH AVE. SOUTH
SUITE 202
NASHVILLE TN, 37203
(615) 250-8154
jhaas@edgelo.com

DEVELOPER:
T. KEITH GLENN
CRESCENT RESOURCES
227 W. TRADE STREET
SUITE 1000
CHARLOTTE, NC. 28202

DEVELOPER:
CHRIS PASCARELLA
PEARL STREET PARTNERS, LLC
205 POWELL PLACE
BRENTWOOD TN 37027
kpascarella@pearlstreetpartners.com



EDGE
210 Twelfth Avenue South
Suite 202
Nashville, Tennessee 37203
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F 615-250-8155

FISHER & ARNOLD, INC.
1420 Donelson Pike, Suite A-12 • Nashville, Tennessee 37217
(615) 383-6300 • Fax: (615) 383-6301 • www.fisherarnold.com



Echelon
PUD Development Plan
Franklin, TN
COF #2667

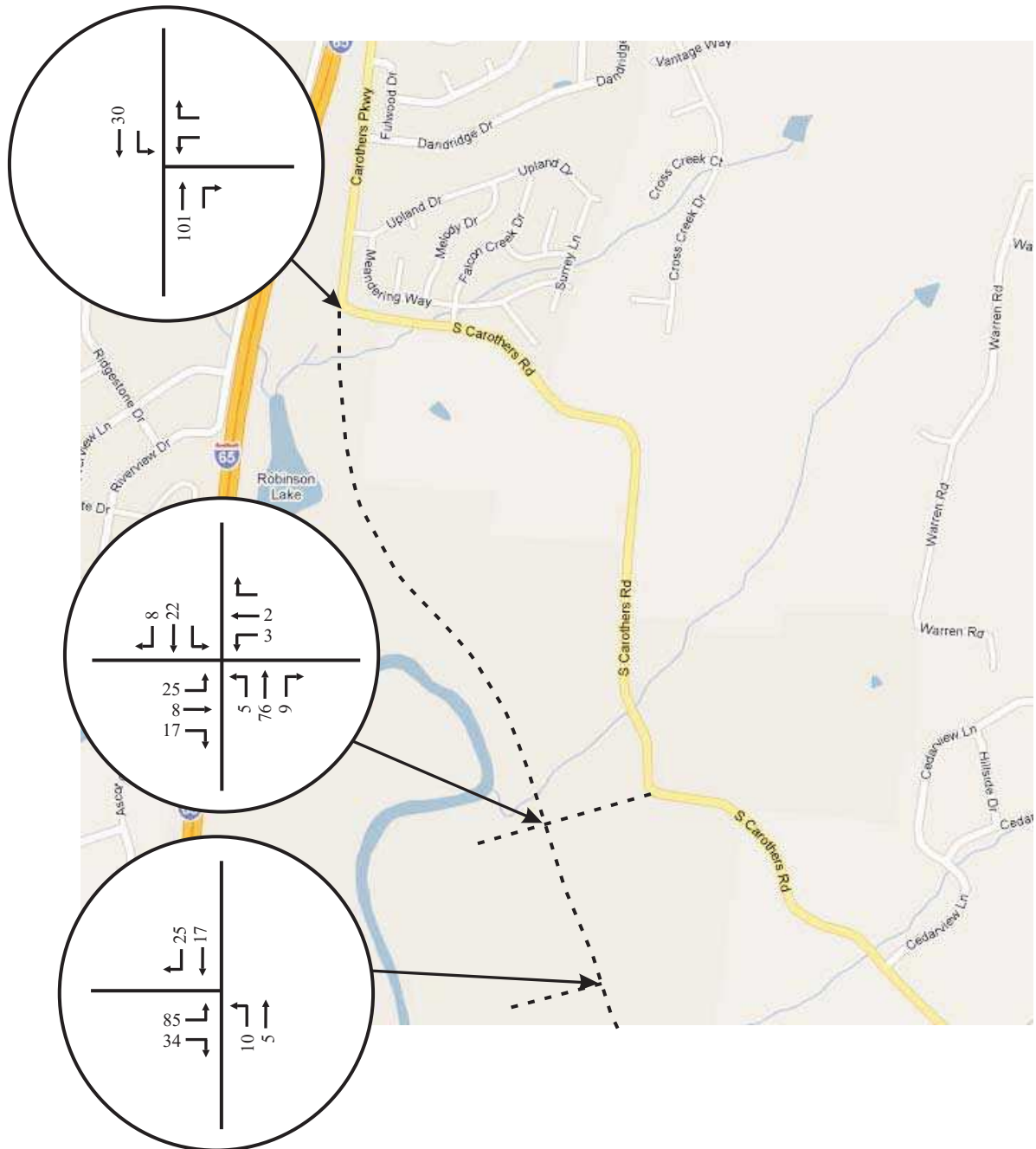
Crescent
Resources
Charlotte, NC

PROJECT NO.	13007
Date	2/11/13
Revisions	
03/07/2013	
08/23/2013 POST PC	
10/10/2013 POST PC	

Sheet Title	
DEVELOPMENT PLAN	
Sheet Number	
L 1.00	



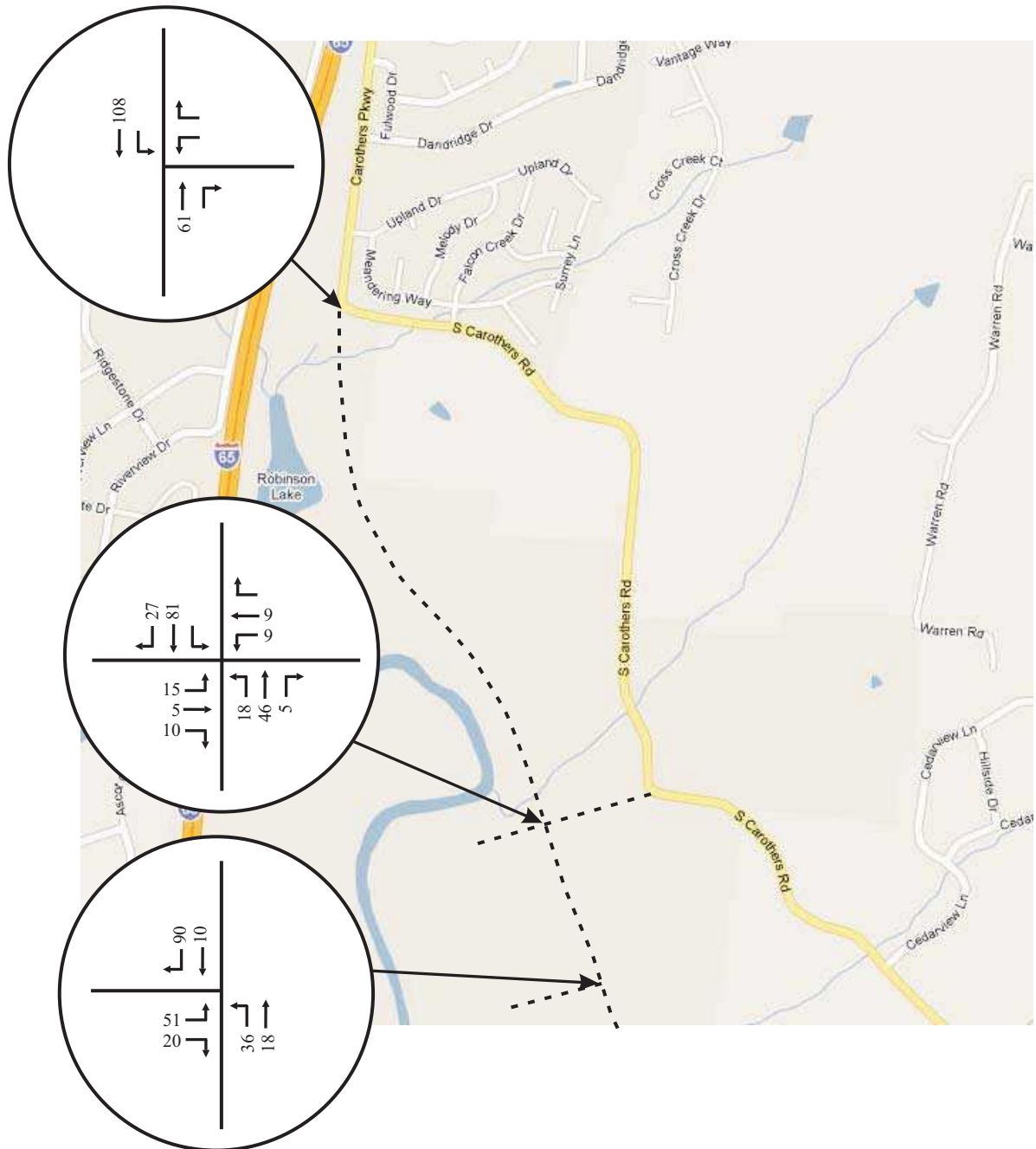
F i s c h b a c h
 Transportation Group, LLC
 Traffic Engineering and Planning



No Scale

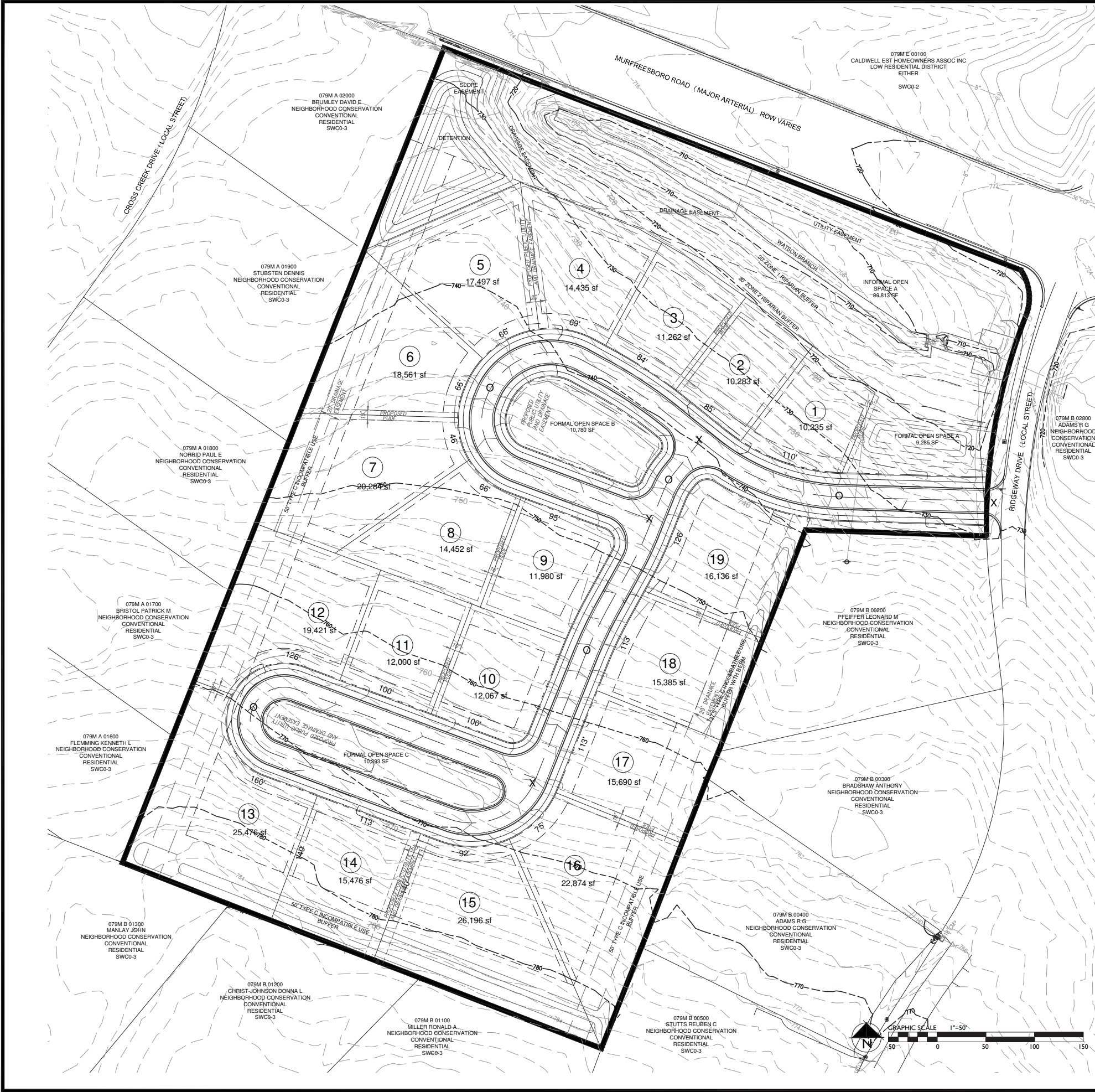
Figure 6A.
 AM Peak Hour Traffic Volumes
 Generated by the Water's Edge Project

F i s c h b a c h
Transportation Group, LLC
 Traffic Engineering and Planning



No Scale

Figure 6C.
PM Peak Hour Traffic Volumes
 Generated by the Water's Edge Project



LAND USE PLAN COMPLIANCE

- CHARACTER AREA OVERLAY: SWCO-3
APPLICABLE DEVELOPMENT STANDARD: CONVENTIONAL
1. THE EXISTING USES WITHIN SEWARD HALL CHARACTER AREA 3 ARE PREDOMINANTLY SINGLE FAMILY DETACHED HOMES. THE PROPOSED PLAN PROVIDES SINGLE FAMILY HOME LOTS.
 2. THE PROPOSED DEVELOPMENT PLAN PRESERVES THE FRONT PORTION OF THE PROPERTY ALONG MURFREESBORO ROAD AS OPEN SPACE. THIS OPEN SPACE "FRONT YARD" IS CONSISTENT WITH THE CHARACTER OF THE CORRIDOR.
 3. THE PROPOSED DEVELOPMENT WILL BE ACCESSED FROM RIDGEWAY DRIVE.

LOCAL COMPATIBILITY

THE PROPOSED SUBDIVISION IS PLANNED WITH TWO STORY SINGLE FAMILY HOMES RANGING IN SIZE BETWEEN 3500 SQUARE FEET AND 4600 SQUARE FEET. THESE HOMES ARE COMPATIBLE WITH THE HOMES WITHIN THE ADJACENT NEIGHBORHOODS, RIDGEWAY AND CROSS CREEK SUBDIVISIONS EVEN THOUGH THEY ARE PROPOSED ON LOTS LESS THAN ONE ACRE.

THE HOMES WITHIN THE RIDGEWAY AND CROSS CREEK SUBDIVISIONS ARE BETWEEN 1900 TO 5700 SQUARE FEET IN SIZE. THE AVERAGE HOME IS 3500 SQUARE FEET IN SIZE. THESE HOMES WERE BUILT ON ONE ACRE LOTS WITH SEPTIC TANKS ACCORDING TO WILLIAMSON COUNTY DEVELOPMENT REGULATIONS. SINCE THE DEVELOPMENT OF THESE HOMES, SEWER HAS BEEN MADE ACCESSIBLE BY THE CITY OF FRANKLIN WITH A SEWER MAIN ALONG MURFREESBORO ROAD.

THE PROPOSED PUD PLAN FOLLOWS THE ZONING ORDINANCE'S REQUIREMENTS FOR PROVIDING A TYPE 'C' INCOMPATIBLE USE BUFFERS WHERE ADJACENT LOTS ARE LESS THAN 75% OF THE ADJACENT LOTS. A TYPE 'C' BUFFER IS PLANNED ON 3 BOUNDARIES OF THE SITE ADJOINING ADJACENT LOTS ZONED NEIGHBORHOOD CONSERVATION (WILLIAMSON COUNTY). IN ADDITION TO SPACIAL REQUIREMENTS, THIS BUFFER WILL INCLUDE 16 TREES AND 40 SHRUBS EVERY ONE HUNDRED LINEAR FEET. THE NEIGHBORING HOMES AVERAGE A REAR SETBACK OF 88 FEET FROM OCTOBER PARK'S BOUNDARY. HOMES ARE AS CLOSE AS 25 FEET TO THE PROPERTY AND AS FAR AWAY AS 165 FEET. THE AVERAGE DISTANCE BETWEEN THE NEW HOMES AND THE EXISTING HOMES WILL BE 138 FEET.

COMPATIBILITY OF LOT SIZE SHOULD NOT BE THE ONLY FACTOR TO DETERMINE APPROPRIATENESS OF THE DEVELOPMENT PLAN. THE PROPOSED PLAN IS COMPATIBLE IN THE SIZE OF HOME AND COST OF HOME, AND ARE FULLY SCREENED FOR THE PRIVACY OF THE EXISTING NEIGHBORS AND THE NEW RESIDENTS.

THE DEVELOPMENT OF ONE ACRE LOTS WITHIN THE CITY OF FRANKLIN IS OFTEN BOTH COST PROHIBITIVE FOR DEVELOPMENT AND COST PROHIBITIVE FOR LONG TERM MAINTENANCE OF INFRASTRUCTURE. THE DENSITY AND LOT SIZES PROPOSED IN THE PUD ARE NECESSARY DUE TO THE COST OF INFRASTRUCTURE AND COST OF LAND. BOTH RIDGEWAY AND CROSS CREEK SUBDIVISIONS WERE DEVELOPED WITHOUT STORMWATER DETENTION BASINS, SEWER, CURB AND GUTTER, SIDEWALKS, FORMAL OPEN SPACE, NOR INFORMAL OPEN SPACE PRESERVATION AREAS. THE PER LOT COST OF DEVELOPMENT, INSTALLATION, AND MAINTENANCE IS DISPROPORTIONATELY HIGHER FOR NEW DEVELOPMENT THAN THE ADJACENT EXISTING SUBDIVISIONS DUE TO THE CITY'S DESIGN STANDARDS.

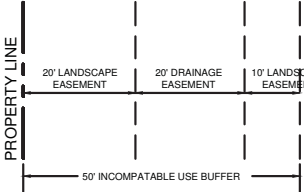
CONNECTIVITY INDEX

0 LINKS 1
X NODES 4
INDEX = 1.0

DUE TO EXISTING CONDITIONS OF THIS PROPERTY, AND ADJACENT EXISTING SUBDIVISION, OFF-SITE CONNECTIONS ARE NOT POSSIBLE AND ARE NOT PROVIDED WITH THIS PUD. A SPECIAL EXCEPTION IS REQUESTED FROM THE ENGINEERING DEPARTMENT FOR OFF-SITE CONNECTIONS.

INCOMPATIBLE USE BUFFER

THE SOUTHERN, EASTERN, AND WESTERN BOUNDARIES SHALL HAVE A TYPE 'C' INCOMPATIBLE USE BUFFER AS SHOWN ON THE SITE PLAN. INCOMPATIBLE USE BUFFERS ARE TO BE PLACED IN A LANDSCAPE EASEMENT. (SEE DIAGRAM BELOW)



PARKLAND DEDICATION

PARKLAND DEDICATION SHALL BE FEE IN LIEU OF FOR THIS DEVELOPMENT PLAN.
19 X 1200SF = 22,800 SF (0.52 ACRES)

HYDRANT FIRE FLOW (HYDRANT LOCATED 500' EAST OF THE INTERSECTION OF RIDGEWAY DR AND HWY 96)
WATER MAIN 16" DUCTILE IRON
FLOW: 1455 GPM
STATIC PRESSURE: 99 PSI
RESIDUAL PRESSURE: 75 PSI

STREAMSIDE BUFFER ENHANCEMENT

ENHANCEMENT SHALL INCLUDE REMOVAL OF INVASIVE SPECIES AND THE RE-ESTABLISHMENT OF NATIVE SPECIES WHICH PROVIDES A MIX OF CANOPY TREES, UNDERSTORY SHRUBS, AND A NATIVE SEED MIX OF FORBES/GRASSES/SEDGES/RUSHES SUITABLE FOR A MOIST SHADED UNDERSTORY.

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION, STORAGE, OR DISTURBANCE OF VEGETATION ALLOWED IN THE STREAM BUFFER EXCEPT AS PERMITTED BY THE CITY ENGINEER.

PHASING

THE DEVELOPMENT WILL BE CONSTRUCTED AS A SINGLE PHASE.

CRITICAL TREE LOTS

LOTS 3, 4, 5, 6, 14, 16 & 20 ARE CRITICAL TREE LOTS.



SITE DATA:

PROJECT NAME: OCTOBER PARK
PROJECT NUMBER: 4686
SUBDIVISION: NA
LOT NUMBER: NA
ADDRESS: 1110 RIDGEWAY DRIVE
CITY: FRANKLIN, TN
COUNTY: WILLIAMSON
STATE: TENNESSEE
CIVIL DISTRICT: 14TH CIVIL DISTRICT
MAP, GROUP, PARCEL NUMBERS: MAP 79, PARCELS 60.07, 60.01, AND MAP 79M GROUP B PARCEL 1.00

EXISTING ZONING: WILLIAMSON COUNTY
NEIGHBORHOOD CONSERVATION
PROPOSED ZONING: SD-R 1.6 D U/A
CHARACTER AREA OVERLAY: SWCO-3
APPLICABLE DEVELOPMENT STANDARD: CONVENTIONAL
TOTAL ACREAGE: 11.88 AC
TOTAL SQUARE FOOTAGE: 517,412 SF
MINIMUM REQUIRED SETBACKS:
FRONT YARD: 15'
REAR YARD: VARIES WITH BUFFER TREATMENT
SIDE YARD: 5'

OWNER:
ADDRESS: R. GLENN ADAMS
1100 RIDGEWAY DRIVE
FRANKLIN, TN 37067
GLENN ADAMS
CONTACT

APPLICANT:
ADDRESS: VERTEX DEVELOPMENT, LLC
1212 HOSS ROAD
POWELL, TN 37849
OFFICE PHONE: 865-384-8124
EMAIL ADDRESS: sbethel.bethel@gmail.com
CONTACT STEVE BETHEL

PLANNER/LANDSCAPE ARCHITECT:
ADDRESS: GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 200
FRANKLIN, TN 37064
OFFICE PHONE: 615.975.5765
EMAIL ADDRESS: greggambledesign@gmail.com
CONTACT GREGG GAMBLE

PROJECT CHARACTERISTICS
BUILDING SQUARE FOOTAGE: N/A
BUILDING HEIGHT: 2 STORY
LANDSCAPE SURFACE RATIO: 0.84
MINIMUM LANDSCAPE RATIO: 0.40
INCOMPATIBLE-USE BUFFER REQUIRED: YES
TYPE A BUFFER TO NORTH
TYPE C BUFFER, SOUTH, EAST, AND WEST

MINIMUM PARKING REQUIRED: N/A
MAXIMUM PARKING LIMIT: N/A
EXISTING PARKING: N/A
PARKING PROVIDED: SINGLE FAMILY DETACHED
2 PER UNIT

RESIDENTIAL DENSITY: 1.60 DUA (19 UNITS)
EXISTING TREE CANOPY: 1.66 AC
PRESERVED TREE CANOPY: 1.48 AC
PARKLAND FEE IN LIEU: 2.76 AC PROVIDED (23.22%)
OPEN SPACE: 2.76 AC PROVIDED (23.22%)

STATEMENT OF IMPACTS

WATER
WATER SERVICE WILL BE PROVIDED BY THE MILCROFTON UTILITY DISTRICT. THE WATER MAIN WILL BE SERVED FROM A MAIN IN RIDGEWAY DRIVE.
19 x 350 GDP = 6,650 GDP

SEWER
SEWER SERVICE WILL BE PROVIDED BY THE CITY OF FRANKLIN. SEWER MAIN CONNECTION AT MANHOLE LOCATED AT THE INTERSECTION OF RIDGEWAY DRIVE AND HIGHWAY 96.

DRAINAGE FACILITIES
THE PROPERTY WILL BE DRAINED TO THE NORTH TO DETENTION FACILITY. THE DETENTION POND WILL DRAIN TO WATSONS BRANCH BETWEEN THE SITE AND HWY 96.

POLICE AND FIRE
FRANKLIN FIRE DEPT STATION #2 - 2.2 MILES DRIVING DISTANCE
COLUMBIA AVE POLICE STATION - 3.8 MILES DRIVING DISTANCE

RECREATION FACILITIES
LIBERTY PARK - 3.0 MILES DRIVING DISTANCE

PROJECTED STUDENT POPULATION
THE STUDENT POPULATION IS PROJECTED AT A RATE OF .64 STUDENTS PER HOME: 19 x .64 = 12.2 STUDENTS
TRINITY ELEMENTARY SCHOOL 2.7 MILES
PAGE MIDDLE SCHOOL 6.0 MILES
PAGE HIGH SCHOOL 6.0 MILES

REFUSE COLLECTION
REFUSE COLLECTION SERVICE WILL BE PROVIDED BY THE CITY OF FRANKLIN SOLID WASTE.

RESTRICTIVE COVENANTS
A HOME OWNERS ASSOCIATION WILL BE ESTABLISHED PRIOR TO THE FIRST OCCUPANCY OF RESIDENTS. THE HOME OWNERS ASSOCIATION WILL REGULATE ARCHITECTURAL STANDARDS AND THE MAINTENANCE OF THE COMMUNITY. THE HOA WILL MAINTAIN ALL COMMON OPEN SPACE AND RECREATIONAL AREAS.

MINERAL RIGHTS
NO THIRD PARTY MINERAL RIGHTS ARE ASSOCIATED WITH THIS PROPERTY.

COF 4686

Revisions:
1. 11.10.2014
2. 12.03.2014

Drawing Notes:

GDC
GAMBLE
DESIGN COLLABORATIVE

DEVELOPMENT PLANNING AND
LANDSCAPE ARCHITECTURE
Date: OCT 13, 2014

**OCTOBER PARK PUD SUBDIVISION
DEVELOPMENT PLAN**
Parcels 60.07, 60.01 on Map 79 and 1.00 in Group B on Tax Map 79M
Franklin, Williamson County, Tennessee



GAMBLE DESIGN COLLABORATIVE
144 SOUTHEAST PARKWAY
SUITE 200
FRANKLIN, TENNESSEE 37064
GREG GAMBLE
ggambledesign@gmail.com
615.975.5765

**DEVELOPMENT
PLAN**

C 3.0

SITE DATA SHEET
PROJECT NAME: FOUNTAINS OF FRANKLIN, SITE PLAN, SECTION 2
PROJECT #: 4523
SUBDIVISION: SILVER GRACE
LOT NUMBER: 1 AND 2
ADDRESS: 4100 MURFREESBORO ROAD
CITY: FRANKLIN
COUNTY: WILLIAMSON
STATE: TENNESSEE
CIVIL DISTRICT: 14TH

DISTING. ZONING AND CHARACTER AREA OVERLAY:
R1 RESIDENTIAL, VARIETY DIST. / SCENARIO HALL SH2
OTHER APPLICABLE OVERLAYS:
APPLICABLE DEVELOPMENT STANDARD: CONVENTIONAL
ACREAGE OF SITE: 14.88
SQUARE FOOTAGE OF SITE: 648,134.2
MINIMUM REQUIRED SETBACK LINES:
STREET FRONTING: 30' LOCAL/50' ARTERIAL (VILLAS)
STREET FRONTING: 60' (SINGLE FAMILY LOTS)
SIDE YARD: 10'
REAR YARD: 30'

OWNER LOTS 1 & 2:
FOUNTAINS OF FRANKLIN, L.L.C.
2202 JEFFERSON COURT
FRANKLIN, TN 37064
(615)790-7041
MAP 79, PARCEL 58
MAP 80, PARCEL 39.04
BOOK 5006, PAGE 86
CONTAINING 13.51 ACRES (588,615.2 S.F.) &
CONTAINING 1.37 ACRES (59,519 S.F.)

APPLICANT/DEVELOPER:
GOODWORKS UNLIMITED, LLC
GARY KEOCKLEY
2202 JEFFERSON COURT
FRANKLIN, TN 37064
(615)790-7041
GKECKLEY@YAHOO.COM

BUILDING SQUARE FOOTAGE:
MEMORY CARE BUILDING: 49,548
PHASE 2 VILLAS: 23,213

BUILDING HEIGHT:
MEMORY CARE: ONE STORY-26'
VILLAS: ONE STORY-30'

LANDSCAPE SURFACE RATIO: 0.22
MIN. LANDSCAPE SURFACE RATIO: 0.10
INCOMPATIBLE-USE BUFFER REQUIRED: 37.5' CLASS C ALONG
EAST PROPERTY BOUNDARY (25% REDUCTION W/6' OPAQUE FENCE)

MINIMUM PARKING REQUIREMENT:
MAIN BUILDING: 0.25 PER PATIENT + 1 PER EMPLOYEE =
25 (59) + 15 = 30 SPACES (TEMPORARY CARE FACILITY)

TOTAL: 30 SPACES
MAXIMUM PARKING LIMIT: 120% OF 30 = 36 SPACES

PARKING PROVIDED:
MAIN BUILDING: 59 SPACES
TOTAL: 59 SPACES
ADDITIONAL SPACES FOR FUTURE SECTIONS

RESIDENTIAL DENSITY: 3.96 UNITS PER ACRE

PARKLAND DEDICATION: PAYMENT IN-LIEU BASED ON 30 UNITS
AT 1,200 S.F./UNIT = 36,000 S.F.

TREE CANOPY: 34,570 S.F. TO REMAIN; 58% OF LOT 2

OPEN SPACE:
REQUIRED:
FORMAL: 5% = 14,880 S.F. (0.5) = 32,409 S.F.
INFORMAL: 10% = 14,880 S.F. (1.0) = 64,817 S.F.
PROVIDED:
FORMAL: 45,807 S.F. = 7.08%
INFORMAL: 173,508 S.F. = 26.77%

WATER SUPPLY:
THE WATER UTILITY DISTRICT THAT SERVES THIS DEVELOPMENT IS THE MIDCROFTON UTILITY DISTRICT, 6333 ARNO RD FRANKLIN, TN 37064. THE CONTACT PERSON AT MIDCROFTON IS CARL SCOTT AT 615-794-5947. THE RECORDED DATA FOR THIS HYDRANT IS 105 PSI STATIC PRESSURE AND 96 PSI RESIDUAL PRESSURE WITH A FLOW RATE OF 1,300+ GPM.

ALL VILLAS AND ASSISTED SUITES TO HAVE AUTOMATIC FIRE SPRINKLERS.

SANITARY SEWER SERVICE:
THE UTILITY DISTRICT THAT SERVES THIS DEVELOPMENT IS THE CITY OF FRANKLIN. THE SEWER INFRASTRUCTURE FOR THIS DEVELOPMENT WAS INSTALLED IN PHASE 1. CLEAN-OUTS FOR THE VILLAS HAVE BEEN STUBBED OUT FOR CONNECTION DURING THIS PHASE. THE MEMORY CARE ADDITION WILL BE SERVED INTERNALLY BY THE EXISTING FACILITY. ALL SEWER CONNECTIONS MUST BE APPROVED BY THE CITY OF FRANKLIN (COF) AND CONSTRUCTION WILL ADHERE TO THE SPECIFICATIONS OF THE COF.

STORMWATER CONTROL:
ALL STORMWATER TREATMENT FOR QUALITY AND QUANTITY WERE INSTALLED DURING PHASE 1 FOR THE COMPLETE BUILD-OUT OF THIS DEVELOPMENT. NO NEW TREATMENT IS REQUIRED FOR THIS PHASE. ON SITE DETENTION WAS DESIGNED TO TREAT A MAXIMUM IMPERVIOUS AREA OF 266,588 S.F.

ELECTRIC SERVICE:
THE UTILITY DISTRICT THAT SERVES THIS DEVELOPMENT IS MIDDLE TENNESSEE ELECTRIC MEMBERSHIP CORP. (MTEC). MTEC HAS PROVIDED THE LAYOUT. ALL ELECTRIC SERVICE LINES TO BE UNDERGROUND. ALL CONSTRUCTION TO ADHERE TO THE SPECIFICATIONS OF MTEC.

TREE PROTECTION NOTE:
ALL TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ISSUANCE OF A GRADING PERMIT AND SHALL BE MAINTAINED IN GOOD WORKING ORDER UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETE. ANY REQUIRED EROSION CONTROL MEASURES SHALL BE PLACED OUTSIDE OF ANY TREE PROTECTION FENCING.

UTILITY NOTE:
WITHIN NEW DEVELOPMENTS AND FOR OFFSITE LINES CONSTRUCTED AS A RESULT OF, OR TO PROVIDE SERVICE TO THE NEW DEVELOPMENT, ALL UTILITIES SUCH AS CABLE TELEVISION, ELECTRICAL (EXCLUDING TRANSFORMERS), GAS, SEWER, TELEPHONE, AND WATER LINES SHALL BE PLACED UNDERGROUND.

SOLID WASTE SERVICE:
THE SITE IS CURRENTLY SERVICED BY A DUMPSITE LOCATED AT THE REAR OF THE EXISTING FACILITY. THIS WILL CONTINUE TO BE USED FOR THE PRESENT FACILITY AS WELL AS THE PHASE 2 ADDITIONS, MEMORY CARE UNIT AND VILLAS.

APPROVAL NOTE:
THIS SITE PLAN HAS BEEN DESIGNED TO MEET THE CITY OF FRANKLIN STANDARDS AND THE APPROVAL OF THE PLANNING COMMISSION. CHANGES SHALL NOT BE MADE TO THE APPROVED SITE PLAN UNLESS APPROVED BY EITHER THE RELEVANT DEPARTMENT SUPERINTENDENT OR THE PLANNING COMMISSION.

RETAINING WALL NOTE:
ALL RETAINING WALLS ON SITE SHALL MEET THE STANDARDS OF SECTION 6.6 OF THE FRANKLIN ZONING ORDINANCE. DETAILS OF RETAINING WALLS SHALL BE SUBMITTED TO THE DEPT. OF BUILDING AND NEIGHBORHOOD SERVICES FOR REVIEW. REFER TO LANDSCAPE PLANS IN THIS SUBMITAL FOR PLANTINGS AROUND WALLS.

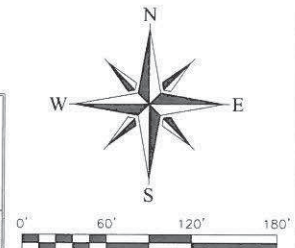
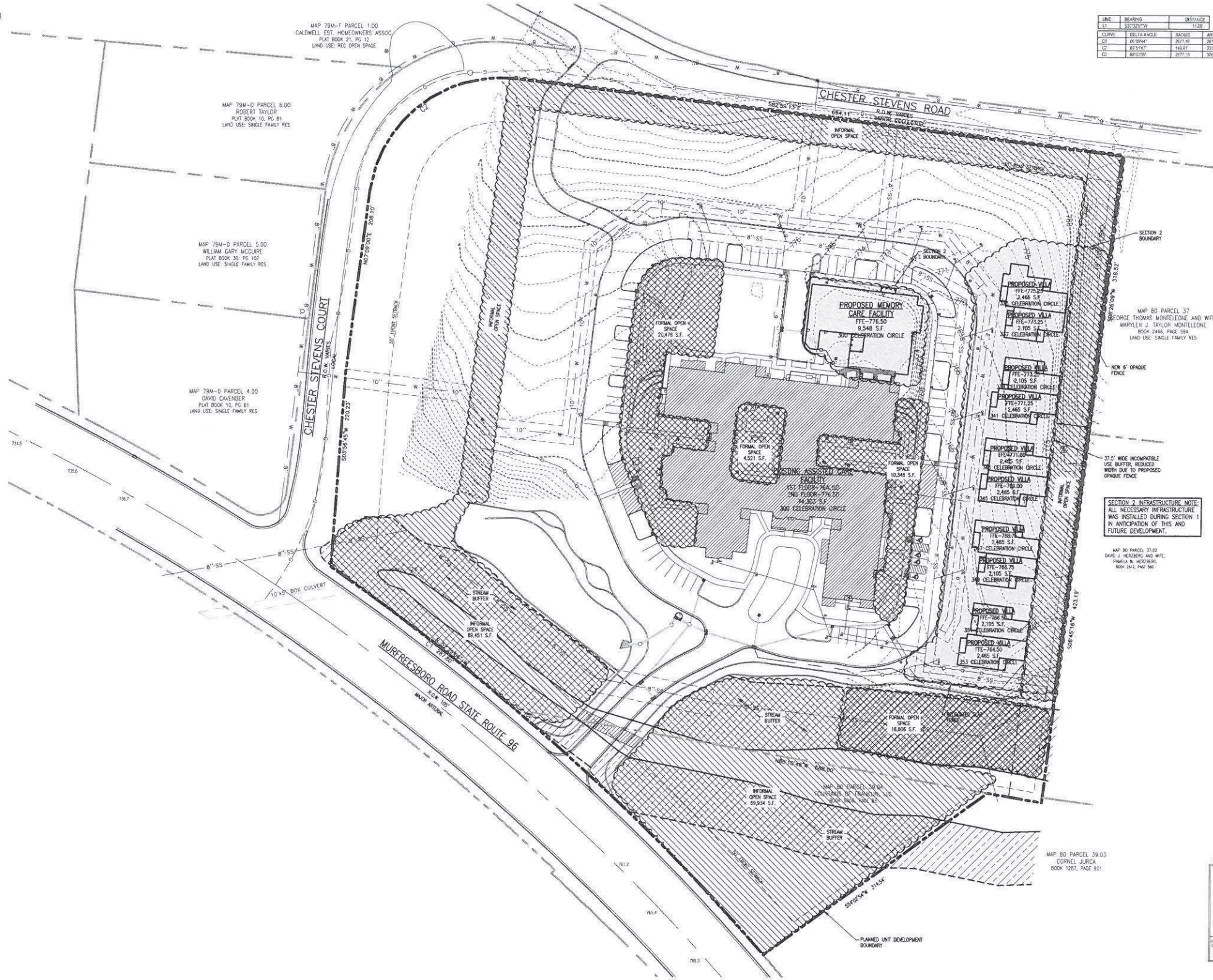
CIVIL CONTRACTOR NOTES:

- THE SCOPE OF WORK IS THE TOTALITY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, FIELD ORDERS, SHOP DRAWING APPROVAL CONDITIONS AND PERFORMANCE REQUIREMENTS OF THE SCOPE OF WORK. THE SCOPE OF WORK IS IDENTIFIED WITH SPECIFICATION SECTIONS AND SHEET ALPHA NUMERIC CONVENTION, BUT SUCH IDENTIFICATION DOES NOT DEFINE, RESTRICT OR ASSIGN THE SCOPE OF WORK OR ORGANIZE THE CONTRACT.
- THE SCOPE OF WORK IS SUBJECT TO AND SHALL INCLUDE THE REQUIREMENTS OF THE APPLICABLE CODES, STANDARDS AND ORDINANCES FOR THE LOCATION OF THIS PROJECT AND THE INTERPRETATIONS OF THE CODES, STANDARDS AND ORDINANCES BY THE AUTHORITIES HAVING JURISDICTION OF THIS PROJECT. SUCH INTERPRETATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO BIDDING. ANY VARIANCE FROM THE CONTRACT DOCUMENTS SHALL BE INCLUDED IN THE BIDDING AS A QUALIFICATION OF ANY BID AND SHALL BE INCLUDED IN THE SCOPE OF WORK BY THE CONTRACTOR. FAILURE TO IDENTIFY ANY SUCH VARIANCE AS A QUALIFICATION IN A BID SHALL NOT BE A BASIS FOR A CHANGE ORDER. DO NOT SCALE DRAWINGS. IF DIMENSIONS OR ELEVATIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLARIFICATION FROM THE ARCHITECT BEFORE IMPLEMENTATION OF CONSTRUCTION.
- CONTRACTOR SHALL VERIFY ALL EQUIPMENT REQUIREMENTS, FIXTURE REQUIREMENTS, SYSTEM REQUIREMENTS WHETHER OWNER FURNISHED OR CONTRACTOR FURNISHED, PRIOR TO IMPLEMENTATION OF ANY WORK ASSOCIATED WITH THE EQUIPMENT.
- CONTRACTOR SHALL PROVIDE WORK AS NEEDED FOR ALL SITE UTILITIES WHERE UTILITIES ARE INSTALLED BY OTHERS INCLUDING, BUT NOT LIMITED TO TRENCHING, CONDUIT, JUNCTION BOXES.
- CONTRACTOR SHALL PROVIDE FOR FIRE LINES AND DOMESTIC WATER LINES IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION INCLUDING BUT NOT LIMITED TO LICENSED INSTALLERS, TESTING, MATERIALS.
- NO IMPROVEMENT MAY BE ENCASED, CLOSED OR COVERED PRIOR TO INSPECTION AND ACCEPTANCE BY THE ARCHITECT. PROVIDE ARCHITECT WITH ADEQUATE NOTICE TO INSPECT ANY IMPROVEMENT READY FOR ENCLOSURE.
- CONTRACTOR SHALL LAYOUT BUILDING PAD, PARKING, SIDEWALKS AND ESTABLISH FINISH FLOOR ELEVATION FOR REVIEW AND APPROVAL OF ARCHITECT PRIOR TO IMPLEMENTATION.

GENERAL CONTRACTOR NOTES:

- THE SCOPE OF WORK IS THE TOTALITY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, FIELD ORDERS, SHOP DRAWING APPROVAL CONDITIONS AND PERFORMANCE REQUIREMENTS OF THE SCOPE OF WORK. THE SCOPE OF WORK IS IDENTIFIED WITH SPECIFICATION SECTIONS AND SHEET ALPHA NUMERIC CONVENTION, BUT SUCH IDENTIFICATION DOES NOT DEFINE, RESTRICT OR ASSIGN THE SCOPE OF WORK OR ORGANIZE THE CONTRACT.
- THE SCOPE OF WORK IS SUBJECT TO AND SHALL INCLUDE THE REQUIREMENTS OF THE APPLICABLE CODES, STANDARDS AND ORDINANCES FOR THE LOCATION OF THIS PROJECT AND THE INTERPRETATIONS OF THE CODES, STANDARDS AND ORDINANCES BY THE AUTHORITIES HAVING JURISDICTION OF THIS PROJECT. SUCH INTERPRETATION SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO BIDDING. ANY VARIANCE FROM THE CONTRACT DOCUMENTS SHALL BE INCLUDED IN THE BIDDING AS A QUALIFICATION OF ANY BID AND SHALL BE INCLUDED IN THE SCOPE OF WORK BY THE CONTRACTOR. FAILURE TO IDENTIFY ANY SUCH VARIANCE AS A QUALIFICATION IN A BID SHALL NOT BE A BASIS FOR A CHANGE ORDER.
- DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLARIFICATION FROM THE ARCHITECT BEFORE IMPLEMENTATION OF CONSTRUCTION.
- CONTRACTOR SHALL VERIFY ALL CONDITIONS AND SHALL REPORT ANY CONDITION THAT VARIES FROM THE CONSTRUCTION AS SHOWN.
- FOR CLARIFICATION FROM THE ARCHITECT BEFORE IMPLEMENTATION OF CONSTRUCTION, PRIOR TO IMPLEMENTATION OF ANY WORK ASSOCIATED WITH THE EQUIPMENT. PROVIDE PLUMBING SUPPLY AND DRAINS FOR ALL FIXTURES AND EQUIPMENT AS SHOWN ON ARCHITECTURAL, MECHANICAL, FIRE PROTECTION AND PLUMBING PLANS. LOCATE ALL ELECTRICAL SWITCHES AND PLUGS AS SHOWN ON ELECTRICAL OR ARCHITECTURAL PLANS AND INTERIOR ELEVATIONS.
- DIMENSIONS ARE NOMINAL TO THE FACE OF THE WALL OR CENTERLINE OF COLUMNS.
- ALL RATED WALLS EXTEND ONLY TO CEILING; RATED WALLS IN ATTICS ARE SHOWN ON ROOF PLAN.
- PROVIDED RATED WALLS AS NOTED BEHIND ALL FIRE EXTINGUISHER CABINETS AND OTHER PENETRATIONS.
- CONCEAL ALL PIPING IN WALLS OR FUR OUT WALL TO ENCASE PIPING. REVIEW ANY CONDITION REQUIRING FURRING WITH ARCHITECT PRIOR TO IMPLEMENTATION.
- PROVIDE APPROPRIATE STRUCTURAL SUPPORT FOR EQUIPMENT, LAVATORIES OR OTHER IMPROVEMENTS AS REQUIRED TO SUPPORT A MINIMUM LOAD OF 250 LBS.
- NO IMPROVEMENT MAY BE ENCASED, CLOSED OR COVERED PRIOR TO INSPECTION AND ACCEPTANCE BY THE ARCHITECT. PROVIDE ARCHITECT WITH ADEQUATE NOTICE TO INSPECT ANY IMPROVEMENT READY FOR ENCLOSURE.
- TO COORDINATE ALL WORK, MARK THE FLOORS AND WALLS FOR LOCATION OF WALLS, CABINETS, EQUIPMENT, TOILETS, SHOWERS, AIR HANDLING EQUIPMENT, DIFFUSERS, EXHAUSTS, SPRINKLER HEADS, DRAINS AND TEST VALVES, ELECTRICAL, SYSTEMS AND JUNCTION BOXES FOR REVIEW AND APPROVAL OF ARCHITECT PRIOR TO IMPLEMENTATION.

LINE	BEARING	DISTANCE
L1	N02°07'00"W	11.00'
1	DELTA ANGLE	RADIUS
C1	0°30'44"	267.16'
C2	88°34'47"	148.61'
C3	0°10'02"	257.11'



DEVELOPMENT	APPROVAL DATE	RY ZONED ACRES	SINGLE FAMILY DWELLING UNITS	MAIN BUILDING VILLAS	TOTAL DWELLING UNITS	LOT DENSITY (UNITS/AC)	REMAINING ACREAGE	REMAINING DWELLINGS
CONCEPT PLAN	9/8/09	14.88	3	94	27	124	1	8.33
REGULATING PLAN	3/25/10	14.88	3	94	27	124	1	8.33
SECTION 1	11/18/10	14.88	-	59	-	59	1	3.97
SECTION 2	TBD	14.88	-	18	10	87	1	5.84

DEVELOPMENT	APPROVAL DATE	RY ZONED ACRES	USE	PHASE TOTAL FLOOR AREA	ASSISTED LIVING FLOOR AREA	MEMORY CARE FLOOR AREA	VILLA FLOOR AREA	SINGLE FAMILY FLOOR AREA	PUD PROJECT TOTAL FLOOR AREA	PUD REMAINING FLOOR AREA	IMPERVIOUS SURFACE	TOTAL IMPERVIOUS SURFACE	TOTAL I.S.R.
CONCEPT PLAN	9/8/09	14.88	ASSISTED LIVING FACILITY, VILLAS, SINGLE FAMILY	153,658	-	-	-	-	153,658	-	238,806	238,806	0.37
REGULATING PLAN	3/25/10	14.88	ASSISTED LIVING FACILITY, VILLAS, SINGLE FAMILY	153,658	-	-	-	-	153,658	-	238,806	238,806	0.37
SECTION 1	11/18/10	14.88	ASSISTED LIVING FACILITY, VILLAS, MEMORY CARE	74,303	74,303	-	-	-	74,303	79,355	140,059	140,059	0.22
SECTION 2	TBD	14.88	VILLAS, MEMORY CARE	32,761	-	9,548	23,213	-	107,064	46,594	46,764	186,823	0.29
SECTION 3	TBD	14.88	ASSISTED LIVING FACILITY, VILLAS	30,942	5,157	-	24,785	-	138,006	15,652	0	-	-
SECTION 4	TBD	14.88	VILLAS, SINGLE FAMILY	15,652	-	-	11,660	3,992	153,658	0	0	-	-

FRANKLIN PROJECT #:

- THE CITY OF FRANKLIN PROJECT NUMBER IS COF #4523



DATE	DESCRIPTION
3/19/14	PRICING AND PERMITS

VILLA AND MEMORY CARE ADDITION FOR
Silver Grace
PUD SUBDIVISION, SITE PLAN, SECTION 2
300 CELEBRATION CIRCLE, FRANKLIN TN, 37067

DRAWING TITLE:
OVERALL PLAN

SCALE: 1"=60'

C1.2

**APPENDIX E
TRIP GENERATION**

TRIP GENERATION CALCULATIONS - Single-family Homes (NORTHERN PORTION)

The following calculations are based on the data compiled for ITE Land Use Code 210.

Average Daily Traffic

$$\ln(T) = 0.92 \ln(X) + 2.72$$

$$\ln(T) = 0.92 \ln(70) + 2.72$$

$$T = 756 \text{ vehicles}$$

$$\text{Enter} = 0.50 (756) = 378 \text{ vehicles}$$

$$\text{Exit} = 0.50 (756) = 378 \text{ vehicles}$$

AM traffic during peak hour of adjacent street

$$T = 0.70 (X) + 9.74$$

$$T = 0.70 (70) + 9.74$$

$$T = 59 \text{ vehicles}$$

$$\text{Enter} = 0.25 (59) = 15 \text{ vehicles}$$

$$\text{Exit} = 0.75 (59) = 44 \text{ vehicles}$$

PM traffic during peak hour of adjacent street

$$\ln(T) = 0.90 \ln(X) + 0.51$$

$$\ln(T) = 0.90 \ln(70) + 0.51$$

$$T = 76 \text{ vehicles}$$

$$\text{Enter} = 0.63 (76) = 48 \text{ vehicles}$$

$$\text{Exit} = 0.37 (76) = 28 \text{ vehicles}$$

TRIP GENERATION CALCULATIONS - Single-family Homes (NORTHERN PORTION)

The following calculations are based on the data compiled for ITE Land Use Code 210.

Average Daily Traffic

$$\ln(T) = 0.92 \ln(X) + 2.72$$

$$\ln(T) = 0.92 \ln(306) + 2.72$$

$$T = 2,938 \text{ vehicles}$$

$$\text{Enter} = 0.50 (2,938) = 1,469 \text{ vehicles}$$

$$\text{Exit} = 0.50 (2,938) = 1,469 \text{ vehicles}$$

AM traffic during peak hour of adjacent street

$$T = 0.70 (X) + 9.74$$

$$T = 0.70 (306) + 9.74$$

$$T = 224 \text{ vehicles}$$

$$\text{Enter} = 0.25 (224) = 56 \text{ vehicles}$$

$$\text{Exit} = 0.75 (224) = 168 \text{ vehicles}$$

PM traffic during peak hour of adjacent street

$$\ln(T) = 0.90 \ln(X) + 0.51$$

$$\ln(T) = 0.90 \ln(306) + 0.51$$

$$T = 287 \text{ vehicles}$$

$$\text{Enter} = 0.63 (287) = 181 \text{ vehicles}$$

$$\text{Exit} = 0.37 (287) = 106 \text{ vehicles}$$

APPENDIX F

RELEVANT PAGES FROM NCHRP REPORT 457:
ENGINEERING STUDY GUIDE FOR EVALUATING INTERSECTION IMPROVEMENTS

NCHRP

REPORT 457

**NATIONAL
COOPERATIVE
HIGHWAY
RESEARCH
PROGRAM**

Evaluating Intersection Improvements: An Engineering Study Guide

TRANSPORTATION RESEARCH BOARD

NATIONAL RESEARCH COUNCIL

can also indirectly reduce the delay to the left-turn or through movements by lessening their need to compete for service with the right-turn movement.

One disadvantage of adding a lane to the minor-road approach is that it may require reallocating the existing pavement or widening of the approach cross section. Sometimes the pavement width needed for the additional lane is available within the existing roadway cross section. In this instance, the only impact is a reallocation of the paved surface through modification of the pavement markings. However, in downtown settings this reallocation may require the removal of some curb parking stalls and can affect adjacent business significantly. Occasionally, the cross section must be widened to provide for the additional lane. If the needed lane width can be provided within the available right-of-way, the cost may be limited to that of construction. However, if additional right-of-way is needed, the costs of acquiring this property in urban settings can be high.

Guidance. The literature does not offer guidance regarding conditions where a second approach lane would benefit from the operation of a minor-road approach. However, the procedures in Chapter 17 of the *Highway Capacity Manual 2000* (15) can be used to identify major- and minor- road volume combinations that would benefit operationally from the provision of a second approach lane or bay. Bonneson and Fontaine (20) developed Figure 2-4 using these procedures and an assumed upper limit of 0.7 for the shared-lane, minor-road volume-to-capacity ratio.

Application. Figure 2-4 indicates the conditions that may justify the use of two approach lanes. Use of the information in this figure requires two types of data:

1. Major-road approach volume for the peak hour of the average day and
2. Minor-road turn movement volume for the peak hour of the average day (used to compute right-turn percentage).

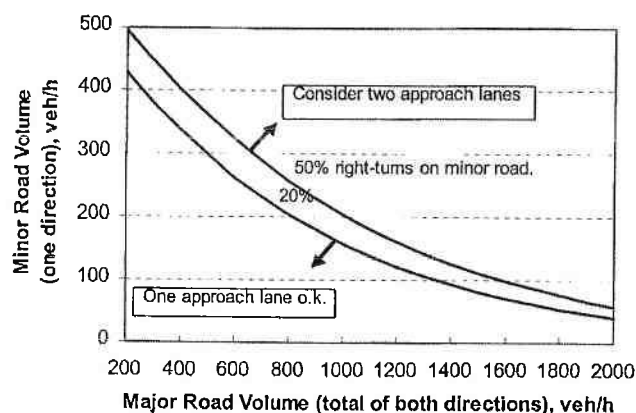


Figure 2-4. Guideline for determining minor-road approach geometry at two-way stop-controlled intersections.

Figure 2-4 would be used once for each minor-road approach to the intersection. The appropriate trend line would be identified on the basis of the percentage of right-turns on the subject minor-road approach. If the volume combination for the major and minor roads intersects above or to the right of this trend line, a second traffic lane should be considered for the subject minor-road approach. If a bay is selected for addition to the intersection, it should be long enough to store vehicles 95 percent of the time (i.e., the bay should not overflow more than 5 percent of the time). Techniques for estimating the 95th percentile storage length are provided in the section, [Increase the Length of the Turn Bay](#).

Add a Left-Turn Bay on the Major Road

Introduction. Provision of a left-turn bay on the major road to a two-way stop-controlled intersection can significantly improve operations and safety at the intersection. A left-turn bay effectively separates those vehicles that are slowing or stopped to turn from those vehicles in through traffic lanes. This separation minimizes turn-related crashes and eliminates unnecessary delay to through vehicles. Data reported by Neuman (21) indicate that the crash rate for unsignalized intersections can be reduced by 35 to 75 percent through the provision of a left-turn bay.

One disadvantage of adding a bay to the major-road approach is that it may require reallocating the existing pavement or widening of the approach cross section. Sometimes the pavement width needed for the additional lane is available within the existing roadway cross section. However, in downtown settings this reallocation may require the removal of some curb parking stalls and can affect adjacent business significantly. Occasionally, the cross section must be widened to provide for the turn bay. If the needed width can be provided within the available right-of-way, the cost may be limited to that of construction. However, if additional right-of-way is needed, the costs of acquiring this property in urban settings can be high.

Guidance. Neuman (21) suggests that the following guidelines should be used to determine when to provide a left-turn bay on the major road of a two-way stop-controlled intersection:

1. A left-turn lane should be considered at any median crossover on a divided, high-speed road.
2. A left-turn lane should be provided on the unstopped approach of a high-speed rural highway when it intersects with other arterials or collectors.
3. A left-turn lane is recommended on the unstopped approach of any intersection when the combination of intersection volumes intersect above or to the right of the appropriate trend line shown in Figure 2-5.

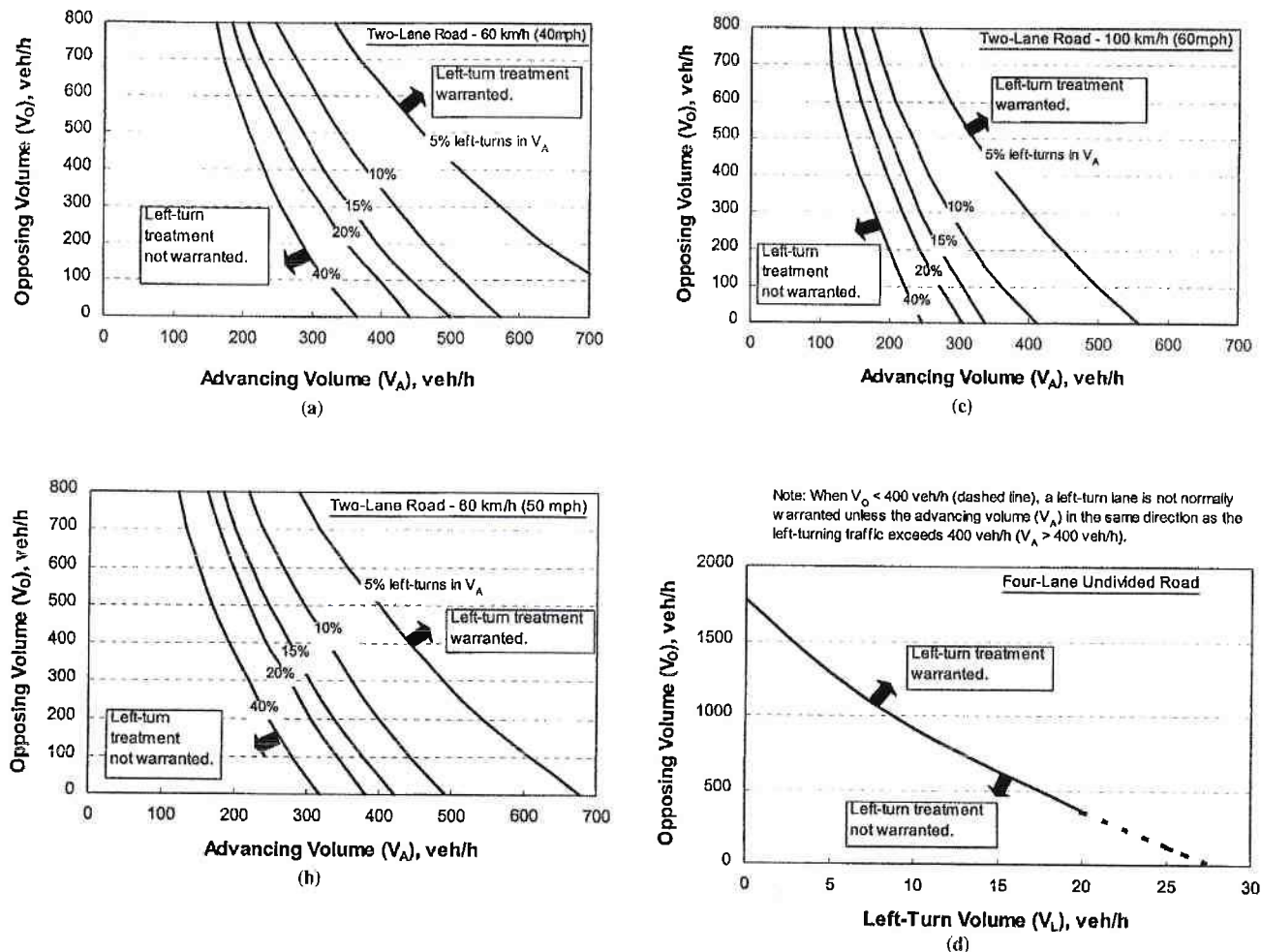


Figure 2-5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

Application. The guidance stated in the preceding section defines the conditions that may justify the provision of a left-turn bay. Application of this guidance requires two types of data:

1. Major-road turn movement volume for the peak hour of the average day and
2. Major-road 85th percentile speed (posted speed can be substituted if data are unavailable).

Use of Figure 2-5 requires determination of the opposing volume, the advancing volume, and the operating speed. The opposing volume should include only the right-turn and through movements on the approach across from (and heading in the opposite direction of) the subject major-road approach. The advancing volume should include the left-turn, right-turn, and through movements on the subject approach. The operating speed can be estimated as the 85th percentile speed. If the operating speed does not coincide with 60, 80, or 100 km/h (i.e., 40, 50, or 60 mph), then interpolation can

be used or, as a more conservative approach, the operating speed can be rounded up to the nearest speed for which a figure is provided.

In application, Figure 2-5 is used once for each major-road approach to the intersection. The appropriate trend line is identified on the basis of the percentage of left-turns on the subject major-road approach. If the advancing and opposing volume combination intersects above or to the right of this trend line, a left-turn bay should be considered for the subject approach. If a bay is included at the intersection, it should be long enough to store left-turn vehicles 99.5 percent of the time (i.e., the bay should not overflow more than 0.5 percent of the time). Techniques for estimating this storage length are provided in the section, [Increase the Length of the Turn Bay](#).

Add a Right-Turn Bay on the Major Road

Introduction. Provision of a right-turn bay on the major road to a two-way stop-controlled intersection can signifi-

cantly improve operations and safety at the intersection. A right-turn bay effectively separates those vehicles that are slowing or stopped to turn from those vehicles in the through traffic lanes. This separation minimizes turn-related collisions (e.g., angle, rear-end, and same-direction-sideswipe) and eliminates unnecessary delay to through vehicles.

One disadvantage of adding a bay to the major-road approach is that it may require reallocating the existing pavement or widening of the approach cross section. Sometimes the pavement width needed for the additional lane is available within the existing roadway cross section. However, in downtown settings this reallocation may require the removal of some curb parking stalls and can affect adjacent business significantly. Occasionally, the cross section must be widened to provide for the turn bay. If the needed width can be provided within the available right-of-way, the cost may be limited to that of construction. However, if additional right-of-way is needed, the costs of acquiring this property in urban settings can be high.

Guidance. Hasan and Stokes (22) developed guidelines for determining when to provide a right-turn bay on the major road of a two-way stop-controlled intersection. These guidelines were based on an evaluation of the operating and collision costs associated with the right-turn maneuver relative to the cost of constructing a right-turn bay. The operating costs included those of road-user fuel and delay. Separate guidelines were developed for two-lane and four-lane roadways. These guidelines are shown in Figure 2-6.

Application. The guidance described in the preceding section defines conditions that may justify the provision of a right-turn bay. Application of this guidance requires two types of data:

1. Major-road turn movement volume for the peak hour of the average day and
2. Major-road 85th percentile speed (posted speed can be substituted if data are unavailable).

Figure 2-6 should be consulted once for each major-road approach. If the combination of major-road approach volume and right-turn volume intersects above or to the right of the trend line corresponding to the major-road operating speed, then a right-turn bay is a viable alternative.

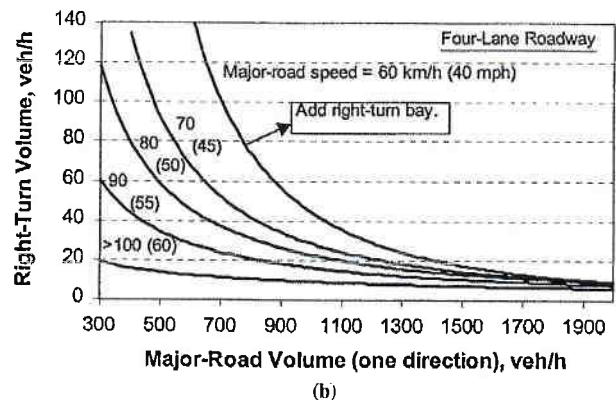
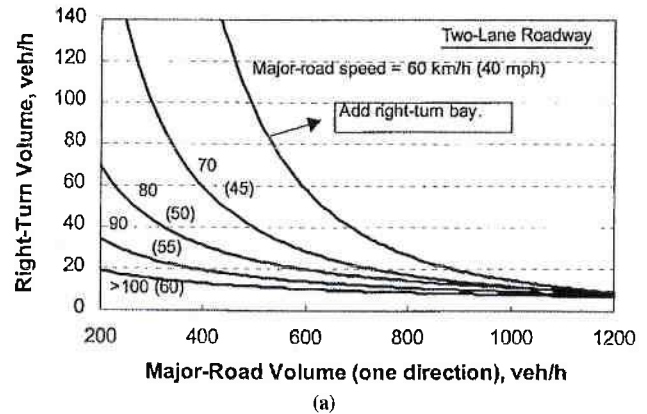


Figure 2-6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

Increase Length of Turn Bay

Introduction. Turn bay length can affect the safety and operation of the intersection approach significantly. This effect becomes more negative as the frequency with which vehicles exceed the available storage increases. Also, for unstopped approaches, this effect becomes more negative as more of the turning vehicle's deceleration occurs in the through lane, prior to the bay. The need to provide adequate storage length, deceleration length, or both is dependent on the type of approach control used and whether the vehicle is turning left or right. Table 2-13 identifies the appropriate bay

TABLE 2-13 Turn-bay length components at unsignalized intersections

Approach Control	Length Components	
	Left-Turn Bay	Right-Turn Bay
Unstopped	Storage Length + Deceleration Length	Deceleration Length
Stopped	Storage Length	Storage Length

PUBLIC NOTICE AFFIDAVIT
City of Franklin, Tennessee

We/I MATTHEW S. HUFF

(Please print Name/Names in Full)

being duly sworn, depose and say(s) that (I am)/(we are), acting as the authorized agent on all matters pertaining to the processing of the development application for the property described as:

MAP 89, PARCELS 55.06, 30.00, 30.01, 43.02, 43.03, 43.04 1/2 MAP 79M, PARCELS 28.00 1/2 29.00
(Property Parcel/Tax ID Number)

and located at:

1101 RIDGEWAY DRIVE

(Street Address)

have/has provided a mailed notice in accordance with section 2.3.8 of the Franklin Zoning Ordinance, which included the following:

1. The address or location of the property subject to the submittal;
2. A brief description of the property (e.g., legal description, nearby streets and intersections);
3. Date, time, and location of the public meeting or hearing; Nature, scope, and purpose of submittal;
4. Information on where the public can view the application and where they may be heard;
5. Information on where the public can submit written comments.

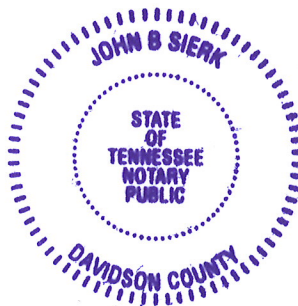
Matthew S. Huff
Signature

Subscribed and sworn to before me this

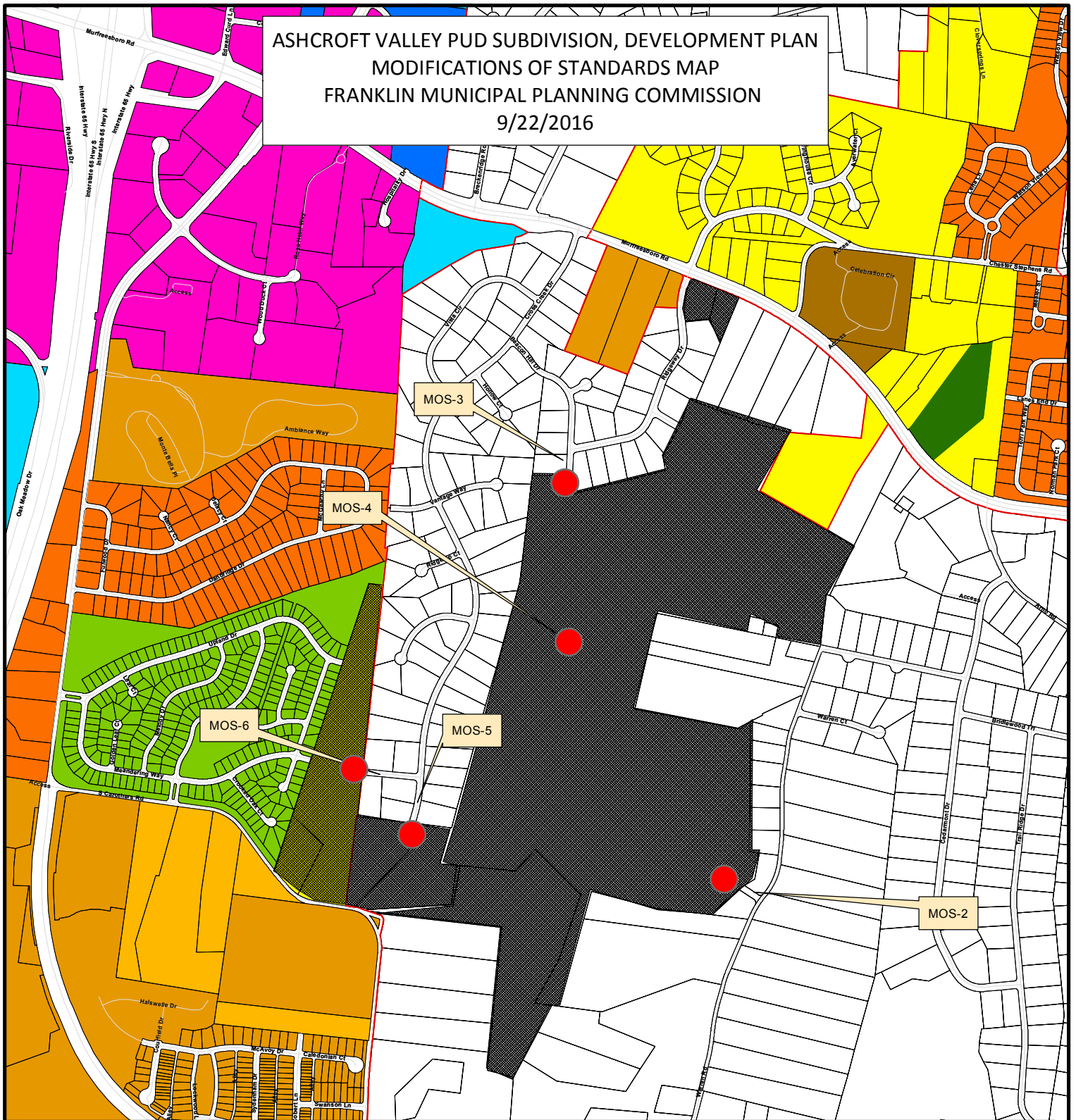
9th day of AUGUST, 20 16

[Signature]
Notary Public

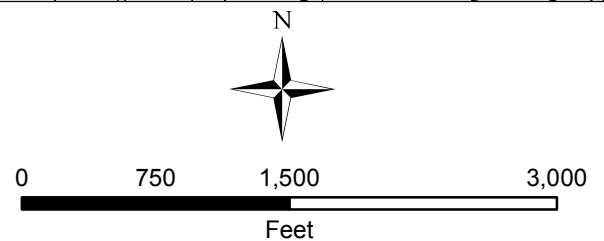
My Commission Expires: 5/5/19



ASHCROFT VALLEY PUD SUBDIVISION, DEVELOPMENT PLAN
MODIFICATIONS OF STANDARDS MAP
FRANKLIN MUNICIPAL PLANNING COMMISSION
9/22/2016

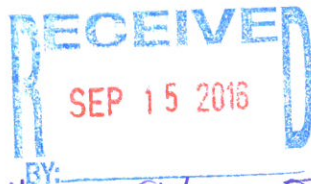


- | | |
|--|---------------------------------------|
| Ashcroft Valley PUD Subdivision | SD-R Specific Development-Residential |
| AG Agricultural District | SD-X Specific Development-Variety |
| ER Estate Residential | OR Office Residential District |
| R-1 Residential District | GO General Office District |
| R-2 Residential District | CC Central Commercial District |
| R-3 Residential District | NC Neighborhood Commercial District |
| R-6 Residential District | GC General Commercial District |
| RM-10 Attached 10 Residential District | LI Light Industrial District |
| RM-15 Attached 15 Residential District | HI Heavy Industrial District |
| RM-20 Attached 20 Residential District | CI Civic and Institutional District |



This map was created by the Franklin Planning Department.
It was compiled from the most authentic information available.
The City is not responsible for any errors or omissions contained hereon.
All data and materials (c) copyright 2016. All rights reserved.

1991 Beacon Hill Dr.
Franklin
TN 37067



9/12/16
Item 8
9/22/16 FMPC Mtg.

Dear Members of the City of Franklin Planning and sustainability department,

I am writing to express my concern about the planned development of Ashcroft Valley and the consequences it will bear on adjacent county neighborhoods.

Please understand that most of my neighbors in Franklin East and Cross Creek do not support a plan that brings city traffic onto our county roads.

Traffic from 70 homes in a gated community, entering and exiting on Stanford Drive will cause a danger to the 30+ young children who live on Ridgeway (yes, the number has increased, another young family has moved in, 2 babies have been born and at least one more family with 2 little ones is due to move in soon).

What guarantee do we, as residents, have that once building starts, there will be a "gated" community and the "pedestrian only" connectivity will not become roads, connecting the further 250+ homes on the Ridge Valley?

Greg Gamble is on record stating that he "understands there will be a fatality." Please prevent this from happening by

redirecting all city traffic away from our county neighborhood.

Unfortunately my husband and I will be absent from the public meeting on September 22. We have to travel out of the country to a family member's funeral.

We regret that our voices won't be heard and request that you acknowledge our concerns.

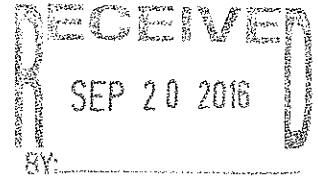
Sincerely,

Susan and Brian Capler

Susan Capler

A handwritten signature in blue ink, appearing to read "Brian Capler", with a long, sweeping underline.

Item 8
FMPC Mtg - 9/22/16



Attention of the Major of Franklin City, Ken Moore and Aldermen at Large

cc: Williamson County Major, Roger Anderson

Ref: FMPC Sept 22nd 2016. Ashcroft Valley PUD. Item 15-1094 etc

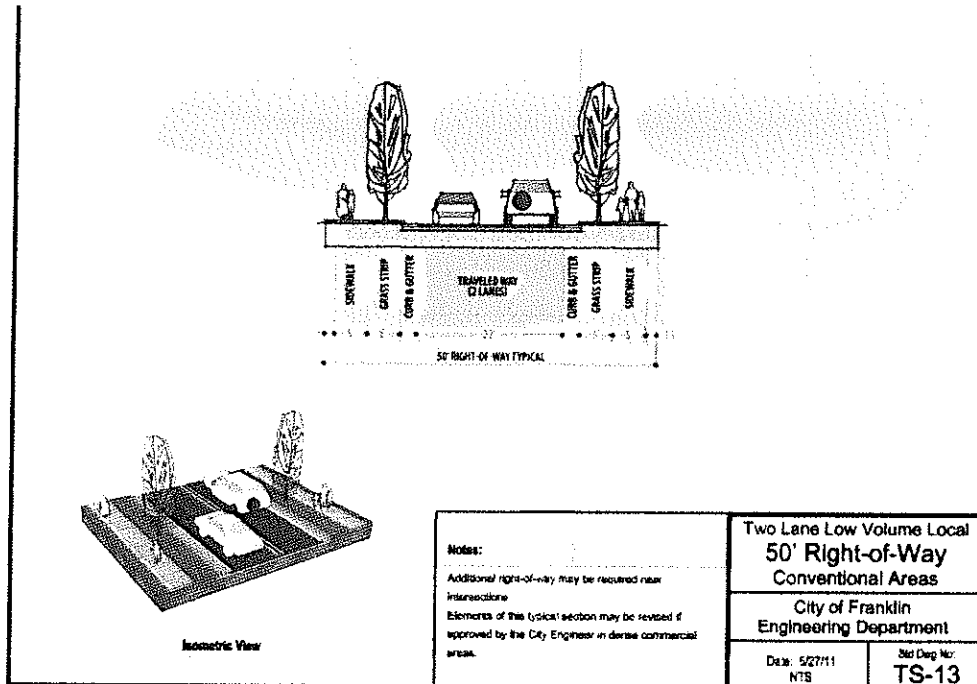
Dear Sirs/Madams

Unfortunately I will not be able to attend the above meeting as I have to attend a funeral in England. Therefore I am sending you my comments on the rezoning request and review of the associated Development Plan. I have grave worries about this Plan and trust that my comments can be entered into the records.

My concerns relating to this proposed development have always been centered around the fundamental flaw in the Plan that proposes to have the traffic from a City developed housing development drive onto and through a County maintained and developed series of roads. Throughout all the revisions on this Plan. None of them have sufficiently addressed and solved the fundamental reality that the County roads of Cross Creek, Ridgeway, Beacon Hill, Stanford and Warren were not developed for this level of traffic.

The new Plan proposes a gated community of 70 houses that has one entrance and exit via Stanford Dr. The traffic, which would not alone come from the houses but would include all the service traffic, school buses, mail trucks, lawn etc would presumably then drive down Lower Ridgeway to join onto Hwy 96. No traffic lights at these intersections are being proposed for this number of cars. However as everyone knows the traffic on Hwy 96 is fast flowing and does not allow traffic to join quickly during the peak rush morning and evening hours. Therefore a backup will occur on Lower Ridgeway and Hwy 96. Traffic is very likely to go back up Ridgeway, down Beacon Hill to Cross Creek to join Hwy 96 closer to the traffic lights at Clover Croft in an attempt to gain quicker access to Hwy 96. .

All these County roads have existed for many years. None have sidewalks nor street lighting. The Franklin Planning department clearly state and require that all new developments follow their criteria of sidewalks and street lighting. As shown clearly in the Ashcroft PUD. However, as I understand, they have no jurisdiction or ability to require that all of these affected County roads mentioned, be upgraded to meet these same requirements. If there is a good rational for these requirements in the City housing areas, should not the same requirements be required for the County roads, as the same traffic will be flowing on both. The reasoning behind these requirements is for the safety of both the motorists and the pedestrians. Therefore these County roads would then not meet this basic code for safety.



The present County road system is sufficient for the present housing density, although with no sidewalks, pedestrian travel can still be risky and unsafe. If this Plan were to proceed to add this new traffic from 70 houses and services, then all this new traffic will become the burden on 9 existing households on Lower Ridgway/Stanford. With the potential burden and safety, also on the households of Upper Ridgway, Beacon Hill and Lower Cross Creek.

I have grave concerns about our safety and the safety for the new households, should they also want to walk out of their gated community to Hwy 96. This Plan brings up the same safety objections as with the earlier plans, even with a housing density that has been reduced to 70.

The traffic safety has simply not been addressed adequately for these County roads to accommodate all of this extra traffic..

Yours sincerely

Brian Caplen

1991 Beacon Hill Drive , Franklin TN 37067

Brian Caplen 9/10/16



HISTORIC
FRANKLIN
TENNESSEE

City of Franklin

Connectivity Presentation

Ashcroft Valley PUD Subdivision

BOMA Work Session 10/11/2016



Connectivity Requirements (Section 5.10.4 of the Zoning Ordinance)

(1) Internal Street Connectivity

- All new Developments shall maintain internal street connectivity through the use of a connectivity index in accordance with the following standards:
 - Development shall achieve a connectivity index score of 1.65 or greater
 - Connectivity Index = Links/Nodes
 - Nodes are street intersection and cul-de-sac heads.
 - Links are stretches of road that connect nodes.

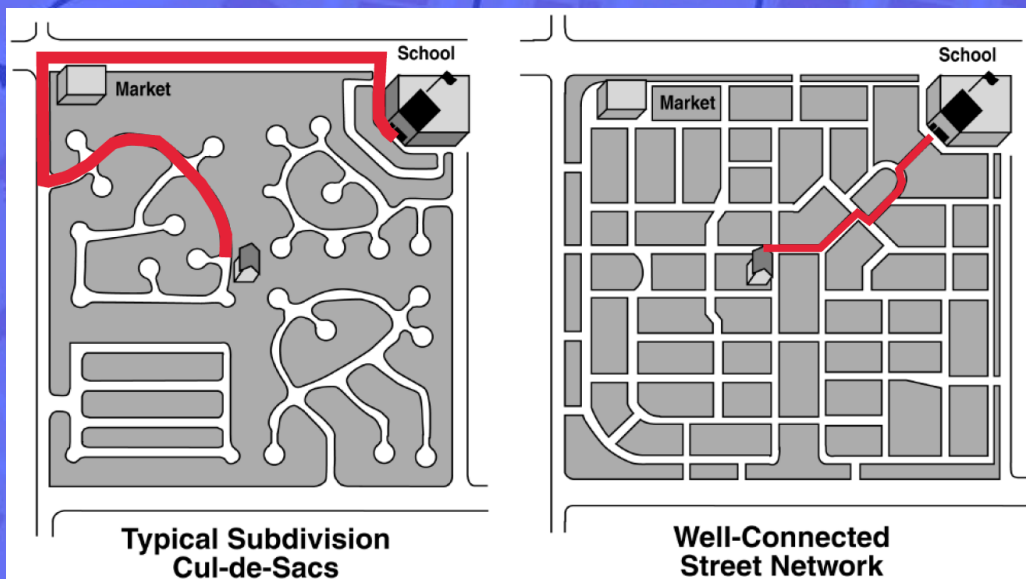
(2) External Street Connectivity

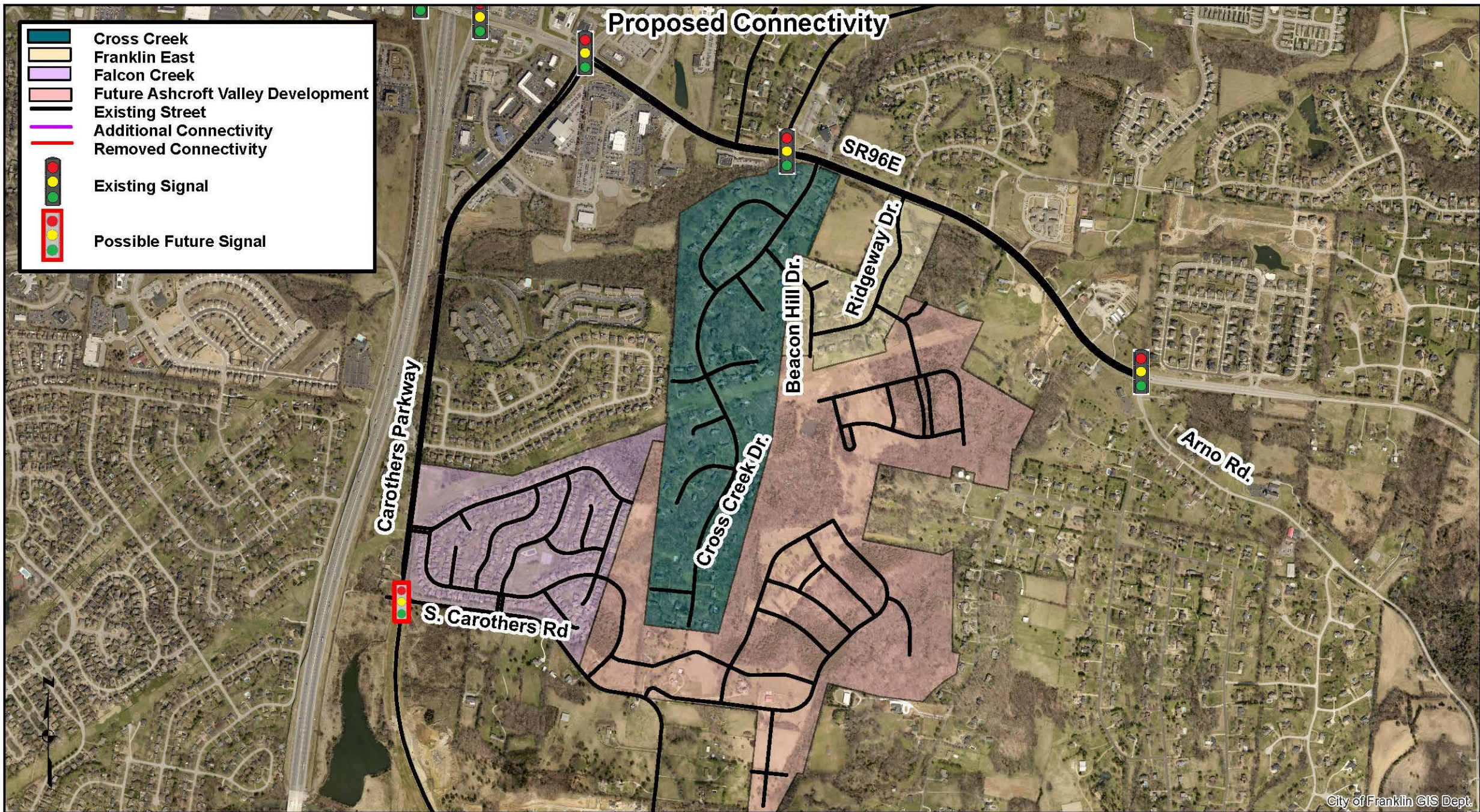
- The arrangement of streets in a development shall provide for the alignment and continuation of existing or proposed streets into adjoining lands in those cases in which the adjoin lands are undeveloped and intended for future development or in which the adjoin lands are developed and include opportunities for such connections.
- Traffic calming measures shall be integrated in the development to mitigate the impact of potential future “cut – through” traffic.
- Street rights-of-way shall be extended to or along adjoining property boundaries such that a roadway connection or street stub shall be provided for development at least every 1,500 feet for each direction (north, south, east and west) in which development abuts vacant lands. Such street stubs shall not be required to abut adjacent development lacking existing or planned street connections, floodplains, wetlands, HHO Districts, riparian buffers, required Tree Projection Zones, slopes exceeding 14 percent, or other unique site conditions preventing a street connection in the determination of the DRT.

Connectivity Requirements				
Community	Connectivity Requirements?	Are Street Stubs Required?	Are cul-de-sacs allowed?	Max. cul-de-sac length
Franklin, TN	Yes	Yes	Yes	500'
Williamson County, TN	Yes	Yes	Yes	800' (Lots Less 14,000 SF)
Nashville, TN	Yes	Yes	Generally prohibited	250'
Chattanooga, TN	Yes	Yes	Yes, Limited	<600' and provides access to < 10 lots
Boulder, CO	Yes	Yes	Yes, Limited	500'
Fort Collins, CO	Yes	Yes	Yes, Limited	660'
Cary, NC	Yes	Yes	Yes	900'
Raleigh, NC	Yes	Yes	Yes	400' for residential
Charlotte, NC	Yes	Yes	Yes, Limited	600'
Austin, TX	Yes	Yes	Yes, Limited	2000' and < 30 single-family residential dwellings

What is the purpose of connectivity requirements?

- Supports the creation of a highly connected transportation system within the City, in order to provide choices for drivers, bicyclists and pedestrians
- Connects neighborhoods to each other and to local destinations such as schools, parks and shopping centers
- Distributes traffic throughout the network and provides options for routes of travel
- Free up arterial road capacity to better serve regional long distance travel needs.
- Improves routing for transit and delivery vehicles (solid waste, recycling, mail, etc.)
- Reduces vehicles miles of travel and travel times
- Reduces emergency response times
- Promote higher levels of physical activity (walking and cycling)
- Improves air quality



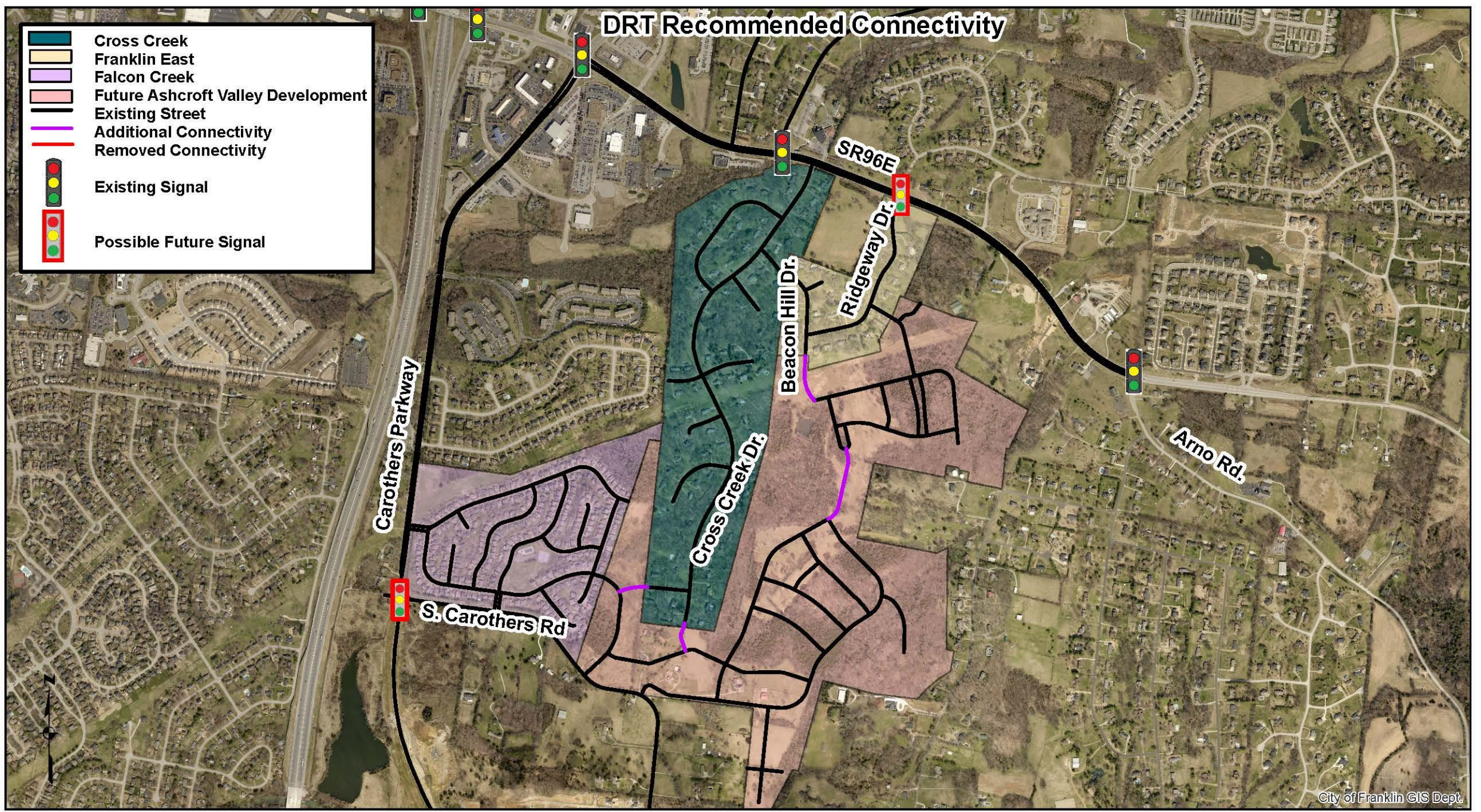


DRT Recommended Connectivity

Cross Creek
Franklin East
Falcon Creek
Future Ashcroft Valley Development
Existing Street
Additional Connectivity
Removed Connectivity

Existing Signal

Possible Future Signal



Planned - Activity Center Map 1

- Cross Creek
- Franklin East
- Falcon Creek
- Future Ashcroft Valley Development
- Future Park
- Future Neighborhood Commercial
- Existing/Future Commercial Development

Summary of Approved Development:

Proposed Retail = 1.95 Million SF

Proposed Office = 3.1 Million SF

Without connectivity you:

- You increase delay at SR96E/Clovercroft and SR96E/Carothers
- Concentrate and direct traffic to the arterial roadways vs. distribute traffic throughout the network
- Increase vehicle miles of travel and travel times
- Decrease routing options for transit, local delivery vehicles and emergency response times

Planned - Activity Center Map 2

- Cross Creek
- Franklin East
- Falcon Creek
- Future Ashcroft Valley Development
- Future Park
- Future Neighborhood Commercial
- Existing/Future Commercial Development

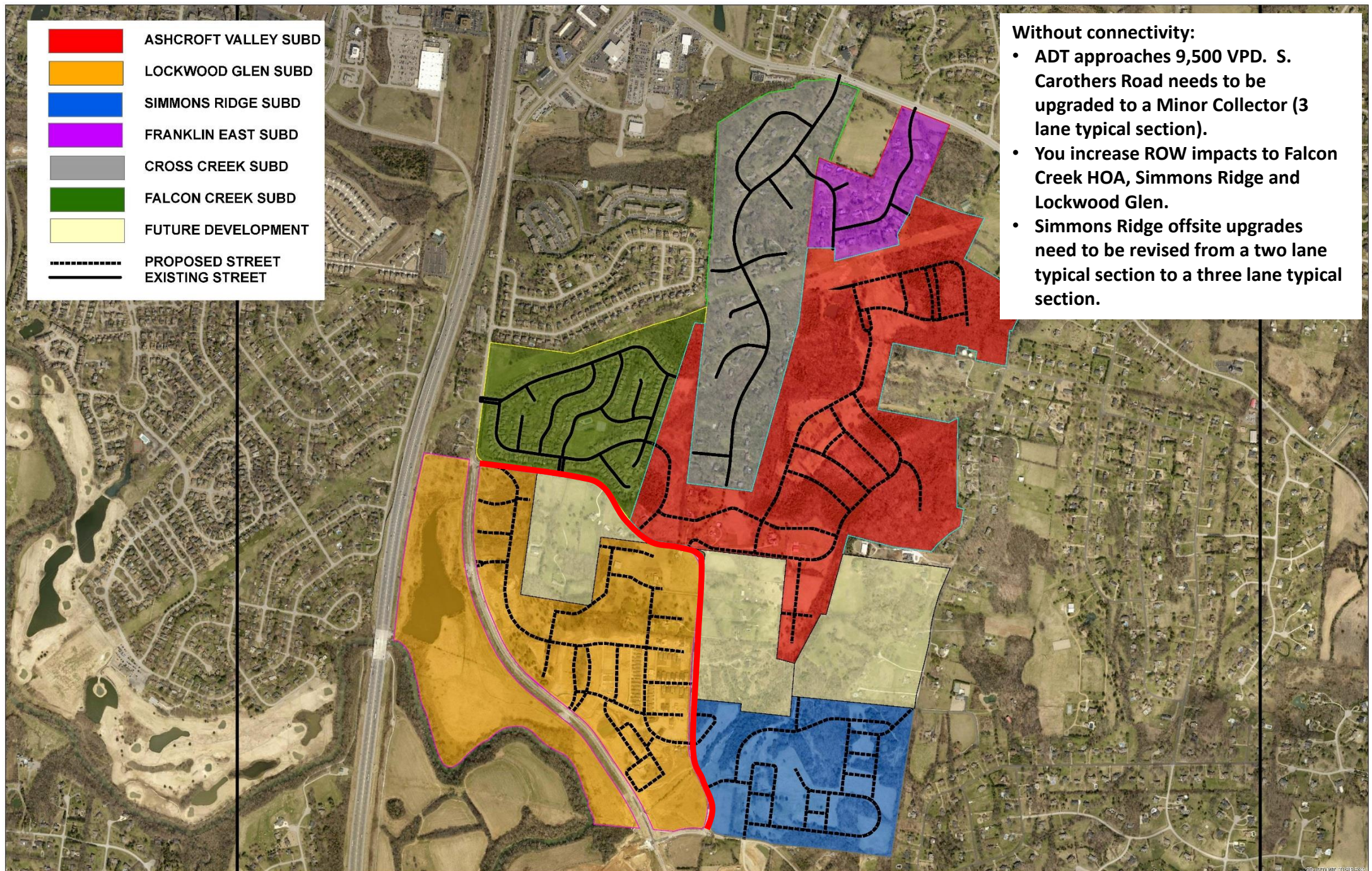
Summary of Approved Development:

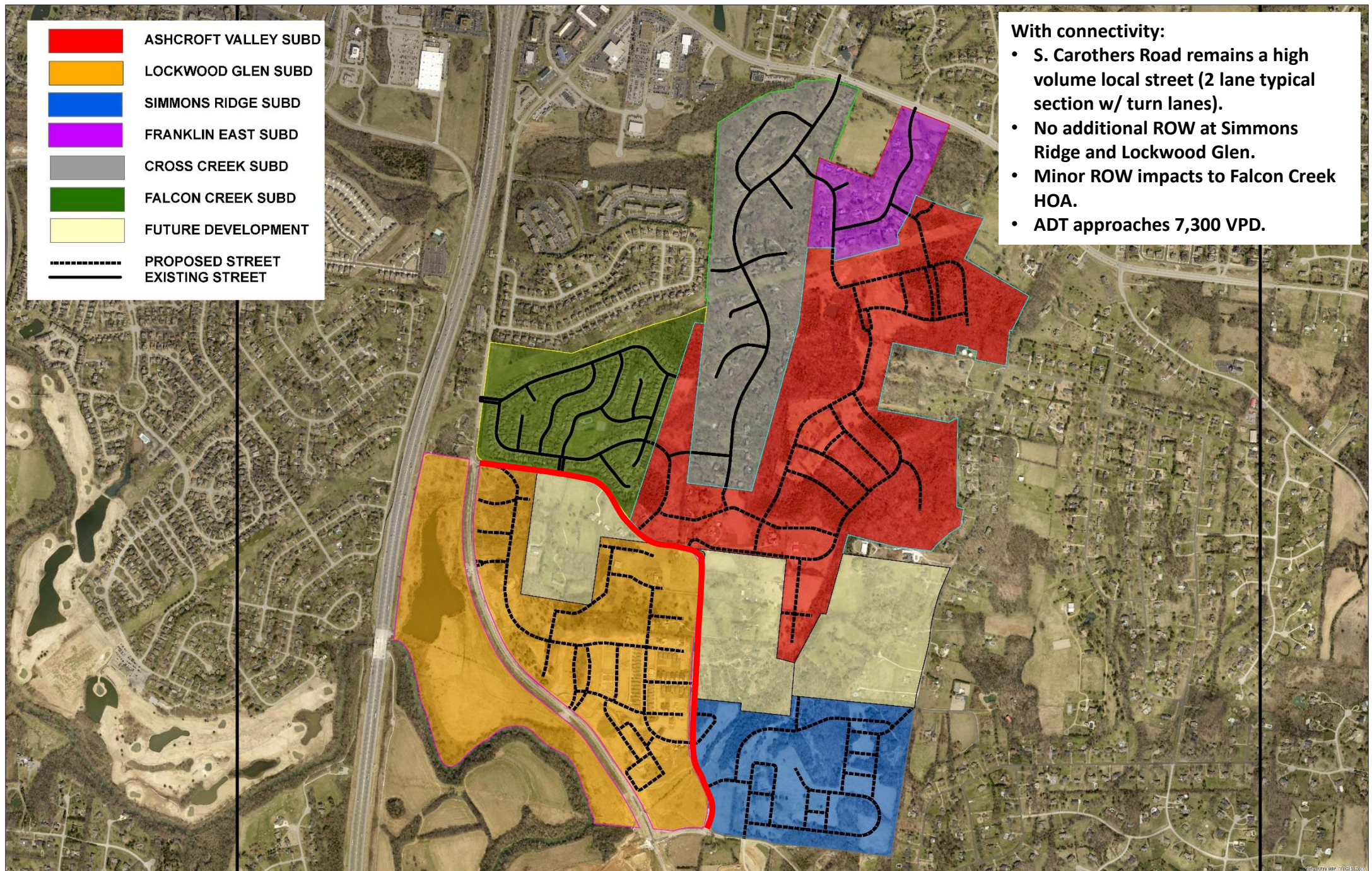
Proposed Retail = 1.95 Million SF

Proposed Office = 3.1 Million SF

With connectivity you:

- You decrease delay at SR96E/Clovercroft and SR96/Carothers
- Distribute traffic throughout the network
- Decrease vehicle miles of travel and travel times
- Increase routing options for transit, local delivery vehicles and emergency response times





November 15, 2016

TO: Board of Mayor and Aldermen

FROM: Paul Holzen, Director of Engineering
Jimmy Wiseman, Assistant Director of Engineering
Carl Baughman, Traffic Engineer III
Josh King, Senior Planner

SUBJECT: Ashcroft Valley Development Plan – Recommended Offsite Transportation Improvements

Purpose

The purpose of this memo is to provide information to the Board of Mayor and Aldermen (BOMA) for the consideration of offsite Transportation Improvements related to Ashcroft Valley Development Plan

Background

Ashcroft Valley currently has numerous MOS related to connectivity. These MOS make it very difficult to complete a traffic impact study addressing all off-site conditions. For this reason, the applicant shall be required to update the traffic impact study following BOMA approval or denial of the MOS's. This will allow City staff and our on-call traffic engineer to finalize traffic distributions and offsite requirements. The final TIS shall be approved by the City Engineer prior to the submitting the first site plan. The summary below is a list of staff recommendations of approval.

General Conditions of Approval:

1. The Development Plan shall be modified to allow adequate guest/visitor parking for all alley loaded residential lots. Specifically lots 133, 134, 135, 136, 137, 143, 144 145, 148, 149, 226, 227, 228, 229, 232, 233, 234 and 235. **Given the design speed (40MPH) along South Carothers Roadway and the superelevation that will be required, no parallel parking shall be allowed on South Carothers Roadway.**
2. The proposed intersection of Local Road E and South Carothers Roadway shall be re-evaluated to ensure Local Road E meets a minimum design speed of 25MPH. AASHTO standards recommends a minimum radius of 198' vs. the 70' radius as shown in the development plan. It should be noted that this may have offsite right-of-way acquisition issues. Staff would be willing to consider a single lane roundabout at this intersection. This roundabout shall be designed to meet AASHTO standards for a design speed of 40 MPH (Posted at 30MPH).
3. In conjunction with the first site plan or infrastructure submittal, full construction drawings shall be prepared for all improvements required on South Carothers Roadway so that Right-of-Way can be reserved and coordinated with adjacent property owners and developers. The Developer shall be required to coordinate with all off-site property owners and pay all cost associated with the Design, Right-of-way and Construction. In the event negotiations fail, for the Right-of-way

acquisition, the City shall attempt to acquire the property and use condemnation as a last resort for South Carothers Roadway only.

Conditions of approval with 100% Connectivity

In conjunction with the northern portion of the proposed project:

1. At the intersection with Highway 96E, the northbound approach of Ridgeway Drive should be widened to include two northbound turn lanes. Specifically, the existing northbound lane should be retained as left turn lane, and a separate through/right turn lane with at least 75 feet of storage should be constructed to the east. With connectivity the developer shall install a traffic signal at HWY 96E. The signal shall be designed to ensure that left turn phases operate concurrently. The exact details of the traffic signal shall be evaluated as part of the TIS update.
2. At the intersection with Ridgeway Drive, an eastbound right turn lane should be provided on Highway 96E. This turn lane should include at least 150 feet of storage and should be designed and constructed according to AASHTO standards.

In conjunction with the southern portion of the proposed project:

3. A northbound right turn lane should be provided on Carothers Parkway at the intersection with S. Carothers Road. This turn lane should include at least 100 feet of storage and should be designed and constructed according to AASHTO standards. No road impact fee offsets will be allowed with this improvement.
4. A traffic signal will likely be warranted at the intersection of Carothers Parkway and S. Carothers Road as all of the approved residential projects on Carothers Parkway and S. Carothers Road are developed. If constructed, this traffic signal should be designed and constructed to include protected and permissive signal phases for southbound motorists, as well as right turn overlap signal phases for northbound and westbound approaches. **Staff does not recommend the installation of the traffic signal until Carothers Parkway is widened to a 4/5 lane roadway.** Any type of signal installed today would be removed as part of a future widening of Carothers Parkway and we would essentially be paying for the signal two times. The signal is only warranted as development continues and staff will continue to evaluate this.
5. The western project access on S. Carothers Road should be constructed to include one entering lane and one exiting lane, striped as a shared left and right turn lane. In conjunction with this configuration, a southbound/eastbound left turn lane should be provided on S. Carothers Road at the project access. This turn lane should include at least 100 feet of storage and should be designed and constructed according to AASHTO standards **(See Exhibit A)**.
6. The eastern (main) project access on S. Carothers Road should be constructed to include one entering lane and two exiting lanes, striped as separate left and right turn lanes. This project access shall be constructed with S. Carothers Road to allow free-flowing traffic on S. Carothers Road and the main project access shall tee into S. Carothers Road. S. Carothers Road shall be designed as a two lane high volume street with turn lanes as required. The design speed on S. Carothers Road shall be 40 MPH so that it can be posted at 30 mph. Due to limited sight distance a westbound right turn lane shall be added, at the main entrance, on S. Carothers Road to

prevent future accidents. In conjunction with this configuration, a southbound/eastbound left turn lane should be provided on S. Carothers Road at the project access. This turn lane should include at least 100 feet of storage and should be designed and constructed according to AASHTO standards (**See Exhibit A**).

7. Finally, in conjunction with the preparation of final construction documents for the proposed project, sight triangles should be provided to identify the sight distances which will be available, based on the specific location of the project access and its design parameters. These sight triangles should be developed based on guidelines that are included in A Policy on Geometric Design of Highways and Streets, which is published by the American Association of State Highway and Transportation Officials (AASHTO) and commonly known as The Green Book. Specifically, The Green Book indicates that for a speed of 40 mph, the minimum stopping sight distance is 305 feet. This is the distance that motorists on S. Carothers Road will need to come to a stop if a vehicle turning from the project access creates a conflict. Also, based on The Green Book, the minimum intersection sight distance is 445 feet. This is the distance that motorists on the project access will need to safely complete a turn onto S. Carothers Road.

Without 100% Connectivity

1. A northbound right turn lane should be provided on Carothers Parkway at the intersection with S. Carothers Road. This turn lane should include at least 100 feet of storage and should be designed and constructed according to AASHTO standards. No road impact fee offsets will be allowed with this improvement.
2. A traffic signal will likely be warranted at the intersection of Carothers Parkway and S. Carothers Road as all of the approved residential projects on Carothers Parkway and S. Carothers Road are developed. If constructed, this traffic signal should be designed and constructed to include protected and permissive signal phases for southbound motorists, as well as right turn overlap signal phases for northbound and westbound approaches. **Staff does not recommend the installation of the traffic signal until Carothers Parkway is widened to a 4/5 lane roadway.** Any type of signal installed today would be removed as part of a future widening of Carothers Parkway and we would essentially be paying for the signal two times.
3. The western project access on S. Carothers Road should be constructed to include one entering lane and one exiting lane, striped as a shared left and right turn lane. In conjunction with this configuration South Carothers Roadway shall be constructed as a three lane minor collector roadway that would include a left / eastbound turn lane and should include at least 100 feet of storage (**See Exhibit B**).
4. The eastern (main) project access on S. Carothers Road should be constructed to include one entering lane and two exiting lanes, striped as separate left and right turn lanes. This project access shall be constructed with S. Carothers Road to allow free-flowing traffic on S. Carothers Road and the main project access shall tee into S. Carothers Road. S. Carothers Road shall be designed as a three lane minor collector street. The design speed on S. Carothers Road shall be 40 MPH so that it can be posted at 30 mph. Due to limited sight distance a westbound right turn lane shall be added, at the main entrance, on S. Carothers Road to prevent future accidents. In

conjunction with this configuration, a southbound/eastbound left turn lane should be provided on S. Carothers Road at the project access. This turn lane should include at least 100 feet of storage and should be designed and constructed according to AASHTO standards (**See Exhibit B**).

5. Finally, in conjunction with the preparation of final construction documents for the proposed project, sight triangles should be provided to identify the sight distances which will be available, based on the specific location of the project access and its design parameters. These sight triangles should be developed based on guidelines that are included in A Policy on Geometric Design of Highways and Streets, which is published by the American Association of State Highway and Transportation Officials (AASHTO) and commonly known as The Green Book. Specifically, The Green Book indicates that for a speed of 40 mph, the minimum stopping sight distance is 305 feet. This is the distance that motorists on S. Carothers Road will need to come to a stop if a vehicle turning from the project access creates a conflict. Also, based on The Green Book, the minimum intersection sight distance is 445 feet. This is the distance that motorists on the project access will need to safely complete a turn onto S. Carothers Road.
6. A roadway connection to Stanford Drive and Biltmore Court or Cross Creek Drive shall be required as a gated emergency connection. This should be completed as a two lane curb and guttered roadway with emergency gates that meet the requirements of the Franklin Fire Department. In addition, these roadways shall be designed to meet City of Franklin Street specifications.

Financial Impact

As the City continues to develop there will be increased pressure to make capital improvements to Carothers Parkway and S. Carothers Road. Without connectivity, The City will be forcing 3,560 VPD to use South Carothers Roadway. Without 100% connectivity, it is recommended that S Carothers Roadway be upgraded to a minor collector to handle the long term traffic in the area. While feasible, this change would have a direct impact on the cost of other future capital projects.

The diagram shows a proposed road layout on an aerial photograph. The road starts at the top left, curves to the right, and then curves to the left. Key features include:

- Left Turn Lane**: Indicated at the top left intersection and in the middle of the road.
- 30 mph superelevated curve**: Indicated at the top left intersection and at the bottom right curve.
- 12' Trail**: Indicated on the right side of the road.
- Right Turn Lane Required for Safety**: Indicated at the bottom right curve.

With Connectivity
Two Lane Typical Section
Design Speed = 40 mph
Posted Speed = 30 mph

Left Turn Lane

30 mph superelevated curve

12' Trail

Left Turn Lane

Right Turn Lane
Required for Safety

30 mph superelevated curve

The diagram is an aerial photograph of a rural area with a proposed road layout overlaid. The road is shown in grey with yellow and white lane markings. It features two curves, both labeled '30 mph superelevated curve'. A '12' Trail' is indicated by a black line with a white arrow. Two 'Left Turn Lane' labels point to specific sections of the road. A 'Right Turn Lane Required for Safety' label points to a section of the road. The surrounding area includes fields, trees, and some buildings.

Without Connectivity
Three Lane Typical Section
Design Speed = 40 mph
Posted Speed = 30 mph

ORDINANCE 2016-39

TO BE ENTITLED: "AN ORDINANCE TO AMEND CHAPTERS 3 AND 5 OF THE ZONING ORDINANCE OF THE CITY OF FRANKLIN, TENNESSEE, TO ADOPT THE NEW FEMA FLOOD INSURANCE RATE MAPS, AND AMEND THE CITY OF FRANKLIN ZONING MAP TO UPDATE THE BOUNDARIES OF THE FLOODWAY FRINGE (FFO) AND FLOODWAY (FWO) OVERLAY DISTRICTS ACCORDINGLY."

WHEREAS, the City of Franklin, Tennessee, is a participant in the National Flood Insurance Program (NFIP); and

WHEREAS, the NFIP and Federal Emergency Management Agency (FEMA) requires local communities to maintain certain requirements; and

WHEREAS, the Board of Mayor and Aldermen (BOMA) wishes to maintain eligibility in the NFIP, and in order to do so must meet the NFIP regulations found in Title 44 of the Code of Federal Regulations (CFR), Ch. 1, § 60.3; and

WHEREAS, areas of the City of Franklin are subject to periodic inundation which could result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare; and

WHEREAS, flood losses are caused by the cumulative effect of obstructions in floodplains, resulting in increases in flood heights and velocities; by uses in flood hazard areas which are vulnerable to floods; or construction which is inadequately elevated, floodproofed, or otherwise unprotected from flood damages; and

WHEREAS, the Legislature of the State of Tennessee has in *Tennessee Code Annotated* (T.C.A.) §§ 13-7-201 through 13-7-210, delegated the responsibility to local government units to adopt municipal zoning regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the City of Franklin has previously adopted the FWO – Floodway Overlay District (FWO) and FFO – Floodway Fringe Overlay District (FFO); and

WHEREAS, the BOMA wishes to amend Subsections 3.4.4 and 3.4.5 in order to update the references to the FEMA Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM) adopted in Subsection 5.8.5 (2) (b) that form the basis for the location of the FWO and FFO Overlay Districts; and

WHEREAS, the City of Franklin has previously adopted Floodplain Protection standards in Chapter 5, Subsection 5.8.5, of the City of Franklin Zoning Ordinance; and

WHEREAS, the BOMA wishes to amend Subsection 5.8.5 (2) (b) of the Franklin Zoning Ordinance in order to update the list of Flood Insurance Rate Map, Community Panel Numbers, in order to include and formally adopt the new Flood Insurance Rate Maps, dated December 22, 2016; and

WHEREAS, FEMA formally notified the City of Franklin and issued a final Flood Hazard Determination (FHD) on June 22, 2016; and

WHEREAS, the City of Franklin is required to adopt the new FIS and FIRMs within six (6) months from the date of the FHD; and

WHEREAS, upon passage of Ordinance 2016-39, the City of Franklin is authorized by the CFR to begin utilizing and enforcing the data contained in the new FIS and FIRMs prior to the December 22, 2016, effective date; and

WHEREAS, the BOMA wishes to amend the City of Franklin Zoning Map, to update the boundaries of the FWO and FFO Overlay Districts to coincide with the new FIS and FIRMs; and

WHEREAS, these amendments are in the best interest of the citizens of Franklin.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS:

SECTION I. That Chapter 3, Subsection 3.4.4 (4) of the Franklin Zoning Ordinance is hereby amended to delete the following text noted with a ~~strike through~~; to add the following text noted in **bold**, and is approved to read as follows:

- (4) Undesignated Tributaries and Drainage Areas Within or Affecting the City
The FWO District shall coincide with floodways designated in the Flood Insurance Studies ~~or~~ **and** on the National Flood Insurance Program Flood Insurance Rate Maps, hereinafter referred to as FIRMs, ~~effective September 29, 2006~~ **adopted in Subsection 5.8.5 (2) (b)**, or as subsequently amended by either a Letter of Map Amendment or a Letter of Map Revision. The FWO District width for tributaries and drainage areas within or affecting the city that do not have designated floodways depicted on the zoning map or are not delimited in the Flood Insurance Studies or FIRMs shall be established in accordance with the stormwater management ordinance.

SECTION II. That Chapter 3, Subsection 3.4.5 (5) of the Franklin Zoning Ordinance is hereby amended to delete the following text noted with a ~~strike through~~; to add the following text noted in **bold**, and is approved to read as follows:

- (5) Undesignated Tributaries and Drainage Areas Within or Affecting the City
The FFO District shall coincide with the 100-year floodplain or floodway fringe boundary as designated in the Flood Insurance Studies ~~or~~ on the FIRMs, ~~effective September 29, 2006~~ **adopted in Subsection 5.8.5 (2) (b)**, or as subsequently amended by either a Letter of Map Amendment or a Letter of Map Revision. The FFO District width for tributaries and drainage areas within or affecting the city that do not have designated floodway fringe areas depicted on the zoning map or are not delimited in the Flood Insurance Studies or FIRMs shall be established in accordance with the stormwater management ordinance.

SECTION III. That Chapter 5, Subsection 5.8.5 (2) (b) of the Franklin Zoning Ordinance is hereby amended to delete the following text noted with a ~~strike through~~; to add the following text noted in **bold**, and is approved to read as follows:

(b) Basis for Establishing the Areas of Special Flood Hazard

~~The Areas of Special Flood Hazard identified in the City of Franklin, Tennessee, as identified by FEMA, and in its Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM), Community Panel Numbers 47187C0180F, 47187C0182F, 47187C0184F, 47187C0190F, 47187C0192F, 47187C0195F, 47187C0203F, 47187C0204F, 47187C0205F, 47187C0208F, 47187C0209F, 47187C0211F, 47187C0212F, 47187C0213F, 47187C0214F, 47187C0220F, 47187C0230F, 47187C0335F, 47187C0355F, 47187C0360F, dated, September 29, 2006, along with all supporting technical data, are adopted by reference and declared to be a part of Section 5.8.5.~~

(i) **The Areas of Special Flood Hazard in the City of Franklin, Tennessee, are identified by FEMA in its Flood Insurance Study (FIS) dated December 22, 2016, and on the Flood Insurance Rate Map (FIRM), Community 470206, as follows:**

A.) Panel Numbers: **47187C0190F, 47187C0195F, 47187C0204F, 47187C0205F, 47187C0208F, 47187C0209F, 47187C0212F, 47187C0220F, 47187C0230F, 47187C0335F, 47187C0355F, 47187C0360F, dated September 29, 2006; and**

B.) Panel Numbers: **47187C0180G, 47187C0182G, 47187C0183G, 47187C0184G, 47187C0192G, 47187C0203G, 47187C0211G, 47187C0213G, 47187C0214G, dated December 22, 2016.**

(ii) **The FIS and FIRMs, along with all supporting technical data, are hereby adopted by reference and declared to be a part of Subsection 5.8.5.**

SECTION IV. That the Franklin Zoning Map shall be, and is hereby, amended to revise the boundaries of the FWO – Floodway Overlay District (FWO) and FFO – Floodway Fringe Overlay District (FFO) to coincide with the Flood Insurance Study (FIS) and Flood Insurance Rate Maps as specified in the Franklin Zoning Ordinance, Chapter 3, Subsections 3.4.4 (4), 3.4.5 (5), and as adopted and further described in Chapter 5, Subsection 5.8.5 (2) (b).

SECTION V. BE IT FINALLY ORDAINED by the Board of Mayor and Aldermen of the City of Franklin, Tennessee, that this Ordinance shall take effect from and after its passage on third and final reading, the health, safety, and welfare of the citizens requiring it.

ATTEST:

CITY OF FRANKLIN, TENNESSEE:

By: _____
Eric Stuckey
City Administrator/Recorder

By: _____
Dr. Ken Moore
Mayor

Approved as to form by:

Kristen L. Corn
Assistant City Attorney

PLANNING COMMISSION RECOMMENDED:

PASSED FIRST READING:

PUBLIC HEARING HELD:

PASSED SECOND READING:

PASSED THIRD READING:



Federal Emergency Management Agency
Washington, D.C. 20472

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

IN REPLY REFER TO:
115-I

June 22, 2016

The Honorable Ken Moore
Mayor, City of Franklin
109 3rd Avenue South, Suite 103
Franklin, TN 37064

Community: City of Franklin,
Williamson County, Tennessee
Community No.: 470206
Map Panels Affected: See FIRM Index

Dear Mayor Moore:

On February 11, 2015, you were notified of proposed modified flood hazard determinations affecting the Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report for the City of Franklin, Williamson County, Tennessee. The statutory 90-day appeal period that was initiated on February 25, 2015, when the Department of Homeland Security's Federal Emergency Management Agency (FEMA) published a notice of proposed Flood Hazard Determinations (FHDs) for your community in *The Tennessean*, has elapsed.

FEMA received no valid requests for changes in the FHDs. Therefore, the determination of the Agency as to the flood hazard information for your community is considered final. The final FHDs will be published in the *Federal Register* as soon as possible. The modified FHDs and revised map panels, as referenced above, will be effective as of December 22, 2016, and revise the FIRM that was in effect prior to that date. For insurance rating purposes, the community number and new suffix code for the panels being revised are indicated above and on the maps and must be used for all new policies and renewals.

The modifications are pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (Public Law 93-234) and are in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, Public Law 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Because of the modifications to the FIRM and FIS report for your community made by this map revision, certain additional requirements must be met under Section 1361 of the 1968 Act, as amended, within 6 months from the date of this letter. Prior to December 22, 2016, your community is required, as a condition of continued eligibility in the National Flood Insurance Program (NFIP), to adopt or show evidence of adoption of floodplain management regulations that meet the standards of Paragraph 60.3(d) of the NFIP regulations. These standards are the minimum requirements and do not supersede any State or local requirements of a more stringent nature.

It must be emphasized that all the standards specified in Paragraph 60.3(d) of the NFIP regulations must be enacted in a legally enforceable document. This includes the adoption of the effective FIRM [, FBFM,] and FIS report to which the regulations apply and the modifications made by this map revision. Some of the standards should already have been enacted by your community. Any additional requirements can be met by taking one of the following actions:

1. Amending existing regulations to incorporate any additional requirements of Paragraph 60.3(d);
2. Adopting all the standards of Paragraph 60.3(d) into one new, comprehensive set of regulations;
or
3. Showing evidence that regulations have previously been adopted that meet or exceed the minimum requirements of Paragraph 60.3(d).

Communities that fail to enact the necessary floodplain management regulations will be suspended from participation in the NFIP and subject to the prohibitions contained in Section 202(a) of the 1973 Act as amended.

A Consultation Coordination Officer (CCO) has been designated to assist your community with any difficulties you may be encountering in enacting the floodplain management regulations. The CCO will be the primary liaison between your community and FEMA. For information about your CCO, please contact:

Mr. Jesse Munoz
Director, Federal Insurance and Mitigation Division
Federal Emergency Management Agency, Region IV
3003 Chamblee Tucker Road
Atlanta, Georgia 30341
(770) 220-5200

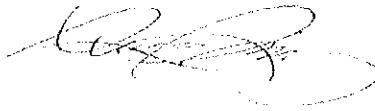
To assist your community in maintaining the FIRM, we have enclosed a Summary of Map Actions to document previous Letter of Map Change (LOMC) actions (i.e., Letters of Map Amendment (LOMAs), Letters of Map Revision (LOMRs)) that will be superseded when the revised FIRM panels referenced above become effective. Information on LOMCs is presented in the following four categories: (1) LOMCs for which results have been included on the revised FIRM panels; (2) LOMCs for which results could not be shown on the revised FIRM panels because of scale limitations or because the LOMC issued had determined that the lots or structures involved were outside the Special Flood Hazard Area as shown on the FIRM; (3) LOMCs for which results have not been included on the revised FIRM panels because the flood hazard information on which the original determinations were based is being superseded by new flood hazard information; and (4) LOMCs issued for multiple lots or structures where the determination for one or more of the lots or structures cannot be revalidated through an administrative process like the LOMCs in Category 2 above. LOMCs in Category 2 will be revalidated through a single letter that reaffirms the validity of a previously issued LOMC; the letter will be sent to your community shortly before the effective date of the revised FIRM and will become effective 1 day after the revised FIRM becomes effective. For the LOMCs listed in Category 4, we will review the data previously submitted for the LOMA or LOMR request and issue a new determination for the affected properties after the revised FIRM becomes effective.

The FIRM and FIS report for your community have been prepared in our countywide format, which means that flood hazard information for all jurisdictions within Williamson County, Tennessee has been combined into one FIRM and FIS report. When the FIRM and FIS report are printed and distributed, your community will receive only those panels that present flood hazard information for your community. We will provide complete sets of the FIRM panels to county officials, where they will be available for review by your community.

The FIRM panels have been computer-generated. Once the FIRM and FIS report are printed and distributed, the digital files containing the flood hazard data for the entire county can be provided to your community for use in a computer mapping system. These files can be used in conjunction with other thematic data for floodplain management purposes, insurance purchase and rating requirements, and many other planning applications. Copies of the digital files or paper copies of the FIRM panels may be obtained by calling our FEMA Map Information eXchange (FMIX), toll free, at 1-877-FEMA MAP (1-877-336-2627). In addition, your community may be eligible for additional credits under our Community Rating System if you implement your activities using digital mapping files.

If you have any questions regarding the necessary floodplain management measures for your community or the NFIP in general, we urge you to call the Director, Federal Insurance and Mitigation Division of FEMA in Atlanta, Georgia, at (770) 220-5200 for assistance. If you have any questions concerning mapping issues in general or the enclosed Summary of Map Actions, please call our FMIX at the toll free number shown above. Additional information and resources your community may find helpful regarding the NFIP and floodplain management, such as *The National Flood Insurance Program Code of Federal Regulations*, *Answers to Questions About the National Flood Insurance Program*, *Use of Flood Insurance Study (FIS) Data as Available Data*, *Frequently Asked Questions Regarding the Effect that Revised Flood Hazards have on Existing Structures*, and *National Flood Insurance Program Elevation Certificate and Instructions*, can be found on our website at <http://www.floodmaps.fema.gov/lfd>. Paper copies of these documents may also be obtained by calling our FMIX.

Sincerely,



Luis Rodriguez, P.E., Chief
Engineering Management Branch
Federal Insurance and Mitigation Administration

Enclosure:
Final Summary of Map Actions

cc: Community Map Repository
Ms. Shanna McCoy, Codes Administrator

FINAL SUMMARY OF MAP ACTIONS

Community: FRANKLIN, CITY OF

Community No: 470206

To assist your community in maintaining the Flood Insurance Rate Map (FIRM), we have summarized below the previously issued Letter of Map Change (LOMC) actions (i.e., Letters of Map Revision (LOMRs) and Letters of Map Amendment (LOMAs)) that will be affected when the revised FIRM becomes effective on December 22, 2016.

1. LOMCs Incorporated

The modifications effected by the LOMCs listed below will be reflected on the revised FIRM. In addition, these LOMCs will remain in effect until the revised FIRM becomes effective.

LOMC	Case No.	Date Issued	Project Identifier	Old Panel	New Panel
LOMR	12-04-6046P ¹	02/04/2013	Lynnwood Branch Restudy	47187C0182F	47187C0182G

¹LOMR only incorporated on panel 47187C0182G. The portion of the LOMR located on panel 47187C0205F will be reflected in a reissued version of the LOMR following publication of the revised FIRM.

2. LOMCs Not Incorporated

The modifications effected by the LOMCs listed below will not be reflected on the revised FIRM panels because of scale limitations or because the LOMC issued had determined that the lot(s) or structure(s) involved were outside the Special Flood Hazard Area, as shown on the FIRM. These LOMCs will remain in effect until the revised FIRM becomes effective. These LOMCs will be revalidated free of charge 1 day after the revised FIRM becomes effective through a single revalidation letter that reaffirms the validity of the previous LOMCs.

LOMC	Case No.	Date Issued	Project Identifier	Old Panel	New Panel
LOMA	951-064	11/09/1994	Lot 10, Section 1, Sturbridge Pointe Subdivision – 300 Richmond Place	4702060007D	47187C0211G
LOMA	951-115	12/13/1994	Units 7 and 8, West Pointe Place Condominiums, Phase 2 – 1129 West Main Street	4702060004D	47187C0211G
LOMA	951-176	01/26/1995	Unit 1, West Pointe Place Condominiums, Phase 1 – 1129 West Main Street	4702060004D	47187C0192G
LOMA	953-091	05/23/1995	Units 29 and 30, West Pointe Place Condominiums, Phase 2 – 1129 West Main Street	4702060004D	47187C0192G
LOMA	R4-981-219	01/20/1998	Lot 11, Section 1, Sturbridge Pointe Subdivision – 304 Richmond Place	4702060007D	47187C0211G
LOMA	R4-981-249	01/21/1998	Units 23 through 26, West Pointe Place Condominiums, Phase 2 – 1129 West Main Street	4702060004D	47187C0192G
LOMA	99-04-1968A	03/25/1999	Lot 2, Section 2, Maplewood – 709 Watson Branch Drive	4702060008D	47187C0211G
LOMA	02-04-5742A	07/24/2002	Unit 3, West Pointe Place Condominiums – 1129 West Main Street	4702060004D	47187C0192G

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this.

FINAL SUMMARY OF MAP ACTIONS

Community: FRANKLIN, CITY OF

Community No: 470206

LOMC	Case No.	Date Issued	Project Identifier	Old Panel	New Panel
LOMA	03-04-5744A	06/05/2003	Building L, Prescott Place at Fieldstone Farms -- Compton Lane	47187C0074E	47187C0184G
LOMA	03-04-7194A	06/16/2003	Bldg. F, Sec. 1, Prescott Place at Fieldstone Farms Condominiums, Phase 2	47187C0074E	47187C0184G
LOMA	03-04-7196A	06/16/2003	Building M, Prescott Place at Fieldstone Farms Condominiums	47187C0074E	47187C0184G
LOMA	03-04-8490A	07/29/2003	Buildings B, D, G, H, N, & O, Prescott Place at Fieldstone Farms Condominiums	47187C0074E	47187C0184G
LOMA	04-04-A360A	08/05/2004	CARRIAGE PARK CONDOMINIUM, LOT 11-B -- 1261 CARRIAGE PARK DRIVE	47187C0133E	47187C0213G
LOMA	05-04-1022A	01/21/2005	CARRIAGE PARK CONDOMINIUM, LOT 11-A -- 1263 CARRIAGE PARK DRIVE	47187C0133E	47187C0213G
LOMA	05-04-0729A	01/27/2005	1129 WEST MAIN STREET, UNIT 6, WEST POINTE PLACE CONDOMINIUMS	47187C0127E	47187C0192G
LOMA	06-04-BA59A	03/21/2006	CARRIAGE PARK CONDOMINIUM, LOT 19, Units A & B -- 1229 & 1231 CARRIAGE PARK DRIVE	47187C0133E	47187C0213G
LOMA	07-04-1413A	01/30/2007	WILLIAMSON FARMERS CO-OP, BUILDINGS A-F -- 200 EDDY LANE (PN: 063-063-049.00-000)	47187C0211F	47187C0211G
LOMA	08-04-6351A	10/09/2008	HARPETH MEADOWS, LOT 12 -- 135 LANCASTER DRIVE	47187C0211F	47187C0211G
LOMA	09-04-8124A	11/12/2009	PN: 09-063M-A-063L-03800-000 -- 497 LIBERTY PIKE, UNITS A,B,D,F,J,K	47187C0211F	47187C0211G
LOMR-F	11-04-2345A	01/27/2011	PN: 063G-E-29.00 -- 807 HILLSBORO ROAD	47187C0184F	47187C0184G
LOMA	13-04-2242A	02/05/2013	BUCKINGHAM PARK SUBDIVISION, SECTION TWO, LOT 183 -- 611 CLARIDGE COURT	47187C0211F	47187C0211G
LOMA	13-04-4201A	05/13/2013	RALSTON GLEN, SECTION ONE, LOT 9 -- 1119 GLENBROOK DRIVE	47187C0211F	47187C0211G
LOMR-F	14-04-1192A	02/18/2014	WILLOW PLUNGE SUBDIVISION, LOT 5 -- 1130 CARNTON LANE	47187C0211F	47187C0211G
LOMR-F	15-04-5807A	05/22/2015	BENELLI PARK SUBDIVISION, SECTION 2, LOT 6 -- 1023 BENELLI PARK COURT	47187C0192F	47187C0192G
LOMA	15-04-6216A	06/02/2015	BENELLI PARK, SECTION 2, LOTS 10 & 11 -- 1034 & 1035 BENELLI PARK COURT	47187C0192F	47187C0192G
LOMA	15-04-6537A	06/22/2015	REBEL MEADOWS SUBDIVISION, SECTION 4, LOT 91 -- 813 RONALD DRIVE	47187C0184F	47187C0184G

FINAL SUMMARY OF MAP ACTIONS

Community: FRANKLIN, CITY OF

Community No: 470206

LOMC	Case No.	Date Issued	Project Identifier	Old Panel	New Panel
LOMR-F	15-04-9146A	09/21/2015	CAROTHERS PARKWAY	47187C0214F 47187C0220F 47187C0360F	47187C0214G 47187C0220F 47187C0360F
LOMR-F	15-04-A429A	12/02/2015	LOCKWOOD GLEN PUD SUBDIVISION-SECTION 5, LOT 222 - 504 LOCKWOOD LANE	47187C0214F	47187C0214G
LOMA	08-04-5187A	07/11/2008	415 Boyd Mill Avenue	47187C0192F	47187C0192G

3. LOMCs Superseded

The modifications effected by the LOMCs listed below have not been reflected on the Final revised FIRM panels because they are being superseded by new detailed flood hazard information or the information available was not sufficient to make a determination. The reason each is being superseded is noted below. These LOMCs will no longer be in effect when the revised FIRM becomes effective.

LOMC	Case No.	Date Issued	Project Identifier	Reason Determination Will be Superseded
LOMA	961-078	11/27/1995	Lot 5, Section 1, Heath Place, Phase 2 - 1316 Kinnard Drive	2
LOMA	97-04-936A	05/14/1997	Lot 1362, Section G1, Fieldstone Farms	2
LOMA	00-04-1500A	02/18/2000	Lot 2, Willow Plunge Subdivision - 1132 Camton Lane	2
LOMA	00-04-2618A	06/06/2000	340 9TH AVENUE NORTH	2
LOMA	03-04-4678A	04/03/2003	Parcel A, Tract I of the R. L. Eatherly Property	3
LOMA	05-04-0927A	01/19/2005	FIELDSTONE FARMS PUD, SECTION G-1, LOT 1307 - 418 ESSEX PARK CIRCLE	2
LOMA	05-04-1903A	03/23/2005	FIELDSTONE FARMS P.U.D., SECTION G-1, LOT 1302 - 428 ESSEX PARK CIRCLE	2
LOMA	05-04-2106A	04/06/2005	FIELDSTONE FARMS, SECTION G1, LOT 1298 - 436 ESSEX PARK CIRCLE	2
LOMA	06-04-C625A	12/19/2006	LOT 3, RESUBDIVISION OF LOT 2, WILLOW PLUNGE SUBDIV, REVISION 1, - 1136 CARNTON LANE	2
LOMR-F	07-04-0225A	12/19/2006	HENLEY, SECTION 1, PORTION OF LOTS 24, 28-31, 43, OPEN SPACES 301 AND 308	3
LOMA	07-04-2910A	05/08/2007	FIELDSTONE FARMS, SECTION G1, LOT 1299 - 434 ESSEX PARK CIRCLE	2

FINAL SUMMARY OF MAP ACTIONS

Community: FRANKLIN, CITY OF

Community No: 470206

LOMC	Case No.	Date Issued	Project Identifier	Reason Determination Will be Superseded
LOMA	12-04-0507A	11/17/2011	JAMISON STATION, SECTION 1, LOT 14 --- 18 DANIELS DRIVE	3
LOMA	12-04-4064A	05/01/2012	CHARLTON GREEN, SECTION 3, LOT 29 -- 436 WATERCRESS DRIVE	2
LOMR-F	12-04-5050A	07/17/2012	PN: 078-06701-00109078 --- 412 EDDY LANE	3
LOMA	13-04-5849A	07/30/2013	PN: 078L-B-078L-01300-000 --- 504 FAIRFAX PLACE	2
LOMA	16-04-3702A	04/20/2016	FIELDSTONE FARMS, SECTION H1, LOT 996 -- 4011 LINDEN COURT	2
LOMA	12-04-0327A		Lot 15, Block -/1, Jamison Station Subdivision - 120 Jamison Station Lane	3

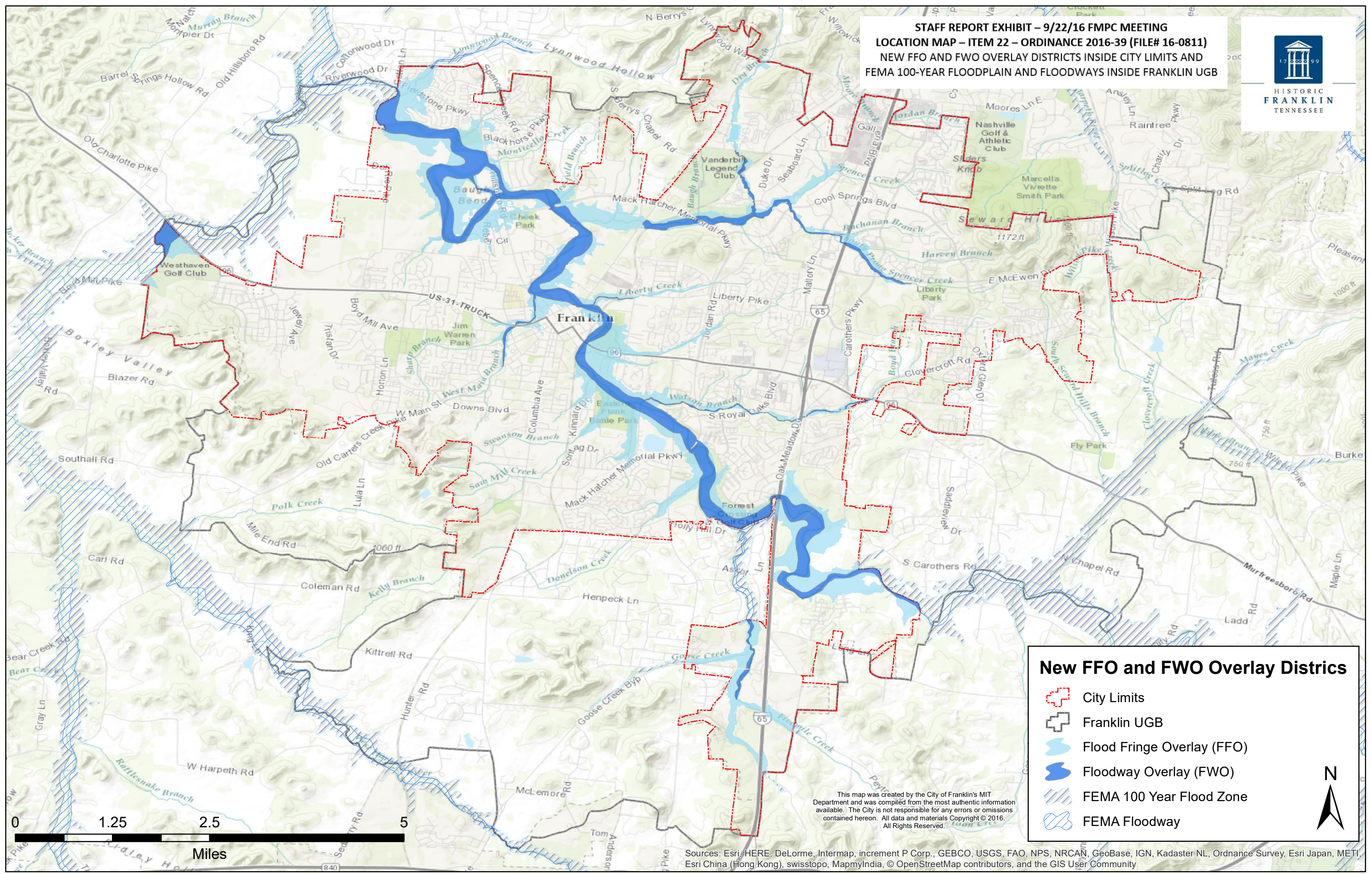
1. Insufficient information available to make a determination.
2. Lowest Adjacent Grade and Lowest Finished Floor are below the proposed Base Flood Elevation.
3. Lowest Ground Elevation is below the proposed Base Flood Elevation.
4. Revised hydrologic and hydraulic analyses.
5. Revised topographic information.

4. LOMCs To Be Redetermined

The LOMCs in Category 2 above will be revalidated through a single revalidation letter that reaffirms the validity of the determination in the previously issued LOMC. For LOMCs issued for multiple lots or structures where the determination for one or more of the lots or structures has changed, the LOMC cannot be revalidated through this administrative process. Therefore, we will review the data previously submitted for the LOMC requests listed below and issue a new determination for the affected properties after the effective date of the revised FIRM.

LOMC	Case No.	Date Issued	Project Identifier	Old Panel	New Panel
			NO CASES RECORDED		

STAFF REPORT EXHIBIT – 9/22/16 FMPC MEETING
LOCATION MAP – ITEM 22 – ORDINANCE 2016-39 (FILE# 16-0811)
NEW FFO AND FWO OVERLAY DISTRICTS INSIDE CITY LIMITS AND
FEMA 100-YEAR FLOODPLAIN AND FLOODWAYS INSIDE FRANKLIN UGB



New FFO and FWO Overlay Districts

- City Limits
- Franklin UGB
- Flood Fringe Overlay (FFO)
- Floodway Overlay (FWO)
- FEMA 100 Year Flood Zone
- FEMA Floodway

This map was created by the City of Franklin's MIT Department and was compiled from the most authentic information available. The City is not responsible for any errors or omissions contained hereon. All data and materials Copyright © 2016. All Rights Reserved.

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swiss topo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



GOVERNMENTAL GRANT CONTRACT

(cost reimbursement grant contract with a federal or Tennessee local governmental entity or their agents and instrumentalities)

Begin Date October 7, 2016	End Date September 30, 2017	Agency Tracking # 32701-02853	Edison ID 51353			
Grantee Legal Entity Name City of Franklin			Edison Vendor ID 1552			
Subrecipient or Contractor ☒ Subrecipient ☐ Contractor		CFDA #15.904 Grantee's fiscal year end 6/30				
Service Caption (one line only) For the provision of restoration of the City Cemetery markers.						
Funding —	FY	State	Federal	Interdepartmental	Other	TOTAL Grant Contract Amount
	2017		8,460.00			8,460.00
	TOTAL:		8,460.00			8,460.00
Grantee Selection Process Summary						
☒ Competitive Selection		Grantee submitted application and was ranked in the top scores for these services and was awarded grant.				
☐ Non-competitive Selection		Describe the reasons for a non-competitive grantee selection process.				
Budget Officer Confirmation: There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations. 				CPO USE - GG		
Speed Chart (optional) EN00019512		Account Code (optional) 71302000				

327.04

**GRANT CONTRACT
BETWEEN THE STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION, TENNESSEE HISTORICAL
COMMISSION
AND
CITY OF FRANKLIN**

This grant contract ("Grant Contract"), by and between the State of Tennessee, Department of Environment and Conservation, Tennessee Historical Commission, hereinafter referred to as the "State" or the "Grantor State Agency" and Grantee City of Franklin, hereinafter referred to as the "Grantee," is for the provision of restoration of the City Cemetery markers, as further defined in the "SCOPE OF SERVICES AND DELIVERABLES."

Grantee Edison Vendor ID # 1552

A. SCOPE OF SERVICES AND DELIVERABLES:

- A.1. The Grantee shall provide the scope of services and deliverables ("Scope") as required, described, and detailed in this Grant Contract.
- A.2. The Grantee shall make repairs to markers in City Cemetery. All work shall be completed in a timely and efficient manner. The work shall follow the Secretary of the Interior's Standards as interpreted by the State.
- A.3. The Grantee shall erect a job sign containing at least these words "this work is being funded in part with funds from the National Park Service, Department of the Interior, and the Tennessee Historical Commission.
- A.4. The Grantee shall submit 5X7 black and white before and after photographs of the work area.
- A.5. The Grantee shall execute a Preservation Agreement substantially complying with the terms of the model covenant attached and designated as Attachment Four as required by the regulations of the United States Department of the Interior governing the administration of grants under the National Historic Preservation Act. The exact wording of this agreement shall be approved by the State.
- A.6. The Grantee shall submit a final project report which fully describes the methods, results, products, and costs of the project.
- A.7. Incorporation of Federal Award Identification Worksheet. The federal award identification worksheet, which appears as Attachment One, is incorporated in this Grant Contract.

B. TERM OF CONTRACT:

This Grant Contract shall be effective on October 7, 2016 ("Effective Date") and extend for a period of twelve (12) months after the Effective Date ("Term"). The State shall have no obligation to the Grantee for fulfillment of the Scope outside the Term.

C. PAYMENT TERMS AND CONDITIONS:

- C.1. Maximum Liability. In no event shall the maximum liability of the State under this Grant Contract exceed eight thousand four hundred sixty dollars (\$8,460.00) ("Maximum Liability"). The Grant Budget, attached and incorporated as Attachment Two is the maximum amount due the Grantee under this Grant Contract. The Grant Budget line-items include, but are not limited to, all

applicable taxes, fees, overhead, and all other direct and indirect costs incurred or to be incurred by the Grantee.

- C.2. Compensation Firm. The Maximum Liability of the State is not subject to escalation for any reason unless amended. The Grant Budget amounts are firm for the duration of the Grant Contract and are not subject to escalation for any reason unless amended, except as provided in Section C.6.
- C.3. Payment Methodology. The Grantee shall be reimbursed for actual, reasonable, and necessary costs based upon the Grant Budget, not to exceed the Maximum Liability established in Section C.1. Upon progress toward the completion of the Scope, as described in Section A of this Grant Contract, the Grantee shall submit invoices prior to any reimbursement of allowable costs.
- C.4. Travel Compensation. Reimbursement to the Grantee for travel, meals, or lodging shall be subject to amounts and limitations specified in the "State Comprehensive Travel Regulations," as they are amended from time to time, and shall be contingent upon and limited by the Grant Budget funding for said reimbursement.
- C.5. Invoice Requirements. The Grantee shall invoice the State no more often than monthly, with all necessary supporting documentation, and present such to:

Tennessee Historical Commission
2941 Lebanon Road
Nashville, Tennessee 37214

- a. Each invoice shall clearly and accurately detail all of the following required information (calculations must be extended and totaled correctly).
- (1) Invoice/Reference Number (assigned by the Grantee).
 - (2) Invoice Date.
 - (3) Invoice Period (to which the reimbursement request is applicable).
 - (4) Grant Contract Number (assigned by the State).
 - (5) Grantor: Tennessee Historical Commission, Department of Environment and Conservation.
 - (6) Grantor Number (assigned by the Grantee to the above-referenced Grantor).
 - (7) Grantee Name.
 - (8) Grantee Tennessee Edison Registration ID Number Referenced in Preamble of this Grant Contract.
 - (9) Grantee Remittance Address.
 - (10) Grantee Contact for Invoice Questions (name, phone, or fax).
 - (11) Itemization of Reimbursement Requested for the Invoice Period— it must detail, at minimum, all of the following:
 - i. The amount requested by Grant Budget line-item (including any travel expenditure reimbursement requested and for which documentation and receipts, as required by "State Comprehensive Travel Regulations," are attached to the invoice).
 - ii. The amount reimbursed by Grant Budget line-item to date.
 - iii. The total amount reimbursed under the Grant Contract to date.
 - iv. The total amount requested (all line-items) for the Invoice Period.
- b. The Grantee understands and agrees to all of the following.
- (1) An invoice under this Grant Contract shall include only reimbursement requests for actual, reasonable, and necessary expenditures required in the delivery of service described by this Grant Contract and shall be subject to the Grant Budget

and any other provision of this Grant Contract relating to allowable reimbursements.

- (2) An invoice under this Grant Contract shall not include any reimbursement request for future expenditures.
- (3) An invoice under this Grant Contract shall initiate the timeframe for reimbursement only when the State is in receipt of the invoice, and the invoice meets the minimum requirements of this section C.5.

C.6. Budget Line-items. Expenditures, reimbursements, and payments under this Grant Contract shall adhere to the Grant Budget. The Grantee may vary from a Grant Budget line-item amount by up to twenty percent (20%) of the line-item amount, provided that any increase is off-set by an equal reduction of other line-item amount(s) such that the net result of variances shall not increase the total Grant Contract amount detailed by the Grant Budget. Any increase in the Grant Budget, grand total amounts shall require an amendment of this Grant Contract.

C.7. Disbursement Reconciliation and Close Out. The Grantee shall submit any final invoice and a grant disbursement reconciliation report within sixty (60) days of the Grant Contract end date and in form and substance acceptable to the State.

- a. The Grant Budget specifies a Grantee Match Requirement and the final grant disbursement reconciliation report shall detail all Grantee expenditures recorded to meet this requirement.
 - i. No Grantee expenditure shall be recorded and reported toward meeting a Grantee Match Requirement of more than one grant contract with the State.
 - ii. The final grant disbursement reconciliation report shall specifically detail the exact amount of any Grantee failure to meet a Match Requirement, and the maximum total amount reimbursable by the State pursuant to this Grant Contract, as detailed by the Grant Budget column "Grant Contract," shall be reduced by the amount that the Grantee failed to contribute to the Total Project as budgeted.
- b. If total disbursements by the State pursuant to this Grant Contract exceed the amounts permitted by the section C, payment terms and conditions of this Grant Contract (including any adjustment pursuant to subsection a.ii. above), the Grantee shall refund the difference to the State. The Grantee shall submit the refund with the final grant disbursement reconciliation report.
- c. The State shall not be responsible for the payment of any invoice submitted to the state after the grant disbursement reconciliation report. The State will not deem any Grantee costs submitted for reimbursement after the grant disbursement reconciliation report to be allowable and reimbursable by the State, and such invoices will NOT be paid.
- d. The Grantee's failure to provide a final grant disbursement reconciliation report to the state as required shall result in the Grantee being deemed ineligible for reimbursement under this Grant Contract, and the Grantee shall be required to refund any and all payments by the state pursuant to this Grant Contract.
- e. The Grantee must close out its accounting records at the end of the contract period in such a way that reimbursable expenditures and revenue collections are NOT carried forward.

C.8. Indirect Cost. Should the Grantee request reimbursement for indirect costs, the Grantee must submit to the State a copy of the indirect cost rate approved by the cognizant federal agency or

the cognizant state agency, as applicable. The Grantee will be reimbursed for indirect costs in accordance with the approved indirect cost rate and amounts and limitations specified in the attached Grant Budget. Once the Grantee makes an election and treats a given cost as direct or indirect, it must apply that treatment consistently and may not change during the Term. Any changes in the approved indirect cost rate must have prior approval of the cognizant federal agency or the cognizant state agency, as applicable. If the indirect cost rate is provisional during the Term, once the rate becomes final, the Grantee agrees to remit any overpayment of funds to the State, and subject to the availability of funds the State agrees to remit any underpayment to the Grantee.

- C.9. Cost Allocation. If any part of the costs to be reimbursed under this Grant Contract are joint costs involving allocation to more than one program or activity, such costs shall be allocated and reported in accordance with the provisions of Department of Finance and Administration Policy Statement 03 or any amendments or revisions made to this policy statement during the Term.
- C.10. Payment of Invoice. A payment by the State shall not prejudice the State's right to object to or question any reimbursement, invoice, or related matter. A payment by the State shall not be construed as acceptance of any part of the work or service provided or as approval of any amount as an allowable cost.
- C.11. Non-allowable Costs. Any amounts payable to the Grantee shall be subject to reduction for amounts included in any invoice or payment that are determined by the State, on the basis of audits or monitoring conducted in accordance with the terms of this Grant Contract, to constitute unallowable costs.
- C.12. State's Right to Set Off. The State reserves the right to set off or deduct from amounts that are or shall become due and payable to the Grantee under this Grant Contract or under any other agreement between the Grantee and the State of Tennessee under which the Grantee has a right to receive payment from the State.
- C.13. Prerequisite Documentation. The Grantee shall not invoice the State under this Grant Contract until the State has received the following, properly completed documentation.
 - a. The Grantee shall complete, sign, and return to the State an "Authorization Agreement for Automatic Deposit (ACH Credits) Form" provided by the State. By doing so, the Grantee acknowledges and agrees that, once this form is received by the State, all payments to the Grantee under this or any other grant contract will be made by automated clearing house ("ACH").
 - b. The Grantee shall complete, sign, and return to the State the State-provided W-9 form. The taxpayer identification number on the W-9 form must be the same as the Grantee's Federal Employer Identification Number or Social Security Number referenced in the Grantee's Edison registration information.

D. STANDARD TERMS AND CONDITIONS:

- D.1. Required Approvals. The State is not bound by this Grant Contract until it is signed by the parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this Grant Contract, the officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).
- D.2. Modification and Amendment. This Grant Contract may be modified only by a written amendment signed by all parties and approved by the officials who approved the Grant Contract and, depending upon the specifics of the Grant Contract as amended, any additional officials required by Tennessee laws and regulations (the officials may include, but are not limited to, the

Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).

- D.3. Termination for Convenience. The State may terminate this Grant Contract without cause for any reason. A termination for convenience shall not be a breach of this Grant Contract by the State. The State shall give the Grantee at least thirty (30) days written notice before the effective termination date. The Grantee shall be entitled to compensation for authorized expenditures and satisfactory services completed as of the termination date, but in no event shall the State be liable to the Grantee for compensation for any service that has not been rendered. The final decision as to the amount for which the State is liable shall be determined by the State. The Grantee shall not have any right to any actual general, special, incidental, consequential, or any other damages whatsoever of any description or amount for the State's exercise of its right to terminate for convenience.
- D.4. Termination for Cause. If the Grantee fails to properly perform its obligations under this Grant Contract, or if the Grantee violates any terms of this Grant Contract, the State shall have the right to immediately terminate this Grant Contract and withhold payments in excess of fair compensation for completed services. Notwithstanding the exercise of the State's right to terminate this Grant Contract for cause, the Grantee shall not be relieved of liability to the State for damages sustained by virtue of any breach of this Grant Contract by the Grantee.
- D.5. Subcontracting. The Grantee shall not assign this Grant Contract or enter into a subcontract for any of the services performed under this Grant Contract without obtaining the prior written approval of the State. If such subcontracts are approved by the State, each shall contain, at a minimum, sections of this Grant Contract pertaining to "Conflicts of Interest," "Lobbying," "Nondiscrimination," "Public Accountability," "Public Notice," and "Records" (as identified by the section headings). Notwithstanding any use of approved subcontractors, the Grantee shall remain responsible for all work performed.
- D.6. Conflicts of Interest. The Grantee warrants that no part of the total Grant Contract Amount shall be paid directly or indirectly to an employee or official of the State of Tennessee as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, or consultant to the Grantee in connection with any work contemplated or performed relative to this Grant Contract.
- D.7. Lobbying. The Grantee certifies, to the best of its knowledge and belief, that:
- a. No federally appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
 - b. If any funds other than federally appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, grant, loan, or cooperative agreement, the Grantee shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
 - c. The Grantee shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into and is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352.

- D.8. Communications and Contacts. All instructions, notices, consents, demands, or other communications required or contemplated by this Grant Contract shall be in writing and shall be made by certified, first class mail, return receipt requested and postage prepaid, by overnight courier service with an asset tracking system, or by email or facsimile transmission with recipient confirmation. All communications, regardless of method of transmission, shall be addressed to the respective party as set out below:

The State:

Louis M. Jackson, Historic Preservation Specialist
Tennessee Historical Commission
2941 Lebanon Road, Nashville, Tennessee 37214
louis.jackson@tn.gov
Telephone # 615-770-1099
FAX # 615-532-1549

The Grantee:

Amanda Rose, Preservation Planner
City of Franklin
109 3rd Avenue South, Franklin, Tennessee 37064
Amanda.rose@franklin.tn.gov
Telephone # 615-550-6737

A change to the above contact information requires written notice to the person designated by the other party to receive notice.

All instructions, notices, consents, demands, or other communications shall be considered effectively given upon receipt or recipient confirmation as may be required.

- D.9. Subject to Funds Availability. This Grant Contract is subject to the appropriation and availability of State or Federal funds. In the event that the funds are not appropriated or are otherwise unavailable, the State reserves the right to terminate this Grant Contract upon written notice to the Grantee. The State's right to terminate this Grant Contract due to lack of funds is not a breach of this Grant Contract by the State. Upon receipt of the written notice, the Grantee shall cease all work associated with the Grant Contract. Should such an event occur, the Grantee shall be entitled to compensation for all satisfactory and authorized services completed as of the termination date. Upon such termination, the Grantee shall have no right to recover from the State any actual, general, special, incidental, consequential, or any other damages whatsoever of any description or amount.
- D.10. Nondiscrimination. The Grantee hereby agrees, warrants, and assures that no person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the performance of this Grant Contract or in the employment practices of the Grantee on the grounds of handicap or disability, age, race, color, religion, sex, national origin, or any other classification protected by federal, Tennessee state constitutional, or statutory law. The Grantee shall, upon request, show proof of nondiscrimination and shall post in conspicuous places, available to all employees and applicants, notices of nondiscrimination.

- D.11. HIPAA Compliance. The State and the Grantee shall comply with obligations under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), Health Information Technology for Economic and Clinical Health Act (HITECH) and any other relevant laws and regulations regarding privacy (collectively the "Privacy Rules"). The obligations set forth in this Section shall survive the termination of this Grant Contract.
- a. The Grantee warrants to the State that it is familiar with the requirements of the Privacy Rules and will comply with all applicable HIPAA requirements in the course of this Grant Contract.
 - b. The Grantee warrants that it will cooperate with the State, including cooperation and coordination with State privacy officials and other compliance officers required by the Privacy Rules, in the course of performance of this Grant Contract so that both parties will be in compliance with the Privacy Rules.
 - c. The State and the Grantee will sign documents, including but not limited to business associate agreements, as required by the Privacy Rules and that are reasonably necessary to keep the State and the Grantee in compliance with the Privacy Rules. This provision shall not apply if information received by the State under this Grant Contract is NOT "protected health information" as defined by the Privacy Rules, or if the Privacy Rules permit the State to receive such information without entering into a business associate agreement or signing another such document.
- D.12. Public Accountability. If the Grantee is subject to Tenn. Code Ann. § 8-4-401 *et seq.*, or if this Grant Contract involves the provision of services to citizens by the Grantee on behalf of the State, the Grantee agrees to establish a system through which recipients of services may present grievances about the operation of the service program. The Grantee shall also display in a prominent place, located near the passageway through which the public enters in order to receive Grant supported services, a sign at least eleven inches (11") in height and seventeen inches (17") in width stating:
- NOTICE: THIS AGENCY IS A RECIPIENT OF TAXPAYER FUNDING. IF YOU OBSERVE AN AGENCY DIRECTOR OR EMPLOYEE ENGAGING IN ANY ACTIVITY WHICH YOU CONSIDER TO BE ILLEGAL, IMPROPER, OR WASTEFUL, PLEASE CALL THE STATE COMPTROLLER'S TOLL-FREE HOTLINE: 1-800-232-5454.
- The sign shall be on the form prescribed by the Comptroller of the Treasury. The Grantor State Agency shall obtain copies of the sign from the Comptroller of the Treasury, and upon request from the Grantee, provide Grantee with any necessary signs.
- D.13. Public Notice. All notices, informational pamphlets, press releases, research reports, signs, and similar public notices prepared and released by the Grantee in relation to this Grant Contract shall include the statement, "This project is funded under a grant contract with the State of Tennessee." All notices by the Grantee in relation to this Grant Contract shall be approved by the State.
- D.14. Licensure. The Grantee, its employees, and any approved subcontractor shall be licensed pursuant to all applicable federal, state, and local laws, ordinances, rules, and regulations and shall upon request provide proof of all licenses.
- D.15. Records. The Grantee and any approved subcontractor shall maintain documentation for all charges under this Grant Contract. The books, records, and documents of the Grantee and any approved subcontractor, insofar as they relate to work performed or money received under this Grant Contract, shall be maintained in accordance with applicable Tennessee law. In no case shall the records be maintained for a period of less than five (5) full years from the date of the

final payment. The Grantee's records shall be subject to audit at any reasonable time and upon reasonable notice by the Grantor State Agency, the Comptroller of the Treasury, or their duly appointed representatives.

The records shall be maintained in accordance with Governmental Accounting Standards Board (GASB) Accounting Standards or the Financial Accounting Standards Board (FASB) Accounting Standards Codification, as applicable, and any related AICPA Industry Audit and Accounting guides.

In addition, documentation of grant applications, budgets, reports, awards, and expenditures will be maintained in accordance with U.S. Office of Management and Budget's *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*.

Grant expenditures shall be made in accordance with local government purchasing policies and procedures and purchasing procedures for local governments authorized under state law.

The Grantee shall also comply with any recordkeeping and reporting requirements prescribed by the Tennessee Comptroller of the Treasury.

The Grantee shall establish a system of internal controls that utilize the COSO Internal Control - Integrated Framework model as the basic foundation for the internal control system. The Grantee shall incorporate any additional Comptroller of the Treasury directives into its internal control system.

Any other required records or reports which are not contemplated in the above standards shall follow the format designated by the head of the Grantor State Agency, the Central Procurement Office, or the Commissioner of Finance and Administration of the State of Tennessee.

- D.16. Monitoring. The Grantee's activities conducted and records maintained pursuant to this Grant Contract shall be subject to monitoring and evaluation by the State, the Comptroller of the Treasury, or their duly appointed representatives.
- D.17. Progress Reports. The Grantee shall submit brief, periodic, progress reports to the State as requested.
- D.18. Annual and Final Reports. The Grantee shall submit, within three (3) months of the conclusion of each year of the Term, an annual report. For grant contracts with a term of less than one (1) year, the Grantee shall submit a final report within three (3) months of the conclusion of the Term. For grant contracts with multiyear terms, the final report will take the place of the annual report for the final year of the Term. The Grantee shall submit annual and final reports to the Grantor State Agency and the Department of Finance and Administration ("F&A"). Send electronic copies of annual and final reports to F&A at fa.audit@tn.gov. At minimum, annual and final reports shall include: (a) the Grantee's name; (b) the Grant Contract's Edison identification number, Term, and total amount; (c) a narrative section that describes the program's goals, outcomes, successes and setbacks, whether the Grantee used benchmarks or indicators to determine progress, and whether any proposed activities were not completed; and (d) other relevant details requested by the Grantor State Agency. Annual and final report documents to be completed by the Grantee shall appear on the Grantor State Agency's website or as an attachment to the Grant Contract.
- D.19. Audit Report. The Grantee shall be audited in accordance with applicable Tennessee law.
- If the Grantee is subject to an audit under this provision, then the Grantee shall complete Attachment Three.
- When a federal single audit is required, the audit shall be performed in accordance with U.S. Office of Management and Budget's *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*.
- A copy of the audit report shall be provided to the Comptroller by the licensed, independent public accountant. Audit reports shall be made available to the public.

- D.20. Procurement. If other terms of this Grant Contract allow reimbursement for the cost of goods, materials, supplies, equipment, motor vehicles, or contracted services, procurements by the Grantee shall be competitive where practicable. For any procurement for which reimbursement is paid under this Grant Contract, the Grantee shall document the competitive procurement method. In each instance where it is determined that use of a competitive procurement method is not practicable, supporting documentation shall include a written justification for the decision and for the use of a non-competitive procurement. If the Grantee is a subrecipient, the Grantee shall comply with 2 C.F.R. §§ 200.318—200.326 when procuring property and services under a federal award.

The Grantee shall obtain prior approval from the State before purchasing any equipment or motor vehicles under this Grant Contract.

- D.21. Strict Performance. Failure by any party to this Grant Contract to insist in any one or more cases upon the strict performance of any of the terms, covenants, conditions, or provisions of this Grant Contract is not a waiver or relinquishment of any term, covenant, condition, or provision. No term or condition of this Grant Contract shall be held to be waived, modified, or deleted except by a written amendment signed by the parties.
- D.22. Independent Contractor. The parties shall not act as employees, partners, joint venturers, or associates of one another in the performance of this Grant Contract. The parties acknowledge that they are independent contracting entities and that nothing in this Grant Contract shall be construed to create a principal/agent relationship or to allow either to exercise control or direction over the manner or method by which the other transacts its business affairs or provides its usual services. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purpose whatsoever.
- D.23. State Liability. The State shall have no liability except as specifically provided in this Grant Contract.
- D.24. Force Majeure. "Force Majeure Event" means fire, flood, earthquake, elements of nature or acts of God, wars, riots, civil disorders, rebellions or revolutions, acts of terrorism or any other similar cause beyond the reasonable control of the party except to the extent that the non-performing party is at fault in failing to prevent or causing the default or delay, and provided that the default or delay cannot reasonably be circumvented by the non-performing party through the use of alternate sources, workaround plans or other means. A strike, lockout or labor dispute shall not excuse either party from its obligations under this Grant Contract. Except as set forth in this Section, any failure or delay by a party in the performance of its obligations under this Grant Contract arising from a Force Majeure Event is not a default under this Grant Contract or grounds for termination. The non-performing party will be excused from performing those obligations directly affected by the Force Majeure Event, and only for as long as the Force Majeure Event continues, provided that the party continues to use diligent, good faith efforts to resume performance without delay. The occurrence of a Force Majeure Event affecting Grantee's representatives, suppliers, subcontractors, customers or business apart from this Grant Contract is not a Force Majeure Event under this Grant Contract. Grantee will promptly notify the State of any delay caused by a Force Majeure Event (to be confirmed in a written notice to the State within one (1) day of the inception of the delay) that a Force Majeure Event has occurred, and will describe in reasonable detail the nature of the Force Majeure Event. If any Force Majeure Event results in a delay in Grantee's performance longer than forty-eight (48) hours, the State may, upon notice to Grantee: (a) cease payment of the fees until Grantee resumes performance of the affected obligations; or (b) immediately terminate this Grant Contract or any purchase order, in whole or in part, without further payment except for fees then due and payable. Grantee will not increase its charges under this Grant Contract or charge the State any fees other than those provided for in this Grant Contract as the result of a Force Majeure Event.

- D.25. Tennessee Department of Revenue Registration. The Grantee shall comply with all applicable registration requirements contained in Tenn. Code Ann. §§ 67-6-601 – 608. Compliance with applicable registration requirements is a material requirement of this Grant Contract.
- D.26. Charges to Service Recipients Prohibited. The Grantee shall not collect any amount in the form of fees or reimbursements from the recipients of any service provided pursuant to this Grant Contract.
- D.27. No Acquisition of Equipment or Motor Vehicles. This Grant Contract does not involve the acquisition and disposition of equipment or motor vehicles acquired with funds provided under this Grant Contract.
- D.28. State and Federal Compliance. The Grantee shall comply with all applicable state and federal laws and regulations in the performance of this Grant Contract. The U.S. Office of Management and Budget's Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards is available here: http://www.ecfr.gov/cgi-bin/text-idx?SID=c6b2f053952359ba94470ad3a7c1a975&tpl=/ecfrbrowse/Title02/2cfr200_main_02.tpl
- D.29. Governing Law. This Grant Contract shall be governed by and construed in accordance with the laws of the State of Tennessee. The Grantee agrees that it will be subject to the exclusive jurisdiction of the courts of the State of Tennessee in actions that may arise under this Grant Contract. The Grantee acknowledges and agrees that any rights or claims against the State of Tennessee or its employees hereunder, and any remedies arising there from, shall be subject to and limited to those rights and remedies, if any, available under Tenn. Code Ann. §§ 9-8-101 through 9-8-407.
- D.30. Completeness. This Grant Contract is complete and contains the entire understanding between the parties relating to the subject matter contained herein, including all the terms and conditions agreed to by the parties. This Grant Contract supersedes any and all prior understandings, representations, negotiations, or agreements between the parties, whether written or oral.
- D.31. Severability. If any terms and conditions of this Grant Contract are held to be invalid or unenforceable as a matter of law, the other terms and conditions shall not be affected and shall remain in full force and effect. To this end, the terms and conditions of this Grant Contract are declared severable.
- D.32. Headings. Section headings are for reference purposes only and shall not be construed as part of this Grant Contract.

E. SPECIAL TERMS AND CONDITIONS:

- E.1. Conflicting Terms and Conditions. Should any of these special terms and conditions conflict with any other terms and conditions of this Grant Contract, the special terms and conditions shall be subordinate to the Grant Contract's other terms and conditions.
- E.2.. Debarment and Suspension. The Grantee certifies, to the best of its knowledge and belief, that it, its current and future principals, its current and future subcontractors and their principals:
- a. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department or agency;
 - b. have not within a three (3) year period preceding this Grant Contract been convicted of, or had a civil judgment rendered against them from commission of fraud, or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (federal,

state, or local) transaction or grant under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;

- c. are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses detailed in section b. of this certification; and
- d. have not within a three (3) year period preceding this Grant Contract had one or more public transactions (federal, state, or local) terminated for cause or default.

The Grantee shall provide immediate written notice to the State if at any time it learns that there was an earlier failure to disclose information or that due to changed circumstances, its principals or the principals of its subcontractors are excluded, disqualified, or presently fall under any of the prohibitions of sections a-d.

IN WITNESS WHEREOF,

CITY OF FRANKLIN:

GRANTEE SIGNATURE

DATE

ERIC S. STUCKEY, CITY ADMINISTRATOR

TENNESSEE HISTORICAL COMMISSION:

E. PATRICK MCINTYRE, JR., EXECUTIVE DIRECTOR & SHPO

DATE

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION:

ROBERT J. MARTINEAU, JR., COMMISSIONER

DATE

Approved as to form by:

Kristen L. Corn, Assistant City Attorney

ATTACHMENT ONE**Federal Award Identification Worksheet**

Subrecipient's name (must match registered name in DUNS)	
Subrecipient's DUNS number	
Federal Award Identification Number (FAIN)	P16AF00128
Federal award date	6/22/2016
CFDA number and name	15.904 Historic Preservation Fund grants-in-aid
Grant contract's begin date	10/7/2016
Grant contract's end date	September 30, 2017
Amount of federal funds obligated by this grant contract	8,460
Total amount of federal funds obligated to the subrecipient	
Total amount of the federal award to the pass-through entity (Grantor State Agency)	850,121.00
Name of federal awarding agency	Department of the Interior, National Park Service
Name and contact information for the federal awarding official	Megan J. Brown Chief State, Tribal, Local Plans & Grants
Is the federal award for research and development?	
Indirect cost rate for the federal award (See 2 C.F.R. §200.331 for information on type of indirect cost rate)	

³ A Grantee Match Requirement is detailed by this Grant Budget, and the maximum total amount reimbursable by the State pursuant to this Grant Contract, as detailed by the "Grant Contract" column above, shall be reduced by the amount of any Grantee failure to meet the Match Requirement.

GRANT BUDGET LINE-ITEM DETAIL:

PROFESSIONAL FEE, GRANT & AWARD	AMOUNT
Marker restoration	14,100.00
TOTAL	14,100.00

ATTACHMENT THREE

Parent Child Information

The Grantee should complete this form and submit it with the Grant Contract. The Grantee should submit only one, completed "Parent Child Information" document to the State during the Grantee's fiscal year.

"Parent" means an entity whose IRS filing contains the information of at least one other entity.

"Child" means an entity whose information is contained in another entity's IRS filing.

Grantee's Edison Vendor ID number:

Is Grantee Legal Entity Name a parent? Yes ☐ No ☐

If yes, provide the name and Edison Vendor ID number, if applicable, of any child entities.

Is Grantee Legal Entity Name a child? Yes ☐ No ☐

If yes, complete the fields below.

Parent entity's name: _____

Parent entity's tax identification number: _____

Note: If the parent entity's tax identification number is a social security number, this form must be submitted via US mail to:

Central Procurement Office, Grants Program Manager
3rd Floor, WRS Tennessee Tower
312 Rosa L Parks Avenue
Nashville, TN 37243

Parent entity's contact information

Name of primary contact person: _____

Address: _____

Phone number: _____

Email address: _____

Parent entity's Edison Vendor ID number, if applicable: _____

Preservation Agreement

This agreement is made the ____ day of _____, 2017 by the State of Tennessee, Department of Environment and Conservation, hereafter referred to as the "Subgrantee", and in favor of the State acting through the State Historic Preservation Officer, hereafter referred to as the "Grantee", to restore markers in City Cemetery, in Franklin, Tennessee, which is owned in fee-simple by the Subgrantee and is listed on the National Register of Historic Places.

In consideration of the sum of \$8,460 received in grant-in-aid assistance through the Grantee from the National Park Service, United States Department of the Interior, the Subgrantee hereby agrees to the following for a period of 5 years.

1. The Subgrantee agrees to assume the cost of the continued maintenance and repair of said Property so as to preserve the architectural, historical, or archeological integrity of the same in order to protect and enhance those qualities that made the Property eligible for listing in the National Register of Historic Places.
2. The Subgrantee agrees that no visual or structural alterations will be made to the property without prior written permission of the Grantee.
3. The Subgrantee agrees that the Grantee, its agents and designees shall have the right to inspect the property at all reasonable times in order to ascertain whether or not the conditions of this agreement are being observed.
4. The Subgrantee agrees that when the property is not clearly visible from a public right-of-way or includes interior work assisted with Historic Preservation fund grants, the property will be open to the public, for the purpose of viewing the grant-assisted work, no less than 12 days a year on an equitably spaced basis and at other times by appointment. Nothing in this agreement will prohibit the Subgrantee from charging a reasonable, nondiscriminatory admission fee, comparable to fees charged at similar facilities in the area.
5. The City of Franklin agrees to comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000(d)), the Americans with Disabilities Act, and with Section 504 of the Rehabilitation act of 1973 (29 U.S.C. 794). These laws prohibit discrimination on the basis of race, religion, national origin, or disability. In implementing public access, reasonable accommodation to qualified disabled persons shall be made in consultation with SHPO Office. To comply with the Americans with Disabilities Act, and with Section 504 of the Rehabilitation Act when interior public access is required at least 12 days per year and at other times by appointment, it is not required that a recipient make every part of the property accessible to and useable by disabled persons by means of physical alterations. That is, for public access periods, videos, slide presentations, and/or other audio-visual material and devices should be used to depict otherwise inaccessible areas or features.
6. The Subgrantee further agrees that when the Property is not open to the public on a continuing basis, and when the improvements assisted with Historic Preservation Fund grants are not visible from the public way, notification will be published in newspapers of general circulation in the community area in which the Property is located giving dates and times when the Property will be open. Documentation of such notice will be furnished annually to the State Historic Preservation Officer during the term of the agreement.

This agreement shall be enforceable in specific performance by a court of competent jurisdiction.

Signature of Grantee (SHPO)

Signature of Subgrantee

Date of signature

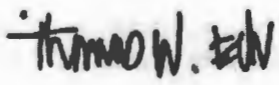
Date of signature

Sworn to before me and subscribed in my
presence this _____ day of
_____, 2013.

Notary Public

**GOVERNMENTAL GRANT CONTRACT**

(cost reimbursement grant contract with a federal or Tennessee local governmental entity or their agents and instrumentalities)

Begin Date October 7, 2016	End Date September 30, 2017	Agency Tracking # 32701-02861	Edison ID 51370		
Grantee Legal Entity Name City of Franklin			Edison Vendor ID 1552		
Subrecipient or Contractor ☒ Subrecipient ☐ Contractor		CFDA ##15.904 Grantee's fiscal year end 6/30			
Service Caption (one line only) For the provision of updates to the Franklin Historic District National Register of Historic Places nomination and Columbia Avenue survey					
Funding —					
FY	State	Federal	Interdepartmental	Other	TOTAL Grant Contract Amount
2017		6,000.00			6,000.00
TOTAL:		6,000.00			6,000.00
Grantee Selection Process Summary					
☒ Competitive Selection		Grantee submitted application and was ranked in the top scores for these services and was awarded grant.			
☐ Non-competitive Selection		Describe the reasons for a non-competitive grantee selection process.			
Budget Officer Confirmation: There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations. 			CPO USE - GG		
Speed Chart (optional) EN00019512		Account Code (optional) 71302000			

32704

**GRANT CONTRACT
BETWEEN THE STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION, TENNESSEE HISTORICAL
COMMISSION
AND
CITY OF FRANKLIN**

This grant contract ("Grant Contract"), by and between the State of Tennessee, Tennessee Department of Environment and Conservation, Tennessee Historical Commission, hereinafter referred to as the "State" or the "Grantor State Agency" and Grantee City of Franklin, hereinafter referred to as the "Grantee," is for the provision of updates to the Franklin Historic District National Register of Historic Places nomination and Columbia Avenue survey, as further defined in the "SCOPE OF SERVICES AND DELIVERABLES."

Grantee Edison Vendor ID # 1552

A. SCOPE OF SERVICES AND DELIVERABLES:

- A.1. The Grantee shall provide the scope of services and deliverables ("Scope") as required, described, and detailed in this Grant Contract.
- A.2. The GRANTEE shall update the existing National Register nomination for the property known as 'Franklin Historic District' through research and survey methods performed by a consultant.
 - a. The GRANTEE is a Certified Local Government.
 - b. The GRANTEE shall hire a qualified professional (refer to A.3.) to undertake the research, photography, and writing of a National Register nomination that provides updated information on properties within the current boundaries of the Franklin Historic District. This includes identification and documentation of additional contributing properties based on an expanded period of significance for the district.
 - c. The GRANTEE shall hire a qualified professional (A.3.) to survey and document historic properties located along Columbia Avenue between the Five Points area and the Carter House for the purposes of gathering additional information that may be used to expand the boundaries of the National Register-listed Franklin Historic District and/or local historic district overlay. The GRANTEE shall provide survey information in the format determined to be acceptable by the State.
 - d. The GRANTEE shall submit to the State the information related to items A.2.b and A.2.c in the form of Additional Documentation, Boundary Increase/Decrease, and/or a new National Register nomination as deemed acceptable by the State and the National Park Service in accordance with National Register program requirements.
- A.3. The person employed by the GRANTEE to complete updates to the Franklin Historic District National Register nomination and Columbia Avenue historic architectural survey shall meet the following qualifications.
 - a. A graduate degree in history, historic preservation, architectural history, architecture, or a closely related field; or a bachelor's degree in one of these plus one of the following: (a) at least two years of full-time experience in research, writing, teaching, interpretation, or other demonstrable professional activity with an academic institution, historical organization or agency, museum, or other professional institution; or (b) substantial contribution through research and publication to the body of scholarly knowledge in one of these fields.
 - b. The STATE shall have the right to review any applicant's qualifications to insure that the requirements are satisfactorily met.

- c. The GRANTEE, with the prior approval of the STATE, may make exceptions to the requirements stated in Section A.3.a. above when evidence of ability to successfully execute the tasks spelled out in Sections A.2.a-d above can be demonstrated.
- A.4. The GRANTEE shall submit to the state QUARTERLY progress reports which describe principal activities and progress achieved under the grant as well as planned activities for the upcoming reporting period. At the conclusion of the project, the GRANTEE shall submit a final project report which fully describes the methods, results, products, and costs of the project.
- A.5. The GRANTEE shall acknowledge the provision of grant support in any publication, including audio-visual materials, based on or developed under any activity supported by these grant funds. This acknowledgment shall be in the form of a statement as follows:

The activity that is the subject of this publication has been financed in part with federal funds from the National Park Service, Department of the Interior. However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior, nor does the mention of trade names or commercial products constitute endorsement or recommendation by the Department of the Interior. Regulations of the U. S. Department of Interior strictly prohibit unlawful discrimination in departmental Federally Assisted Programs on the basis of race, color, national origin, age or handicap. Any person who believes he or she has been discriminated against in any program, activity, or facility operated by a recipient of Federal assistance should write to: Director, Equal Opportunity Program, U. S. Department of the Interior, National Park Service, P. O. Box 37127, Washington, D. C. 20013-7127.
- A.6. Incorporation of Federal Award Identification Worksheet. The federal award identification worksheet, which appears as Attachment 1, is incorporated in this Grant Contract.

B. TERM OF CONTRACT:

This Grant Contract shall be effective on October 7, 2016 ("Effective Date") and extend for a period of twelve (12) months after the Effective Date ("Term"). The State shall have no obligation to the Grantee for fulfillment of the Scope outside the Term.

C. PAYMENT TERMS AND CONDITIONS:

- C.1. Maximum Liability. In no event shall the maximum liability of the State under this Grant Contract exceed Six Thousand dollars (\$6,000.00) ("Maximum Liability"). The Grant Budget, attached and incorporated as Attachment 2 is the maximum amount due the Grantee under this Grant Contract. The Grant Budget line-items include, but are not limited to, all applicable taxes, fees, overhead, and all other direct and indirect costs incurred or to be incurred by the Grantee.
- C.2. Compensation Firm. The Maximum Liability of the State is not subject to escalation for any reason unless amended. The Grant Budget amounts are firm for the duration of the Grant Contract and are not subject to escalation for any reason unless amended, except as provided in Section C.6.
- C.3. Payment Methodology. The Grantee shall be reimbursed for actual, reasonable, and necessary costs based upon the Grant Budget, not to exceed the Maximum Liability established in Section C.1. Upon progress toward the completion of the Scope, as described in Section A of this Grant Contract, the Grantee shall submit invoices prior to any reimbursement of allowable costs.
- C.4. Travel Compensation. Reimbursement to the Grantee for travel, meals, or lodging shall be subject to amounts and limitations specified in the "State Comprehensive Travel Regulations," as

they are amended from time to time, and shall be contingent upon and limited by the Grant Budget funding for said reimbursement.

- C.5. Invoice Requirements. The Grantee shall invoice the State no more often than monthly, with all necessary supporting documentation, and present such to:

Tennessee Historical Commission
2941 Lebanon Road
Nashville, Tennessee 37214

- a. Each invoice shall clearly and accurately detail all of the following required information (calculations must be extended and totaled correctly).
 - (1) Invoice/Reference Number (assigned by the Grantee).
 - (2) Invoice Date.
 - (3) Invoice Period (to which the reimbursement request is applicable).
 - (4) Grant Contract Number (assigned by the State).
 - (5) Grantor: Tennessee Department of Environment and Conservation, Tennessee Historical Commission.
 - (6) Grantor Number (assigned by the Grantee to the above-referenced Grantor).
 - (7) Grantee Name.
 - (8) Grantee Tennessee Edison Registration ID Number Referenced in Preamble of this Grant Contract.
 - (9) Grantee Remittance Address.
 - (10) Grantee Contact for Invoice Questions (name, phone, or fax).
 - (11) Itemization of Reimbursement Requested for the Invoice Period— it must detail, at minimum, all of the following:
 - i. The amount requested by Grant Budget line-item (including any travel expenditure reimbursement requested and for which documentation and receipts, as required by "State Comprehensive Travel Regulations," are attached to the invoice).
 - ii. The amount reimbursed by Grant Budget line-item to date.
 - iii. The total amount reimbursed under the Grant Contract to date.
 - iv. The total amount requested (all line-items) for the Invoice Period.
- b. The Grantee understands and agrees to all of the following.
 - (1) An invoice under this Grant Contract shall include only reimbursement requests for actual, reasonable, and necessary expenditures required in the delivery of service described by this Grant Contract and shall be subject to the Grant Budget and any other provision of this Grant Contract relating to allowable reimbursements.
 - (2) An invoice under this Grant Contract shall not include any reimbursement request for future expenditures.
 - (3) An invoice under this Grant Contract shall initiate the timeframe for reimbursement only when the State is in receipt of the invoice, and the invoice meets the minimum requirements of this section C.5.

- C.6. Budget Line-items. Expenditures, reimbursements, and payments under this Grant Contract shall adhere to the Grant Budget. The Grantee may vary from a Grant Budget line-item amount by up to twenty percent (20%) of the line-item amount, provided that any increase is off-set by an equal reduction of other line-item amount(s) such that the net result of variances shall not increase the total Grant Contract amount detailed by the Grant Budget. Any increase in the Grant Budget, grand total amounts shall require an amendment of this Grant Contract.

- C.7. Disbursement Reconciliation and Close Out. The Grantee shall submit any final invoice and a grant disbursement reconciliation report within sixty (60) days of the Grant Contract end date and in form and substance acceptable to the State.
- a. The Grant Budget specifies a Grantee Match Requirement and the final grant disbursement reconciliation report shall detail all Grantee expenditures recorded to meet this requirement.
 - i. No Grantee expenditure shall be recorded and reported toward meeting a Grantee Match Requirement of more than one grant contract with the State.
 - ii. The final grant disbursement reconciliation report shall specifically detail the exact amount of any Grantee failure to meet a Match Requirement, and the maximum total amount reimbursable by the State pursuant to this Grant Contract, as detailed by the Grant Budget column "Grant Contract," shall be reduced by the amount that the Grantee failed to contribute to the Total Project as budgeted.
 - b. If total disbursements by the State pursuant to this Grant Contract exceed the amounts permitted by the section C, payment terms and conditions of this Grant Contract (including any adjustment pursuant to subsection a.ii. above), the Grantee shall refund the difference to the State. The Grantee shall submit the refund with the final grant disbursement reconciliation report.
 - c. The State shall not be responsible for the payment of any invoice submitted to the state after the grant disbursement reconciliation report. The State will not deem any Grantee costs submitted for reimbursement after the grant disbursement reconciliation report to be allowable and reimbursable by the State, and such invoices will NOT be paid.
 - d. The Grantee's failure to provide a final grant disbursement reconciliation report to the state as required shall result in the Grantee being deemed ineligible for reimbursement under this Grant Contract, and the Grantee shall be required to refund any and all payments by the state pursuant to this Grant Contract.
 - e. The Grantee must close out its accounting records at the end of the contract period in such a way that reimbursable expenditures and revenue collections are NOT carried forward.
- C.8. Indirect Cost. Should the Grantee request reimbursement for indirect costs, the Grantee must submit to the State a copy of the indirect cost rate approved by the cognizant federal agency or the cognizant state agency, as applicable. The Grantee will be reimbursed for indirect costs in accordance with the approved indirect cost rate and amounts and limitations specified in the attached Grant Budget. Once the Grantee makes an election and treats a given cost as direct or indirect, it must apply that treatment consistently and may not change during the Term. Any changes in the approved indirect cost rate must have prior approval of the cognizant federal agency or the cognizant state agency, as applicable. If the indirect cost rate is provisional during the Term, once the rate becomes final, the Grantee agrees to remit any overpayment of funds to the State, and subject to the availability of funds the State agrees to remit any underpayment to the Grantee.
- C.9. Cost Allocation. If any part of the costs to be reimbursed under this Grant Contract are joint costs involving allocation to more than one program or activity, such costs shall be allocated and reported in accordance with the provisions of Department of Finance and Administration Policy Statement 03 or any amendments or revisions made to this policy statement during the Term.

- C.10. Payment of Invoice. A payment by the State shall not prejudice the State's right to object to or question any reimbursement, invoice, or related matter. A payment by the State shall not be construed as acceptance of any part of the work or service provided or as approval of any amount as an allowable cost.
- C.11. Non-allowable Costs. Any amounts payable to the Grantee shall be subject to reduction for amounts included in any invoice or payment that are determined by the State, on the basis of audits or monitoring conducted in accordance with the terms of this Grant Contract, to constitute unallowable costs.
- C.12. State's Right to Set Off. The State reserves the right to set off or deduct from amounts that are or shall become due and payable to the Grantee under this Grant Contract or under any other agreement between the Grantee and the State of Tennessee under which the Grantee has a right to receive payment from the State.
- C.13. Prerequisite Documentation. The Grantee shall not invoice the State under this Grant Contract until the State has received the following, properly completed documentation.
 - a. The Grantee shall complete, sign, and return to the State an "Authorization Agreement for Automatic Deposit (ACH Credits) Form" provided by the State. By doing so, the Grantee acknowledges and agrees that, once this form is received by the State, all payments to the Grantee under this or any other grant contract will be made by automated clearing house ("ACH").
 - b. The Grantee shall complete, sign, and return to the State the State-provided W-9 form. The taxpayer identification number on the W-9 form must be the same as the Grantee's Federal Employer Identification Number or Social Security Number referenced in the Grantee's Edison registration information.

D. STANDARD TERMS AND CONDITIONS:

- D.1. Required Approvals. The State is not bound by this Grant Contract until it is signed by the parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this Grant Contract, the officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).
- D.2. Modification and Amendment. This Grant Contract may be modified only by a written amendment signed by all parties and approved by the officials who approved the Grant Contract and, depending upon the specifics of the Grant Contract as amended, any additional officials required by Tennessee laws and regulations (the officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).
- D.3. Termination for Convenience. The State may terminate this Grant Contract without cause for any reason. A termination for convenience shall not be a breach of this Grant Contract by the State. The State shall give the Grantee at least thirty (30) days written notice before the effective termination date. The Grantee shall be entitled to compensation for authorized expenditures and satisfactory services completed as of the termination date, but in no event shall the State be liable to the Grantee for compensation for any service that has not been rendered. The final decision as to the amount for which the State is liable shall be determined by the State. The Grantee shall not have any right to any actual general, special, incidental, consequential, or any other damages whatsoever of any description or amount for the State's exercise of its right to terminate for convenience.

- D.4. Termination for Cause. If the Grantee fails to properly perform its obligations under this Grant Contract, or if the Grantee violates any terms of this Grant Contract, the State shall have the right to immediately terminate this Grant Contract and withhold payments in excess of fair compensation for completed services. Notwithstanding the exercise of the State's right to terminate this Grant Contract for cause, the Grantee shall not be relieved of liability to the State for damages sustained by virtue of any breach of this Grant Contract by the Grantee.
- D.5. Subcontracting. The Grantee shall not assign this Grant Contract or enter into a subcontract for any of the services performed under this Grant Contract without obtaining the prior written approval of the State. If such subcontracts are approved by the State, each shall contain, at a minimum, sections of this Grant Contract pertaining to "Conflicts of Interest," "Lobbying," "Nondiscrimination," "Public Accountability," "Public Notice," and "Records" (as identified by the section headings). Notwithstanding any use of approved subcontractors, the Grantee shall remain responsible for all work performed.
- D.6. Conflicts of Interest. The Grantee warrants that no part of the total Grant Contract Amount shall be paid directly or indirectly to an employee or official of the State of Tennessee as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, or consultant to the Grantee in connection with any work contemplated or performed relative to this Grant Contract.
- D.7. Lobbying. The Grantee certifies, to the best of its knowledge and belief, that:
- a. No federally appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
 - b. If any funds other than federally appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this contract, grant, loan, or cooperative agreement, the Grantee shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
 - c. The Grantee shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into and is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352.

- D.8. Communications and Contacts. All instructions, notices, consents, demands, or other communications required or contemplated by this Grant Contract shall be in writing and shall be made by certified, first class mail, return receipt requested and postage prepaid, by overnight courier service with an asset tracking system, or by email or facsimile transmission with recipient confirmation. All communications, regardless of method of transmission, shall be addressed to the respective party as set out below:
The State:

Caroline Eller, Historic Preservation Specialist, National Register Coordinator

Tennessee Historical Commission
 2941 Lebanon Road
 Nashville, Tennessee 37214
 Caroline.Eller@tn.gov
 Telephone # 615-770-1086
 FAX # 615-532-1549

The Grantee:

Eric S. Stuckey, City Administrator
 City of Franklin
 City Hall
 109 3rd Avenue South
 Franklin, TN 37064
 Eric.stuckey@franklintn.gov
 Telephone # 615-791-3217

A change to the above contact information requires written notice to the person designated by the other party to receive notice.

All instructions, notices, consents, demands, or other communications shall be considered effectively given upon receipt or recipient confirmation as may be required.

- D.9. Subject to Funds Availability. This Grant Contract is subject to the appropriation and availability of State or Federal funds. In the event that the funds are not appropriated or are otherwise unavailable, the State reserves the right to terminate this Grant Contract upon written notice to the Grantee. The State's right to terminate this Grant Contract due to lack of funds is not a breach of this Grant Contract by the State. Upon receipt of the written notice, the Grantee shall cease all work associated with the Grant Contract. Should such an event occur, the Grantee shall be entitled to compensation for all satisfactory and authorized services completed as of the termination date. Upon such termination, the Grantee shall have no right to recover from the State any actual, general, special, incidental, consequential, or any other damages whatsoever of any description or amount.
- D.10. Nondiscrimination. The Grantee hereby agrees, warrants, and assures that no person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the performance of this Grant Contract or in the employment practices of the Grantee on the grounds of handicap or disability, age, race, color, religion, sex, national origin, or any other classification protected by federal, Tennessee state constitutional, or statutory law. The Grantee shall, upon request, show proof of nondiscrimination and shall post in conspicuous places, available to all employees and applicants, notices of nondiscrimination.
- D.11. HIPAA Compliance. The State and the Grantee shall comply with obligations under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), Health Information Technology for Economic and Clinical Health Act (HITECH) and any other relevant laws and regulations regarding privacy (collectively the "Privacy Rules"). The obligations set forth in this Section shall survive the termination of this Grant Contract.
- a. The Grantee warrants to the State that it is familiar with the requirements of the Privacy Rules and will comply with all applicable HIPAA requirements in the course of this Grant Contract.
 - b. The Grantee warrants that it will cooperate with the State, including cooperation and coordination with State privacy officials and other compliance officers required by the

Privacy Rules, in the course of performance of this Grant Contract so that both parties will be in compliance with the Privacy Rules.

- c. The State and the Grantee will sign documents, including but not limited to business associate agreements, as required by the Privacy Rules and that are reasonably necessary to keep the State and the Grantee in compliance with the Privacy Rules. This provision shall not apply if information received by the State under this Grant Contract is NOT "protected health information" as defined by the Privacy Rules, or if the Privacy Rules permit the State to receive such information without entering into a business associate agreement or signing another such document.
- D.12. Public Accountability. If the Grantee is subject to Tenn. Code Ann. § 8-4-401 *et seq.*, or if this Grant Contract involves the provision of services to citizens by the Grantee on behalf of the State, the Grantee agrees to establish a system through which recipients of services may present grievances about the operation of the service program. The Grantee shall also display in a prominent place, located near the passageway through which the public enters in order to receive Grant supported services, a sign at least eleven inches (11") in height and seventeen inches (17") in width stating:

NOTICE: THIS AGENCY IS A RECIPIENT OF TAXPAYER FUNDING. IF YOU OBSERVE AN AGENCY DIRECTOR OR EMPLOYEE ENGAGING IN ANY ACTIVITY WHICH YOU CONSIDER TO BE ILLEGAL, IMPROPER, OR WASTEFUL, PLEASE CALL THE STATE COMPTROLLER'S TOLL-FREE HOTLINE: 1-800-232-5454.

The sign shall be on the form prescribed by the Comptroller of the Treasury. The Grantor State Agency shall obtain copies of the sign from the Comptroller of the Treasury, and upon request from the Grantee, provide Grantee with any necessary signs.

- D.13. Public Notice. All notices, informational pamphlets, press releases, research reports, signs, and similar public notices prepared and released by the Grantee in relation to this Grant Contract shall include the statement, "This project is funded under a grant contract with the State of Tennessee." All notices by the Grantee in relation to this Grant Contract shall be approved by the State.
- D.14. Licensure. The Grantee, its employees, and any approved subcontractor shall be licensed pursuant to all applicable federal, state, and local laws, ordinances, rules, and regulations and shall upon request provide proof of all licenses.
- D.15. Records. The Grantee and any approved subcontractor shall maintain documentation for all charges under this Grant Contract. The books, records, and documents of the Grantee and any approved subcontractor, insofar as they relate to work performed or money received under this Grant Contract, shall be maintained in accordance with applicable Tennessee law. In no case shall the records be maintained for a period of less than five (5) full years from the date of the final payment. The Grantee's records shall be subject to audit at any reasonable time and upon reasonable notice by the Grantor State Agency, the Comptroller of the Treasury, or their duly appointed representatives.

The records shall be maintained in accordance with Governmental Accounting Standards Board (GASB) Accounting Standards or the Financial Accounting Standards Board (FASB) Accounting Standards Codification, as applicable, and any related AICPA Industry Audit and Accounting guides.

In addition, documentation of grant applications, budgets, reports, awards, and expenditures will be maintained in accordance with U.S. Office of Management and Budget's *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*.

Grant expenditures shall be made in accordance with local government purchasing policies and procedures and purchasing procedures for local governments authorized under state law.

The Grantee shall also comply with any recordkeeping and reporting requirements prescribed by the Tennessee Comptroller of the Treasury.

The Grantee shall establish a system of internal controls that utilize the COSO Internal Control - Integrated Framework model as the basic foundation for the internal control system. The Grantee shall incorporate any additional Comptroller of the Treasury directives into its internal control system.

Any other required records or reports which are not contemplated in the above standards shall follow the format designated by the head of the Grantor State Agency, the Central Procurement Office, or the Commissioner of Finance and Administration of the State of Tennessee.

- D.16. Monitoring. The Grantee's activities conducted and records maintained pursuant to this Grant Contract shall be subject to monitoring and evaluation by the State, the Comptroller of the Treasury, or their duly appointed representatives.
- D.17. Progress Reports. The Grantee shall submit brief, periodic, progress reports to the State as requested.
- D.18. Annual and Final Reports. The Grantee shall submit, within three (3) months of the conclusion of each year of the Term, an annual report. For grant contracts with a term of less than one (1) year, the Grantee shall submit a final report within three (3) months of the conclusion of the Term. For grant contracts with multiyear terms, the final report will take the place of the annual report for the final year of the Term. The Grantee shall submit annual and final reports to the Grantor State Agency and the Department of Finance and Administration ("F&A"). Send electronic copies of annual and final reports to F&A at fa.audit@tn.gov. At minimum, annual and final reports shall include: (a) the Grantee's name; (b) the Grant Contract's Edison identification number, Term, and total amount; (c) a narrative section that describes the program's goals, outcomes, successes and setbacks, whether the Grantee used benchmarks or indicators to determine progress, and whether any proposed activities were not completed; and (d) other relevant details requested by the Grantor State Agency. Annual and final report documents to be completed by the Grantee shall appear on the Grantor State Agency's website or as an attachment to the Grant Contract.
- D.19. Audit Report. The Grantee shall be audited in accordance with applicable Tennessee law.
- If the Grantee is subject to an audit under this provision, then the Grantee shall complete Attachment 3.
- When a federal single audit is required, the audit shall be performed in accordance with U.S. Office of Management and Budget's *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*.
- A copy of the audit report shall be provided to the Comptroller by the licensed, independent public accountant. Audit reports shall be made available to the public.
- D.20. Procurement. If other terms of this Grant Contract allow reimbursement for the cost of goods, materials, supplies, equipment, motor vehicles, or contracted services, procurements by the Grantee shall be competitive where practicable. For any procurement for which reimbursement is paid under this Grant Contract, the Grantee shall document the competitive procurement method. In each instance where it is determined that use of a competitive procurement method is not practicable, supporting documentation shall include a written justification for the decision and for the use of a non-competitive procurement. If the Grantee is a subrecipient, the Grantee shall comply with 2 C.F.R. §§ 200.318—200.326 when procuring property and services under a federal award.

The Grantee shall obtain prior approval from the State before purchasing any equipment or motor vehicles under this Grant Contract.

- D.21. Strict Performance. Failure by any party to this Grant Contract to insist in any one or more cases upon the strict performance of any of the terms, covenants, conditions, or provisions of this Grant Contract is not a waiver or relinquishment of any term, covenant, condition, or provision. No term or condition of this Grant Contract shall be held to be waived, modified, or deleted except by a written amendment signed by the parties.
- D.22. Independent Contractor. The parties shall not act as employees, partners, joint venturers, or associates of one another in the performance of this Grant Contract. The parties acknowledge that they are independent contracting entities and that nothing in this Grant Contract shall be construed to create a principal/agent relationship or to allow either to exercise control or direction over the manner or method by which the other transacts its business affairs or provides its usual services. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purpose whatsoever.
- D.23. State Liability. The State shall have no liability except as specifically provided in this Grant Contract.
- D.24. Force Majeure. "Force Majeure Event" means fire, flood, earthquake, elements of nature or acts of God, wars, riots, civil disorders, rebellions or revolutions, acts of terrorism or any other similar cause beyond the reasonable control of the party except to the extent that the non-performing party is at fault in failing to prevent or causing the default or delay, and provided that the default or delay cannot reasonably be circumvented by the non-performing party through the use of alternate sources, workaround plans or other means. A strike, lockout or labor dispute shall not excuse either party from its obligations under this Grant Contract. Except as set forth in this Section, any failure or delay by a party in the performance of its obligations under this Grant Contract arising from a Force Majeure Event is not a default under this Grant Contract or grounds for termination. The non-performing party will be excused from performing those obligations directly affected by the Force Majeure Event, and only for as long as the Force Majeure Event continues, provided that the party continues to use diligent, good faith efforts to resume performance without delay. The occurrence of a Force Majeure Event affecting Grantee's representatives, suppliers, subcontractors, customers or business apart from this Grant Contract is not a Force Majeure Event under this Grant Contract. Grantee will promptly notify the State of any delay caused by a Force Majeure Event (to be confirmed in a written notice to the State within one (1) day of the inception of the delay) that a Force Majeure Event has occurred, and will describe in reasonable detail the nature of the Force Majeure Event. If any Force Majeure Event results in a delay in Grantee's performance longer than forty-eight (48) hours, the State may, upon notice to Grantee: (a) cease payment of the fees until Grantee resumes performance of the affected obligations; or (b) immediately terminate this Grant Contract or any purchase order, in whole or in part, without further payment except for fees then due and payable. Grantee will not increase its charges under this Grant Contract or charge the State any fees other than those provided for in this Grant Contract as the result of a Force Majeure Event.
- D.25. Tennessee Department of Revenue Registration. The Grantee shall comply with all applicable registration requirements contained in Tenn. Code Ann. §§ 67-6-601 – 608. Compliance with applicable registration requirements is a material requirement of this Grant Contract.
- D.26. Charges to Service Recipients Prohibited. The Grantee shall not collect any amount in the form of fees or reimbursements from the recipients of any service provided pursuant to this Grant Contract.
- D.27. No Acquisition of Equipment or Motor Vehicles. This Grant Contract does not involve the acquisition and disposition of equipment or motor vehicles acquired with funds provided under this Grant Contract.

- D.28. State and Federal Compliance. The Grantee shall comply with all applicable state and federal laws and regulations in the performance of this Grant Contract. The U.S. Office of Management and Budget's Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards is available here: http://www.ecfr.gov/cgi-bin/text-idx?SID=c6b2f053952359ba94470ad3a7c1a975&tpl=/ecfrbrowse/Title02/2cfr200_main_02.tpl
- D.29. Governing Law. This Grant Contract shall be governed by and construed in accordance with the laws of the State of Tennessee. The Grantee agrees that it will be subject to the exclusive jurisdiction of the courts of the State of Tennessee in actions that may arise under this Grant Contract. The Grantee acknowledges and agrees that any rights or claims against the State of Tennessee or its employees hereunder, and any remedies arising there from, shall be subject to and limited to those rights and remedies, if any, available under Tenn. Code Ann. §§ 9-8-101 through 9-8-407.
- D.30. Completeness. This Grant Contract is complete and contains the entire understanding between the parties relating to the subject matter contained herein, including all the terms and conditions agreed to by the parties. This Grant Contract supersedes any and all prior understandings, representations, negotiations, or agreements between the parties, whether written or oral.
- D.31. Severability. If any terms and conditions of this Grant Contract are held to be invalid or unenforceable as a matter of law, the other terms and conditions shall not be affected and shall remain in full force and effect. To this end, the terms and conditions of this Grant Contract are declared severable.
- D.32. Headings. Section headings are for reference purposes only and shall not be construed as part of this Grant Contract.

E. SPECIAL TERMS AND CONDITIONS:

- E.1. Conflicting Terms and Conditions. Should any of these special terms and conditions conflict with any other terms and conditions of this Grant Contract, the special terms and conditions shall be subordinate to the Grant Contract's other terms and conditions.
- E.2. Debarment and Suspension. The Grantee certifies, to the best of its knowledge and belief, that it, its current and future principals, its current and future subcontractors and their principals:
- a. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department or agency;
 - b. have not within a three (3) year period preceding this Grant Contract been convicted of, or had a civil judgment rendered against them from commission of fraud, or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or grant under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;
 - c. are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses detailed in section b. of this certification; and
 - d. have not within a three (3) year period preceding this Grant Contract had one or more public transactions (federal, state, or local) terminated for cause or default.

The Grantee shall provide immediate written notice to the State if at any time it learns that there was an earlier failure to disclose information or that due to changed circumstances, its principals or the principals of its subcontractors are excluded, disqualified, or presently fall under any of the prohibitions of sections a-d.

- E.3. Printing Authorization. The Grantee agrees that no publication coming within the jurisdiction of Tenn. Code Ann. § 12-7-101, *et seq.*, shall be printed pursuant to this Grant Contract unless a printing authorization number has been obtained and affixed as required by Tenn. Code Ann. § 12-7-103(d).

IN WITNESS WHEREOF,

CITY OF FRANKLIN:

GRANTEE SIGNATURE

DATE

PRINTED NAME AND TITLE OF GRANTEE SIGNATORY (above)

TENNESSEE HISTORICAL COMMISSION:

E. PATRICK MCINTYRE, JR., EXECUTIVE DIRECTOR & SHPO

DATE

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION:

ROBERT J. MARTINEAU, JR., COMMISSIONER

DATE

APPROVED AS TO FORM

By: _____

Title: _____

City of Franklin

END: September 30, 2017

³ A Grantee Match Requirement is detailed by this Grant Budget, and the maximum total amount reimbursable by the State pursuant to this Grant Contract, as detailed by the "Grant Contract" column above, shall be reduced by the amount of any Grantee failure to meet the Match Requirement.

ATTACHMENT 2

Page 2 of 2

GRANT BUDGET LINE-ITEM DETAIL:

PROFESSIONAL FEE, GRANT & AWARD	AMOUNT
Consultant fees for preparation of updated National Register nomination for Franklin Historic District. Consultant fees for completion of historic architectural survey of Columbia Avenue resources.	6,000.00
TOTAL	\$6,000.00

ATTACHMENT 3**Parent Child Information**

The Grantee should complete this form and submit it with the Grant Contract. The Grantee should submit only one, completed "Parent Child Information" document to the State during the Grantee's fiscal year.

"Parent" means an entity whose IRS filing contains the information of at least one other entity.

"Child" means an entity whose information is contained in another entity's IRS filing.

Grantee's Edison Vendor ID number:

Is City of Franklin a parent? Yes ☐ No ☐

If yes, provide the name and Edison Vendor ID number, if applicable, of any child entities.

Is City of Franklin a child? Yes ☐ No ☐

If yes, complete the fields below.

Parent entity's name: _____

Parent entity's tax identification number: _____

Note: If the parent entity's tax identification number is a social security number, this form must be submitted via US mail to:

Central Procurement Office, Grants Program Manager
3rd Floor, WRS Tennessee Tower
312 Rosa L Parks Avenue
Nashville, TN 37243

Parent entity's contact information

Name of primary contact person: _____

Address: _____

Phone number: _____

Email address: _____

Parent entity's Edison Vendor ID number, if applicable: _____

RESOLUTION 2016-67

**RESOLUTION AUTHORIZING THE ADOPTION AND IMPLEMENTATION OF
AMENDMENTS TO THE HISTORIC DISTRICT DESIGN GUIDELINES**

WHEREAS, the City of Franklin has long been recognized as a community that values historic preservation; and

WHEREAS, the City of Franklin recognizes the importance of historic structures, landmarks and buildings in the development of plans and standards of this community and, in the values expressed in the day to day lives of its residents; and

WHEREAS, the City of Franklin Historic District Design Guidelines are intended to provide the Franklin Historic Zoning Commission (HZC), residents of the City of Franklin's local historic districts, and managers of other properties governed by the HZC with guidelines for building rehabilitation, new construction, and other changes which would affect the overall appearance of Franklin's historic areas; and

WHEREAS, the City of Franklin approved a historic preservation ordinance in 1986 and, in 1991, the Franklin Design Guidelines Manual was adopted. This manual provides information on the design review process and recommended guidelines for property owners. The guidelines in the manual are administered by the HZC in their review of actions affecting historic properties within all of the overlay zones in the City; and

WHEREAS, in July 2016, the HZC voted to favorably recommend updates to the guidelines to revise language relating to infill, additions, fencing, signage, windows, and other site features. The guidelines that follow are to be followed by property owners prior to making application for signage review by the HZC; and

WHEREAS, the updated City of Franklin Historic District Design Guidelines are in accordance with principles and recommendations set forth by the National Park Service. The National Park Service, United States Department of the Interior, is the federal agency responsible for the national program of historic preservation. It also sets professional guidelines for historic preservation which are used by state and local preservation programs.

NOW, THEREFORE, BE IT RESOLVED by the Board of Mayor and Aldermen of the City of Franklin, Tennessee, that upon the endorsement from the City of Franklin Historic Zoning Commission, the amendments to the City of Franklin Historic District Design Guidelines as shown in Appendix A are hereby adopted.

Approved this ____ day of _____, 20____

ATTEST:

CITY OF FRANKLIN, TENNESSEE:

BY: _____
ERIC S. STUCKEY
City Recorder/Administrator

BY: _____
KEN MOORE, M.D.
Mayor

Approved as to form by:

Kristen L. Corn, Assistant City Attorney

HISTORIC ZONING COMMISSION RECOMMENDED APPROVAL:
BOMA PASSED:

7/11/16

Appendix A

1. Incorporate non-substantive, grammatical corrections and format revisions.
2. Change “Commercial Guidelines” as noted in the Table of Contents and at the top of each page starting at page 91 to “Nonresidential Guidelines.”
3. Delete the following text noted with a ~~strike through~~ and add the following text noted in **bold**. Italicized text existed prior to the revisions but have been rearranged within the document for clarity:
 - Architectural Features (p. 46)-
 1. *Historic architectural features should be preserved and maintained, and new architectural features should not be added.*
 2. **Enclosing a porte cochere changes the overall character of a residential building and should be avoided.**
 3. **Preserve historic, atypical-style buildings and architectural details. Do not historicize a building by adding inappropriate architectural ornamentation or altering the roofline to make it mimic a different period of significance.**
 - Chimney (p. 49)-
 1. *Chimneys contribute to a building’s historic and architectural character and should be maintained and preserved in accordance with the guidelines for masonry.* Do not remove or alter historic chimneys.
 - Enclosed Additions: Residential (p. 52)-
 1. Do not place additions to buildings on primary elevations. **Appropriate locations for additions are on rear or obscured elevations. Rear or side elevations may not always be appropriate for additions, however, as some historic buildings have visual prominence from many vantage points.**
 2. **The historic building must be clearly identifiable and its physical integrity must not be compromised by the new addition. Avoid approaches that unify the existing structure and new construction into a single architectural whole. Incorporate differentiating methods, such as roof breaks, insets, offsets, and material changes, in the design to separate existing construction from new construction.**
 3. If documentation exists for a historic addition, it may be replicated. Otherwise, design additions to be clearly contemporary and compatible with the proportions, form, materials, and details of the building. **New additions should not destroy historic materials that characterize the property.**
 4. Limit the square footage of additions to no more than half of the square footage of the footprint of the ~~original building~~ **historic building (all portions of the building that are at least 50 years of age). Porches and all roof-covered surfaces factor into the building’s footprint.**
 5. Maximum building coverage should not exceed 35%... Building footprint includes all structures on a lot and all roof-covered surfaces, **such as porches or roof-covered patios.**
 6. **Lap siding exposure should be consistent with that on the existing structure or that on adjacent historic buildings.**
 - Fences and Walls (p. 55)-
 - 0 ~~Fencing may qualify for administrative review.~~ **Rear Yard Fencing may qualify for administrative review.**
 2. Build new retaining walls of stone or brick **Select retaining wall materials that are similar in scale, texture, color, and form as those historically used in the district and that are compatible with the main structure. Concrete blocks, poured concrete and exposed concrete masonry units (CMUs) can be used but not as surface materials.**
 3. Erect fences along all property lines of a residence.
 4. **Primary yard fencing is fencing located along front yard property lines and areas that are readily visible from the street. Wooden picket fences are the most common fencing material for the**

primary yard. Other appropriate fence materials for the primary yard are open-weave brick designs or cast iron.

5. Rear yard fencing begins 20 feet from the plane of the residence's primary façade.
6. Fence materials should be compatible with the surface materials of the building. Compatibility is achieved by maintaining the range of materials historically present in the district. Unit size and visual and tactile textures of the materials should correspond the main structure.
8. Operable gates should be configured to swing inwardly and not onto the public sidewalk. Front yard entrances should not have sliding gates. Sliding gates should be avoided.

- **Gutters and Downspouts (p. 60)-**

1. Use and maintain gutters, downspouts, and splash blocks to help protect the building from water damage. **Gutter design and materials should be appropriate to the age of the building they support.**

- **Infill Buildings: Accessory (p. 61)-**

1. ~~Build outbuildings only in rear yards and set back at least 60 feet from the front lot line. Build accessory buildings behind the rear plane of the principal structure only. Place accessory buildings in traditional locations behind or to the side of the principal structure.~~
2. ~~Place accessory buildings in traditional locations such as behind and to the side of houses for garages.~~
2. **New accessory structures should be visually subordinate in placement, size, mass, and intricacy to the principal structures they support.**
3. ~~Make outbuildings smaller than principal buildings.~~ **New accessory structures should be shorter in overall height than the principal structure.**
4. ~~Design outbuildings~~ **accessory structures** simply, and use forms reflective of the adjacent principal building. Infill accessory structures should be consistent with the context of their principal structures. **Architectural details should complement, but not visually compete with, the character of the historic principal structure.**
5. **Dormers shall relate to the style and proportion of windows on the principal dwelling and shall be set back a minimum of two feet from the exterior wall.**
6. ~~Use components typically used in historic equivalents. Such as wooden paneled doors for garages.~~ **Garage doors should have similar proportions and materials as those traditionally found within the historic district.**
8. **Lap siding exposure should be consistent with that on the principal structure and adjacent historic buildings.**

- **Infill Buildings: Principal (p. 62)-**

2. Design new construction to be compatible with the massing, **height, proportions**, scale, size, and architectural features of adjacent buildings. **New construction should complement rather than detract from the character of the historic district.**
5. ~~Make new construction compatible in height, scale, and proportions with adjacent structures. New construction should be consistent with the context of the surrounding neighborhood. Building height should be measured from grade (ground) and not from finished floor.~~
5. **The height of new construction should be compatible with the existing buildings on the same block face on the same side of the street. Compatibility is generally achieved by building within 10 percent above or below the average height of the buildings on the same block face on the same side of the street.**
6. **The height of infill buildings on newly-created streets should be compatible with the building height on the nearest block face within the established historic district.**
9. In compliance with the zoning ordinance, reinforce and maintain the existing setbacks of adjacent structures. [Formerly No. 16]
19. **In areas where historic garages are generally detached, new garages should appear to be detached. Attached garages should be designed in such a way that they are located at traditional locations behind the rear plane of the main form of the house or otherwise not be visible from the street.**

20. **New chimneys should be compatible in size, height, and massing to existing chimneys on neighboring houses. Chimneys should be made out of stone, brick, or brick veneer.**
 23. **Architectural details should complement, but not visually compete with, the character of nearby historic structures.**
 26. **Use weatherboard, clapboard, or shiplap siding. Lap siding exposure should be consistent with that on adjacent historic buildings.**
- **Landscaping (p. 66)-**
 1. **Original landscape features and configurations should be maintained. Avoid significantly altering the topography of a property (i.e., extensive grading).**
 2. **Preserve and maintain historic sidewalks and walkways.**
 3. **New sidewalks and walkways should follow historic patterns of alignment, configuration, width, and materials. The layout of new sidewalks and walkways should take placement of historic trees into consideration.**
 4. **Minimize changes in topography resulting from new elements, like driveways and walkways, through appropriate siting and design. New site elements should work with, rather than change, character-defining topography when possible.**
 5. **Match the historic topography of adjacent lots prevalent along the block face for new construction.**
 6. **Do not fully remove and replace traditional lawn areas with hardscape.**
 7. **Do not introduce large pavers or boulders, asphalt, or other impervious surfaces where they were not historically located.**
 - **Parking and Driveways (p. 73)-**
 8. *Driveways should follow historic patterns and should be located along rear or side elevations and should be landscaped to mitigate its impact on the district's historic character. "Track" or "Hollywood" style driveways are appropriate for historic districts.*
 9. **Use durable materials that were historically typical for driveways such as gravel, concrete, bricks, and asphalt.**
 - **Porches (p. 74)-**
 7. **If desired, add porches or decks to rear or secondary elevations where they are not readily visible from the street. New porch building materials should be compatible with those found on the principal structure or match existing porches found within the district.**
 8. **Maximum building coverage should not exceed 35 percent as measured by the building footprint. Building footprint refers to the sum of the square footage areas of the largest floors of buildings or structures. Building footprint includes all structures on a lot and any roof-covered structures.**
 15. **Architectural features that are not original to historic porches should not be added. These features include limestone caps to steps, pilasters, and decorative molding.**
 - **Relocation (p. 77)-**
 1. *Historic buildings should not be relocated from a district. The relocation of historic buildings into a district may be appropriate.*
 - **Roofs (p. 78)-**
 1. *Roof shape and materials contribute to building style and historic character, and roofing sections on main and other visible elevations should remain unaltered.*
 6. **If dormers, decks, or other modern rooftop features are desired, add them only to rear or side elevations with minimal visibility and use designs, materials, and scale in keeping with building character. Roof dormers are recommended over wall dormers.**
 - **Siding (p. 79)-**
 4. **The use of smooth cement board siding may be appropriate for replacement of deteriorated wood siding on rear elevation or for new construction.**
 5. **Lap siding exposure should be consistent with that on the principal structure and adjacent historic buildings.**

- **Signage: Residential (p. 81)—**
 1. **Design signs to respect and respond to the character of the property on which it is being placed.**
 2. ~~Size and place signs according to the following stipulations:~~
 - **Post-and-arm:** 9 square feet for total sign surface and 8 feet for total post height
 - **Post-and-panel:** 12 square feet total sign face; maximum height of six feet for sign face; posts cannot exceed 8 feet.
 - ~~**Monument:** 12 square feet for total sign surface and 6 feet for total height.~~
 - **Wall signs:** 4.5 square feet for total sign surface and 12 feet for total height. Signs must also be below the second story.
 - **Projecting arm:** 4.5 square feet for total sign surface and 12 feet for total height.
 3. **Sign colors should complement the colors of the building. Strong primary colors should only be considered as accents.**
 8. ~~Use signs based on styles from the mid-19th and early-20th centuries.~~
 8. *Do not use materials such as plastic, plywood, or unfinished wood for signage materials or plastic for trim, post, or hanging bracket materials.* Composite product materials **that have the appearance of historic sign materials** are acceptable.
 9. **Monument-style signs are not appropriate within the residential historic districts.**
- **Utilities (p. 85)-**
 1. *Utilities should be placed and screened in order to minimize their impact on the district.*
- **Windows (p. 86)-**
 1. *Preserve and maintain historic windows and historic window openings.*
 4. **New windows should have historic profiles and dimensions.** Use true divided-light (TDL) or simulated divided-light (SDL) windows as new or replacement windows. **Windows should have a double-hung (or “double-sash”) appearance.**
 5. ~~New and replacement windows should be wood in material.~~ **Replacement window materials should match the historic materials found on the building. New window materials for existing structures should match the historic materials found on the building. Infill windows should match those found on neighboring buildings.**
 6. **Composite materials that have the appearance of wood are appropriate for windows, stops, jambs, and trim.**
 9. **Storm windows should be full view design to allow the viewing of the original window from the street.**

Commercial
Nonresidential:

- **Architectural Features (p. 95)-**
 2. **Decorative transoms should not be obscured.**
 4. **Do not add or remove details to divide up a single historic building into sections based on tenant occupation.**
 5. **Preserve historic, atypical-style buildings and architectural details. Do not historicize a building by adding inappropriate architectural ornamentation or altering the roofline to make it fit in with a different period of significance.**
- **Awnings (p. 96)-**
 3. *The use of canvas storefront awnings or canopies is appropriate.* Install retractable or fixed canvas, vinyl-coated, or acrylic awnings on storefronts or upper windows.
- **Demolition (p. 98)-**
 1. *Do not demolish historic buildings or structures.*
 2. ~~Do not demolish historic buildings or structures.~~ Demolition may only be approved if the HZC deems one or more of the following concerns are met: ... (*same criteria listed here*).

- **Entrances (p. 101)-**
 1. *Original entrances and elements should be preserved and maintained. Do not remove or replace entrance elements such as doors and transoms unless extensive deterioration is evident.*
- **Infill Buildings (p. 104)-**
 4. Reconstruct buildings, if desired, **only to their original historic state on their original location.**
 8. **Reinforce the appearance and rhythm of historic horizontal patterns.** Respect and maintain the existing configuration of storefront and upper façade arrangements.
 16. ~~Do not exceed the average height of buildings on a block or neighboring blocks, by more than 10 percent.~~ **The height of new construction should be compatible with the existing buildings on the same block face. Compatibility is generally achieved by building to within 10 percent above or below the average height of the historic buildings on the same block face on the same side of the street. In instances where additional height internal to the block is appropriate, step-backs should be utilized to mitigate massing and scale.**
 20. ~~In Special Area 1, the maximum height is three stories or 42 feet. PUD may be up to four stories or 56 feet with transitional features.~~
 21. ~~Using the Central Franklin Area Plan for guidance, the building heights should be consistent with the height and scale of the neighboring buildings and surrounding area but shall not exceed the building height permitted in the Franklin Zoning Ordinance.~~
- **Landscaping: Nonresidential (Proposed)-**
 1. **Original landscape features and configurations should be maintained. Avoid significantly altering the topography of a property (i.e., extensive grading).**
 2. **Preserve and maintain historic sidewalks and walkways.**
 3. **New sidewalks and walkways should follow historic patterns of alignment, configuration, width, and materials. The layout of new sidewalks and walkways should take placement of historic trees into consideration.**
 4. **Minimize changes in topography resulting from new elements, like driveways and walkways, through appropriate siting and design. New site elements should work with, rather than change, character-defining topography when possible.**
- **Lighting (p. 107)-**
 2. *New light fixtures should not be obtrusive of historic architectural features.*
- **Metal (p. 109)-**
 1. Preserve and maintain historic cast-iron and sheet metal *features, such as pilasters, columns, cornices, and hood moldings.*
- **Rear Elevations (p. 112)-**
 1. *Rear elevations should be kept simple in appearance.*
- **Signage: Nonresidential (p. 115)—**
 1. *Historic signs should be preserved and maintained. Signs should follow the city's ordinance.*
 2. **Size signs according to the following:**
 - **Projecting-arm:** 4.5 square feet for total sign surface and hung a minimum of 8 feet from the grade surface (generally defined as the sidewalk).
 - **Post-and-arm:** 9 square feet for total sign surface and 8 feet for total post height.
 - **Post-and-panel:** 12 square feet for total sign surface; maximum height of 6 feet for sign surface.
 - **Wall Sign:** 1 linear foot of width of the building façade or storefront (example: 30 feet of width—30 square feet of total wall signage). This will pertain to the total amount of wall signage for the first-floor façade, first-floor storefront, or the first-floor tenant space. Wall

signs above the first floor should be a maximum of 9 square feet and proportionate to the building façade and other signage.

- **Sandwich-board:** 6 square feet or less per side.
 - **Monument:** 12 square feet for total sign surface and 6 feet for total sign height.
7. **Do not use wall signs that exceed the height of the building cornice.** [Formerly no. 2]
 11. **Monument-style are not recommended for use in nonresidential but may be appropriate for civic or institutional properties.**
 12. Do not use materials such as plastic, plywood, or unfinished wood for signage materials or plastic for trim, post, or hanging bracket materials are acceptable for use in signage materials. Composite product materials **that have the appearance of historic sign materials** are acceptable.
 13. **Use wood or painted or otherwise finished metal for sign brackets.** [Formerly no. 18]
 14. **Temporary signs are required to have a dark background and light lettering. Contact the Preservation Planner for temporary (30-day limit) sign approval.** [Formerly no. 5]
 19. **Sign colors should complement the colors of the building. Strong primary colors should only be used as accents.**
 21. ~~Use sign designs based on styles from the mid-19th and early-20th century.~~
- **Utilities (p. 122)-**
 1. *Utilities should be placed along rear elevations or otherwise out of view from the main street, and visibility should be further screened through landscaping or fencing.*
 - **Windows (p. 123)-**
 6. ~~New or replacement windows should be wood in material.~~ **Replacement window materials should match the historic materials found on the building. New window materials for existing structures should match the historic materials found on the building. Infill windows should match those found on neighboring buildings.**
 7. **Composite materials that have the appearance of wood are appropriate for windows, stops, jambs, and trim.**

RESOLUTION 2016-45

TO BE ENTITLED: "A RESOLUTION ADOPTING A PLAN OF SERVICES FOR THE ANNEXATION OF 459, 463 AND 467 FRANKLIN ROAD, BY THE CITY OF FRANKLIN, TENNESSEE."

WHEREAS, *Tennessee Code Annotated* (T.C.A.) § 6-51-102, as amended, requires that a Plan of Services be adopted by a municipal governing body prior to the passage of an annexation resolution; and

WHEREAS, Barry Cowan and Phyllis Osborn ("Owners") of the properties located at 459, 463 and 467 Franklin Road ("Properties") petitioned the Board of Mayor and Aldermen (BOMA) of the City of Franklin, Tennessee ("City"), to annex 5.4 acres adjoining the City limits and located within the Franklin Urban Growth Boundary (UGB); and

WHEREAS, the Properties are located west of Franklin Road and north of Mack Hatcher as described herein and as depicted on the Map attached hereto as Exhibit A:

Map-Parcel	Acres
053---02300	1.3
053---02100	2.1
053---02200	2.0
Total	5.4

The Properties adjoins the City limits within the Franklin Urban Growth Boundary (UGB) and comprises a total of 5.4 acres in 3 parcels The Properties are used as single family residential for all properties.

WHEREAS, this resolution shall bind the Owners and subsequent Owners of the Property; and

WHEREAS, the Franklin Municipal Planning Commission has reviewed and recommended approval of the Plan of Services for the annexation area; and

WHEREAS, a public hearing was held following public notice as required by *T.C.A.* § 6-51-102, as amended; and

WHEREAS, it is believed it is in the best interest of the City to adopt a Plan of Services for the area petitioned to be annexed in order to provide for future development in accordance with City standards; and

WHEREAS, this resolution shall not bind the City to later annex the Property.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS:

SECTION I. Pursuant to the provisions of T.C.A. § 6-51-102, as amended, there is hereby adopted, for the area bounded as described above, the following Plan of Services:

A. Water

The subject Properties are located in Mallory Valley's Water District. Water availability shall be approved and provided through Mallory Valley. The Owners shall be required to provide adequate fire flow and pressure to the proposed development.

B. Reclaimed Water

According to the City of Franklin's Municipal Code, reclaimed water systems need to be extended to a development if the development is within 1,000 feet of an existing reclaimed water line. In the case of these Properties, a 3500 feet extension would be required to serve the Properties. For this reason, reclaimed water will not be required to be extended to the subject Properties.

C. Wastewater

The Properties lie within the Spencer Creek Sanitary Sewer Basin as defined in the City of Franklin Sanitary Sewer Basin Study documents. The proposed Properties is anticipated to construct two (2) single family residential homes. This Property shall be served by an existing Manhole located on the eastern side of Franklin Road, directly across from the 467 Franklin Road Property, and be required to bore ± 140 feet under Franklin Road to extend sanitary sewer to the property. A manhole shall be set at the 467 Franklin Road Property line, outside the future right-of-way of Franklin Road, and an 8-inch sewer main extended to the south outside of the right-of-way to provide service to the 459 Franklin Road Property. The Owners shall ensure that existing septic fields are not impacted by the sanitary sewer construction. If the existing septic fields are impacted or damaged during construction of the sewer, the Owners shall be responsible for all work and fees necessary to tie the impacted properties on to City sewer. In addition, the Owners shall be required to dedicate an exclusive sewer easement outside of the future right-of-way of Franklin Road and extending from the constructed sanitary sewer to the adjacent properties. The Owners shall be responsible for the engineering, design, easement acquisition and construction of the necessary sanitary sewer infrastructure for the development of this Property and shall comply with all requirements as outlined in the Franklin Municipal Code.

D. Stormwater

The Owners shall be responsible for the engineering, design and construction of the necessary Stormwater infrastructure for the development of this Properties and shall comply with all requirements as outlined in the Franklin Municipal Code. As the Properties develop, the City of Franklin will charge prevailing stormwater user fees per policies and procedures as outline in the Franklin Municipal Code.

E. Streets

Access to the Properties shall be provided on Franklin Road via the existing drive cuts. No additional access to Franklin Road shall be allowed by the City of Franklin. Franklin Road is classified as a Major Arterial in the City of Franklin Major Thoroughfare Plan. The Owners shall be required to dedicate the necessary future right-of-way for Franklin Road to allow the City to make future improvements as this area of the City continues to develop. The Owners shall be required to dedicate 62 feet of right-of-way from the existing centerline of Franklin Road as part of the final plat.

- F. Traffic Control
Traffic signals, traffic signs, street markings, and other traffic-control devices will be installed as the need is established by appropriate study and traffic standards. No needs have been identified for the area at this time. New development after the effective date of annexation shall comply with City regulations governing traffic markings.
- G. Street Lighting
No off-site street lighting is proposed at this time. Street lighting within new developments shall be funded and installed by the Owners per City policy.
- H. Street Name Signs
1. No additional street name signs in the area have been deemed necessary.
2. New development shall install street name signs per City policy.
- I. Fire Protection
1. Fire protection by the present personnel and equipment of the Franklin Fire Department will be provided on and after the effective date of annexation.
2. No additional manpower or equipment will be necessary to serve the annexation area at this time.
- J. Planning and Zoning
1. The planning and zoning jurisdiction of the City will extend to the annexed area on and after the effective date of annexation.
2. The properties are located in the Berry's Chapel Character Area – 7 (BCCO-7). Established land uses include homesteads, farmsteads and large estate single family residential uses. Future development will be limited and may include clustered residential and institutional uses that maintain substantial areas of open space and preserve rural view sheds. Franklin Road in this area is considered to be the last rural gateway into Central Franklin. This area is unique and has tremendous scenic value to the community. As such, it will remain a prominent and important gateway and corridor into Central Franklin.
3. Upon annexation, the Properties will be zoned by the Board of Mayor and Aldermen, pursuant to the requirements of the Franklin Zoning Ordinance with a base zone district, Overlay District, Character Area Overlay District, and designated as a Conventional or Traditional Area.
- K. Parks and Recreation
1. The benefit and use of the recreational facilities and programs provided by the Parks Department will be available on and after the effective date of the annexation. Recreational facilities and programs will be provided with existing personnel, facilities and resources.
2. New development in the annexed area shall comply with the City of Franklin Parkland Dedication Ordinance.
- L. Police Protection
1. Police patrol and response to calls by the Franklin Police Department will be provided on and after the effective date of annexation.
2. Police services will be provided with existing personnel and equipment.

M. Building and Code Inspection Services

1. Building and code inspection services will begin in the annexed area on and after the effective date of the annexation.
2. New development in the annexed area shall comply with adopted City Building Codes, pay the applicable fees, and obtain the required permits for inspection services.

N. Garbage and Recycling Pickup and Environmental

1. The Sanitation and Environmental Services Department will begin providing services in the annexed area on and after the effective date of the annexation in accordance with adopted City requirements.
2. No additional manpower or equipment will be necessary to serve the annexation area at this time.

SECTION II. This Resolution shall take effect from and after its adoption.

ADOPTED THIS _____.

ERIC S. STUCKEY
City Administrator

DR. KEN MOORE
Mayor

Approved as to form by:

Shauna R. Billingsley
City Attorney

DRAFT PLAN OF SERVICES
459, 463 & 467 FRANKLIN ROAD ANNEXATION
5.4 ACRES



Legend

 459 463 & 467 Franklin Road

Properties Under Consideration

 Properties Under Consideration

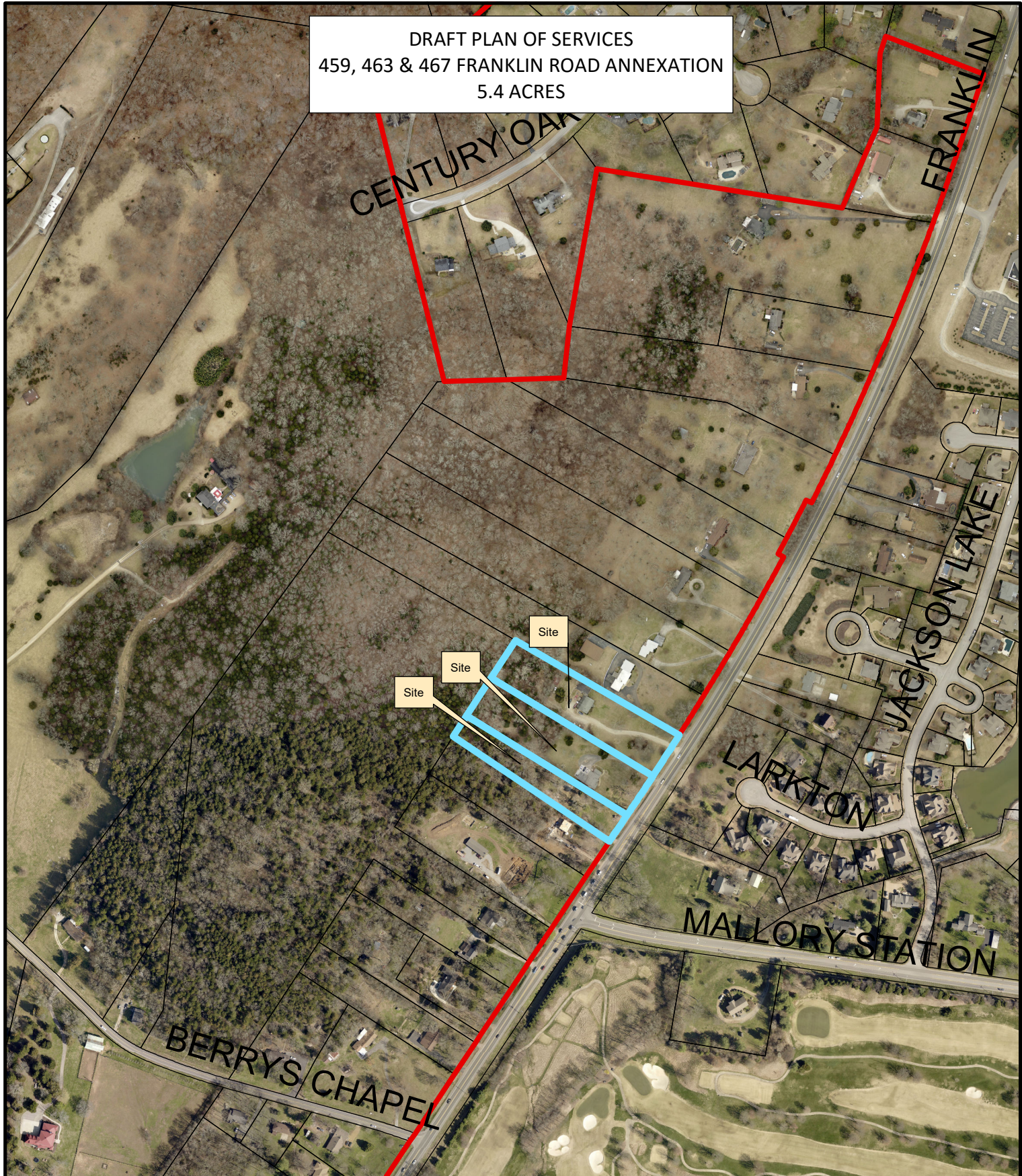
 Existing City Limits

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Feet



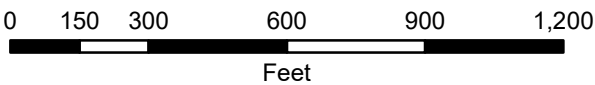
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DRAFT PLAN OF SERVICES
459, 463 & 467 FRANKLIN ROAD ANNEXATION
5.4 ACRES



Legend

- Franklin Road Annexation
- Existing City Limits



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**INTERLOCAL AGREEMENT BETWEEN THE CITY OF FRANKLIN, TENNESSEE AND
WILLIAMSON COUNTY, TENNESSEE CONCERNING PERFORMANCE BONDS
COF Contract No 2016-0278**

THIS INTERLOCAL AGREEMENT ("Agreement"), is entered into by and between WILLIAMSON COUNTY, TENNESSEE ("County"), a political subdivision of the State of Tennessee located at 1320 West Main Street, Franklin, Tennessee, 37064, and the CITY OF FRANKLIN, TENNESSEE ("City"), a municipal government located at 109 3rd Avenue South, Franklin, Tennessee, 37064.

NOW THEREFORE, in consideration of the mutual promises contained herein, the sufficiency of which is hereby acknowledged, the parties agree as follows:

I. Purpose of Agreement. The purpose of this Interlocal Agreement is to set forth the obligations of the County to be responsible for the satisfactory completion of necessary public improvements and installation of landscape as required and as a condition of approval of projects as agreed by the parties. This Interlocal Agreement shall satisfy the condition of any requirement that the County submit a performance agreement and/or surety for current and future projects which are not yet approved at the time this Agreement is executed, or which are approved, but building permits have not yet been issued. The responsibilities of this Agreement shall only become effective once the parties agree on the conditions concerning any required and needed public improvements and landscape requirements. The parties agree to cooperate in a reasonable manner to reach an agreement on the conditions.

II. Authority. This Agreement is made and entered into pursuant to the authority granted to the parties under the *Interlocal Cooperation Act*, Tennessee Code Annotated Sections 12-9-101, et seq. The parties agree that all approvals and filings required by the terms of the Act shall be achieved as soon as possible from and after the execution of this Agreement.

III. Provision of Surety. The County, as both principal and surety, agrees to be responsible for all costs associated with satisfying the conditions and requirements set forth by the Franklin Municipal Planning Commission and agreed by the parties for future approved projects concerning the public improvements and installation of landscape requirements in accordance with approved plans and conditions as agreed by the parties.

IV. Performance Agreement. The County, as both principal and surety, agrees that it shall be firmly bound in such amounts to satisfy its obligations set forth herein unto the City for the use of the Franklin Municipal Planning Commission, within any certain sites which new projects are approved in the form of site plans, final plats, and miscellaneous construction which are typically subject to performance sureties to ensure the satisfactory completion of public improvements and installation of landscape as required by the plans.

V. Term. The initial term of this Agreement shall be for a period of five (5) years which shall begin November 15, 2016 and end on November 14, 2021. The parties may agree to extend this Agreement by written agreement for three (3) additional terms of five (5) years. This Agreement shall be on a continuing basis and shall be effective for all future projects subject to approval of the parties as provided herein.

VI. Termination.

- a. **Breach.** Should either party fail to fulfill in a timely and proper manner a material obligation under this Agreement or if either party should violate a material term of this Agreement, the non-breaching party shall provide the breaching party with notice of the breach. The breaching party will then have seven (7) calendar days from the receipt of the notice to cure the breach. Upon breach or default of any of the provisions set forth herein, the non-breaching party shall be entitled to any and all damages and other equitable relief permitted under the laws of the State of Tennessee.
- b. **Termination for Convenience.** City or County may terminate this Agreement at any time upon thirty (30) days written notice to the other party. Such termination shall not affect in any manner any prior existing obligations between the parties.

VII. Cost. Each party shall be responsible for its own cost for the satisfaction of the obligations set forth herein.

VIII. Cooperation. The parties agree to cooperate fully in order to successfully execute the terms and conditions of this Agreement including obtaining all regulatory and governmental approvals required by this Agreement recognizing that the intent of each party to the other is to serve the individual interests of each party while respecting the conditions and obligations of this Agreement.

IX. Limitation on Liability. Each party shall be responsible for its own actions and the actions of their employees, contractors, subcontractors, and agents, conducted pursuant to this Agreement. Neither party shall be

liable for claims against the other party unless liability is imposed under the Tennessee Governmental Tort Liability Act.

X. General Terms.

a. **Choice of Law and Forum.** This Agreement shall be exclusively governed by the laws of the State of Tennessee. In the event that any section and/or term of this Agreement, or any exhibits hereto, becomes subject to litigation, the venue for such action will be exclusively maintained in a court of competent jurisdiction sitting in Williamson County, Tennessee.

b. **Notices.** All notices, demands and requests to be given hereunder by either party shall be in writing and must be sent by certified or registered mail and shall be deemed properly given if tendered at the address below or at such other address as either party shall designate by written notice to the other.

If to County: **WILLIAMSON COUNTY, TENNESSEE**
County Administrative Complex
1320 West Main Street, Suite 125
Franklin, TN 37064
Attn: County Mayor

If to City: **CITY OF FRANKLIN**
Franklin City Hall
109 Third Ave. South
Franklin, TN 37064
Attn: City Mayor

c. **Entire Agreement and Modifications in Writing.** This Agreement and any exhibits included herewith at the time of execution of this Agreement contain the entire agreement between the parties, and no statement, promises, or inducements made by either party or agent of either party that is not contained in this written Agreement shall be valid or binding; and this Agreement may not be enlarged, modified, or altered except in writing and signed by the parties and attached hereto.

d. **Dispute Resolution.** The parties may agree to participate in non-binding mediation in an attempt to resolve any disputes. Notwithstanding the foregoing statement, any claims, disputes, or other matters in question between the parties to this Agreement, arising out of or relating to this Agreement or breach thereof, shall be subject to and decided by a court of law.

e. **Assignment.** The rights and obligations of this Agreement are not assignable.

f. **Waiver.** No waiver of any provision of this Agreement shall be valid unless in writing and signed by the parties against who charged.

g. **Headings.** The headings in this Agreement are for convenience and reference and are not intended to define or limit the scope of any provision of this Agreement.

h. **Employment Practices.** Neither party shall subscribe to any personnel policy which permits or allows for the promotion, demotion, employment, dismissal, or laying off of any individual due to race, creed, color, national origin, age, sex, or which is in violation of applicable laws concerning the employment of individuals with disabilities. The parties shall not knowingly hire any unauthorized employees or fail to comply with record keeping requirements set forth in the Federal Immigration Reform and Control Act of 1986, Chapter 878 of the 2006 Tennessee Public Acts and all other applicable laws.

i. **Relationship Between the Parties.** The relationship of the parties shall be that of an independent contractor. No principal-agent or employer-employee relationship is created by this Agreement. The parties hereto shall hold itself out in a manner contrary to the terms of this paragraph. No party shall become liable for any representation, act, or omission of any other party contrary to the terms of this paragraph.

j. **Severability.** If any one or more of the covenants, agreements, or provisions of this Agreement shall be held contrary to any expressed provisions of law or contrary to any policy of expressed law, although not expressly prohibited, or contrary to any express provision of public policy, or shall for any reason whatsoever be held invalid, then such covenants, agreements, or provisions shall be null and void and shall be deemed separate from the remaining covenants, agreements or provisions of this Agreement.

k. **Specific Performance.** The parties recognize that the rights afforded to each under this Agreement are unique and, accordingly, County shall, in addition to such other remedies as may be available to them in equity, have the right to enforce their respective rights hereunder by an action for injunctive relief and/or specific performance to the extent permitted by law.

l. **Compliance with Laws.** The parties shall comply with all laws of the United States of America, the State of Tennessee, and local laws and shall secure all necessary permits and licenses and keep the same in force during the term of this Agreement.

m. **Effective Date.** This Agreement shall not be binding upon the parties until it has been properly approved by the legislative bodies of the respective parties, it has then been signed first by the authorized representatives for the City and then by the authorized representatives of Williamson County and has been filed in the

office of the County Mayor. When it has been so signed and filed, this Agreement shall be effective as of the date written below.

IN WITNESS WHEREOF, the County and the City have executed this Agreement effective as of the date and year written below.

ATTEST:

WILLIAMSON COUNTY, TENNESSEE

BY:

BY:

DATE: _____

DATE: _____

APPROVED AS TO FORM AND LEGALITY:

Williamson County Attorney

ATTEST:

CITY OF FRANKLIN, TENNESSEE

BY:

BY:

DATE: _____

DATE: _____

APPROVED AS TO FORM AND LEGALITY:

Franklin City Attorney

<H:\Williamson County\Agreements\Interlocal Agreements\City of Franklin\Surety Bonds\2016.09.08 Interlocal Franklin-Surety Bonds K#16-290.doc>

COF Contract No. 2011-0111

**INTERLOCAL AGREEMENT BETWEEN THE CITY OF FRANKLIN, TENNESSEE AND
WILLIAMSON COUNTY, TENNESSEE CONCERNING PERFORMANCE SURETY**

THIS INTERLOCAL AGREEMENT, ("Agreement"), is entered into by and between WILLIAMSON COUNTY, TENNESSEE, ("County"), a political subdivision of the State of Tennessee, located at 1320 West Main Street, Franklin, Tennessee, 37064, and the CITY OF FRANKLIN, TENNESSEE, ("City"), a municipal government located at 109 3rd Avenue South, Franklin, Tennessee, 37064.

NOW THEREFORE, in consideration of the mutual promises contained herein, the sufficiency of which is hereby acknowledged, the parties agree as follows:

- I. Purpose of Agreement.** The purpose of this Interlocal Agreement is to set forth the obligations of the County to be responsible for the satisfactory completion of installation of landscape as required as a condition of approval as agreed by the parties. This interlocal agreement shall satisfy the condition of any requirement that the County submit a performance agreement and surety for current and future projects which are not yet approved at the time this agreement is executed, or which are approved but building permits have not yet been issued, with the exception of the project entitled "Franklin Recreation Complex Addition", City of Franklin Project number 2193, which shall also be subject to this Agreement. A copy of the letter from the County's counsel related to the Franklin Recreation Complex Addition confirming such is attached hereto as Exhibit A. The responsibilities of the Agreement shall only become effective once the parties agree on the conditions of the required landscape installation. The parties agree to cooperate in a reasonable manner to reach an agreement on the conditions.
- II. Authority.** This Agreement is made and entered into pursuant to the authority granted to the parties under the *Interlocal Cooperation Act*, Tennessee Code Annotated Sections 12-9-101, et seq., and the parties agree that all approvals and filings required by the terms of the Act shall be achieved as soon as possible from and after the execution of this Agreement.
- III. Provision of Surety.** The County, as both principal and surety, agrees to be responsible for all costs associated with satisfying the conditions and requirements set forth by the Franklin Municipal Planning Commission and agreed by the parties for future approved projects concerning the installation of landscape requirements in accordance with approved plans and conditions as agreed by the parties.
- IV. Performance Agreement.** The County, as both principal and surety, agrees that it shall be firmly bound in such amounts to satisfy its obligations set forth herein unto the City for the use of the Franklin Municipal Planning Commission, within any certain sites which new projects are approved in the form of site plans, final plats, and miscellaneous construction which are subject to performance sureties to ensure the satisfactory completion of installation of landscape as required by the plans.
- V. Term.** The initial term of this Agreement shall be for a period of 5 years which shall begin July 1, 2011 and end on June 30, 2016. The parties may agree to extend the Agreement by written agreement for three additional terms of 5 years. This Agreement shall be on a continuing basis and shall be effective for all future projects once the parties have agreed on the conditions and requirements as set forth by the Franklin Municipal Planning Commission.
- VI. Termination.**
 - a. Breach.** Should any party fail to fulfill in a timely and proper manner a material obligation under this Agreement or if any party should violate a material term of this Agreement, the non-breaching party shall provide the breaching party with notice of the breach. The breaching party will then have seven calendar days from the receipt of the notice to cure the breach. Upon breach or default of any of the provisions set forth herein, the non-breaching party shall be entitled to any and all damages and other equitable relief permitted under the laws of the State of Tennessee.
 - b. Termination for Convenience.** City or County may terminate this Agreement at any time upon 30 days written notice to the other party. Such termination shall not affect in any manner any prior existing obligations between the parties.
- VII. Cost.** Each party shall be responsible for its own cost for the satisfaction of the obligations set forth herein.
- VIII. Cooperation.** The parties agree to cooperate fully in order to successfully execute the terms and conditions of this Agreement including obtaining all regulatory and governmental approvals required by this Agreement recognizing that the intent of each party to the other is to serve the individual interests of each party while respecting the conditions and obligations of this Agreement.
- IX. Limitation on Liability.** Each party shall be responsible for its own actions, and the actions of their employees, contractors, subcontractors, and agents, conducted pursuant to this Agreement. Neither party shall be

liable for claims against the other party unless liability is imposed under the Tennessee Governmental Tort Liability Act.

X. General Terms.

a. **Choice of Law and Forum.** This Agreement shall be exclusively governed by the laws of the State of Tennessee. In the event that any section and/or term of this Agreement, or any exhibits hereto, becomes subject to litigation, the venue for such action will be exclusively maintained in a court of competent jurisdiction sitting in Williamson County, Tennessee.

b. **Notices.** All notices, demands and requests to be given hereunder by either party shall be in writing and must be sent by certified or registered mail and shall be deemed properly given if tendered at the address below or at such other address as either party shall designate by written notice to the other.

County: **WILLIAMSON COUNTY, TENNESSEE**
County Administrative Complex
1320 West Main Street, Suite 125
Franklin, TN 37064
Attn: County Mayor

City: **CITY OF FRANKLIN**
Franklin City Hall
109 Second Ave. South
Franklin, TN 37064
Attn: City Mayor

c. **Entire Agreement and Modifications in Writing.** This Agreement and any exhibits included herewith at the time of execution of this Agreement contain the entire agreement between the parties, and no statement, promises, or inducements made by either party or agent of either party that is not contained in this written Agreement shall be valid or binding; and this Agreement may not be enlarged, modified, or altered except in writing and signed by the parties and attached hereto.

d. **Dispute Resolution.** The parties may agree to participate in non-binding mediation in an attempt to resolve any disputes. Notwithstanding the foregoing statement, any claims, disputes or other matters in question between the parties to this Agreement, arising out of or relating to this Agreement or breach thereof, shall be subject to and decided by a court of law.

e. **Assignment.** The rights and obligations of this Agreement are not assignable.

f. **Waiver.** No waiver of any provision of this Agreement shall be valid unless in writing and signed by the parties against who charged.

g. **Headings.** The headings in this Agreement are for convenience and reference and are not intended to define or limit the scope of any provision of this Agreement.

h. **Employment Practices.** Neither party shall subscribe to any personnel policy which permits or allows for the promotion, demotion, employment, dismissal or laying off of any individual due to race, creed, color, national origin, age, sex or which is in violation of applicable laws concerning the employment of individuals with disabilities. The parties shall not knowingly hire any unauthorized employees or fail to comply with record keeping requirements set forth in the Federal Immigration Reform and Control Act of 1986, Chapter 878 of the 2006 Tennessee Public Acts and all other applicable laws.

i. **Relationship Between the Parties.** The relationship of the parties shall be that of an independent Contractor. No principal-agent or employer-employee relationship is created by this Agreement. The parties hereto shall hold itself out in a manner contrary to the terms of this paragraph. No party shall become liable for any representation, act or omission of any other party contrary to the terms of this paragraph.

j. **Severability.** If any one or more of the covenants, agreements or provisions of this Agreement shall be held contrary to any expressed provisions of law or contrary to any policy of expressed law, although not expressly prohibited, or contrary to any express provision of public policy, or shall for any reason whatsoever be held invalid, then such covenants, agreements or provisions shall be null and void and shall be deemed separate from the remaining covenants, agreements or provisions of this Agreement.

k. **Specific Performance.** The parties recognize that the rights afforded to each under this Agreement are unique and, accordingly, County shall, in addition to such other remedies as may be available to them in equity, have the right to enforce their respective rights hereunder by an action for injunctive relief and/or specific performance to the extent permitted by law.

l. **Compliance with Laws.** The parties shall comply with all laws of the United States of America, the State of Tennessee, and local laws and shall secure all necessary permits and licenses and keep the same in force during the term of this Agreement.

m. **Effective Date.** This Agreement shall not be binding upon the parties until it has been properly approved by the legislative bodies of the respective parties, it has then been signed first by the authorized

representatives for the City and then by the authorized representatives of Williamson County and has been filed in the office of the County Mayor. When it has been so signed and filed, this contract shall be effective as of the date written below.

IN WITNESS WHEREOF, the County and the City have executed this Agreement effective as of the date and year written below.

ATTEST:

Carol Edwards
BY:

WILLIAMSON COUNTY, TENNESSEE

Robert C. Johnson
BY:

DATE: 3.12.12

DATE: 3.12.12

APPROVED AS TO FORM AND LEGALITY:

Robert Cook
Williamson County Attorney

ATTEST:

Eric S. Stuckey
BY: Eric S. Stuckey
City Administrator

DATE: 3.12.12

CITY OF FRANKLIN, TENNESSEE

Dr. Ken Moore
BY: Dr. Ken Moore, Mayor

DATE: 3.12.12

APPROVED AS TO FORM AND LEGALITY:

Shauna R. Billingsley
Franklin City Attorney

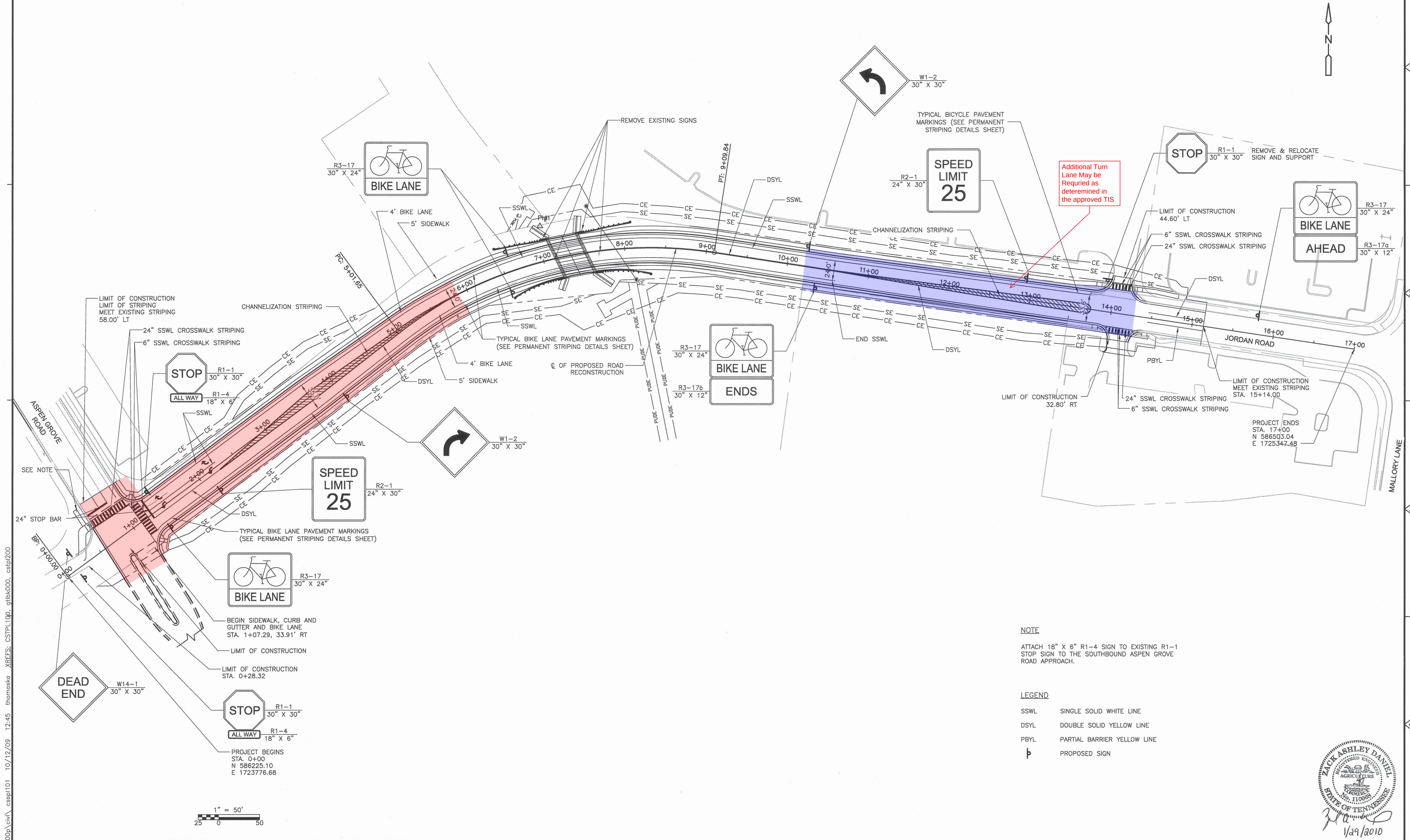




DISCLAIMER
This map was created by the City of Franklin's MIT Department and was compiled from the most authentic information available. The City is not responsible for any errors or omissions contained hereon. All data and materials Copyright © 2015. All Rights Reserved.

Legend

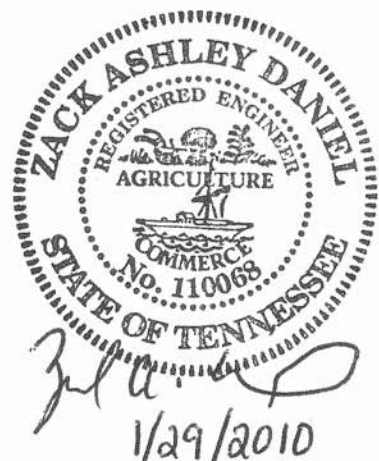
- 1 Mile Buffer
- Parcels

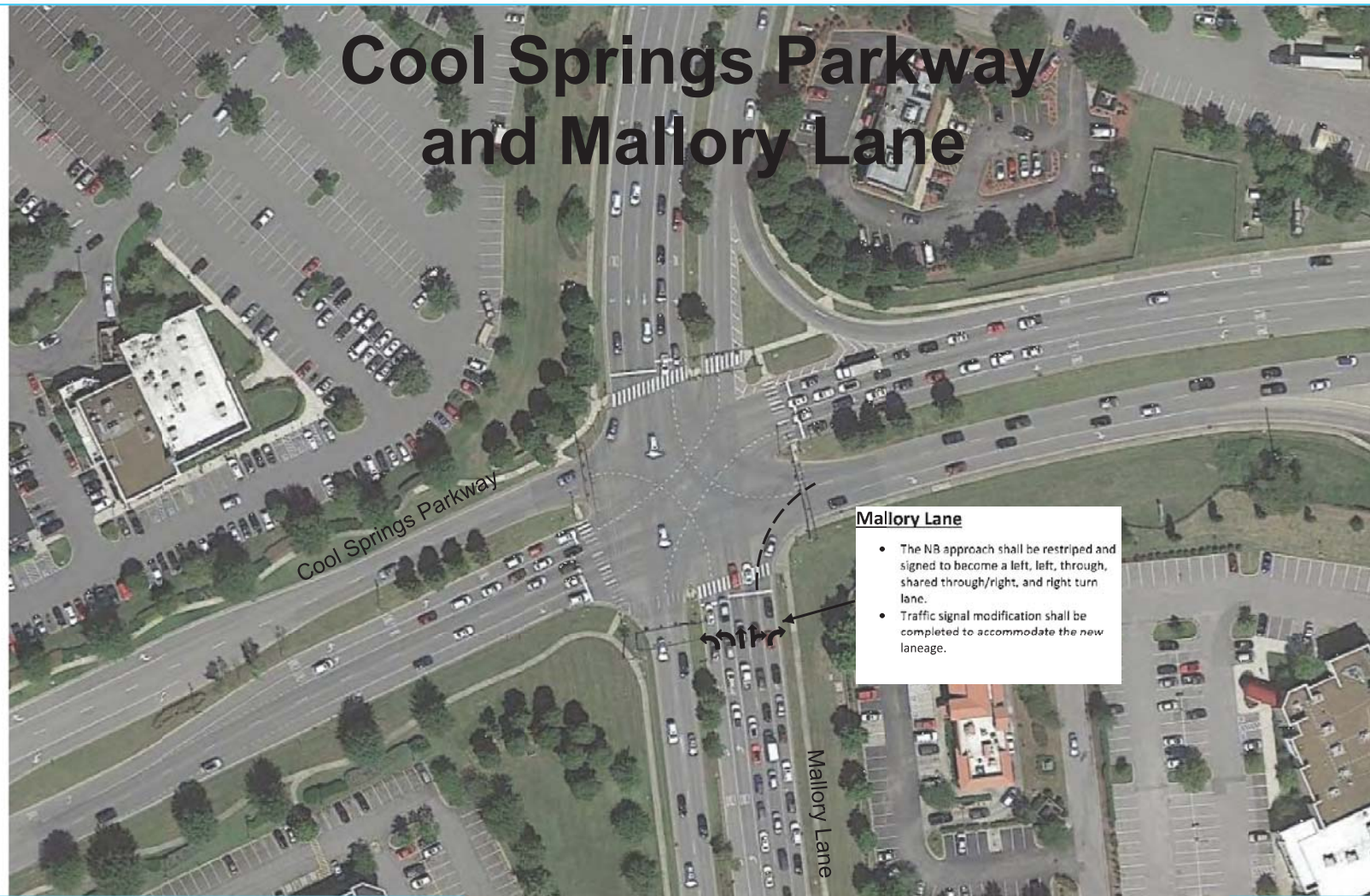


NOTE
ATTACH 18" X 6" R1-4 SIGN TO EXISTING R1-1 STOP SIGN TO THE SOUTHBOUND ASPEN GROVE ROAD APPROACH.

- LEGEND**
- SSWL SINGLE SOLID WHITE LINE
 - DSYL DOUBLE SOLID YELLOW LINE
 - PBYL PARTIAL BARRIER YELLOW LINE
 - PROPOSED SIGN

W:\14915\62910\100\civil\csp1101_10\12\09_12:45 thomaska_xrefes\cstpl100_glib\000_cstpl200				DESIGNED BY: S. MURPHY DRAWN BY: S. MURPHY SHEET CHK'D BY: C. LIGGETT CROSS CHK'D BY: C. KINCAID APPROVED BY: Z. DANIEL DATE: JANUARY 2010				CDM Camp Dresser & McKee Inc. Parkview Towers 210 25th Avenue North, Suite 1102 Nashville, TN 37203 Tel: (615) 320-3161 consulting • engineering • construction • operations				City of Franklin RECONSTRUCTION OF JORDAN ROAD				PERMANENT SIGNING AND STRIPING PLAN				PROJECT NO. 14915-62910 FILE NAME: CSSPL101 SHEET NO. SP-1			
REV. NO.	DATE	DRWN	CHKD	REMARKS																			





VOLKERT

330 Mallory Station Road, Suite A-1
Franklin, TN 37067
Telephone: 615.656.1845
www.volkert.com

**Recommended Lane Configuration
Figure 10**

SCALE: NTS

Table 12 – Mallory Lane / Liberty Pike Analysis

	2015 Existing						2020 Background					
	AM		MD		PM		AM		MD		PM	
Overall	C (25.1 s)		F (85.8 s)		F (99.2 s)		C (28.0 s)		F (102.9 s)		F (118.0 s)	
EBL		B (11.9 s)		B (19.7 s)		C (29.4 s)		B (16.0 s)		C (20.5 s)		D (41.7 s)
EBT	B (13.0 s)		C (21.9 s)		C (27.8 s)		B (17.7 s)		C (23.8 s)		C (34.7 s)	
EBR		B (14.3 s)		C (24.3 s)		C (26.3 s)		B (19.3 s)		C (27.0 s)		C (29.4 s)
WBL		B (14.5 s)		C (23.0 s)		C (20.6 s)		B (17.6 s)		C (23.0 s)		C (27.7 s)
WBT	B (17.6 s)	B (18.7 s)	C (26.4 s)	C (27.9 s)	C (23.2 s)	C (24.9 s)	C (21.6 s)	C (23.3 s)	C (27.2 s)	C (29.0 s)	C (26.3 s)	C (26.7 s)
WBR		B (17.6 s)		C (27.4 s)		C (21.9 s)		C (21.6 s)		C (28.6 s)		C (22.7 s)
NBL		D (37.0 s)		D (35.6 s)		F (82.9 s)		D (38.7 s)		D (36.5 s)		F (98.2 s)
NBT	D (44.1 s)	D (44.8 s)	D (36.9 s)	D (37.0 s)	D (48.6 s)	D (39.9 s)	D (47.3 s)	D (48.2 s)	D (39.0 s)	D (39.3 s)	D (52.0 s)	D (40.2 s)
NBR												
SBL		D (37.6 s)		C (29.4 s)		C (33.2 s)		D (39.4 s)		C (30.1 s)		D (43.1 s)
SBT	D (36.4 s)	D (43.1 s)	F (159.1 s)	F (275.3 s)	F (190.9 s)	F (290.3 s)	D (36.7 s)	D (43.2 s)	F (201.8 s)	F (362.7 s)	F (240.2 s)	F (364.9 s)
SBR		C (29.1 s)		C (28.2 s)		F (131.9 s)		C (28.3 s)		C (29.1 s)		F (182.6 s)

	2020 Buildout (no improvements)						2020 Full Buildout (Improvements)					
	AM		MD		PM		AM		MD		PM	
Overall	C (28.9 s)		F (113.0 s)		F (199.7 s)		D (38.3 s)		D (38.5 s)		D (45.0 s)	
EBL		B (18.1 s)		C (20.2 s)		E (58.4 s)		D (52.7 s)		E (57.3 s)		E (67.4 s)
EBT	B (18.6 s)		C (22.3 s)		D (42.7 s)		D (359 s)	B (17.6 s)	D (40.2 s)	C (20.5 s)	D (50.1 s)	D (35.4 s)
EBR		B (19.2 s)		C (24.8 s)		C (29.4 s)						
WBL		B (17.5 s)		C (23.2 s)		C (27.8 s)		C (20.2 s)		C (24.1 s)		C (33.0 s)
WBT	C (22.1 s)	C (23.9 s)	C (26.8 s)	C (28.3 s)	C (26.3 s)	C (26.8 s)	C (24.6 s)	C (26.0 s)	C (25.9 s)	C (26.7 s)	D (38.2 s)	D (41.1 s)
WBR		C (22.3 s)		C (24.8 s)		C (22.9 s)		C (25.1 s)		C (26.2 s)		D (37.9 s)
NBL		D (37.2 s)		D (36.0 s)		F (98.7 s)		D (36.1 s)		C (33.3 s)		D (36.6 s)
NBT	D (47.2 s)	D (48.1 s)	D (37.9 s)	D (38.1 s)	D (51.7 s)	D (41.2 s)	D (46.9 s)	D (49.2 s)	D (38.7 s)	D (40.1 s)	D (39.1 s)	D (40.8 s)
NBR								D (41.2 s)		C (32.9 s)		D (35.5 s)
SBL		D (36.4 s)		C (30.0 s)		E (57.6 s)		E (57.3 s)		E (55.1 s)		E (74.4 s)
SBT	D (35.5 s)	D (43.8 s)	F (220.2 s)	F (389.9 s)	F (427.2 s)	F (596.0 s)	D (44.3 s)	D (41.2 s)	D (40.9 s)	D (42.3 s)	D (48.3 s)	D (46.7 s)
SBR		C (26.4 s)		C (29.4 s)		F (382.5 s)		D (39.9 s)		C (32.1 s)		C (34.1 s)

DESCRIPTIONS OF LOS FOR SIGNALIZED INTERSECTIONS

Level of Service	Description	Average Control Delay per Vehicle (sec)
A	Operations with very low control delay. Progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	≤ 10
B	Operations with stable flows. This generally occurs with good progression, short cycle lengths, or both. More vehicles stop than for LOS A, causing higher levels of average delay.	> 10 and ≤ 20
C	Operations with stable flow. Occurs with fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	> 20 and ≤ 35
D	Approaching unstable flow. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop.	> 35 and ≤ 55
E	Unstable flow. In many cases, this is considered to be the limit for acceptable delay. These high delays generally indicate poor progression, long cycle lengths, and high v/c ratios.	> 55 and ≤ 80
F	Unacceptable delay. This condition often occurs with oversaturation or with high v/c ratios. Poor progression and long cycle lengths may also cause such delay levels.	> 80

Source: Highway Capacity Manual 2010 (HCM2010)

Mallory Lane and Liberty Pike

Southbound Approach

- An additional right turn lane shall be constructed with a minimum of 200 feet of storage and taper per AASHTO standards.
- SB approach shall be widened to accommodate as a Left, Left, Through, Shared Through/Right, and Right.

Westbound Approach

- An additional right turn lane shall be constructed with a minimum of 400 feet of storage and taper per AASHTO standards.
- WB approach shall be widened to accommodate a Left, (future) Left, Through, Through, and Right.

Eastbound Departure

- Extend EB through lane to Stanwick Drive with lane drop.

Eastbound Approach

- An additional left lane and shared through/right turn lane shall be constructed with a minimum of 500 feet of storage and taper per AASHTO standards.
- EB approach shall be constructed as a Left, Left, Through, and Shared Through/Right.

Northbound Approach

- The NB approach shall be constructed as a Left, (future) Left, Through, Through, and Right.
- Extend two through lanes approaching the intersection northbound.
- Remove right turn lane channelization.
- Begin new NB lane taper at the end of the horizontal curve to the south of the intersection.

Southbound Departure

- Extend SB through lane past apartment entrance with taper ending at the beginning of the horizontal curve.



VOLKERT

330 Mallory Station Road, Suite A-1
Franklin, TN 37067
Telephone: 615.656.1845
www.volkert.com

**Recommended Lane Configuration
Figure 11**

SCALE: NTS

Project # ST16011
Project Name Mallory/N Royal Oaks & Liberty Intersection Imp.

Department Streets
Contact Engineering Director
Type Improvement
Useful Life 20+
Category Transportation
Priority 3 Star Project
Status Pending

Description	Total Cost \$4,440,000
Intersection improvements to North Royal Oaks Boulevard, Liberty Pike and Mallory Lane. This intersection is projected to be at a failure level in the next 3-4 years based on the proposed development along Carothers Parkway. If this project is not completed, there will be significant delays at this key intersection.	
Justification	
Congestion Mitigation: It is anticipated that this roadway will reach failure levels within the next 5 years. The increased traffic is a result of all the development along Carothers Parkway and other areas within Cool Springs. Safety: No existing safety concerns at this intersection. Pedestrian facilities should be incorporated to the intersection improvements to comply with the Cities master plan. Economic Development: Redevelopment and future economic development in the Cool Springs area continues. This improvement is needed to maintain our high quality of life by reducing congestion and improving safety along this Major Arterial Roadway.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)				216,000							216,000
ROW and Easements					1,200,000						1,200,000
Construction Engineering / Inspection						324,000					324,000
Construction						2,700,000					2,700,000
Total				216,000	1,200,000	3,024,000					4,440,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Road Impact Fees				216,000	1,200,000	2,721,400					4,137,400
Stormwater						135,000					135,000
Water Capacity						55,000					55,000
Wastewater Renewal						112,600					112,600
Total				216,000	1,200,000	3,024,000					4,440,000

ST16011 - Mallory/N Royal Oaks & Liberty Intersection



RESOLUTION 2016-61

A RESOLUTION FUNDING THE DESIGN, RIGHT-OF-WAY ACQUISITION AND CONSTRUCTION FOR THE MALLORY LANE, NORTH ROYAL OAKS BLVD AND LIBERTY PIKE INTERSECTION PROJECT.

WHEREAS, in August of 2016, the City's on-call traffic engineer, Volkert, Inc., submitted a joint transportation impact analysis that was funded by the City, McEwen Town Center PUD Subdivision, Mallory Green (Ranco Farms Subdivision) and Spring Creek Subdivision; and

WHEREAS, the McEwen Town Center PUD Subdivision, Mallory Green (Ranco Farms Subdivision) and Spring Creek Subdivision developments were included in the McEwen Interchange TIF District; and

WHEREAS, the intersection of Mallory Lane, North Royal Oaks Blvd and Liberty Pike was included in the FY2017-2026 CIP and was ranked by Staff as a 3 star priority project; and

WHEREAS, due to continued growth and development, significant intersection delays are anticipated at the intersection of Mallory Lane, North Royal Oaks Blvd and Liberty Pike under the no build option; and

WHEREAS, this project received 3 out of 9 votes during the Board of Mayor and Aldermen prioritization process and was ranked number 16; and

WHEREAS, the estimated design, construction and right-of-way cost for the project is \$4,440,000.

NOW THEREFORE, BE IT RESOLVED by the Board of Mayor and Aldermen of the City of Franklin, Tennessee, that the intersection of Mallory Lane, North Royal Oaks Blvd and Liberty Pike shall be funded, using a combination of funding sources, as determined by the Board of Mayor and Aldermen and the project shall be included as part of the FY2017-2026 CIP.

IT IS SO RESOLVED AND DONE on this ___ day of _____, 2016

ATTEST:

CITY OF FRANKLIN, TENNESSEE:

By: _____

ERIC S. STUCKEY
City Administrator

By: _____

DR. KEN MOORE
Mayor

Approved as to Form:

By: _____
Shauna R. Billingsley
City Attorney

**ROAD IMPACT FEE OFFSET AGREEMENT
COF CONTRACT NO. 2016-0299**

This agreement is entered into between THE CITY OF FRANKLIN, TENNESSEE ("City") and Embrey Partners, Ltd., ("Developer"), on this the _____ day of _____, 2016, pursuant to Title 16, Chapter 4 of the Franklin Municipal Code.

WHEREAS, the Developer is in the process of developing Map 062 - Parcel 43 (the "Development Project"), as shown on Exhibit A; and

WHEREAS, the City has required the Developer to design and construct certain arterial roadway improvements to include the dedication of arterial right-of-way as a requirement of the Development Project; and

WHEREAS, the arterial improvements required as part of the Development Project are identified in the City's Major Thoroughfare Plan; and

WHEREAS, the Developer has made application to offset a portion of the costs of construction of these improvements against any Road Impact Fees due from the Development Project, and the estimated amount of such eligible costs, and potential offset, was determined by the Road Impact Fee Administrator (City Engineer) on September, 29, 2016, to be \$517,910.00.

NOW THEREFORE, the City and the Developer, their successors and assigns, do hereby agree as follows:

1. The foregoing recitals are incorporated into this Agreement and made a part thereof.
2. The Developer and City agree that the Developer shall be eligible for reimbursement as hereafter set forth for the arterial roadway improvements as conceptually shown on Exhibit B.
3. The total estimated cost of right-of-way, engineering/design and the cost of labor, equipment, supplies and material used to construct the arterial roadway improvements is **FIVE HUNDRED SEVENTEEN THOUSAND NINE HUNDRED TEN AND NO/100 DOLLARS (\$517,910.00)** and the estimated total reimbursement to the Developer is an identical amount. The following cost are specifically excluded: fiscal cost, including interest on money borrowed to finance the construction, cost for utility relocations, turn lanes, signals and other improvements that benefit solely the development and not the arterial roadway. At no time shall reimbursement exceed the impact fees collected as part of the Development Project.
4. Pursuant to the Franklin Municipal Code, the eligible reimbursement shall not exceed the total of Road Impact Fees due for the Development Project (Section 16-417 (7)).
5. The Developer may submit periodic invoices to the City during the course of construction (not more frequently than every ninety (90) days), which invoices shall be payable within thirty (30) days after approval by the Road Impact Fee Administrator (City Engineer), subject to collected impact fees and paragraph 3 above. Invoices shall include copies of contracts and invoices associated with the arterial roadway improvements and copies of checks to show proof of payment.

6. Within 60 days of completion and acceptance of the arterial roadway improvements, the Developer and the City shall settle on a final billing. The Developer will provide reasonable documentation for all such cost and provide notarized release of liens.
7. The City and Developer agree that the terms and conditions contained herein shall be binding on and shall inure to their heirs, representatives, successors, and assigns and that there are no understandings or agreements between them except as contained in this instrument.
8. The City shall have no liability except as specifically provided in this Agreement.
9. Applicable Law/Choice of Forum and Venue. This Agreement is made under and will be construed in accordance with the laws of the State of Tennessee without giving effect to that state's choice of law rules. The parties' choice for forum and venue shall be exclusively in the courts of Williamson County, Tennessee.
10. Entire Agreement. This Agreement together with its exhibit(s) constitutes the entire agreement between the parties and may not be modified except as by a written agreement by both parties.

Approved by the Franklin Board of Mayor and Aldermen on _____, 2016.

WITNESS our hands on the dates as indicated.

DEVELOPER

By: _____

Print Name: _____

Title: _____

STATE OF TENNESSEE

)

Date: _____

)

COUNTY OF WILLIAMSON

)

Before me, the undersigned Notary Public of said County and State, personally appeared DR. KEN MOORE and ERIC S. STUCKEY, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged themselves to be the Mayor and City Administrator, respectively, of the City of Franklin, Tennessee, the within named bargainor, a municipality, and that as such Mayor and City Administrator executed the foregoing instrument for the purposes therein contained, by signing the name of the municipality by themselves as Mayor and City Administrator.

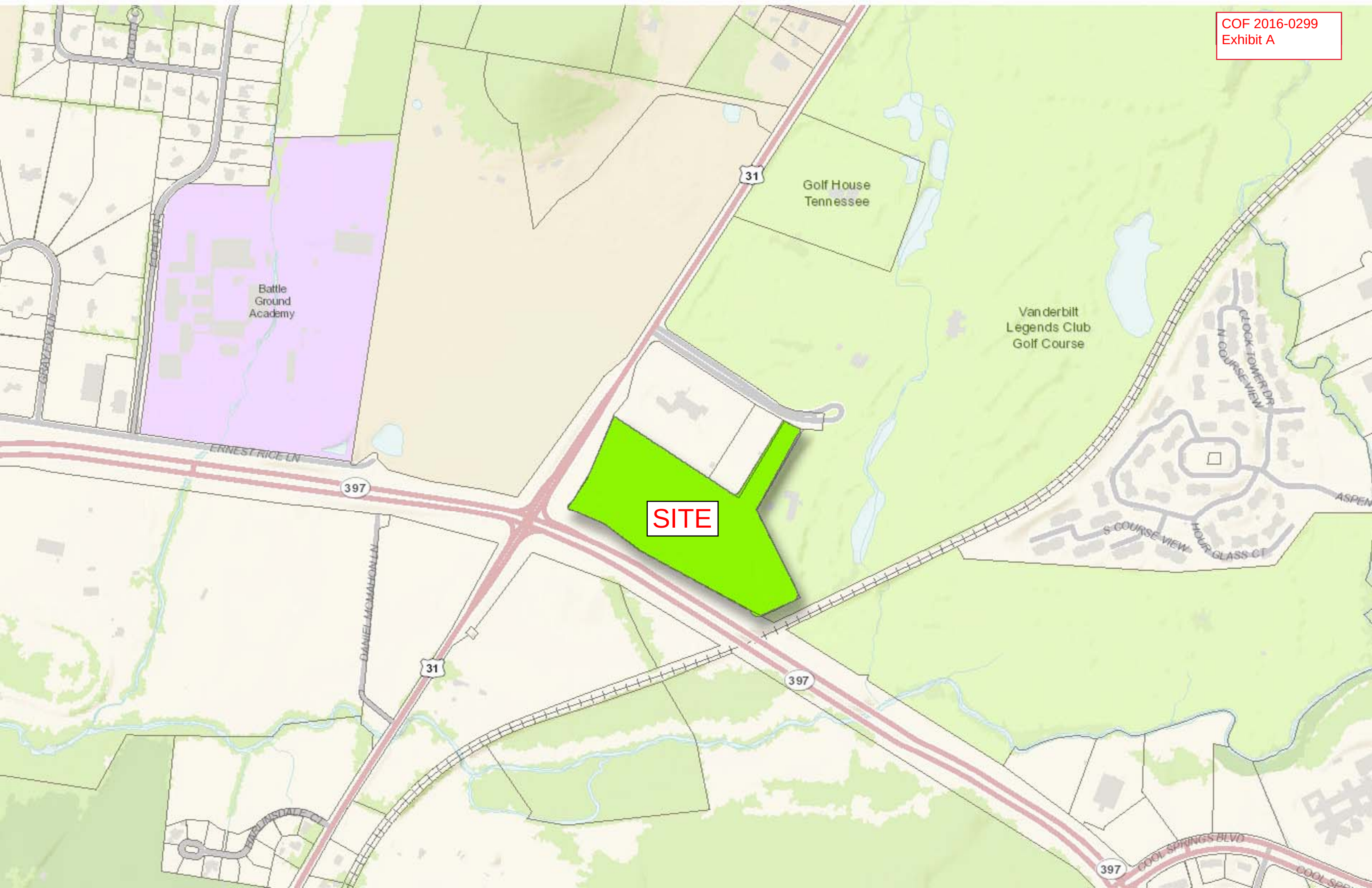
Witness my hand and seal this _ day of _____, 20____.

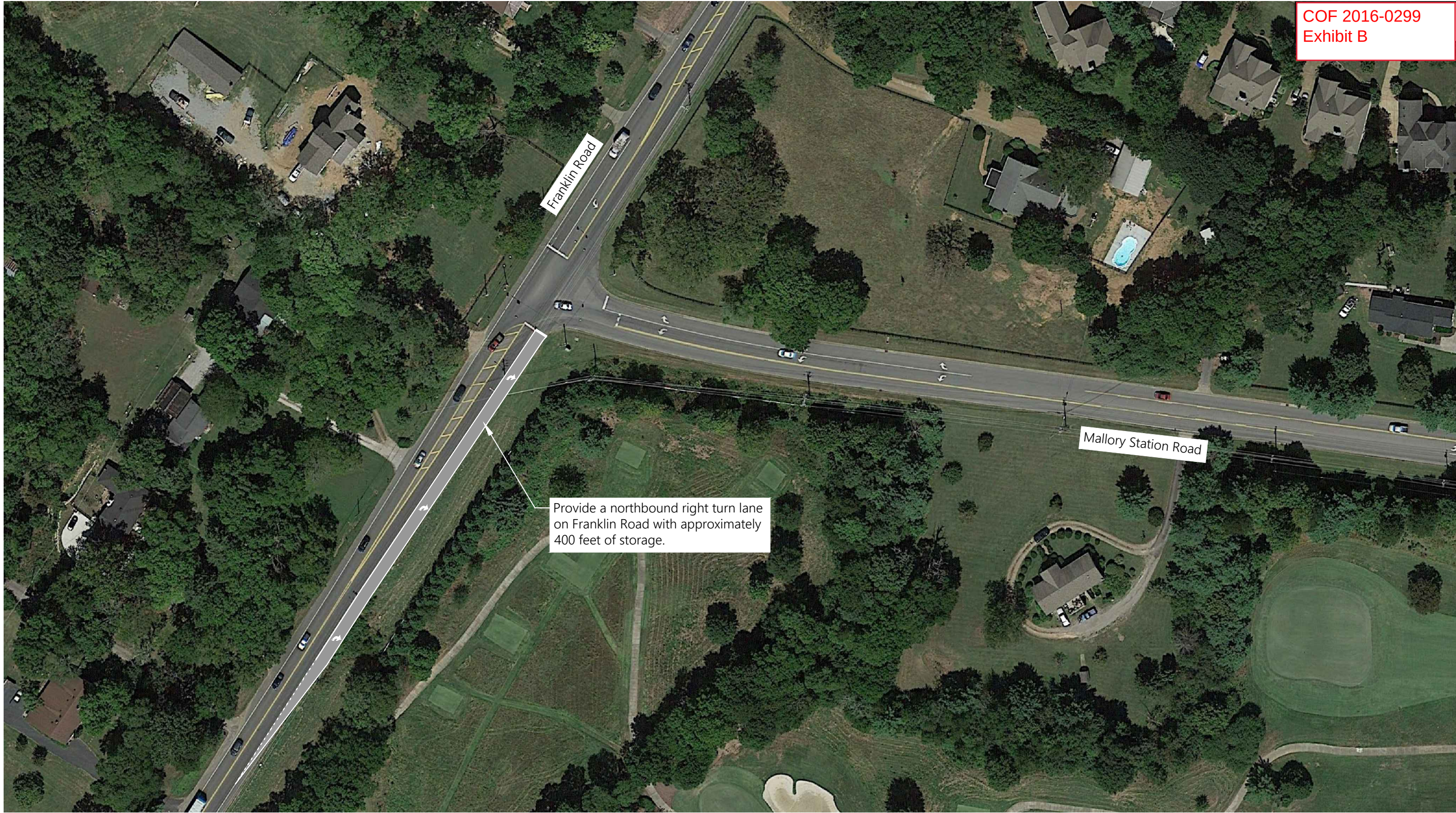
Notary Public

My Commission Expires: _____

Approved as to form by:

Kristen L. Corn, Assistant City Attorney





Franklin Road and Mallory Station Road - Needed Improvements Based on Existing Traffic



Figure 9.



RESOLUTION 2016-69

A RESOLUTION TO ADOPT THE PROJECT LIST FOR PHASE I OF THE FY 2017-2026 CIP (CAPITAL INVESTMENT PROGRAM)

WHEREAS, the Board of Mayor and Aldermen (BOMA) has determined that the FY 2017-2026 Capital Investment Program (CIP) as has been presented represents their intent as to the capital projects needing to be accomplished within the next several years; and

WHEREAS, the BOMA has reviewed the FY 2017-2026 CIP and ranked its top nine (9) priority projects for consideration of funding; and

WHEREAS, the BOMA has provided adequate funding capacity for these projects through a variety of sources including the Invest Franklin initiative; and

WHEREAS, City Staff has recommended and presented to the BOMA the FY 2017-2026 Capital Funding Model for consideration inclusive of many internal and external sources which can be leveraged to fund the projects itemized below to maximize available funding.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, that the following FY 2017-2026 CIP projects be approved for funding for the approximate amounts shown below utilizing funding as recommended by City Staff:

1. East McEwen (Phase IV)	\$27,478,800
2. East / Southeast Multipurpose Park	\$13,200,000
3. Sidewalk "Gaps"	\$ 1,250,000
4. Fire Station 7	\$ 4,330,000
5. Franklin Road Improvements	\$14,340,000
6. Goose Creek Interchange Lighting	\$ 870,000
7. Major Street Resurfacing	\$ 5,400,000
8. Public Safety Communications System	\$ 4,600,000
9. Mallory Station / Royal Oaks / Liberty Pike Intersection Improvements (Phase 1)	\$ 2,200,000

BE IT FURTHER RESOLVED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE that those capital improvement projects listed in the FY 2017-2026 CIP not designated as being funded by this Resolution will be continually evaluated on a case by case basis and in accordance with the established priority rankings for funding should additional funds be made available or those projects slated for funding are delayed and the designated funding not be needed at the present time.

IT IS SO RESOLVED AND DONE on this ____ day of _____ 2016.

ATTEST:

CITY OF FRANKLIN, TENNESSEE

By: _____

ERIC S. STUCKEY
City Administrator

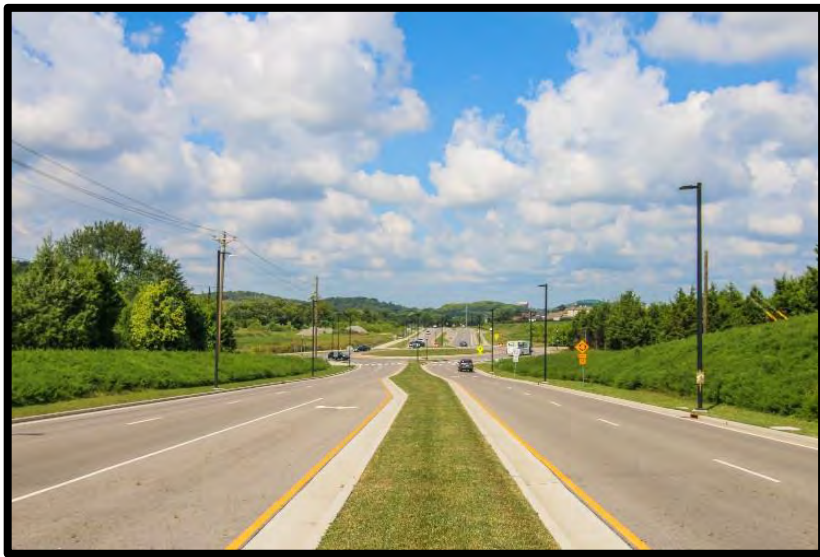
By: _____

DR. KEN MOORE
Mayor

Approved as to Form

By: _____

Shauna R. Billingsley City Attorney



Capital Investment Program

**** DRAFT ****
9/30/2016

FY2017-2026



Phase I CIP Projects

FY 2017-2026 CIP - BOMA Selections - Non-Weighted

(Facilities, Parks & Recreation, and Transportation Projects)

Project Information						Total Votes (X of 9)	Cumulative Total	Counter
ID	Name	Category	Status	Star Ranking	Estimated Cost			
PK16014	East/Southeast Multipurpose Park	Parks & Recreation	Pending	4	\$ 13,200,000.00	8	\$ 13,200,000.00	1
ST16007	East McEwen Drive Improvements - Phase 4	Transportation	Active	4	\$ 26,428,800.00	8	\$ 39,628,800.00	2
ST16037	Sidewalk Gaps	Transportation	Pending	4	\$ 1,250,000.00	8	\$ 40,878,800.00	3
FD16001	Fire Station 7 (Goose Creek Area)	Facilities	Active	4	\$ 4,330,000.00	7	\$ 45,208,800.00	4
ST16009	Franklin Road Improvements & Streetscape	Transportation	Active	4	\$ 14,340,000.00	7	\$ 59,548,800.00	5
ST16002	Goose Creek Interchange Lighting	Transportation	Pending	3	\$ 870,000.00	6	\$ 60,418,800.00	6
FM16001	New City Hall	Facilities	Active	4	\$ 24,100,000.00	5	\$ 84,518,800.00	7
ST16014	Franklin Rd & Mallory Station Rd Int. Improv.	Transportation	Pending	3	\$ 3,920,000.00	5	\$ 88,438,800.00	8
PK16018	Eastern Flank Circle (Loop Road) Repair	Parks & Recreation	Pending	4	\$ 130,000.00	4	\$ 88,568,800.00	9
PK16020	Bicentennial Park Schematic Design & Construction	Parks & Recreation	Active	4	\$ 1,905,000.00	4	\$ 90,473,800.00	10
ST16030	Sidewalk Lewisburg Ave	Transportation	Pending	4	\$ 580,000.00	4	\$ 91,053,800.00	11
PK16002	Main Barn Restoration (Harlinsdale)	Parks & Recreation	Pending	4	\$ 698,000.00	3	\$ 91,751,800.00	12
PK16008	Jim Warren Park Renovations	Parks & Recreation	Pending	3	\$ 2,885,000.00	3	\$ 94,636,800.00	13
PK16009	Liberty Park Improvements	Parks & Recreation	Pending	1	\$ 557,000.00	3	\$ 95,193,800.00	14
ST16008	East McEwen Dr. Right-Turn Bypass Lane	Transportation	Pending	4	\$ 974,400.00	3	\$ 96,168,200.00	15
ST16011	Mallory/N Royal Oaks & Liberty Intersection Imp.	Transportation	Pending	3	\$ 4,440,000.00	3	\$ 100,608,200.00	16
ST16017	Long Lane/Old Peytonsville Rd Connector at I-65	Transportation	Active	3	\$ 12,790,000.00	3	\$ 113,398,200.00	17
ST16031	Liberty Pike Sidewalk	Transportation	Pending	3	\$ 102,000.00	3	\$ 113,500,200.00	18
ST16038	Major Street Resurfacing	Transportation	Pending	2	\$ 13,800,000.00	3	\$ 127,300,200.00	19
PK16001	Hayes Home Restoration (Harlinsdale)	Parks & Recreation	Pending	4	\$ 718,500.00	2	\$ 128,018,700.00	20
PK16010	Splash Pad	Parks & Recreation	Pending	1	\$ 600,000.00	2	\$ 128,618,700.00	21
PK16013	Greenway & Bridge (Harlinsdale to Fulton Greer)	Parks & Recreation	Pending	3	\$ 652,944.00	2	\$ 129,271,644.00	22
ST16012	East McEwen Drive Extension - Phase 5	Transportation	Active	1	\$ 12,587,800.00	2	\$ 141,859,444.00	23
ST16015	Carothers Parkway Widening (Falcon Creek to SR-96)	Transportation	Pending	3	\$ 16,676,000.00	2	\$ 158,535,444.00	24
ST16019	N Royal Oaks Blvd (Alexander Plaza to Liberty Pk)	Transportation	Pending	1	\$ 8,688,400.00	2	\$ 167,223,844.00	25
ST16028	Clovercroft Road (SR96 to Oxford Glen)	Transportation	Pending	3	\$ 14,458,150.00	2	\$ 181,681,994.00	26
ST16029	Multi-Use Trail S Royal Oaks	Transportation	Pending	1	\$ 810,000.00	2	\$ 182,491,994.00	27
TOC16001	Carothers Parkway (South) ITS Extension	Transportation	Pending	4	\$ 1,375,000.00	2	\$ 183,866,994.00	28
TOC16002	ITS Camera at Columbia Ave & Mack Hatcher Pkwy	Transportation	Pending	2	\$ 85,000.00	2	\$ 183,951,994.00	29
PK16004	North Barn Restoration (Harlinsdale)	Parks & Recreation	Pending	2	\$ 689,400.00	1	\$ 184,641,394.00	30
PK16005	Harlinsdale Visitor Center & Museum	Parks & Recreation	Pending	2	\$ 3,100,760.00	1	\$ 187,742,154.00	31
PK16006	Worker House I & II (Harlinsdale)	Parks & Recreation	Pending	2	\$ 342,000.00	1	\$ 188,084,154.00	32
PK16012	Greenway (Pinkerton to Bicentennial)	Parks & Recreation	Pending	3	\$ 5,710,126.00	1	\$ 193,794,280.00	33
PK16016	Lockwood Glen Park	Parks & Recreation	Pending	2	\$ 210,750.00	1	\$ 194,005,030.00	34
PK16019	Harlinsdale Farm Interurban Trail Connection	Parks & Recreation	Pending	2	\$ 128,000.00	1	\$ 194,133,030.00	35

FY 2017-2026 CIP - BOMA Selections - Non-Weighted

(Facilities, Parks & Recreation, and Transportation Projects)

Project Information						Total Votes (X of 9)	Cumulative Total	Counter
ID	Name	Category	Status	Star Ranking	Estimated Cost			
ST16004	Carothers Parkway Extension	Transportation	Pending	1	\$ 5,172,000.00	1	\$ 199,305,030.00	36
ST16006	Jordan Road Improvements	Transportation	Active	4	\$ 2,062,000.00	1	\$ 201,367,030.00	37
ST16013	Aspen Grove Dr & Seaboard Ln Intersection Improv.	Transportation	Active	2	\$ 1,708,000.00	1	\$ 203,075,030.00	38
ST16016	Lewisburg Pike Imp. (Donelson Crk Pkwy to SR-397)	Transportation	Pending	3	\$ 12,720,000.00	1	\$ 215,795,030.00	39
ST16018	S. Margin Infrastructure Upgrades (1st to Columbia)	Transportation	Pending	4	\$ 7,393,680.00	1	\$ 223,188,710.00	40
ST16022	Carothers Parkway Widening (Long Lane to Falcon Creek)	Transportation	Pending	3	\$ 9,435,629.00	1	\$ 232,624,339.00	41
ST16024	Multi-Use Trail Mack Hatcher (Franklin to Hillsboro)	Transportation	Pending	3	\$ 2,295,000.00	1	\$ 234,919,339.00	42
ST16025	Multi-Use Trail Oxford Glen Dr (Dalily to McEwen)	Transportation	Pending	3	\$ 870,000.00	1	\$ 235,789,339.00	43
ST16026	Multi-Use Trail Forrest Crossing Blvd	Transportation	Pending	3	\$ 375,000.00	1	\$ 236,164,339.00	44
ST16027	Boyd Mill Ave (Downs to SR96W)	Transportation	Pending	2	\$ 7,421,542.00	1	\$ 243,585,881.00	45
ST16032	West Main Street (Natchez St to Downs Blvd)	Transportation	Pending	4	\$ 8,752,750.00	1	\$ 252,338,631.00	46
ST16034	Jordan Road (McEwen - Liberty)	Transportation	Pending	1	\$ 2,400,000.00	1	\$ 254,738,631.00	47
ST16036	Hillsboro Road Temporary Sidewalk	Transportation	Pending	1	\$ 550,000.00	1	\$ 255,288,631.00	48
TOC16003	ITS Camera at Franklin Rd & Mallory Station Rd	Transportation	Pending	2	\$ 85,000.00	1	\$ 255,373,631.00	49
TOC16007	Lewisburg Pike ITS Extension	Transportation	Pending	1	\$ 150,000.00	1	\$ 255,523,631.00	50
PK16003	Maintenance Building Restoration (Harlinsdale)	Parks & Recreation	Pending	1	\$ 549,000.00	0		
PK16007	North Pavilion & Restroom Facility (Harlinsdale)	Parks & Recreation	Pending	1	\$ 292,500.00	0		
PK16011	Greenway (Aspen Grove to Mack Hatcher)	Parks & Recreation	Pending	3	\$ 907,255.00	0		
PK16017	Greenway (Lewisburg to I-65/Harpeth River)	Parks & Recreation	Pending	1	\$ 3,300,000.00	0		
ST16001	Carlisle Lane Improvements	Transportation	Pending	1	\$ 4,186,000.00	0		
ST16003	Peytonsville Road Extension	Transportation	Pending	1	\$ 16,812,000.00	0		
ST16005	Peytonsville Rd & Pratt Ln Intersection Improv.	Transportation	Pending	1	\$ 5,016,000.00	0		
ST16010	Beta Drive Extension	Transportation	Pending	1	\$ 4,306,000.00	0		
ST16020	Multi-Use Trail SR-96W (Vera Valley Dr to 9th Ave)	Transportation	Pending	2	\$ 1,913,867.00	0		
ST16021	Multi-Use Trail (Mack Hatcher Pkwy to EFBP)	Transportation	Pending	1	\$ 1,987,451.00	0		
ST16023	Multi-Use Trail 1st Ave (South Margin to Bridge)	Transportation	Pending	1	\$ 1,470,000.00	0		
ST16033	Carters Creek Pk (Old Carters Creek - Downs Blvd)	Transportation	Pending	2	\$ 23,287,500.00	0		
ST16035	Columbia Ave (Downs Blvd to Fowlkes St)	Transportation	Pending	2	\$ 17,900,000.00	0		
TOC16004	Hillsboro Road ITS Extension	Transportation	Pending	3	\$ 700,000.00	0		
TOC16005	Highway 96 West ITS Extension - Phase 1	Transportation	Pending	1	\$ 285,000.00	0		
TOC16006	Highway 96 West ITS Extension - Phase 2	Transportation	Pending	1	\$ 310,000.00	0		

BOMA Ranking: 1

Project #	PK16014
Project Name	East/Southeast Multipurpose Park

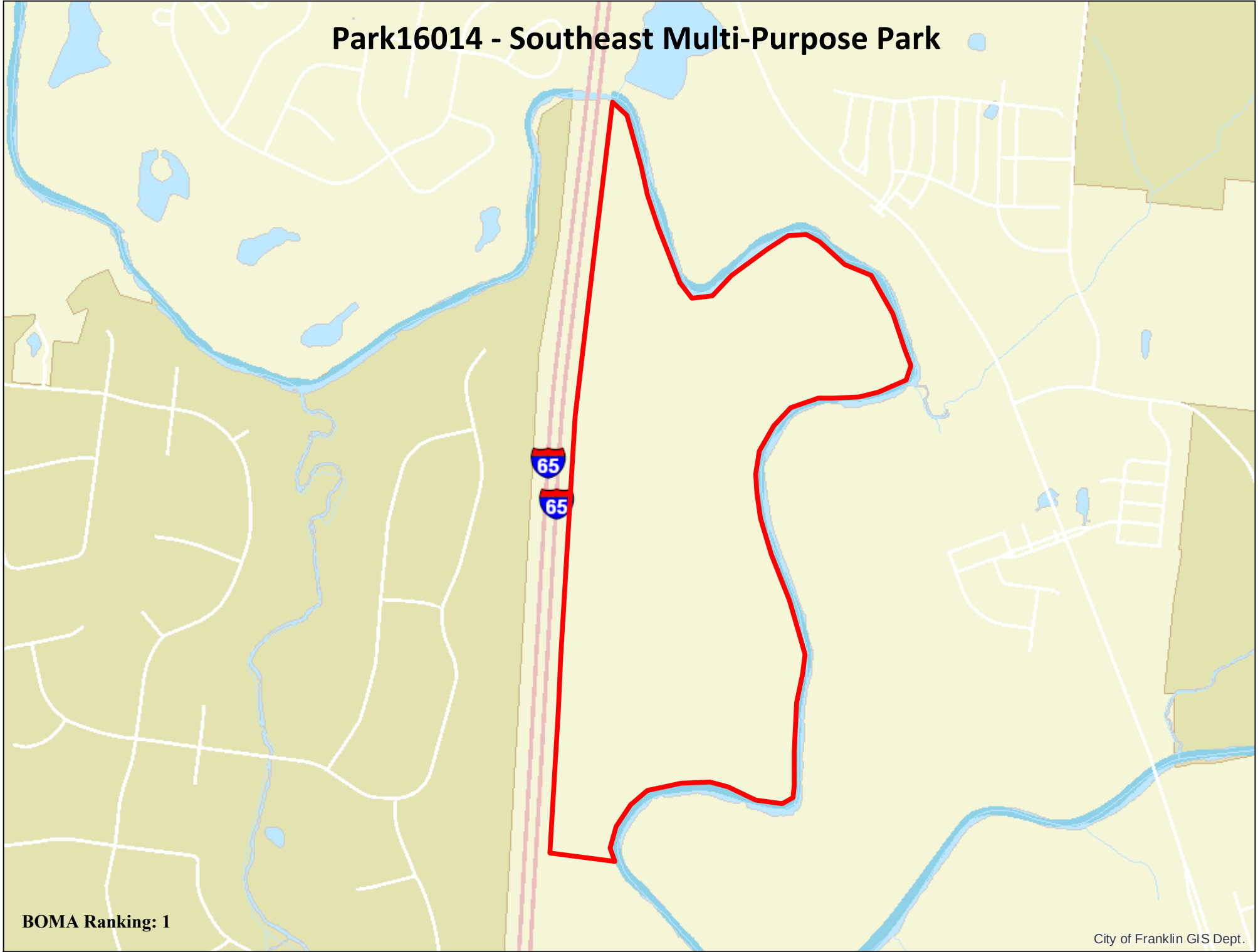
Department	Parks
Contact	Park Director
Type	New
Useful Life	20+
Category	Parks and Recreation
Priority	4 Star Project
Status	Pending

Description	Total Cost \$13,200,000
This section of greenway will transition to a multi-use pathway in certain sections. The trail will connect to the proposed Mack Hatcher multi-use pathway in the future. The intersection of Mack Hatcher and Lewisburg Pike will be particularly difficult to manage but an at-grade crossing is proposed at this traffic light. From Mack Hatcher, the trail will continue south along Lewisburg Pike until it heads east near the intersection of Donelson Creek Parkway along the southern edge of the Waters Edge development to the Harpeth River. The trail will again say along the south side of the Harpeth until Five Mile Creek. A bridge crossing to the East side of Five Mile Creek provides an opportunity to connect via easements south to Berry Farms.	
Justification	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)	1,200,000										1,200,000
Construction		4,000,000	4,000,000	4,000,000							12,000,000
Total	1,200,000	4,000,000	4,000,000	4,000,000							13,200,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Parkland Dedication	1,200,000	4,000,000	4,000,000	4,000,000							13,200,000
Total	1,200,000	4,000,000	4,000,000	4,000,000							13,200,000

Park16014 - Southeast Multi-Purpose Park



BOMA Ranking: 1

BOMA Ranking: 2

Project # ST16007
Project Name East McEwen Drive Improvements - Phase 4

Department Streets
Contact Engineering Director
Type Improvement
Useful Life 20+
Category Transportation
Priority 4 Star Project
Status Active

Description	Total Cost
Improvement of East McEwen Drive, from 800 feet east of the roundabout at Cool Springs Boulevard/Oxford Glen Drive to Wilson Pike (SR-252). The project shall be constructed as a four (4) lane, median divided facility with turn lanes as required. Project shall include: access management (as allowable), curb & gutter, street lights, ITS Infrastructure, and accomodations for pedestrians and bicycles. Approximate project length of 8,200 LF.	\$26,428,800
Justification	
Congestion Mitigation: The Cools Springs Area is a major employment area within middle TN. As development continues along Carothers Parkway so does the AADT on McEwen Drive. McEwen Drive is an important East / West Connector between Nolensville, La Vergne, Smyrna and Rutherford County. In the last few years the Board has approved 5.2 Million SF of Office, 450,000 SF of retail, 700 hotel rooms and 2,418 multifamily units at the Carothers and McEwen Intersection alone. Improving this roadway will help to significantly reduce congestion for commuters trying to access the Cool Springs area. Safety: This rural roadway is an important East / West Connector between Nolensville, La Vergne, Smyrna and Rutherford County. This roadway has significate vertical and horizontal issues that need corrected to improve safety. Economic Development: The City has invested heavily in the Carothers McEwen area over the last few years. We are now seeing the private market invest millions of dollars into office and retail space along Carothers Parkway. These upgrades are needed to reduce congestion and improve safety so that we can retain and attract new businesses long term.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)	100,000										100,000
ROW and Easements	2,500,000	1,000,000									3,500,000
Construction Engineering / Inspection			500,000	500,000							1,000,000
Construction			10,914,400	10,914,400							21,828,800
Total	2,600,000	1,000,000	11,414,400	11,414,400							26,428,800

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Road Impact Fees	2,600,000	1,000,000	10,688,830	10,688,830							24,977,660
Stormwater			545,720	545,720							1,091,440
Wastewater Renewal			179,850	179,850							359,700
Total	2,600,000	1,000,000	11,414,400	11,414,400							26,428,800

ST16007 - East McEwen Drive Improvement



BOMA Ranking: 2

City of Franklin GIS Dept

BOMA Ranking: 15

Project # ST16008

Project Name East McEwen Dr. Right-Turn Bypass Lane

Department Streets

Contact Engineering Director

Type Improvement

Useful Life 20+

Category Transportation

Priority 4 Star Project

Status Pending

Description

Total Cost \$974,400

Improvement of roudabout at East McEwen Drive and Cool Springs Boulevard/Oxford Glen Drive. The project consists of the construction of a riight-turn bypass lane for westbound motorists turning right from East McEwen Drive onto Cool Springs Boulevard. Approximate project length of 1,000 LF.

Justification

Congestion Mitigation: The Cools Springs Area is a major employment area within Middle TN. As development continues along Carothers Parkway so does the AADT on McEwen Drive. McEwen Drive is an important East / West Connector between Nolensville, La Vergne, Smyrna and Rutherford County. In the last few years the Board has approved 5.2 Million SF of Office, 450,000 SF of retail, 700 hotel rooms and 2,418 multifamily units at the Carothers and McEwen Intersection alone. Improving this intersection will help to significantly reduce congestion for commuters trying to access the Cool Springs area.

Safety: This roundabout has one of the highest crash rates within the city. The high crash rate is probably due to lack of public understanding of how to drive through a roundabout and the high volume of traffic utilizing this roundabout. The addition of right-turn bypass lane is anticipated to reduce both congestion and accidents at this intersection.

Economic Development: The City has invested heavily in the Carothers McEwen area over the last few years. We are now seeing the private market invest millions of dollars into office and retail space along Carothers Parkway. These upgrades are needed to reduce congestion and improve safety so that we can retain and attract new businesses long term.

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)	70,000										70,000
ROW and Easements		350,000									350,000
Construction Engineering / Inspection			59,400								59,400
Construction			495,000								495,000
Total	70,000	350,000	554,400								974,400

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Road Impact Fees	70,000	350,000	529,650								949,650
Stormwater			24,750								24,750
Total	70,000	350,000	554,400								974,400

ST16008 - East McEwen Dr. Right Turn Bypass Lane



BOMA Ranking: 3

Project #	ST16037
Project Name	Sidewalk Gaps

Department	Streets
Contact	Engineering Director
Type	New
Useful Life	20+
Category	Transportation
Priority	4 Star Project
Status	Pending

Description	Total Cost \$1,250,000
Annual budget of \$250,000 over a 5-year period to "fill-in" gaps in the existing sidewalk network.	
Justification	
Segments of sidewalk that do not have logical connections (e.g gaps) exist in many areas around the City. An dedicated budget item on an annual basis would allow the City the opportunity to complete existing sidewalk networks by "filling-in" these gaps.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Construction	250,000	250,000	250,000	250,000	250,000						1,250,000
Total	250,000	250,000	250,000	250,000	250,000						1,250,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General	250,000	250,000	250,000	250,000	250,000						1,250,000
Total	250,000	250,000	250,000	250,000	250,000						1,250,000

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BOMA Ranking: 4

Project #	FD16001
Project Name	Fire Station 7 (Goose Creek Area)

Department	Fire
Contact	Fire Chief
Type	New
Useful Life	20+
Category	Emergency Services
Priority	4 Star Project
Status	Active

Description	Total Cost \$4,330,000
New Fire Station at the Williamson County AG Complex	
Justification	
The City currently operates a temporary fire station at the Williamson County AG Complex. This temporary fire station needs to be replaced with a permanent facility.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)	80,000										80,000
Construction Engineering / Inspection		250,000									250,000
Construction		3,900,000									3,900,000
Equip/Vehicles/Furnishings			100,000								100,000
Total	80,000	4,150,000	100,000								4,330,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Facilities Tax	80,000	4,150,000	100,000								4,330,000
Total	80,000	4,150,000	100,000								4,330,000



BOMA Ranking: 4

BOMA Ranking: 5

Project # ST16009
Project Name Franklin Road Improvements & Streetscape

Department Streets
Contact Engineering Director
Type Improvement
Useful Life 20+
Category Transportation
Priority 4 Star Project
Status Active

Description **Total Cost** \$14,340,000

Improvement of Franklin Road, from the bridge at the Harpeth River to Hooper Lane. The project shall be constructed as a three (3) facility. Project shall include: curb & gutter, street lights, ITS Infrastructure, sidewalks, and typical streetscape elements. Approximate project length of 3,500 LF.

Justification

Congestion Mitigation: This project will provide limited congestion mitigation as it relates to vehicular traffic.

Safety: Pedestrian safety and utility upgrades are on the primary reasons for moving this project forward. This project will provide a safe way for pedestrians to access Harlinsdale Farm, Jamison Station and the Factory. As more events are moved to Harlinsdale Farm the priority of this project continues to increase.

Economic Development: Downtown Franklin is a destination point that attracts numerous visitors and business to City. We need to continue investment within our historic downtown area to ensure that it remains a safe and walkable community to all residents and visitors

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)		50,000									50,000
ROW and Easements		2,500,000									2,500,000
Construction Engineering / Inspection			450,000	450,000							900,000
Construction			5,445,000	5,445,000							10,890,000
Total		2,550,000	5,895,000	5,895,000							14,340,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Road Impact Fees		2,550,000	4,405,450	4,405,450							11,360,900
Stormwater			272,250	272,250							544,500
Hotel/Motel Tax			750,000	750,000							1,500,000
Water Capacity			155,650	155,650							311,300
Wastewater Capacity			78,000	156,000							234,000
Water Renewal			155,650	155,650							311,300
Wastewater Renewal			78,000								78,000
Total		2,550,000	5,895,000	5,895,000							14,340,000

S16009 - Franklin Rd Improvements & Streetscape



BOMA Ranking: 5

City of Franklin, TN 37067

BOMA Ranking: 6

Project #	ST16002
Project Name	Goose Creek Interchange Lighting

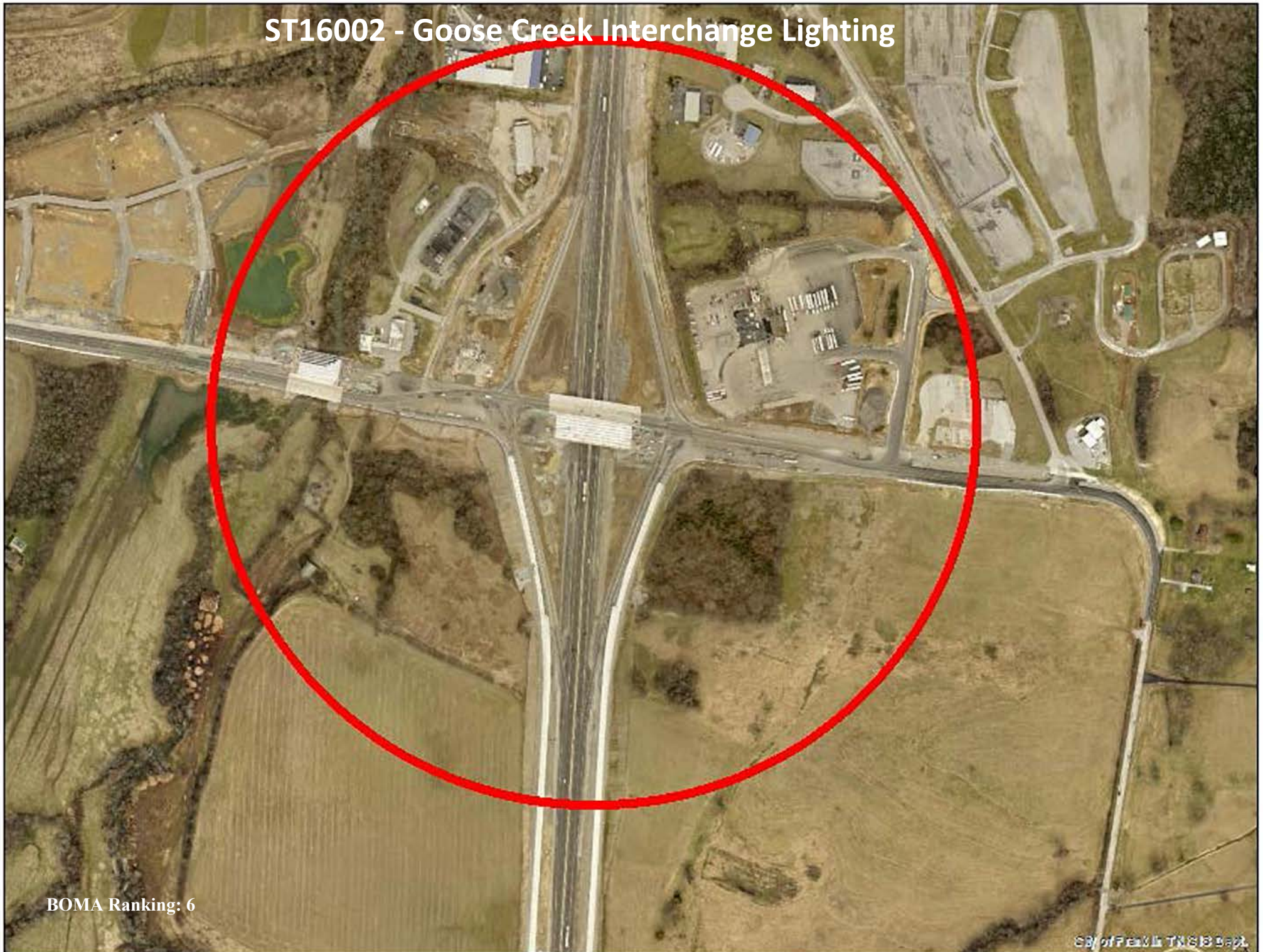
Department	Streets
Contact	Engineering Director
Type	New
Useful Life	20+
Category	Transportation
Priority	3 Star Project
Status	Pending

Description	Total Cost \$870,000
Interchange Lighting for Goose Creek at I-65. The City will need to partner with TDOT to fund 50% of the cost associated with this project.	
Justification	
Safty: Lighted interscetions and interchanges tend to have fewer crashes than unlighted intersections/interchanges. The majority of the intersection crashes at night are primarily assoicated with visibility.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)						60,000					60,000
Construction Engineering / Inspection							60,000				60,000
Construction							750,000				750,000
Total						60,000	810,000				870,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General						30,000	405,000				435,000
MPO/TDOT Funding						30,000	405,000				435,000
Total						60,000	810,000				870,000

ST16002 - Goose Creek Interchange Lighting



BOMA Ranking: 6

City of Franklin, Tennessee

BOMA Ranking: 19

Project #	ST16038
Project Name	Major Street Resurfacing

Department	Streets
Contact	Streets Director
Type	Maintenance
Useful Life	10-20 years
Category	Transportation
Priority	2 Star Project
Status	Pending

Description	Total Cost \$13,800,000
The resurfacing (e.g. paving) of major roadways within the City are proposed to be included in the Capital Investment Plan (CIP) as follows: 2017 - Cool Springs Blvd, from Mack Hatcher Pkwy to East McEwen Dr 2018 - Royal Oaks Blvd/Mallory Ln, from Mack Hatcher Pkwy to Cool Springs Blvd 2019 - Mallory Ln, from Cool Springs Blvd to Moores Ln 2020 - Liberty Pk, from Franklin Rd to Broadgate Dr/Waverly Pl 2021 - Del Rio Pk, from Cotton Ln to Hillsboro Rd 2022 - Carothers Pkwy, from Long Ln to Isabella Ln 2023 - East McEwen Dr, from Cool Springs Blvd to Wilson Pk 2024 - Boyd Mill Ave/Carlisle Ln, from SR-96W (Jim Warren Park) to Del Rio Pk As expected, any scheduled maintenance would be significantly postponed by the funding over major reconstruction projects. For example, the funding of the East McEwen Drive Phase 4 Project would eliminate the immediate need to repave that section of East McEwen Drive, as repaving would be performed as a part of the reconstruction project.	
Justification	Currently, the City of Franklin Streets Department primarily utilizes State Street Aid to fund the maintenance (e.g. paving) of City streets. The yearly shortfall in available funds for resurfacing projects forces the City to extend to time between pavement maintenance to an undesirable level (e.g. greater than 20 year cycle). To meet the needs of the entire City, large projects must be broken into many projects over a multi-year timespan. This can lead to shorter pavement life and less than desirable rideability. The inclusion of major resurfacing projects in the Capital Investment Plan (CIP) would allow the Streets Department to focus their annual budget on local streets and minor collectors. This additional funding would also allow for a shorter cycle between paving cycles, which will lead to better street conditions.

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Construction	2,400,000	1,700,000	1,300,000	900,000	1,800,000	3,100,000	1,700,000	900,000			13,800,000
Total	2,400,000	1,700,000	1,300,000	900,000	1,800,000	3,100,000	1,700,000	900,000			13,800,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General	2,400,000	1,700,000	1,300,000	900,000	1,800,000	3,100,000	1,700,000	900,000			13,800,000
Total	2,400,000	1,700,000	1,300,000	900,000	1,800,000	3,100,000	1,700,000	900,000			13,800,000

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Possible Phase II CIP Projects

Summary of Possible Phase 2 Projects

ID	Name	BOMA Rank	Reason for consideration:
FM16001	New City Hall	7	Received 5 of 9 BOMA Votes. The Board should consider future planning for City Hall.
ST16014	Franklin Rd & Mallory Station Rd Int. Improvements	8	Received 5 of 9 BOMA Votes. Significant Peak Hour Delays at the intersection.
PK16018	Eastern Flank Circle (loop Road) Repair	9	Received 4 of 9 BOMA Votes. Roadway is a maintenance problem for the Parks Department.
PK16020	Bicentennial Park Schematic Design & Construction	10	Received 4 of 9 BOMA Votes. Staff would recommend that we look at phasing the project and work with the board to determine how to proceed.
ST13030	Sidewalk Lewisburg Ave	11	Received 4 of 9 BOMA Votes. This fills in a gap within our downtown and has been requested by the residents.
ST16011	Mallory/N Royal Oaks & Liberty Intersection Imp.	16	Significate delay anticipated at this intersection due to private development / investment along the Carothers and Mallory corridor.
ST16017	Long Lane Old Peytonsville Rd Connector	17	Significate private development / investment within the Southeast area of the City. This investment is driving the need for improved connectivity to keep up with Development.
PK16013	Greenway Harlinsdale to Cheek & Fulton Greer Park	22	Possible partnership with Friends of Franklin Park and Heritage Foundation.
TOC16001	Carothers Parkway (South) ITS Extension	28	Need to extend ITS infrastructure to the Goose Creek Area due to the number of signals and need to connect to Fire Station 7.
PK16012	Pinkerton Park to Bicentennial Park	33	Possible partnership with Friends of Franklin Park and Heritage Foundation.
ST16006	Jordan Road Improvements	37	This is a rural road in an urban environment. The Roadway needs significant upgrades.
ST16013	Aspen Grove & Seaboard Ln Intersection	38	Significant peak hour delays at this intersection. The city has applied to obtain a CMAQ grant with the Nashville area MPO.
ST16018	S. Margin Infrastructure Upgrades	40	All water, sewer and storm infrastructure needs to be replaced. This is a high priority to help with operations and maintenance of the infrastructure.
PK16020	Multiuse Trail (Vera Valley – 9 th Ave)	N/A	The City has obtained a grant from TDOT for this project. City staff recently submitted on another grant opportunity to help fund this project.
ST16005	Peytonsville Rd & Pratt Ln Intersection	N/A	The City has committed to completing this project long term.
ST16023	Multiuse Trail 1 st Ave (South Margin to Bridge)	N/A	Possible partnership with Friends of Franklin Park and Heritage Foundation.

BOMA Ranking: 7

Project #	FM16001
Project Name	New City Hall

Department	Project & Facilities Mgmt.
Contact	Engineering Director
Type	New
Useful Life	20+
Category	General Services
Priority	3 Star Project
Status	Pending

Description	Total Cost \$24,100,000
New City Hall Building	
Justification	The City has assessed the need for a new City Hall and believes that the existing City Hall is inadequate to meet present and foreseeable future needs, given the rapid growth and increased demand for superior municipal services in Franklin.

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)					400,000	400,000					800,000
Construction Engineering / Inspection							400,000	400,000			800,000
Construction							11,000,000	11,000,000			22,000,000
Equip/Vehicles/Furnishings									500,000		500,000
Total					400,000	400,000	11,400,000	11,400,000	500,000		24,100,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Facilities Tax					400,000	400,000	11,400,000	11,400,000	500,000		24,100,000
Total					400,000	400,000	11,400,000	11,400,000	500,000		24,100,000



BOMA Ranking: 8

Project # ST16014
Project Name Franklin Rd & Mallory Station Rd Int. Improv.

Department Streets
Contact Engineering Director
Type Improvement
Useful Life 20+
Category Transportation
Priority 3 Star Project
Status Pending

Description	Total Cost
Reconstruction of intersection at Franklin Road (SR-6/US-31) and Mallory Station Road to allow for more efficient peak hour movements. Approximate project length of 1,000 LF.	\$3,920,000
Justification	
Congestion Mitigation: Capacity at this intersection is approaching failures and it currently has significant peak hour delays.	
Safety: No existing safety concerns at this intersection. Pedestrian facilities should be incorporated to the intersection improvement to comply with the Cities master plan.	
Economic Development: Redevelopment and future economic development along this corridor is limited. This improvement is needed to maintain our high quality of life by reducing congestion and improving safety along this Major Arterial Roadway.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)			216,000								216,000
ROW and Easements				680,000							680,000
Construction Engineering / Inspection					324,000						324,000
Construction					2,700,000						2,700,000
Total			216,000	680,000	3,024,000						3,920,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General			108,000	340,000	1,444,500						1,892,500
Road Impact Fees			108,000	340,000	1,444,500						1,892,500
Stormwater					135,000						135,000
Total			216,000	680,000	3,024,000						3,920,000

ST 16014 - Franklin Rd & Mallory Station Rd



BOMA Ranking: 8

City of Franklin, SD Sept

BOMA Ranking: 9

Project #

PK16018

Project Name

Eastern Flank Circle (Loop Road) Repair

Department

Parks

Contact

Park Director

Type

Improvement

Useful Life

20+

Category

Parks and Recreation

Priority

3 Star Project

Status

Pending

Description

Total Cost \$130,000

Cover existing DBST with West TN Mix

Justification

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Construction	130,000										130,000
Total	130,000										130,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Hotel/Motel Tax	130,000										130,000
Total	130,000										130,000

Park16018 – Eastern Flank Circle Repair



BOMA Ranking: 9

BOMA Ranking: 10

Project #	PK16020
Project Name	Bicentennial Park Schematic Design & Construction

Department	Parks
Contact	Park Director
Type	Improvement
Useful Life	20+
Category	Parks and Recreation
Priority	4 Star Project
Status	Active

Description	Total Cost \$1,905,000
Located at 214 N. Margin St.: Update the current 2008 master plan and design for construction of a paving system or ground cover for the park surrounding the Bicentennial park pavilion, east side of the park and the Worley property if purchased by the City. Design and prepare construction documents to include but not limited to soil testing, stormwater management needs, vehicular load requirements, local regulations and flood restrictions. Project areas are highlighted.	
Justification	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)	145,000										145,000
Construction Engineering / Inspection		100,000	100,000								200,000
Construction		780,000	780,000								1,560,000
Total	145,000	880,000	880,000								1,905,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Hotel/Motel Tax	145,000	880,000	880,000								1,905,000
Total	145,000	880,000	880,000								1,905,000

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BOMA Ranking: 11

Project #	ST16030
Project Name	Sidewalk Lewisburg Ave

Department	Streets
Contact	Engineering Director
Type	Improvement
Useful Life	20+
Category	Transportation
Priority	4 Star Project
Status	Pending

Description	Total Cost \$580,000
Build a sidewalk along the north side of Lewisburg Ave. This project will require the installation of curb and gutter, storm infastrcutre and a rebuilding at least one lane of traffic.	
Justification	
This will provide additional sidewalk in our downtown and provide connectivity to Thompson Alley and the Park.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)	80,000										80,000
ROW and Easements		100,000									100,000
Construction			400,000								400,000
Total	80,000	100,000	400,000								580,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General	80,000	100,000	400,000								580,000
Total	80,000	100,000	400,000								580,000

ST16030 - Sidewalk Lewisburg Ave

Lewisburg Ave

Stewart St

Thompson Al

BOMA Ranking: 11

BOMA Ranking: 16

Project #	ST16011
Project Name	Mallory/N Royal Oaks & Liberty Intersection Imp.

Department	Streets
Contact	Engineering Director
Type	Improvement
Useful Life	20+
Category	Transportation
Priority	3 Star Project
Status	Pending

Description	Total Cost \$4,440,000
Intersection improvements to North Royal Oaks Boulevard, Liberty Pike and Mallory Lane. This intersection is projected to be at a failure level in the next 3-4 years based on the proposed development along Carothers Parkway. If this project is not completed, there will be significant delays at this key intersection.	
Justification	
Congestion Mitigation: It is anticipated that this roadway will reach failure levels within the next 5 years. The increased traffic is a result of all the development along Carothers Parkway and other areas within Cool Springs.	
Safety: No existing safety concerns at this intersection. Pedestrian facilities should be incorporated to the intersection improvements to comply with the Cities master plan.	
Economic Development: Redevelopment and future economic development in the Cool Springs area continues. This improvement is needed to maintain our high quality of life by reducing congestion and improving safety along this Major Arterial Roadway.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)				216,000							216,000
ROW and Easements					1,200,000						1,200,000
Construction Engineering / Inspection						324,000					324,000
Construction						2,700,000					2,700,000
Total				216,000	1,200,000	3,024,000					4,440,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Road Impact Fees				216,000	1,200,000	2,721,400					4,137,400
Stormwater						135,000					135,000
Water Capacity						55,000					55,000
Wastewater Renewal						112,600					112,600
Total				216,000	1,200,000	3,024,000					4,440,000

ST16011 - Mallory/N Royal Oaks & Liberty Intersection



BOMA Ranking: 16

City of Peachtree City, GA

BOMA Ranking: 17

Project #	ST16017
Project Name	Long Lane/Old Peytonsville Rd Connector at I-65

Department	Streets
Contact	Engineering Director
Type	Improvement
Useful Life	20+
Category	Transportation
Priority	3 Star Project
Status	Active

Description	Total Cost \$12,790,000
Included in the update to the Major Thoroughfare Plan are 2 crossings of I-65. This project is one of those crossings as is intended to connect Old Peytonsville Road with Long Lane. The main advantage of this crossing is to allow for traffic interconnectivity across I-65 without having to use Goose Creek By-Pass or Highway 96. Limits of construction are from Five Mile Creek Bridge to 500 feet east of Baskin Property. Approximately 2,500 LF.	
Justification	
Congestion Mitigation: AADT on Carothers Parkway and Lewisburg Pike is expected to reach 25,000 VPD. The Board has approved numerous developments in the South East section of the City. Approvals include approximately 2,663 Single Family Units, 2,004 Multi-Family Units, 1.8 Million SF in Retail and 3.4 Million SF in Office/Civic Development. In addition TDOT has approved 7 traffic signals along Goose Creek Bypass. This option will provide an important alternative route to avoid future congestion.	
Safety: As traffic increases on Carothers Parkway and Lewisburg Pike this roadway will become increasingly important. This connection will help reduce traffic on our arterial roadways and provide options to avoid future congestion at the Goose Creek Interchange.	
Economic Development: This roadway will help future and existing businesses in the area by reducing congestion and making this an attractive place to live and work.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)				450,000							450,000
ROW and Easements					4,500,000						4,500,000
Construction Engineering / Inspection					420,000	420,000					840,000
Construction					3,500,000	3,500,000					7,000,000
Total				450,000	8,420,000	3,920,000					12,790,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General				450,000	8,032,000	3,532,000					12,014,000
Stormwater					175,000	175,000					350,000
Water Capacity					49,500						49,500
Wastewater Capacity						49,500					49,500
Reclaimed Water Capacity					90,000	90,000					180,000
Water Renewal					49,500						49,500
Wastewater Renewal					24,000	73,500					97,500
Total				450,000	8,420,000	3,920,000					12,790,000

Capital Improvement Plan FY2017-2026

ST16017 - Long Lane Old Peytonsville Rd Connector



BOMA Ranking: 17

BOMA Ranking: 22

Project #	PK16013
Project Name	Greenway & Bridge (Harlinsdale to Fulton Greer)

Department	Parks
Contact	Park Director
Type	New
Useful Life	20+
Category	Parks and Recreation
Priority	3 Star Project
Status	Pending

Description	Total Cost \$652,944
This trail segment connects large sections of existing trails maintained by Williamson County Parks and Recreation, formerly Chestnut Bend HOA through open space along the Harpeth and Williamson County trails through Cheek Park and Judge Fulton Greer Park. A bridge to connect the internal trails at the Park at Harlinsdale to the existing Chestnut Bend trails. Sign kiosk, trailhead at Harlinsdale, Cheek Park and at Judge Fulton Greer locations.	
Justification	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)					110,000						110,000
Construction Engineering / Inspection						537,900					537,900
Equip/Vehicles/Furnishings						5,044					5,044
Total					110,000	542,944					652,944

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Parkland Dedication					110,000	542,944					652,944
Total					110,000	542,944					652,944

Park16013 - Greenway (Harlinsdale to Cheek & Fulton Greer Park)



BOMA Ranking: 22

City of Franklin Sept

BOMA Ranking: 28

Project #	TOC16001
Project Name	Carothers Parkway (South) ITS Extension

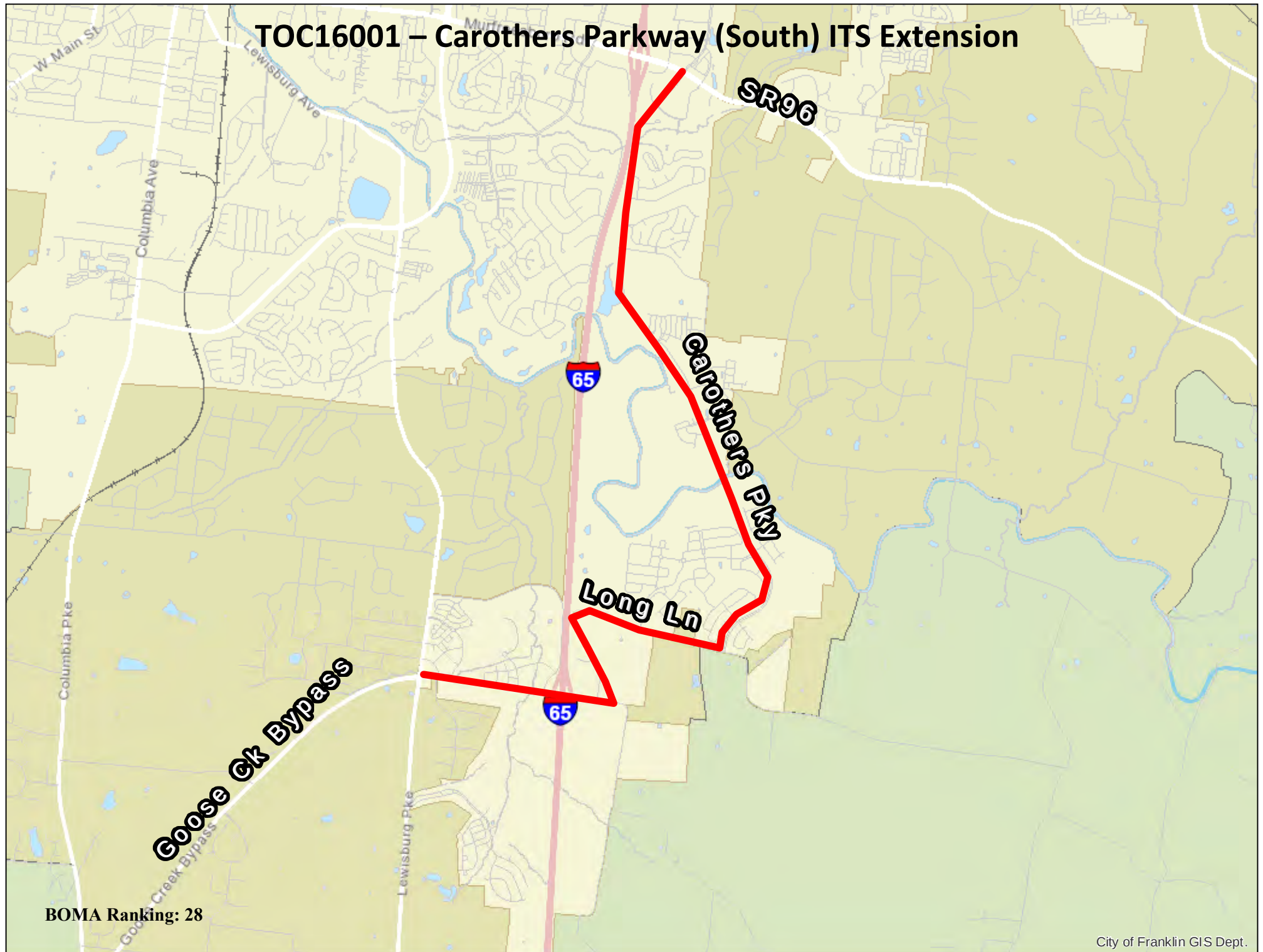
Department	Traffic Ops. Center (TOC)
Contact	Engineering Director
Type	New
Useful Life	10-20 years
Category	Transportation
Priority	4 Star Project
Status	Pending

Description	Total Cost \$1,375,000
Project includes: 35,000 LF fiber optic cable, 13,000 LF of conduit with pull boxes, and five (5) closed caption television (CCTV) cameras.	
Justification	The project will provide communication to/from Carothers Parkway (from Long Lane to Murfreesboro Road), Fire Station 7 (Ag Center), the seven (7) intersections along Goose Creek Bypass (SR-248) and Peytonsville Road (from Lewisburg Pike to Long Lane), and the existing CCTV camera at Lewisburg Pike (SR-106/US-431). Approximate project length is 35,000 LF.

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)	125,000										125,000
Construction Engineering / Inspection	20,000	30,000									50,000
Construction	400,000	800,000									1,200,000
Total	545,000	830,000									1,375,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General	545,000	830,000									1,375,000
Total	545,000	830,000									1,375,000

TOC16001 – Carothers Parkway (South) ITS Extension



BOMA Ranking: 28

BOMA Ranking: 33

Project #	PK16012
Project Name	Greenway (Pinkerton to Bicentennial)

Department	Parks
Contact	Park Director
Type	New
Useful Life	20+
Category	Parks and Recreation
Priority	3 Star Project
Status	Pending

Description	Total Cost \$5,710,126
From the existing trails at Pinkerton Park, the Greenway would head north and west along the banks of the Harpeth River, this time hugging a small shelf below Fort Granger Park as the trail approaches Downtown Franklin. City-owned property on the north side of the Harpeth and the Battleground Academy property provide trailhead opportunities. A crosswalk over Franklin Road would be required and these would connect via sidewalk to Downtown Franklin. The Greenway continues west along the north bank of the Harpeth until it is across the Harpeth River from Bicentennial Park which connects into existing trails within Bicentennial Park along the Harpeth River to the Williamson County Recreation Center. Potential trailhead and kiosk with permeable parking at city owned property on Daniels Drive.	
Justification	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)		551,817									551,817
ROW and Easements			425,419								425,419
Construction Engineering / Inspection				459,847							459,847
Construction				4,273,043							4,273,043
Total		551,817	425,419	4,732,890							5,710,126
Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Parkland Dedication		551,817	425,419	4,732,890							5,710,126
Total		551,817	425,419	4,732,890							5,710,126

Park 16012 - (Pinkerton Park to Bicentennial Park)



BOMA Ranking: 33

BOMA Ranking: 37

Project #	ST16006
Project Name	Jordan Road Improvements

Department	Streets
Contact	Engineering Director
Type	Improvement
Useful Life	20+
Category	Transportation
Priority	4 Star Project
Status	Active

Description	Total Cost \$2,062,000
Improvement of Jordan Road, from Aspen Grove Road to Mallory Lane. Reconstruction of Jordan Road to City standard two (2) lane facility with turn lanes as required. Project shall include: curb & gutter, ITS Infrastructure, and accomodations for pedestrians and bicycles. Approximate project length of 1,700 LF.	
Justification	
Congestion Mitigation: As McEwen Town Center develops out this roadway will become extremely important to help reduce traffic on Mallory Ln, Cool Springs Blvd and Mallory Lane. The developer of McEwen Town Center was required to improve Jordan Road; however, those conditions were removed by the FMPC and BOMA.	
Safety: This rural roadway is located in a very urban area and has extremely narrow lanes and significant geometric issues that need to be corrected. Ideally this would happen as McEwen Town Center develops out its remaining property.	
Economic Development: Redevelopment and future economic development in the Cool Springs area continues to occur. Upgrades are needed to reduce congestion and improve safety so that we can retain and attract new businesses long term.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)			50,000								50,000
ROW and Easements				500,000							500,000
Construction Engineering / Inspection					162,000						162,000
Construction					1,350,000						1,350,000
Total			50,000	500,000	1,512,000						2,062,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General			50,000	500,000	1,418,100						1,968,100
Stormwater					67,500						67,500
Wastewater Renewal					26,400						26,400
Total			50,000	500,000	1,512,000						2,062,000

ST16006 - Jordan Road Improvement



BOMA Ranking: 37

City of Franklin GIS Dept.

BOMA Ranking: 38

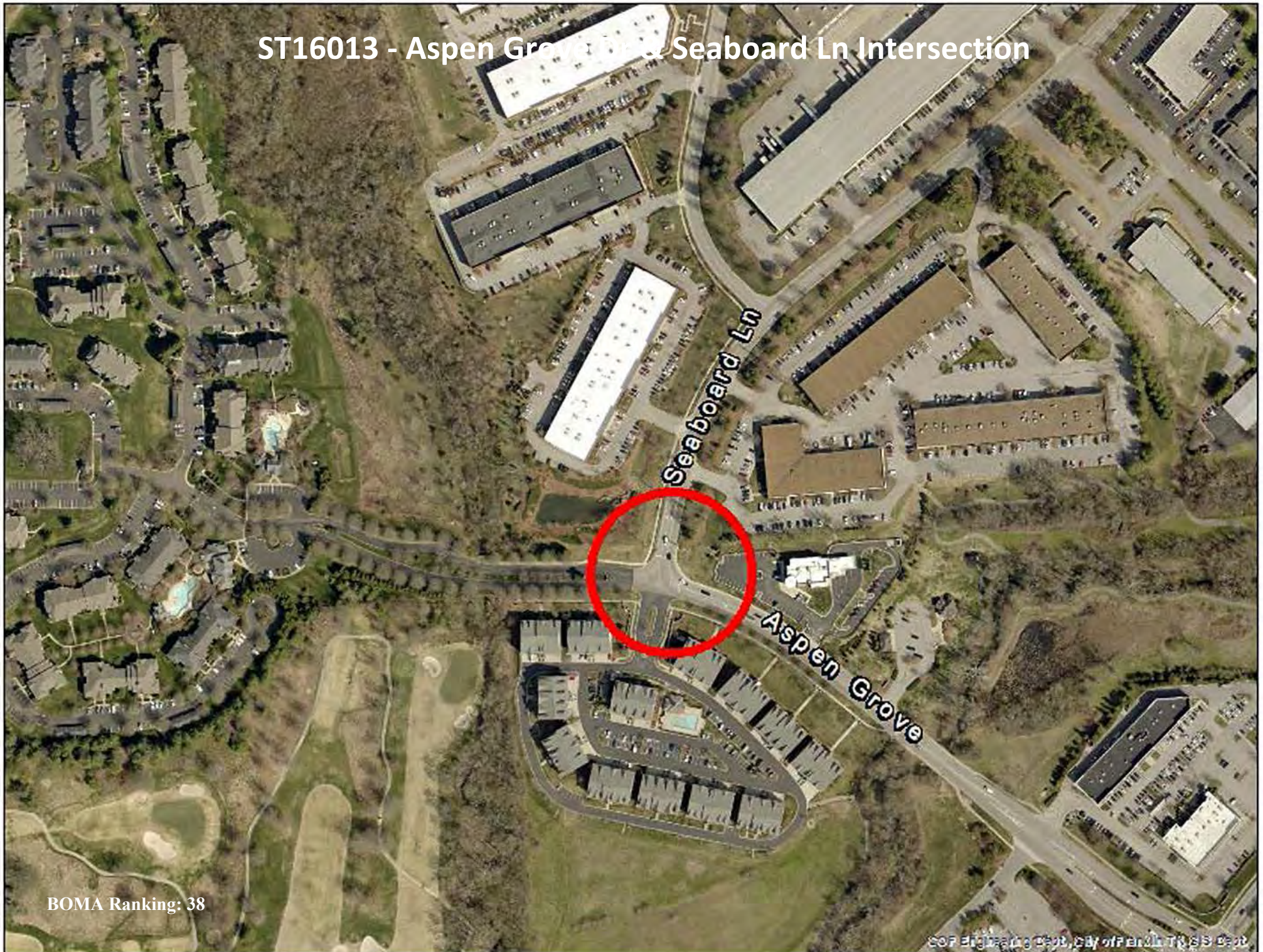
Project #	ST16013
Project Name	Aspen Grove Dr & Seaboard Ln Intersection Improv.

Department	Streets
Contact	Engineering Director
Type	Improvement
Useful Life	20+
Category	Transportation
Priority	2 Star Project
Status	Active

Description	Total Cost \$1,708,000
Reconstruction of intersection at Aspen Grove Drive and Seaboard Lane to allow for more efficient peak hour movements. Approximate project length of 1,000 LF.	
Justification	
Congestion Mitigation: Capacity at this intersection is at failure levels during both the AM and PM peak hours. The Board has funded a project for city staff to evaluate and make recommendations to the full BOMA on possible solutions.	
Safety: Pedestrian facilities should be incorporated into the intersection improvement project to comply with the Cities long range master plan.	
Economic Development: Redevelopment and future economic development along this corridor is possible. Upgrades are needed to reduce congestion so that we can retain and attract new businesses long term.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)				50,000							50,000
ROW and Easements					650,000						650,000
Construction Engineering / Inspection						108,000					108,000
Construction						900,000					900,000
Total				50,000	650,000	1,008,000					1,708,000
Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General				50,000	650,000	963,000					1,663,000
Stormwater						45,000					45,000
Total				50,000	650,000	1,008,000					1,708,000

ST16013 - Aspen Grove & Seaboard Ln Intersection



BOMA Ranking: 38

COP Engineering Dept., City of Franklin, TN 37067

BOMA Ranking: 40

Project # ST16018
Project Name S. Margin Infastructure Upgrades (1st - Columbia)

Department Streets
Contact
Type Improvement
Useful Life 20+
Category Transportation
Priority 4 Star Project
Status Pending

Description

Total Cost \$7,393,680

This project is to upgrade Sanitary Sewer, Water and Stormwater infrastructure in our historic downtown area. We are having issues with all utilities along this corridor and they are in need of upgrades and replacement.

The existing stormwater system mainly consists of a series of intermittent roadside ditches and culverts. This area has been a problem since the early 90's with no improvements made. The roadways lack drainage infrastructure. This infrastructure is needed to help protect localized flooding during heavy rain events. This project would also include the install of a water quality feature at the Harpeth River. The goal is to extend infrastructure into the Parkview Area to address localized flooding

Justification

Congestion Mitigation: Congestion along S. Margin Street is very heavy during peak hours and events. This project would not increase vehicular capacity but would provide need and key pedestrian connections within our historic downtown area.

Safety: Providing sidewalks and street lights in our historic downtown area will help ensure our downtown remains a safe and walkable community.

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)	171,456	171,456									342,912
ROW and Easements			2,250,000								2,250,000
Construction Engineering / Inspection				514,368							514,368
Construction				4,286,400							4,286,400
Total	171,456	171,456	2,250,000	4,800,768							7,393,680

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General	171,456	171,456	2,250,000	3,220,158							5,813,070
Stormwater				642,960							642,960
Water Renewal				294,690							294,690
Wastewater Renewal				642,960							642,960
Total	171,456	171,456	2,250,000	4,800,768							7,393,680

ST16018 - S. Margin Infrastructure Upgrades



BOMA Ranking: 40

BOMA Ranking: N/A

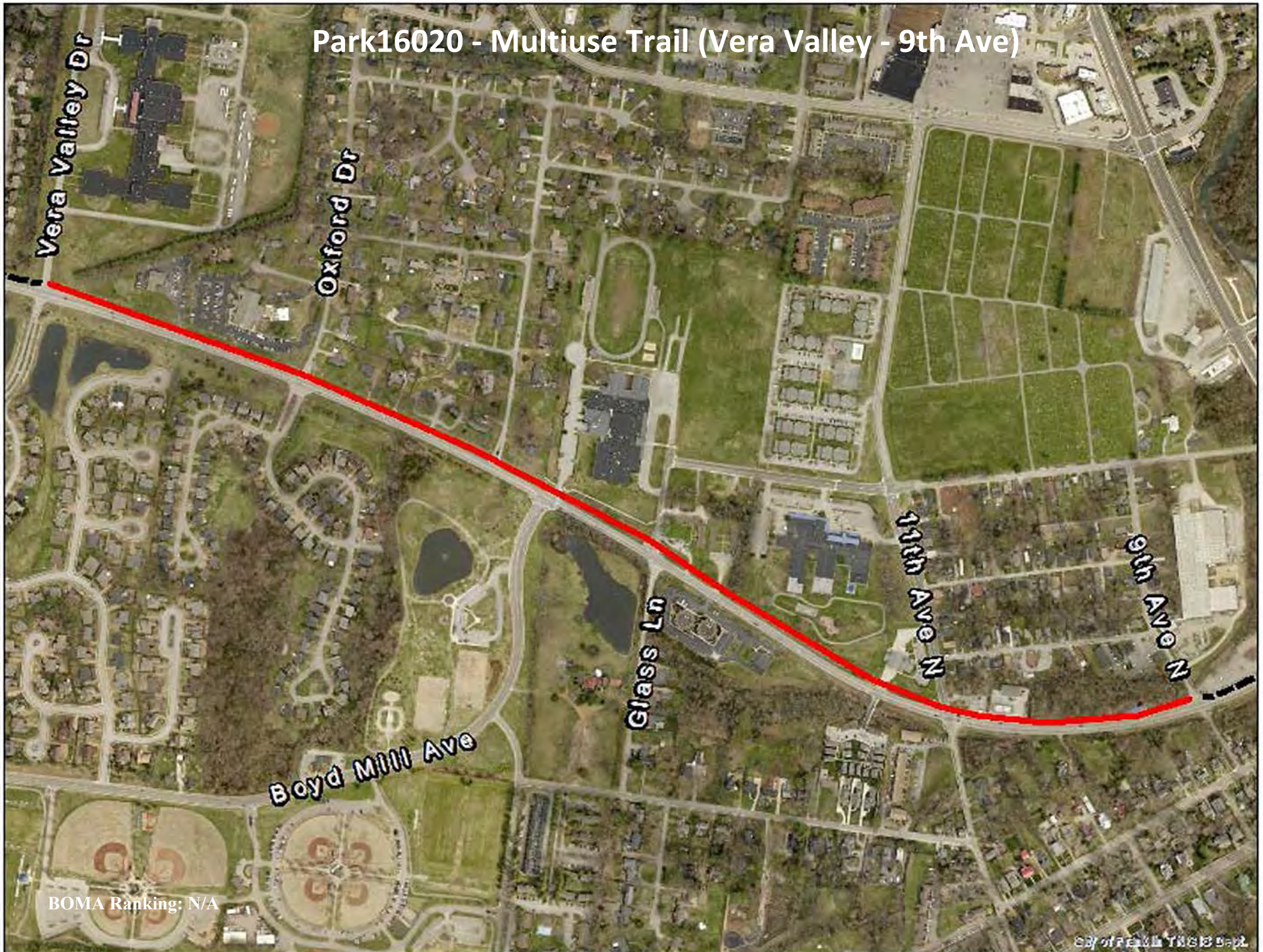
Project #	ST16020
Project Name	Multi-Use Trail SR-96W (Vera Valley Dr - 9th Ave)

Department	Streets
Contact	Engineering Director
Type	New
Useful Life	20+
Category	Transportation
Priority	2 Star Project
Status	Pending

Description	Total Cost \$1,913,867
Extend ten (10) foot multi-use trail from Vera Valley Drive to 9th Avenue in Downtown Franklin. Approximate project length is 5,800 LF.	
Justification	
This project will provide pedestrian, bicycling access to Freedom Middle School, Freedom Intermediate School from the neighborhoods surrounding Hwy 96 West. Two other schools exist with in the vicinity of this trail – Poplar Grove School and Johnson Elementary. Students from these two schools will also benefit as they will have access to this trail (if it is constructed). Also, Jim Warren Park, three subdivisions (Clairemonte, Spencer Hall, West Field Estates) and two churches (The Church of West Franklin, The Kingdom Hall of Jehovah’s Witness) and a Fire Station are located along SR 96, with in this project vicinity.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)					97,591						97,591
ROW and Easements						450,000					450,000
Construction Engineering / Inspection							146,386				146,386
Construction							1,219,890				1,219,890
Total					97,591	450,000	1,366,276				1,913,867
Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General					97,591	450,000	1,305,282				1,852,873
Stormwater							60,994				60,994
Total					97,591	450,000	1,366,276				1,913,867

Park16020 - Multiuse Trail (Vera Valley - 9th Ave)



BOMA Ranking: N/A

BOMA Ranking: N/A**Project #** ST16005**Project Name** Peytonsville Rd & Pratt Ln Intersection Improv.**Department** Streets**Contact** Engineering Director**Type** Improvement**Useful Life** 20+**Category** Transportation**Priority** 1 Star Project**Status** Pending**Description****Total Cost** \$5,016,000

Reconstruction of the intersection of Peytonsville Road and Pratt lane to a conventional T-intersection. The included section Old Peytonsville Road shall be reconstruction as a four (4) lane, median divided facility, while the included section of Pratt Lane shall be reconstructed as a two (2) lane facility. Both streets shall have turn lanes as required. Project shall include: access management (as allowable), curb & gutter, ITS Infrastructure, and accomodations for pedestrians and bicycles. Approximate project length of 2,300 LF.

Justification

Congestion Mitigation: Peytonsville Road provides access between SR840 and the Goose Creek Interchange. Traffic will increase in this area as development continues. In addition this roadway will see heavy traffic when accidents occur on SR-840 and I-65.

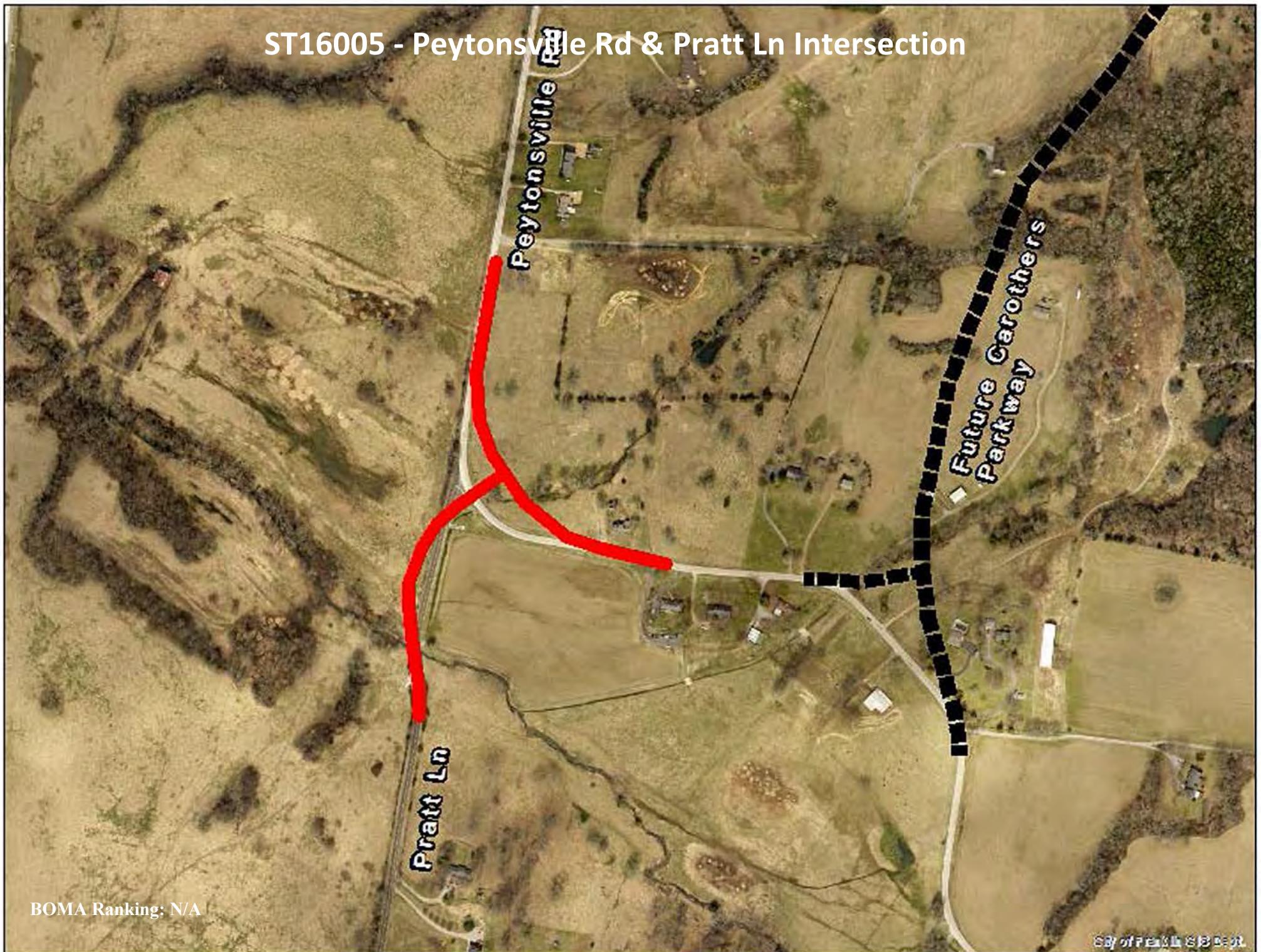
Safety: Peytonsville Rd & Pratt Ln have geometric issues that need to be addressed as traffic increases in this area of the City. It was agreed upon by the Reams-Fleming Team and the City that Reams Fleming will not be allowed to have access to Pratt Lane until the City makes the necessary safety upgrades to this intersection.

Economic Development: Lampo Group is currently proposing their cooperate headquarters in the southern section of Reams-Fleming PUD. This includes approximately 650,000SF of commercial office space. As Reams-Fleming develops the city will need to fund this improvement to reduce congestion and provide alternative routes so that we can retain businesses long term.

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)				194,400							194,400
ROW and Easements					2,100,000						2,100,000
Construction Engineering / Inspection						291,600					291,600
Construction						2,430,000					2,430,000
Total				194,400	2,100,000	2,721,600					5,016,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General				194,400	2,100,000	2,600,100					4,894,500
Stormwater						121,500					121,500
Total				194,400	2,100,000	2,721,600					5,016,000

ST16005 - Peytonsville Rd & Pratt Ln Intersection



BOMA Ranking: N/A

City of Pratt KS Dept

BOMA Ranking: N/A

Project #	ST16023
Project Name	Multi-Use Trail 1st Ave (South Margin to Bridge)

Department	Streets
Contact	Engineering Director
Type	Improvement
Useful Life	20+
Category	Transportation
Priority	1 Star Project
Status	Pending

Description	Total Cost \$1,470,000
This project would connect Pinkerton Park, Historic downtown Franklin and would eventually be extended to Bicentennial Park. Construction would include a 12' wide multipurpose trail on the east side of 1st Ave	
Justification	
This project was identified as a short term project as part of the CTNP.	

Expenditures	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
Design/Planning (Professional Services)						70,000					70,000
ROW and Easements							200,000				200,000
Construction Engineering / Inspection								50,000			50,000
Construction								1,150,000			1,150,000
Total						70,000	200,000	1,200,000			1,470,000

Funding Sources	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Total
General						70,000	200,000	1,200,000			1,470,000
Total						70,000	200,000	1,200,000			1,470,000

ST16023 - Multiuse Trail 1st Ave (South Margin to Bridge)



BOMA Ranking: N/A



City of Franklin

FY 2017-2026 Capital Improvement Program Financing Model

**Presentation to the Board of Mayor and Alderman
September 13, 2016**



City of Franklin

FY 2017-2026 Capital Improvement Program Financing Model

Capital Financing Model - September 13, 2016

Executive Summary

This financing model has been built to determine answers to the following questions:

- What is the amount of available resources from all funds which can be spent on Capital Projects over the next ten years?
- How much will Phase I of the FY 2017-2026 Capital Improvement Program cost?
- What will be the amount of remaining resources after those projects are paid for? And,
- What will be the impact on the City's debt capacity and overall debt service?

This model has three main sections:

- This Executive Summary with summaries of current, future and remaining resources, annual and cumulative cost estimates for all Phase I CIP projects and a revised Debt Capacity Analysis given the revised cost of projects.
- Phase I CIP Project Detail Sheets, which itemize the annual and cumulative funding needs by source by project.
- 10-year Financing Analysis with detailed forecasts for most major internal funds of the City of Franklin.

In building this model, staff has tried to be conservative with our revenue projections and prudent when determining available resources.

"Available fund balances" are current estimated balances in most funds as of June 30th, less amounts reserved either through state law or BOMA policy.

The result is mostly positive - due to the prudent management of the community and the passage of the Invest Franklin initiative, the City can afford to take on all Phase I projects and have reasonable levels of remaining resources to fund additional phases of the FY 2017-2026 Capital Improvement Program.



City of Franklin

FY 2017-2026 Capital Improvement Program Financing Model

DRAFT

Existing Resources (Cash)

The following shows the various funding sources currently available for use on Capital projects. While the City aggressively looks for outside funding to assist in stretching taxpayer dollars, the vast majority of resources available to the City are internal in nature.

		FY 2015 Actual		FY 2016 Projected		FY 2017 Forecast
Internal						
110 General						
Capital Funding Account (<45%)	\$	8,347,536	\$	8,101,435	\$	8,101,435
1.5 Cent Capital Set-Aside	\$	508,038	\$	1,034,046	\$	1,714,782
Invest Franklin	\$	-	\$	-	\$	3,176,766
124 Sanitation Fund	\$	-	\$	-	\$	32,294
128 Road Impact Fund	\$	397,796	\$	4,582,150	\$	4,880,814
130 Stormwater	\$	4,783,235	\$	4,436,729	\$	4,658,995
135 Facilities Tax	\$	6,717,764	\$	6,348,411	\$	9,260,411
150 Hotel Motel	\$	2,749,596	\$	2,388,275	\$	3,269,693
155 In Lieu of Parkland	\$	2,494,076	\$	4,425,966	\$	5,633,491
421 Water	\$	-	\$	-	\$	925,000
431 Sewer	\$	-	\$	-	\$	-
Sub-Total Internal Resources	\$	25,998,041	\$	31,317,012	\$	41,653,681
External						
MPO/TDOT	\$	-	\$	-	\$	8,630,000
Army Corp of Engineers	\$	-	\$	-	\$	-
County Facilities Tax	\$	2,021,022	\$	3,262,263	\$	4,212,263
Utility Agreements	\$	-	\$	-	\$	475,000
Developer Contributions	\$	550,000	\$	550,000	\$	550,000
Sub-Total External Resources	\$	2,571,022	\$	3,812,263	\$	13,867,263
Total All Available Resources	\$	28,569,063	\$	35,129,275	\$	55,520,944

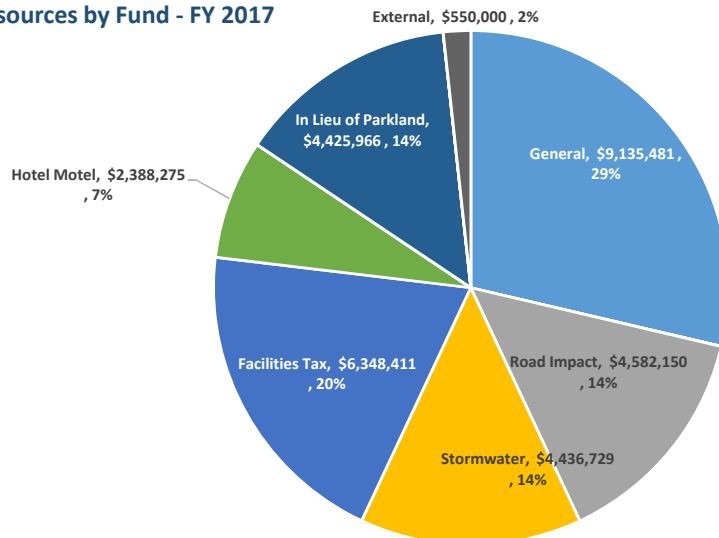


Projected Resources (Cash)

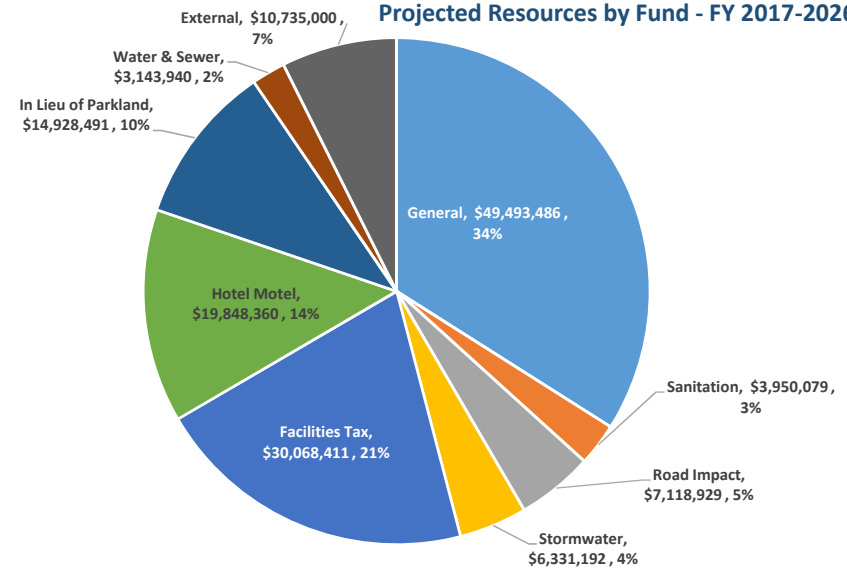
This summarizes the projected cash resources available to the City for the FY 2017-2026 Capital Improvement Program. Existing Fund Balance is shown at the far left, while annual anticipated revenue contributions are provided for the ten-year timeframe of the program. Available Debt Service, and the impact on available cash resources, are shown in the page entitled "Debt Capacity Analysis" on another summary. Detailed funding sheets for most internal funds are provided in the section entitled "10-year Financing Analysis" at the end of this packet.

	Fund Balance Available	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total Available
Internal												
General												
Capital Funding Account	\$ 8,101,435	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,101,435
1.5 Cent Capital Set-Aside	\$ 1,034,046	\$ 680,736	\$ 687,543	\$ 694,419	\$ 701,363	\$ 708,377	\$ 715,460	\$ 722,615	\$ 729,841	\$ 737,140	\$ 744,511	\$ 8,156,051
Invest Franklin	\$ -	\$ 3,176,766	\$ 3,208,534	\$ 3,240,619	\$ 3,273,025	\$ 3,305,755	\$ 3,338,813	\$ 3,372,201	\$ 3,405,923	\$ 3,439,982	\$ 3,474,382	\$ 33,236,000
Sanitation Fund	\$ -	\$ 32,294	\$ 244,165	\$ 588,923	\$ 556,343	\$ 521,641	\$ 484,723	\$ 445,495	\$ 403,857	\$ 359,705	\$ 312,933	\$ 3,950,079
Road Impact Fund	\$ 4,582,150	\$ 298,664	\$ 838,593	\$ 111,484	\$ 131,256	\$ 153,639	\$ 352,228	\$ 372,842	\$ 103,176	\$ 76,783	\$ 98,114	\$ 7,118,929
Stormwater	\$ 4,436,729	\$ 222,266	\$ 216,697	\$ 210,537	\$ 203,759	\$ 196,328	\$ 188,214	\$ 179,373	\$ 169,778	\$ 159,377	\$ 148,135	\$ 6,331,192
Facilities Tax	\$ 6,348,411	\$ 2,912,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 30,068,411
Hotel Motel	\$ 2,388,275	\$ 881,418	\$ 1,134,099	\$ 1,139,140	\$ 1,295,873	\$ 1,458,643	\$ 2,049,163	\$ 2,401,230	\$ 1,843,140	\$ 2,547,764	\$ 2,709,614	\$ 19,848,360
In Lieu of Parkland	\$ 4,425,966	\$ 1,207,525	\$ 1,255,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 14,928,491
Water Funding*	\$ -	\$ 552,500	\$ 863,620	\$ 311,120	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,727,240
Sewer Funding*	\$ -	\$ 372,500	\$ 528,500	\$ 156,000	\$ 179,850	\$ 179,850	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,416,700
External												
MPO/TDOT	\$ -	\$ 8,630,000	\$ 1,555,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,185,000
Army Corp of Engineers	\$ -	\$ -	\$ -	\$ 750,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 750,000
County Facilities Tax	\$ 3,262,263	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 12,762,263
Utility Agreements	\$ -	\$ 475,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 475,000
Developer Agreements	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 550,000
Total	\$ 35,129,275	\$ 20,391,669	\$ 13,793,750	\$ 11,469,242	\$ 10,608,470	\$ 10,791,232	\$ 11,395,601	\$ 11,760,756	\$ 10,922,714	\$ 11,587,751	\$ 11,754,689	\$ 159,605,150

Existing Resources by Fund - FY 2017



Projected Resources by Fund - FY 2017-2026





Year-By-Need Phase I Analysis

The following shows the annual need for Phase I capital projects by funding source. Detailed funding sheets by project are available later in this packet in the section entitled "Phase I CIP Projects". It is important to note that unlike previous schedules, a large amount of funding is requested to come from debt service. This is further explained under the sheet entitled "Debt Capacity Analysis".

	Ongoing Resources										Total Needed
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	
Internal											
General											
Cash	\$ 580,000	\$ 655,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,985,000
Debt	\$ 7,025,000	\$ 5,732,880	\$ 8,955,630	\$ 15,357,300	\$ 11,034,550	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 48,105,360
Sanitation Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Road Impact Fund	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,250,000
Stormwater	\$ 50,000	\$ 50,000	\$ 272,250	\$ 272,250	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 644,500
Facilities Tax	\$ 225,000	\$ 2,102,500	\$ 3,552,500	\$ 1,500,000	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,880,000
Hotel Motel	\$ 195,000	\$ 195,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 390,000
In Lieu of Parkland	\$ -	\$ 250,000	\$ 600,000	\$ 350,000	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,550,000
Water Funding	\$ 552,500	\$ 863,620	\$ 311,120	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,727,240
Sewer Funding	\$ 372,500	\$ 528,500	\$ 156,000	\$ 179,850	\$ 179,850	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,416,700
External											
MPO/TDOT	\$ 8,630,000	\$ 1,555,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,185,000
Army Corp of Engineers	\$ -	\$ -	\$ 750,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 750,000
County Facilities Tax	\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000
Utility Agreements	\$ 475,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 475,000
Developer Agreements	\$ -	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 550,000
Total	\$ 18,855,000	\$ 13,232,500	\$ 15,097,500	\$ 18,159,400	\$ 13,564,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 78,908,800



Remaining Resources

The following shows the anticipated balances in available funding at the end of the ten-year CIP horizon after the \$78,908,800 worth of Phase I projects have been paid for.

It is important to note that the difference between the project resources shown on the page entitled "Projected (Cash) Resources" and this page is the conversion and estimation of available debt service capacity. Please see footnote 2 for more information.

FY 2017-2026 Projected Resources			Phase I Project Needs		Balance Remaining
Internal					
110 General					
Pay-as-you-go Cash ¹	\$	16,257,486	\$	1,985,000	\$ 14,272,486
Debt Service ²	\$	80,000,000	\$	48,105,360	\$ 31,894,640
124 Sanitation Fund	\$	3,950,079	\$	-	\$ 3,950,079
128 Road Impact Fund	\$	7,118,929	\$	1,250,000	\$ 5,868,929
130 Stormwater	\$	6,331,192	\$	644,500	\$ 5,686,692
135 Facilities Tax	\$	30,068,411	\$	8,880,000	\$ 21,188,411
150 Hotel Motel	\$	19,848,360	\$	390,000	\$ 19,458,360
155 In Lieu of Parkland	\$	14,928,491	\$	1,550,000	\$ 13,378,491
421 Water	\$	1,727,240	\$	1,727,240	\$ -
431 Sewer	\$	1,416,700	\$	1,416,700	\$ -
External					
MPO/TDOT	\$	10,185,000	\$	10,185,000	\$ -
Army Corp of Engineers	\$	750,000	\$	750,000	\$ -
County Facilities Tax	\$	12,762,263	\$	1,000,000	\$ 11,762,263
Utility Agreements	\$	475,000	\$	475,000	\$ -
Developer Contributions	\$	550,000	\$	550,000	\$ -
Total	\$	206,369,150	\$	78,908,800	\$ 127,460,350

Notes:

¹ Pay as you go cash includes the balance of the Capital Funding Account (over 45% of fund balance in the General Fund) and the accumulated total of the 1.5 Cent property tax allocation for capital projects.

² Debt Service resource is an estimated amount of \$80,000,000 based upon the amount of capacity gained from the amount of existing debt service to be retired and the addition of the \$0.07 of property tax from the **Invest Franklin** initiative.



City of Franklin

FY 2017-2026 Capital Improvement Program Financing Model

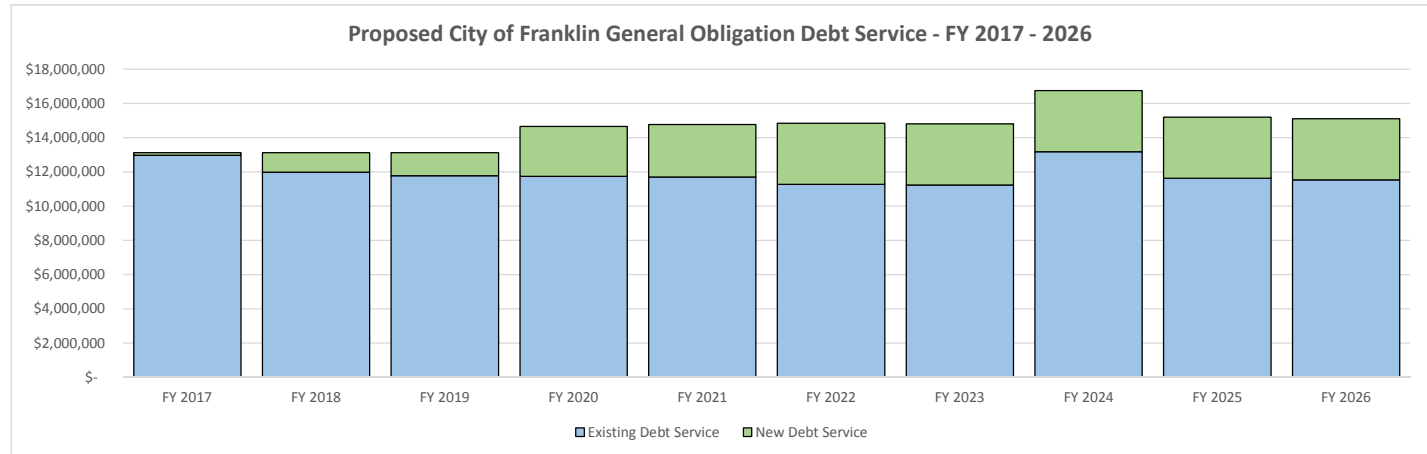
Debt Capacity Analysis

Proposed Debt Issuances				FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Balance (FY 2027-FY 2042)
2017	4.50%	\$	15,000,000	\$ 150,000	\$ 1,141,875	\$ 1,141,875	\$ 1,141,875	\$ 1,141,875	\$ 1,141,875	\$ 1,141,875	\$ 1,141,875	\$ 1,141,875	\$ 1,141,875	\$ 12,560,625
2019	4.50%	\$	25,000,000			\$ 200,000	\$ 1,775,313	\$ 1,775,313	\$ 1,775,313	\$ 1,775,313	\$ 1,775,313	\$ 1,775,313	\$ 1,775,313	\$ 23,079,063
2021	4.50%	\$	10,000,000					\$ 150,000	\$ 654,500	\$ 654,500	\$ 654,500	\$ 654,500	\$ 654,500	\$ 9,817,500
A New Debt Service				\$ 150,000	\$ 1,141,875	\$ 1,341,875	\$ 2,917,188	\$ 3,067,188	\$ 3,571,688	\$ 3,571,688	\$ 3,571,688	\$ 3,571,688	\$ 3,571,688	\$ 45,457,188
B Existing Debt Service				\$ 12,966,453	\$ 11,975,848	\$ 11,772,869	\$ 11,735,204	\$ 11,705,707	\$ 11,273,302	\$ 11,236,584	\$ 13,173,630	\$ 11,623,560	\$ 11,534,574	\$ 58,044,000
C (A + B) Cumulative G.O. Debt Service				\$ 13,116,453	\$ 13,117,723	\$ 13,114,744	\$ 14,652,392	\$ 14,772,895	\$ 14,844,990	\$ 14,808,272	\$ 16,745,318	\$ 15,195,248	\$ 15,106,262	\$ 103,501,188

Summary:

A key financing component to the FY 2017-2026 Capital Improvement Plan is the issuance of debt. In order to finance Phase I of the CIP, staff is recommending the issuance of \$50,000,000 worth of General Obligation (G.O.) bonds in three separate issuances for a duration of 20 years. The assumed interest rate is 4.5%.

The three issuances - one in FY 2017, FY 2019, and FY 2021 will fund East McEwen Phase 4, Franklin Road, Hillsboro Road Phase II, and the East/Southeast Park. The impacts on the overall debt service are shown above and to the right.



Debt Funding Analysis

How the debt is issued is dependent upon many factors; but none more important than the ability to pay. The chart below shows the annual increase in debt service necessary to service the proposed \$50,000,000 in new bonds (Row D). Row E shows the available resources predicted to be generated annually from the \$0.07 Invest Franklin initiative approved this spring by the BOMA. Row F is the difference on an annual basis. As the chart shows, sufficient capacity exists through the increase in revenues generated by Invest Franklin to accommodate the servicing of the proposed new debt. As important, the entire proposed level of resources is not exhausted by FY 2026, the end of the current CIP horizon. This means that additional resources are available for pay as you go financing and/or additional debt service for Phase II CIP projects.

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
D et Increase Debt Service Year over Year	\$ 150,000	\$ 1,270	\$ (1,709)	\$ 1,535,939	\$ 1,656,442	\$ 1,728,537	\$ 1,691,819	\$ 3,628,865	\$ 2,078,795	\$ 1,989,809
E Invest Franklin	\$ 3,176,766	\$ 3,208,534	\$ 3,240,619	\$ 3,273,025	\$ 3,305,755	\$ 3,338,813	\$ 3,372,201	\$ 3,405,923	\$ 3,439,982	\$ 3,474,382
F (E-D) Annual Balance of Invest Franklin Funds	\$ 3,026,766	\$ 3,207,264	\$ 3,242,328	\$ 1,737,087	\$ 1,649,314	\$ 1,610,276	\$ 1,680,383	\$ (222,941)	\$ 1,361,188	\$ 1,484,574
Cumulative Net Balance Invest Franklin	\$ 3,026,766	\$ 6,234,029	\$ 9,476,357	\$ 11,213,444	\$ 12,862,758	\$ 14,473,034	\$ 16,153,417	\$ 15,930,475	\$ 17,291,663	\$ 18,776,237



Phase I CIP Projects



Phase I CIP: East McEwen Drive - Phase 4

Improvement of East McEwen Drive, from 800 feet east of the roundabout at Cool Springs Boulevard/Oxford Glen Drive to Wilson Pike (SR-252). The project shall be constructed as a four (4) lane, median divided facility with turn lanes as required. Project shall include: access management (as allowable), curb & gutter, street lights, ITS Infrastructure, and accommodations for pedestrians and bicycles. Approximate project length of 8,200 LF. The budget has been updated based on additional time and cost associated with accepting federal funds in the amount of \$8,000,000.

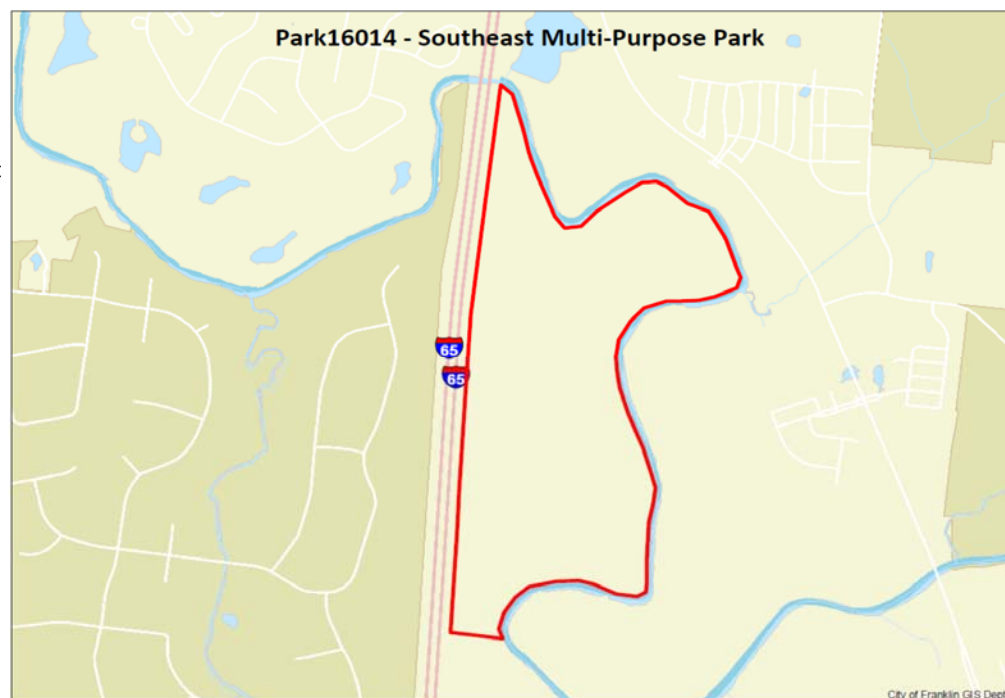


East McEwen Drive - Phase 4	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total Available
Internal											
General	\$ -	\$ 2,350,000	\$ 750,000	\$ 7,384,550	\$ 7,384,550	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,869,100
Sanitation Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Road Impact Fund	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,250,000
Stormwater	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Hotel Motel	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
In Lieu of Parkland	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer Funding	\$ -	\$ -	\$ -	\$ 179,850	\$ 179,850	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 359,700
External											
MPO/TDOT	\$ -	\$ -	\$ -	\$ 4,000,000	\$ 4,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,000,000
County Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Developer Agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 250,000	\$ 2,600,000	\$ 1,000,000	\$ 11,814,400	\$ 11,814,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 27,478,800



Phase I CIP: East / South East Multipurpose Park

New Southeast Multi-Purpose Park on the city-owned 180-acre parcel). The park would include a minimum of 8 lighted multi-purpose rectangular sports fields that could be used for football, lacrosse, rugby and soccer. The Franklin Cowboys football program would move from Jim Warren Park to this new park when completed. This park should have a range of passive uses as well to serve as a Community Park for neighborhoods in this area. A master plan should be developed for the park to guide phased development of the park.

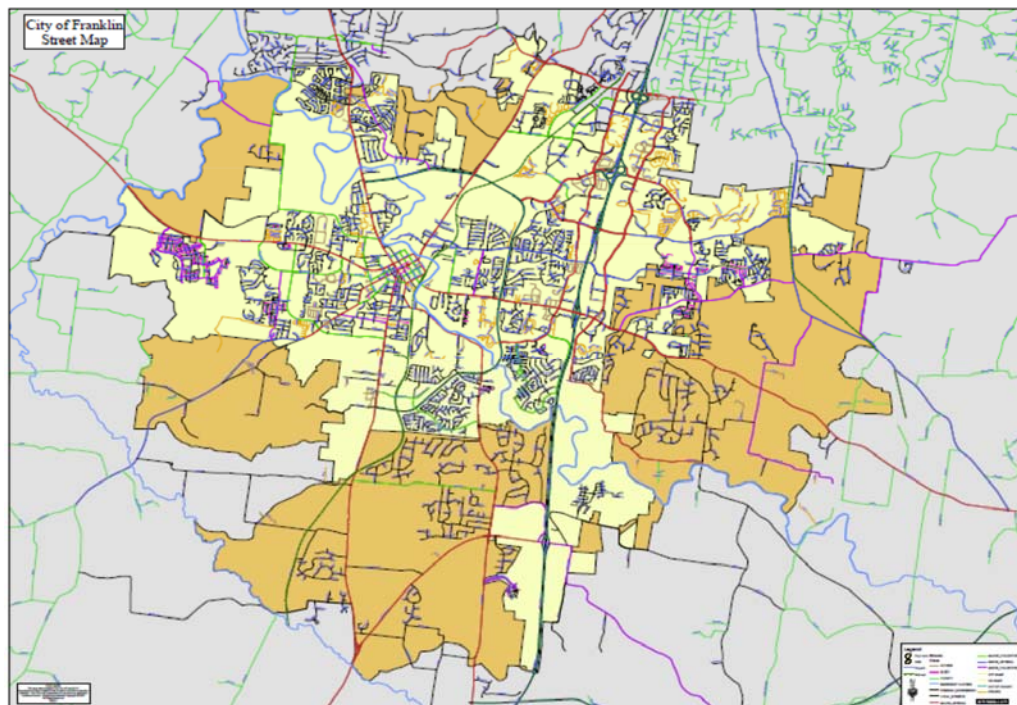


East/Southeast Park	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total Available
Internal											
General	\$ 300,000	\$ -	\$ 2,100,000	\$ 2,350,000	\$ 2,350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,100,000
Sanitation Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Road Impact Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stormwater	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Facilities Tax	\$ -	\$ 50,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,550,000
Hotel Motel	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
In Lieu of Parkland	\$ -	\$ 250,000	\$ 600,000	\$ 350,000	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,550,000
Water Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
External											
MPO/TDOT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
County Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Developer Agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 300,000	\$ 300,000	\$ 4,200,000	\$ 4,200,000	\$ 4,200,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,200,000



Phase I CIP: Sidewalk Gaps

Annual budget of \$250,000 over a 5-year period to "fill in" gaps in the existing sidewalk network. Segments of sidewalk that do not have logical connections exist in many areas around the City. A dedicated budget item on an annual basis would allow the City the opportunity to complete existing sidewalk networks by "filling-in" these gaps.



Sidewalk Gaps	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total Available
Internal											
General	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,250,000
Sanitation Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Road Impact Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stormwater	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Hotel Motel	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
In Lieu of Parkland	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
External											
MPO/TDOT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
County Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Developer Agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,250,000



Phase I CIP: Fire Station 7

The City currently operates a temporary fire station at the Williamson County AG Complex. This temporary fire station needs to be replaced with a permanent facility.



	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total Available
Fire Station 7											
Internal											
General	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sanitation Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Road Impact Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stormwater	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Facilities Tax	\$ 225,000	\$ 2,052,500	\$ 2,052,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,330,000
Hotel Motel	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
In Lieu of Parkland	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
External											
MPO/TDOT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
County Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Developer Agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 225,000	\$ 2,052,500	\$ 2,052,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,330,000



Phase I CIP: Franklin Road Improvements

Improvement of Franklin Road, from the bridge at the Harpeth River to Hooper Lane. The project shall be constructed as a three (3) facility. Project shall include: curb & gutter, street lights, ITS Infrastructure, sidewalks, and typical streetscape elements. Approximate project length of 3,500 LF.



Franklin Road Improvements	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total Available
Internal											
General	\$ -	\$ 1,532,880	\$ 4,405,630	\$ 5,622,750	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,561,260
Sanitation Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Road Impact Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stormwater	\$ -	\$ -	\$ 272,250	\$ 272,250	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 544,500
Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Hotel Motel	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
In Lieu of Parkland	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Funding	\$ -	\$ 311,120	\$ 311,120	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 622,240
Sewer Funding	\$ -	\$ 156,000	\$ 156,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 312,000
External											
MPO/TDOT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
County Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Army Corps of Engineers	\$ -	\$ -	\$ 750,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 750,000
Developer Agreements	\$ -	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 550,000
Total	\$ -	\$ 2,550,000	\$ 5,895,000	\$ 5,895,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,340,000



Phase I CIP: Goose Creek Interchange Lighting

Interchange Lighting for Goose Creek at I-65. The City will need to partner with TDOT to fund 50% of the cost associated with this project.



	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total Available
Goose Creek Lighting											
Internal											
General	\$ 30,000	\$ 405,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 435,000
Sanitation Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Road Impact Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stormwater	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Hotel Motel	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
In Lieu of Parkland	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
External											
MPO/TDOT	\$ 30,000	\$ 405,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 435,000
County Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Developer Agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 60,000	\$ 810,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 870,000



Phase I CIP: Major Street Resurfacing

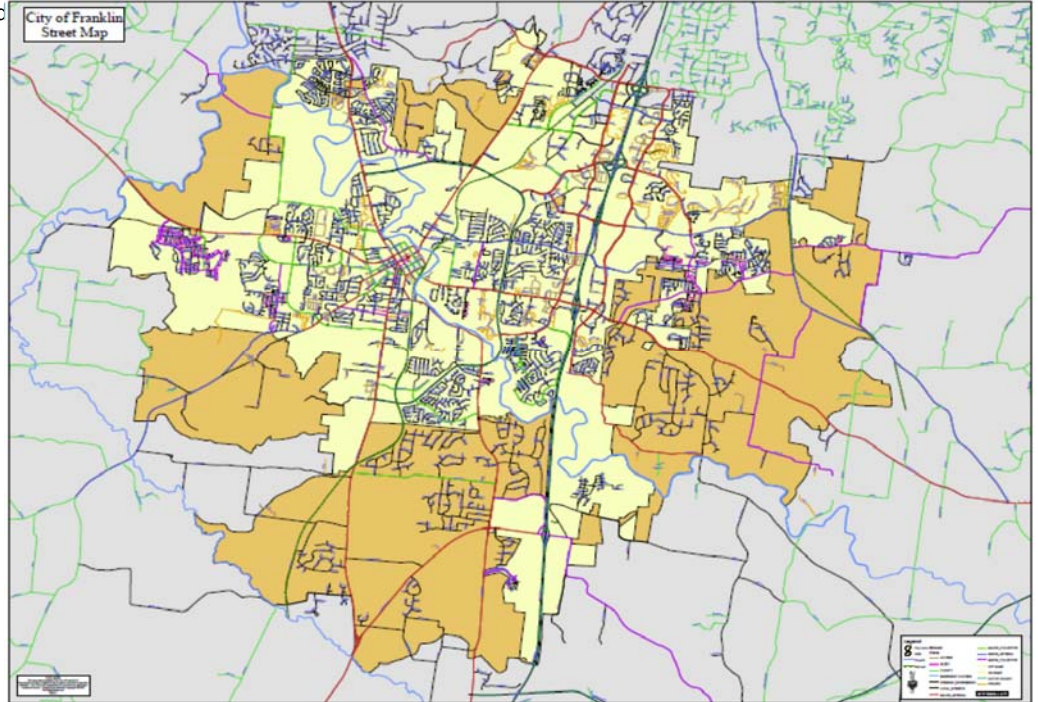
The resurfacing (e.g. paving) of major roadways within the City are proposed to be included in the Capital Investment Plan (CIP) as follows:

2017 - Cool Springs Blvd, from Mack Hatcher Pkwy to East McEwen Dr.

2019 - Royal Oaks Blvd/Mallory Ln, from Mack Hatcher Pkwy to Cool Springs Blvd.

2021 - Mallory Ln, from Cool Springs Blvd to Moores Ln.

The list above is not final, and maybe subject to change.



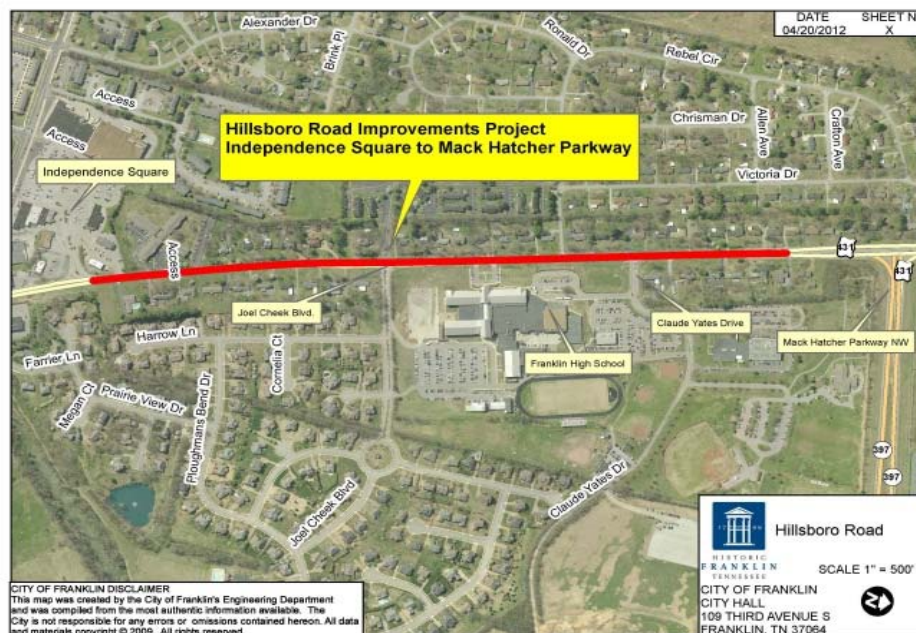
Major Street Resurfacing	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total Available
Internal											
General	\$ 2,400,000	\$ -	\$ 1,700,000	\$ -	\$ 1,300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,400,000
Sanitation Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Road Impact Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stormwater	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Hotel Motel	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
In Lieu of Parkland	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
External											
MPO/TDOT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
County Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Developer Agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 2,400,000	\$ -	\$ 1,700,000	\$ -	\$ 1,300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,400,000



Phase I CIP: Hillsboro Road Phase II

This project is the second phase of the overall Hillsboro Road Improvements Project, creating roadway and utility infrastructure upgrades to Hillsboro Road, State Route 106. Aspects of this project include:

Widening from a 2-lane roadway with shoulders to 3-lanes (includes a new center turn lane) with curb and gutter (widening is symmetrical along the roadway's existing centerline); New 4.0' Bike lanes on both sides; New 3.0' grass strip with street trees; New 5.0' sidewalk along both sides of the roadway, up to Claude Yates; New street lighting along both sides using decorative street light poles; Northbound right turn lanes (in addition to the 2 travel lanes and center turn lane) to be added in front of Franklin High School and at both of the Joel Cheek Blvd. and Claude Yates Drive Intersections; Installing a traffic control signal at Claude Yates Drive to help with Franklin High School Traffic; Upgrading the Joel Cheek Blvd. traffic signal; Relocating all overhead utilities into underground duct banks; Upgrading older and undersized water and sanitary sewer utility lines; and Installing a new storm water sewer system with catch basins and yard inlets. These upgrades take place in both State Rights-of-Way and City/Public Easements.



Hillsboro Road Phase II	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total Available
Internal											
General	\$ 4,625,000	\$ 1,850,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,475,000
Sanitation Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Road Impact Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stormwater	\$ 50,000	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,000
Facilities Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Hotel Motel	\$ 195,000	\$ 195,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 390,000
In Lieu of Parkland	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Funding	\$ 552,500	\$ 552,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,105,000
Sewer Funding	\$ 372,500	\$ 372,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 745,000
External											
Fed/MPO/TDOT	\$ 600,000	\$ 1,150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,750,000
County Facilities Tax	\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000
Utility Agreements	\$ 475,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 475,000
Developer Agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 7,370,000	\$ 4,670,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,040,000

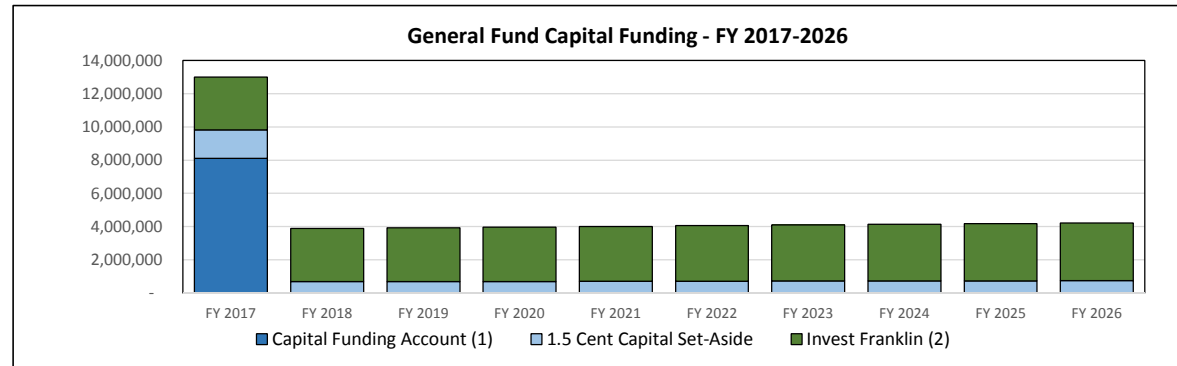


10-Year Financing Analysis



Fund:	General Fund	Percent of Total CIP Revenues	31.0%
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General Fund: The largest funding source for Capital Projects is the General Fund. The property tax contributes the most to capital resources within the General Fund (Both in the form of the Invest Franklin initiative and in FY 2025 when the bonds for the TIF district are paid off. It is anticipated that annual tax revenue will flow to the general fund for either operations and/or increased debt capacity. The amount of debt capacity is under review by the City's financial advisers and City staff.)



	Projections										Totals
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	
Capital Funding Account ⁽¹⁾	8,101,435	-	-	-	-	-	-	-	-	-	8,101,435
1.5 Cent Capital Set-Aside	1,714,782	687,543	694,419	701,363	708,377	715,460	722,615	729,841	737,140	744,511	8,156,051
Invest Franklin ⁽²⁾	3,176,766	3,208,534	3,240,619	3,273,025	3,305,755	3,338,813	3,372,201	3,405,923	3,439,982	3,474,382	33,236,000
Totals	\$ 12,992,983	\$ 3,896,077	\$ 3,935,038	\$ 3,974,388	\$ 4,014,132	\$ 4,054,273	\$ 4,094,816	\$ 4,135,764	\$ 4,177,122	\$ 4,218,893	\$ 49,493,486

Assumptions

- (1) Balance of Capital Funding Account (that portion of G.F. Reserves over 45% of fund balance) varies and will be finalized only once preliminary FY 2016 Audited Financials are available.
- (2) Both the 1.5 Cent Capital Set Aside and the Invest Franklin receipts assume a conservative 1% growth year-over-year for the 10-year CIP horizon. Further increases may occur in FY 2022 at the time of the next revaluation of property, dependent upon what future BOMA's decide to do. For this analysis, no change in the rate is assumed.
- (3) Available Balance will be finalized only once preliminary FY 2016 Audited Financials are available.



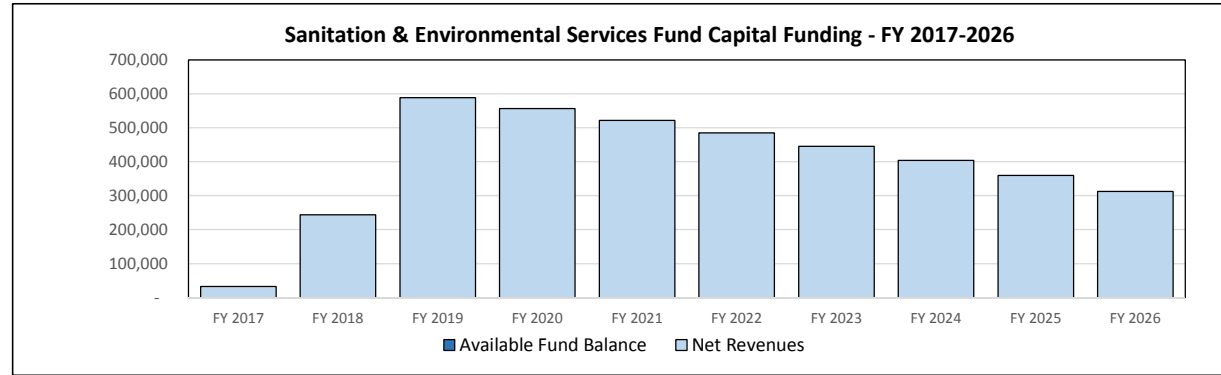
Fund: Sanitation

Percent of All Revenues

2.5%

Sanitation & Environmental Services Fund: This Special Revenue fund accounts for the fees collected in the collection and disposal of residential and commercial garbage. The primary component within the fund are those fees charged for disposal of refuse. In recent years, the City has worked to reduce the subsidy from the General Fund for sanitation and recycling operations.

Beginning in FY 2018, the fund should be able to sustain without transfers from the General Fund, and will be able to be self-sustaining by FY 2019. This surplus should be reserved (at least in part) for Capital Renewal and Replacement. Given the growth of the community, another transfer station may be a real possibility.



	Projections										Totals
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-year
Available Fund Balance	-	-	-	-	-	-	-	-	-	-	-
Net Revenues	32,294	244,165	588,923	556,343	521,641	484,723	445,495	403,857	359,705	312,933	3,950,079
Totals	\$ 32,294	\$ 244,165	\$ 588,923	\$ 556,343	\$ 521,641	\$ 484,723	\$ 445,495	\$ 403,857	\$ 359,705	\$ 312,933	\$ 3,950,079

(1) Available Balance will be finalized only once preliminary FY 2016 Audited Financials are available.



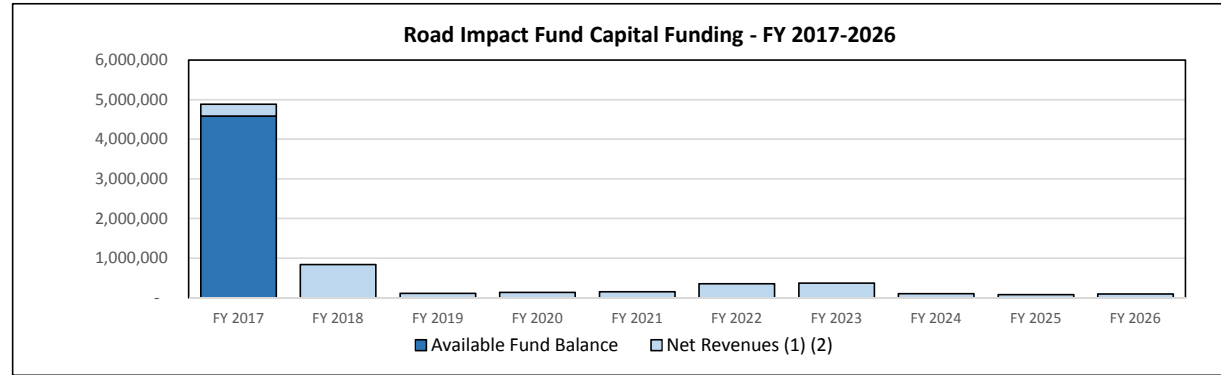
Fund: Road Impact

Percent of All Revenues

4.5%

Road Impact Fund: The Road Impact Fund is the special revenue fund created for the accounting of expenditures in accord with City Ordinance 88-13 on the proceeds of road impact fees from new development. These funds can be used to pay for new arterial roads, directly or through payment of debt service on bonds associated with the projects.

The fund primarily is dedicated to servicing debt on already constructed arterial roadways. During the FY 2017-2026 CIP horizon, the debt service obligation assigned the Road Impact Fund is over \$38 million. (And nearly \$50 million total outstanding) Assuming the current balance is maintained as a sinking fund and reasonable collections remain to come into the fund, this obligation should be able to be met. But few - if any - new obligations should be planned at this time.



	Projections										Totals
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-year
Available Fund Balance	4,582,150	-	-	-	-	-	-	-	-	-	4,582,150
Net Revenues (1) (2)	298,664	838,593	111,484	131,256	153,639	352,228	372,842	103,176	76,783	98,114	2,536,779
Totals	\$ 4,880,814	\$ 838,593	\$ 111,484	\$ 131,256	\$ 153,639	\$ 352,228	\$ 372,842	\$ 103,176	\$ 76,783	\$ 98,114	\$ 7,118,929

(1) Net Revenues less Debt Service and possible offsets.

(2) Assumes average of \$4,250,000 collected annually from FY 2017-FY 2026.

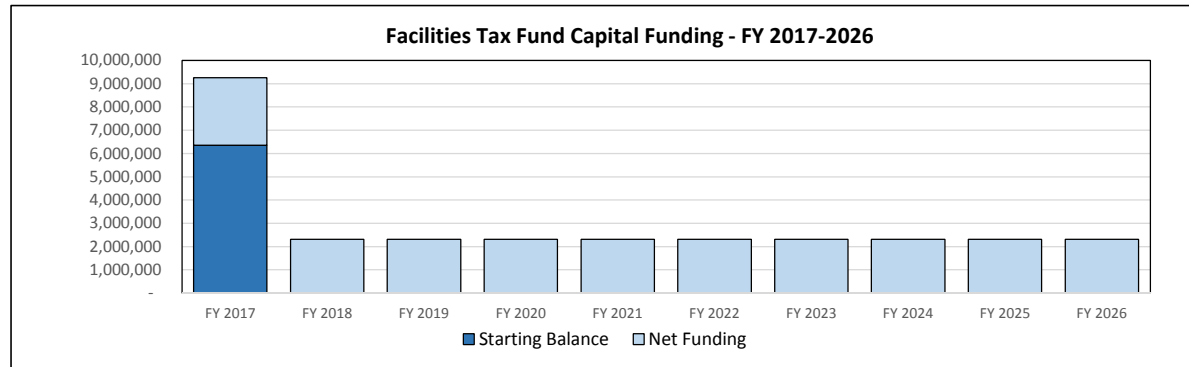
(3) Available Balance will be finalized only once preliminary FY 2016 Audited Financials are available.



Fund:	Facilities Tax Fund	Percent of All Revenues	18.8%
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Facilities Tax Fund: A special revenue fund used to account for the proceeds authorized by a private act of the Tennessee General Assembly of 1987 for the City to levy and collect a privilege tax on new development to provide that new development contribute its fair share of providing new public facilities made necessary by growth. Such taxes may be expended only upon police, fire, sanitation, and parks and recreation.

With the only known funding request against the fund any remaining costs of Fire Station 8 and Fire Station 7, (together both should be no more than \$5,000,000), ample resources are available to spend from the Facilities Tax on eligible capital



	Projections										Totals
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Year
Starting Balance	6,348,411	-	-	-	-	-	-	-	-	-	6,348,411
Net Funding	2,912,000	2,312,000	2,312,000	2,312,000	2,312,000	2,312,000	2,312,000	2,312,000	2,312,000	2,312,000	23,720,000
Totals	\$ 9,260,411	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 30,068,411

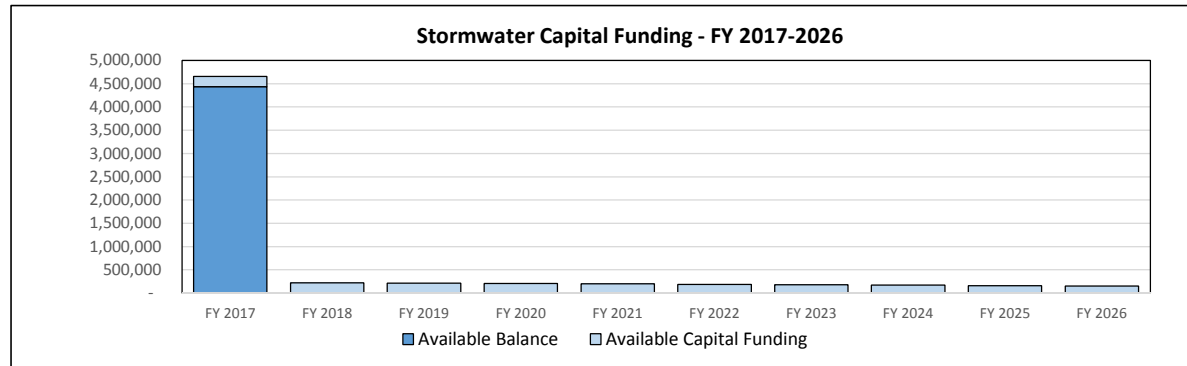
(1) Available Balance will be finalized only once preliminary FY 2016 Audited Financials are available.



Fund:	Stormwater	Percent of Total CIP Revenues	4.0%
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Stormwater Fund: A special revenue fund used to account for the City's Stormwater drainage projects and operations that prevent water issues. Revenues are primarily from charges to residential and commercial customers based on roofs and paved areas.

This is another fund dependent upon development. Should development increase faster than projected, or fees are increased, more money maybe come available for capital needs/requests. As it is, little annual surplus is forecast after operational concerns are met.



	Projections										Totals
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	
Available Balance	4,436,729	-	-	-	-	-	-	-	-	-	4,436,729
Available Capital Funding	222,266	216,697	210,537	203,759	196,328	188,214	179,373	169,778	159,377	148,135	1,894,463
Totals	\$ 4,658,995	\$ 216,697	\$ 210,537	\$ 203,759	\$ 196,328	\$ 188,214	\$ 179,373	\$ 169,778	\$ 159,377	\$ 148,135	\$ 6,331,192

Assumptions

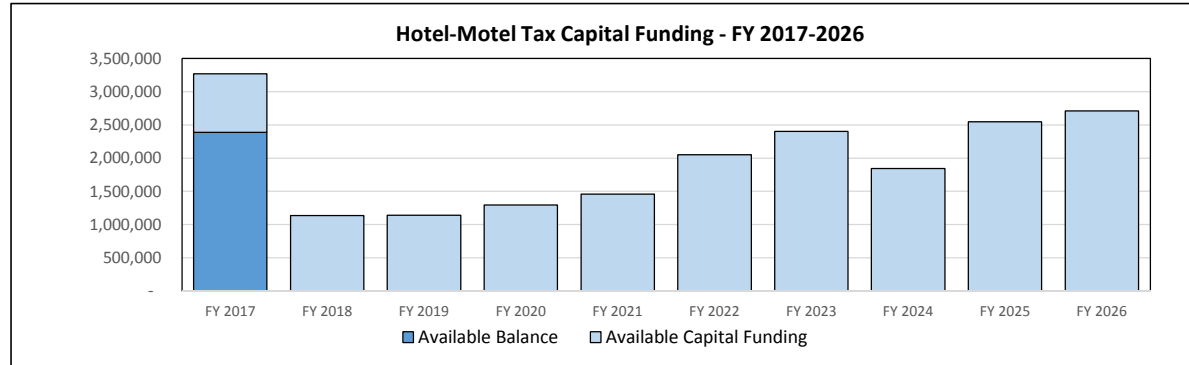
(1) Available Balance will be finalized only once preliminary FY 2016 Audited Financials are available.



Fund:	Hotel Motel Tax	Percent of Total CIP Revenues	12.4%
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Hotel Motel Tax: The Hotel/Motel Tax has been used in the past for those types of infrastructure projects which promote recreation and tourism. Specifically, these monies have been used for servicing debt related to the acquisition of the Carter's Hill Battlefield, Eastern Flank Battlefield and the Park at Harlinsdale Farm.

Future growth assumes between 4-5% growth in revenues from hotel stays annually, less all known costs (existing debt service and the City's contribution to the Williamson County Convention & Visitors Bureau).



	Projections										Totals
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	
Available Balance	2,388,275	-	-	-	-	-	-	-	-	-	2,388,275
Available Capital Funding	881,418	1,134,099	1,139,140	1,295,873	1,458,643	2,049,163	2,401,230	1,843,140	2,547,764	2,709,614	17,460,085
Totals	\$ 3,269,693	\$ 1,134,099	\$ 1,139,140	\$ 1,295,873	\$ 1,458,643	\$ 2,049,163	\$ 2,401,230	\$ 1,843,140	\$ 2,547,764	\$ 2,709,614	\$ 19,848,360

Assumptions

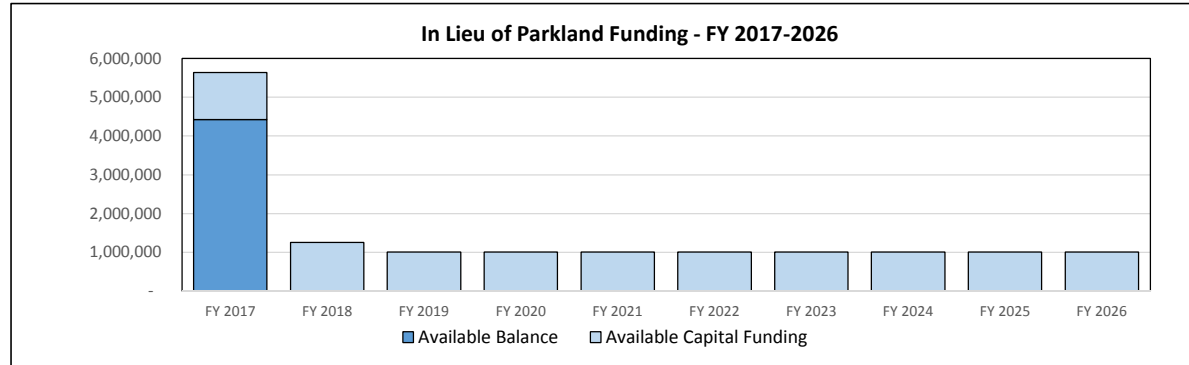
(1) Available Balance will be finalized only once preliminary FY 2016 Audited Financials are available.



Fund:	In Lieu of Tax Parkland	Percent of Total CIP Revenues	9.4%
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In Lieu of Parkland Fund: The In Lieu of Parkland Fund was created in FY 2015 for the purpose of satisfying requirements of Section 5.5.4 of the City of Franklin Zoning Ordinance for developers seeking alternatives to the development of green space within developments. Funds can be used only for the acquisition or development of public parks, greenways/blue ways, open space sites, and related facilities.

The important issue of concern with these funds is the nexus issue: funds can only be spent in the quadrant of the community in which they are collected. Although funds are likely to be generated annually in excess of a million dollars, they cannot be spent City-wide. This limits how much can be spent on a particular project.



	Projections										Totals
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	
Available Balance	4,425,966	-	-	-	-	-	-	-	-	-	4,425,966
Available Capital Funding	1,207,525	1,255,000	1,005,000	1,005,000	1,005,000	1,005,000	1,005,000	1,005,000	1,005,000	1,005,000	10,502,525
Totals	\$ 5,633,491	\$ 1,255,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 14,928,491

Assumptions

(1) Available Balance will be finalized only once preliminary FY 2016 Audited Financials are available.



City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

**FY 2017-2026
Capital Investment Program
Financing Model**

**September 13, 2016
Board of Mayor & Aldermen**



City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

Outline

- Executive Summary**
- Available Resources**
- Phase I Project Details**
- Remaining Resources**
- Debt Capacity Review**



City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

Executive Summary

This financing model has been built to determine answers to the following questions:

- What is the amount of available resources from all funds which can be spent on Capital Projects over the next ten years?**
- How much will Phase I of the FY 2017-2026 Capital Improvement Program cost?**
- What will be the amount of remaining resources after those projects are paid for? And,**
- What will be the impact on the City's debt capacity and overall debt service?**



City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

Executive Summary

This model has three main sections:

- An Executive Summary with summaries of current, future and remaining resources, annual and cumulative cost estimates for all Phase I CIP projects and a revised Debt Capacity Analysis given the revised cost of projects.**
- Phase I CIP Project Detail Sheets, which itemize the annual and cumulative funding needs by source by project.**
- 10-year Financing Analysis with detailed forecasts for most major internal funds of the City of Franklin.**



City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

Executive Summary

In building this model, staff has tried to be conservative with our revenue projections and prudent when determining available resources. "Available fund balances" are current estimated balances in most funds as of June 30th, less amounts reserved either through state law or BOMA policy.

The result is mostly positive - due to the prudent management of the community and the passage of the Invest Franklin initiative, the City can afford to take on all Phase I projects and have reasonable levels of remaining resources to fund additional phases of the FY 2017-2026 Capital Improvement Program.



City of Franklin, Tennessee **FY 2017-2026 Capital Investment Program**

Available Resources

Taking into account all available fund balances which can be used for capital purposes and forecasting all future revenues for the next decade, ***we project nearly \$160,000,000 in cash (or over \$206,000,000 in cash + debt)*** is available for capital projects between now and the end of FY 2026.



City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

Available Resources

	Fund Balance Available	FY 2017	FY 2018	FY 2019	FY 2020	Ongoing Resources						Total Available
						FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	
Internal												
General												
Capital Funding Account	\$ 8,101,435	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 8,101,435
1.5 Cent Capital Set-Aside	\$ 1,034,046	\$ 680,736	\$ 687,543	\$ 694,419	\$ 701,363	\$ 708,377	\$ 715,460	\$ 722,615	\$ 729,841	\$ 737,140	\$ 744,511	\$ 8,156,051
Invest Franklin	\$ -	\$ 3,176,766	\$ 3,208,534	\$ 3,240,619	\$ 3,273,025	\$ 3,305,755	\$ 3,338,813	\$ 3,372,201	\$ 3,405,923	\$ 3,439,982	\$ 3,474,382	\$ 33,236,000
Sanitation Fund	\$ -	\$ 32,294	\$ 244,165	\$ 588,923	\$ 556,343	\$ 521,641	\$ 484,723	\$ 445,495	\$ 403,857	\$ 359,705	\$ 312,933	\$ 3,950,079
Road Impact Fund	\$ 4,582,150	\$ 298,664	\$ 838,593	\$ 111,484	\$ 131,256	\$ 153,639	\$ 352,228	\$ 372,842	\$ 103,176	\$ 76,783	\$ 98,114	\$ 7,118,929
Stormwater	\$ 4,436,729	\$ 222,266	\$ 216,697	\$ 210,537	\$ 203,759	\$ 196,328	\$ 188,214	\$ 179,373	\$ 169,778	\$ 159,377	\$ 148,135	\$ 6,331,192
Facilities Tax	\$ 6,348,411	\$ 2,912,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 2,312,000	\$ 30,068,411
Hotel Motel	\$ 2,388,275	\$ 881,418	\$ 1,134,099	\$ 1,139,140	\$ 1,295,873	\$ 1,458,643	\$ 2,049,163	\$ 2,401,230	\$ 1,843,140	\$ 2,547,764	\$ 2,709,614	\$ 19,848,360
In Lieu of Parkland	\$ 4,425,966	\$ 1,207,525	\$ 1,255,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 1,005,000	\$ 14,928,491
Water Funding*	\$ -	\$ 552,500	\$ 863,620	\$ 311,120	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,727,240
Sewer Funding*	\$ -	\$ 372,500	\$ 528,500	\$ 156,000	\$ 179,850	\$ 179,850	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,416,700
External												
MPO/TDOT	\$ -	\$ 8,630,000	\$ 1,555,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,185,000
Army Corp of Engineers	\$ -	\$ -	\$ -	\$ 750,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 750,000
County Facilities Tax	\$ 3,262,263	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 950,000	\$ 12,762,263
Utility Agreements	\$ -	\$ 475,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 475,000
Developer Agreements	\$ 550,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 550,000
Total	\$ 35,129,275	\$ 20,391,669	\$ 13,793,750	\$ 11,469,242	\$ 10,608,470	\$ 10,791,232	\$ 11,395,601	\$ 11,760,756	\$ 10,922,714	\$ 11,587,751	\$ 11,754,689	\$ 159,605,150

**Water & Sewer resources shown only those available for Phase I capital projects. Amount to be further refined.*



City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

Phase I CIP Project Details

Eight (8) projects are identified in the funding analysis provided herein:

- East McEwen (Phase IV)**
- East / Southeast Multipurpose Park**
- Sidewalk “Gaps”**
- Fire Station 7**
- Franklin Road**
- Goose Creek Interchange Lighting**
- Major Street Resurfacing**
- Hillsboro Road Phase II**

City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

Phase I CIP Project Details

The following shows the financing needs for Phase I CIP projects as ranked by BOMA members and identified by staff.

	Ongoing Resources					Total Needed
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	
Internal						
General						
Cash	\$ 580,000	\$ 655,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 1,985,000
Debt	\$ 7,025,000	\$ 5,732,880	\$ 8,955,630	\$15,357,300	\$11,034,550	\$ 48,105,360
Sanitation Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Road Impact Fund	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 1,250,000
Stormwater	\$ 50,000	\$ 50,000	\$ 272,250	\$ 272,250	\$ -	\$ 644,500
Facilities Tax	\$ 225,000	\$ 2,102,500	\$ 3,552,500	\$ 1,500,000	\$ 1,500,000	\$ 8,880,000
Hotel Motel	\$ 195,000	\$ 195,000	\$ -	\$ -	\$ -	\$ 390,000
In Lieu of Parkland	\$ -	\$ 250,000	\$ 600,000	\$ 350,000	\$ 350,000	\$ 1,550,000
Water Funding	\$ 552,500	\$ 863,620	\$ 311,120	\$ -	\$ -	\$ 1,727,240
Sewer Funding	\$ 372,500	\$ 528,500	\$ 156,000	\$ 179,850	\$ 179,850	\$ 1,416,700
External						
MPO/TDOT	\$ 8,630,000	\$ 1,555,000	\$ -	\$ -	\$ -	\$ 10,185,000
Army Corp of Engineers	\$ -	\$ -	\$ 750,000	\$ -	\$ -	\$ 750,000
County Facilities Tax	\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -	\$ 1,000,000
Utility Agreements	\$ 475,000	\$ -	\$ -	\$ -	\$ -	\$ 475,000
Developer Agreements	\$ -	\$ 550,000	\$ -	\$ -	\$ -	\$ 550,000
Total	\$ 18,855,000	\$ 13,232,500	\$ 15,097,500	\$ 18,159,400	\$ 13,564,400	\$ 78,908,800



City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

Phase I CIP Project Details

- Of the eight (8) projects in Phase I, two (Sidewalk “Gaps” & Fire Station 7) are fully funded as Pay-As-You-Go projects.
- Of the \$78,908,800 in Phase I projects, \$48,105,360 is proposed to be funded through debt financing, some **\$14 million less** than what was proposed in August in the Debt Capacity Analysis provided by PFM.
- Of the \$78,908,800 in Phase I projects, \$12,960,000 (17%) comes from “External Sources”; that is, sources such as the Federal or State governments, the MPO, the County Facilities Tax, or agreements and contributions from utility companies or private developers



City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

Remaining Resources

- The chart below shows the anticipated remaining resources after construction of all Phase I projects.

	FY 2017-2026 Projected Resources		Phase I Project Needs		Balance Remaining
Internal					
110 General					
Pay-as-you-go Cash ¹	\$	16,257,486	\$	1,985,000	\$ 14,272,486
Debt Service ²	\$	80,000,000	\$	48,105,360	\$ 31,894,640
124 Sanitation Fund	\$	3,950,079	\$	-	\$ 3,950,079
128 Road Impact Fund	\$	7,118,929	\$	1,250,000	\$ 5,868,929
130 Stormwater	\$	6,331,192	\$	644,500	\$ 5,686,692
135 Facilities Tax	\$	30,068,411	\$	8,880,000	\$ 21,188,411
150 Hotel Motel	\$	19,848,360	\$	390,000	\$ 19,458,360
155 In Lieu of Parkland	\$	14,928,491	\$	1,550,000	\$ 13,378,491
421 Water	\$	1,727,240	\$	1,727,240	\$ -
431 Sewer	\$	1,416,700	\$	1,416,700	\$ -
External					
MPO/TDOT	\$	10,185,000	\$	10,185,000	\$ -
Army Corp of Engineers	\$	750,000	\$	750,000	\$ -
County Facilities Tax	\$	12,762,263	\$	1,000,000	\$ 11,762,263
Utility Agreements	\$	475,000	\$	475,000	\$ -
Developer Contributions	\$	550,000	\$	550,000	\$ -
Total	\$	206,369,150	\$	78,908,800	\$ 127,460,350

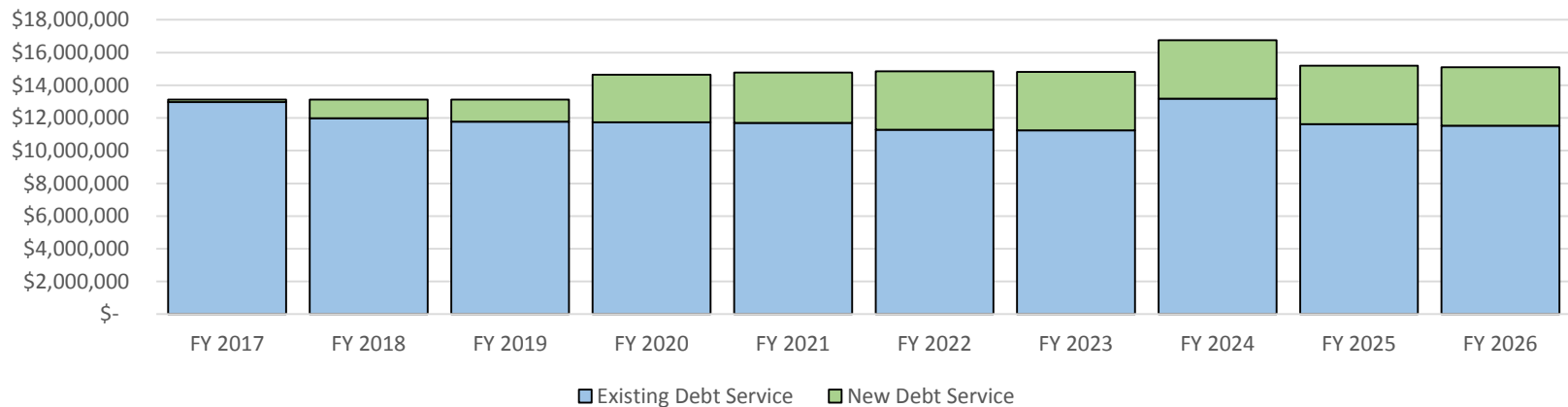
City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

Debt Capacity Analysis

- The model assumes three debt issuances in the next five years: \$15,000,000 in FY 2017, \$25,000,000 in FY 2019 and \$10,000,000 in FY 2021. The chart below shows the revised debt service chart for General Obligation debt during the horizon of the CIP.

Proposed City of Franklin General Obligation Debt Service - FY 2017 - 2026



City of Franklin, Tennessee

FY 2017-2026 Capital Investment Program

Debt Capacity Analysis & Invest Franklin

- The model assumes using most of the \$0.07 raised through the **Invest Franklin** initiative to service debt while other funds and capital reserves will be used for pay as you go projects. The table below shows the balance of **Invest Franklin** Funds if they are used in this way.

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Net Increase Debt Service Year over Year	\$ 150,000	\$ 1,270	\$ (1,709)	\$ 1,535,939	\$ 1,656,442
Invest Franklin	\$ 3,176,766	\$ 3,208,534	\$ 3,240,619	\$ 3,273,025	\$ 3,305,755
Annual Balance of Invest Franklin Funds	\$ 3,026,766	\$ 3,207,264	\$ 3,242,328	\$ 1,737,087	\$ 1,649,314
Cumulative Net Balance Invest Franklin	\$ 3,026,766	\$ 6,234,029	\$ 9,476,357	\$ 11,213,444	\$ 12,862,758

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Net Increase Debt Service Year over Year	\$ 1,728,537	\$ 1,691,819	\$ 3,628,865	\$ 2,078,795	\$ 1,989,809
Invest Franklin	\$ 3,338,813	\$ 3,372,201	\$ 3,405,923	\$ 3,439,982	\$ 3,474,382
Annual Balance of Invest Franklin Funds	\$ 1,610,276	\$ 1,680,383	\$ (222,941)	\$ 1,361,188	\$ 1,484,574
Cumulative Net Balance Invest Franklin	\$ 14,473,034	\$ 16,153,417	\$ 15,930,475	\$ 17,291,663	\$ 18,776,237



HISTORIC
FRANKLIN
TENNESSEE

Debt Capacity Model Update

Presented on
August 18, 2016



The PFM Group
Financial & Investment Advisors

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Memphis, TN 38117-3722
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Capacity Model Overview

The Capacity Model includes:

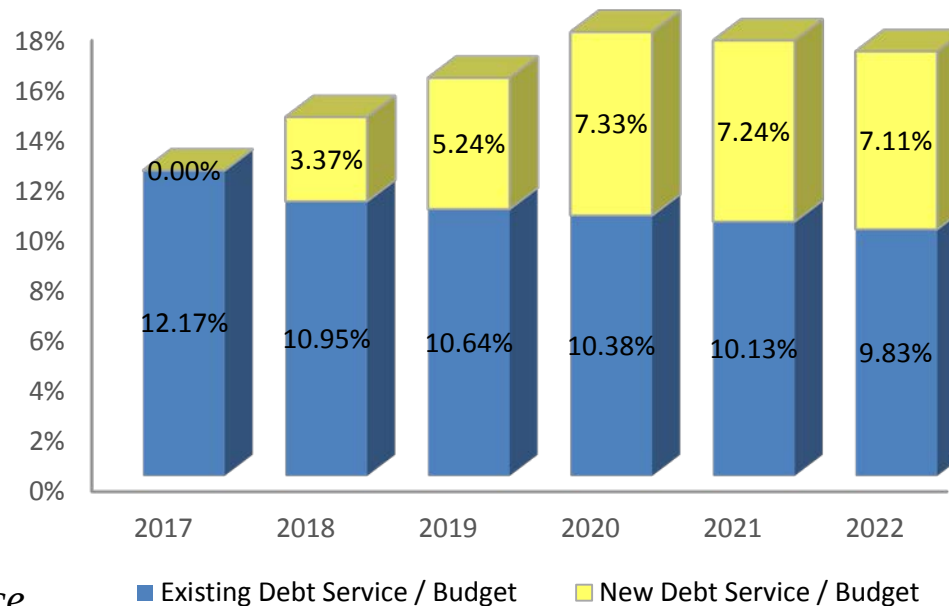
- Actual, Audited Revenues and Expenditures for FY 2015
- Estimated, Unaudited FY 2016 Revenues and Expenditures
- Budgeted FY 2017 Revenues and Expenditures
- Revenue and Expenditure Growth Rate Assumptions for FY 2018 – 2022 provided by the City
- Bonds issued in FY 2017, FY 2019 and FY 2021 to cover CIP project needs of \$82.3 million which results in bonds issued totaling \$63.8 million

CIP Summary

CIP Work Sheet									
August 2016 Analysis									
Project Description Projects	2017	2018	2019	2020	2021	2022	5 Year Total (18-22)	Project Total	
1 East McEwen Drive - Phase 4	2,600,000	1,000,000	12,164,000	12,164,400	-	-	25,328,400	27,928,400	
Net Funding Needs	2,350,000	750,000	7,914,000	7,914,400	-	-	16,578,400	18,928,400	
2 East/Southeast Multipurpose Park	1,200,000	4,000,000	4,000,000	4,000,000	-	-	12,000,000	13,200,000	
Net Funding Needs	-	3,800,000	3,800,000	3,800,000	-	-	11,400,000	11,400,000	
3 Sidewalk Gaps	250,000	250,000	250,000	250,000	250,000	-	1,000,000	1,250,000	
Net Funding Needs	250,000	250,000	250,000	250,000	250,000	-	1,000,000	1,250,000	
4 Fire Station 7	80,000	4,150,000	100,000	-	-	-	4,250,000	4,330,000	
Net Funding Needs	-	-	-	-	-	-	-	-	
5 Franklin Road Improvements & Streetscape	-	2,550,000	5,895,000	5,895,000	-	-	14,340,000	14,340,000	
Net Funding Needs	-	1,900,000	4,405,450	5,155,450	-	-	11,460,900	11,460,900	
6 Goose Creek Interchange Lighting	60,000	810,000	-	-	-	-	810,000	870,000	
Net Funding Needs	30,000	405,000	-	-	-	-	405,000	435,000	
7 Major Street Resurfacing	-	2,400,000	-	1,700,000	-	1,300,000	5,400,000	5,400,000	
Net Funding Needs	-	2,400,000	-	1,700,000	-	1,300,000	5,400,000	5,400,000	
8 Hillsboro Road	15,000,000							- 15,000,000	
Net Funding Needs	15,000,000	-	-	-	-	-	-	15,000,000	
Project Subtotal	19,190,000	15,160,000	22,409,000	24,009,400	250,000	1,300,000	63,128,400	82,318,400	
Net Funding Needs	17,630,000	9,505,000	16,369,450	18,819,850	250,000	1,300,000	46,244,300	63,874,300	
Bonds Issued	27,135,000		35,189,300		1,550,000			63,874,300	

Debt Service to Budget Metrics

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
New Debt Service	-	2,177,383	3,492,094	5,001,063	5,058,973	5,125,439
Estimated Gen Fund Budget (GF Revenues)	62,851,566	64,679,768	66,609,758	68,217,387	69,909,525	72,111,789
New Debt Service / Budget	0.00%	3.37%	5.24%	7.33%	7.24%	7.11%
Existing Debt Service	7,651,190	7,079,596	7,084,969	7,080,820	7,085,047	7,086,321
Existing Debt Service / Budget	12.17%	10.95%	10.64%	10.38%	10.13%	9.83%
New + Existing Debt Service	7,651,190	9,256,978	10,577,063	12,081,883	12,144,019	12,211,760
New + Existing Debt Service / Budget	12.17%	14.32%	15.88%	17.71%	17.37%	16.94%



Debt Assumptions:
Interest rate of 5.00%
20 year, level debt service

Debt Management Policy Ratios

The City's updated Debt Management Policy includes the following ratios:

1. Direct debt as a % of Full Value $\leq$ 1.75%
2. Direct debt of Operating Revenues of $\leq$ 3.00X
3. Total Governmental Funds Debt Service as a % of expenditures $\leq$ 25%

The City also has a reserve fund policy to maintain at least 33% of General Fund Revenues.

Policy Ratios

Affordability Matrix								
Debt Policy	Direct Debt % of Full Value		Direct Debt to Operating Revenue		Govt. Fund DS % Govt. Expenditures		General Fund Balance as a % of Operating Revenues ⁽¹⁾	Debt Service as a % of Operating Expenditures ⁽²⁾
	≤ 1.75%		≤ 3.00x		≤ 25%		≥ 30%	
FY 2017 (Series 2017 Bonds)		1.3%		2.4		14.9%	61.9%	10.8%
FY 2018		1.2%		2.2		16.2%	62.8%	12.8%
FY 2019 (Series 2019 Bonds)		1.4%		2.5		17.4%	64.5%	14.1%
FY 2020		1.3%		2.3		19.0%	66.7%	15.5%
FY 2021 (Series 2021 Bonds)		1.2%		2.1		18.9%	69.3%	15.3%
FY 2022		1.1%		2.0		18.3%	72.2%	15.1%

(1) Moody's 2013 Aaa Median = 38.5%

(2) This metric is no longer reported by Moody's.

Assumptions:

Market Value/Full Value grows at 1%

Governmental Expenditures grow at 1%

Operating Expenses include debt service to be paid out of the General Fund