SPRING HILL MUNICIPAL PLANNING COMMISSION

Paul Downing, Chairman
Jared Cunningham
Matt Fitterer, Alderman
Paula Hepp, Vice Chairman
James Golias
Brent Legendre

City of Spring Hill
199 Town Center Parkway
Spring Hill, TN. 37174

WORK SESSION
AGENDA

January 27, 2020
5:30 PM

A. CALL TO ORDER

B. ROLL CALL

C. CHAIRMAN COMMENTS: All items with changes for the next agenda must be resubmitted by 12:00 PM (noon) on February 3, 2020 (both paper and electronic copies).

D. PUBLIC COMMENT (NON-AGENDA ITEMS)

E. BONDS

1. PC Resolution 20-05 Release Perf Bond and establish Maintenance Bond Cherry Grove Add Ph 7 Sec 2.
2. PC Resolution 20-06 Establish Maintenance Bond for Crooked Creek Ph 2 Sec 3.
3. PC Resolution 20-07 Establish Performance Bond for Crooked Creek Ph 2 Sec 3.
4. PC Resolution 20-08 Establish Maintenance Bond for Harvest Point Ph 16 Sec 1B.
5. PC Resolution 20-09 Establish Performance Bond for Harvest Point Ph 16 Sec 1B.

F. OLD BUSINESS

1. STP 773-2019: Submitted by Brewer Ingram Fuller Architects for the Tennessee Children’s Home. Property is located at 2225 Dr. Robertson Road, zoned I-C and contains approximately 46.25 acres. This item received site plan concept review in September 2019. The applicant requests site plan approval for the new Tennessee Children’s Home campus. Requested by Anthony Fuller.

G. NEW BUSINESS


2. SKP 791-2020: Submitted by Crunk Engineering for South Pointe Square. The property is located at 5081 Port Royal Road, zoned Commercial PUD and contains approximately 17.37 acres. This project was formerly named Magnolia Square. This application is governed by the old zoning ordinance. The applicant requests sketch plan approval for a mixed-use subdivision with 174 residential units (condominiums) and 48,100 sf of commercial space. Requested by Adam Crunk.
3. **FPL 792-2020**: Submitted by S&ME for Harvest Point, Phase 16, Section 1B. The property is zoned R-2 PUD and contains approximately 2.33 acres. The applicant requests final plat approval for 28 townhome lots and the request is being processed under provisions of the approved PUD and the previous zoning code. Requested by Zac Davis.

4. **FPL 793-2020**: Submitted by Wes Engineers & Surveyors for Crooked Creek Sec. 3 Phase 2. The property is zoned R-2 and contains approximately 23.83 acres. The applicant requests final plat approval for 19 single family residential lots. Requested by Allen O’Leary.

5. **STP 794-2020**: Submitted by Berry Engineering for O’Reilly Auto Parts. The property is located at 4872 Port Royal Road, zoned C-4 and contains approximately 1.05 acres (Lot 2B of the Barclay Port Royal subdivision). The applicant requests site plan approval for a 7,500-sf commercial business. Requested by Scott Smith of Belterra Partners.

H. **OTHER BUSINESS**

1. **ZTA 788-2019**: Submitted by the City of Spring Hill Public Works Department for the updating of Articles 15 & 16 of the Unified Development Code.

2. 2040 Plan Map Revisions

I. **ROUND TABLE**

J. **ADJOURN**
DATE: January 22, 2020

REQUEST: Release the performance bond and establish a maintenance bond for Cherry Grove Addition Phase 7 Section 2 for sidewalks, street lights, street signs and final topping

SUBMITTED BY: Thomas S. Wolf, P.E. – City Engineer

OVERVIEW:

- A performance bond was established for Phase 7 Section 2 in the amount of $98,706.00 in April 2018. All improvements have been constructed.
- Roads were final topped in November 2019.

PC ACTION REQUESTED:

- Approve PC Resolution 20-05 to release the performance bond and establish a maintenance bond for Cherry Grove Addition Phase 7 Section 2
RESOLUTION 20-05 OF THE
PLANNING COMMISSION
OF THE CITY OF SPRING HILL, TENNESSEE

A RESOLUTION TO RELEASE THE EXISTING PERFORMANCE BOND AND
TO ESTABLISH AS A MAINTENANCE BOND FOR
CHERRY GROVE ADDITION PHASE 7 SECTION 2

WHEREAS, a Performance Bond is in place guaranteeing the completion of certain improvements for Cherry Grove Addition Phase 7 Section 2 in the amount of $98,706.00; and

WHEREAS, the following improvements are required pursuant to the Final Plat:

   Sidewalks, street lights, street signs and final topping to all streets with 1 3/8 inches of hot mix asphalt; and

WHEREAS, to date, the improvements have been completed, final topping was placed in November 2019 and approved through inspections by the City and therefore a Maintenance Bond letter of credit is required; and

WHEREAS, a Maintenance Bond letter of credit is guaranteeing the workmanship and materials of certain improvements for Cherry Grove Addition Phase 7 Section 2 and the repair of such should damage occur during covered period; and

WHEREAS, it is the recommendation of the City Engineer that the Letter of Credit in the amount of $98,706.00 be reduced to 30% according to Section IV 4.3 Spring Hill Subdivision Regulations, establishing a Maintenance Bond letter of credit in the amount of $29,611.00 for a minimum of twelve (12) months from date of final topping.

NOW, THEREFORE BE IT RESOLVED, by the Spring Hill Planning Commission that the existing bond letter of credit be reduced to establish a Maintenance Bond letter of credit for Cherry Grove Addition Phase 7 Section 2 in the amount of $29,611.00 is hereby approved.

Passed and adopted this 10th day of February, 2020.

Paul Downing, Chairman

Steve Foote, Secretary
CERTIFICATE OF SATISFACTORY COMPLETION

Date: 12/1/2020

Donnie Cameron
Cherry Grove Addition
Phase 7 Section 2

Development Name: Cherry Grove Addition
Phase or Section of Construction: Phase 7 Section 2
Public Improvements: Water, sewer, storm water drainage and basins, streets, curbs, sidewalks, street signs, street lights, final topping

I hereby certify that I have supervised and inspected the improvements to ensure that the design intent has been achieved.

Record Drawings have been submitted by Applicant’s engineer to the City pursuant to ordinance requirements.

Michael W. Stephens
City of Spring Hill Utility Inspector (signature)
Printed name

Approved By:

Thomas S. Wolf
City of Spring Hill Engineering Dept.
Printed name
DATE: January 22, 2020

REQUEST: Establish a maintenance bond and a performance bond for Crooked Creek Phase 2 Section 3

SUBMITTED BY: Thomas S. Wolf, P.E. – City Engineer

OVERVIEW:

- Final plat is on the February 2020 Planning Commission meeting agenda for approval.
- Developer has submitted application and corresponding documentation to establish bonds.

PC ACTION REQUESTED:

- Approve PC Resolution 20-06 to establish a maintenance bond for Crooked Creek Phase 2 Section 3
- Approve PC Resolution 20-07 to establish a performance bond for Crooked Creek Phase 2 Section 3
RESOLUTION 20-06 OF THE
PLANNING COMMISSION
OF THE CITY OF SPRING HILL, TENNESSEE

A RESOLUTION TO ESTABLISH A MAINTENANCE BOND FOR
CROOKED CREEK PHASE 2 SECTION 3

WHEREAS, a Maintenance Bond is required to be established for this development prior to recording of a Final Plat; and

WHEREAS, the Maintenance Bond is guaranteeing the workmanship and materials of certain improvements existing on 19 lots, and the repair of such should damage occur during covered period; and

WHEREAS, the following improvements are required pursuant to the Final Plat:
   Water, Sewer, Storm Water Infrastructure, Streets and Curbs, Street Signs and Street Lights; and

WHEREAS, to date, the improvements have been completed, but not accepted by the City and, therefore, a Maintenance Bond is required; and

WHEREAS, it is the recommendation of the City Engineer that a Maintenance Bond be established for a minimum of twelve (12) months, in the amount of $33,627.00; and

WHEREAS, it is anticipated that the date of completion for the above referenced public improvements will be within the time prescribed for the bond and it is required that an automatic renewal clause, to the benefit of the City of Spring Hill, be included within the bond in case such improvements are not completed in a timely manner.

NOW, THEREFORE, BE IT RESOLVED, that the Spring Hill Planning Commission approves the establishment of a Maintenance Bond for Crooked Creek Phase 2 Section 3 in the amount of $33,627.00.

Passed and adopted this 10th day of February, 2020.

Paul Downing, Chairman

Steve Foote, Secretary
Utility Information Sheet

**Development**: CROOKED CREEK

**Phase**: 2  
**Section**: 3  
**# of lots**: 19

**Cost to install Utility’s (Maintenance Bond)**

| Utility Type      | Cost  
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Sewer line</td>
<td>$29,500</td>
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<tr>
<td>Water line</td>
<td>$20,000</td>
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<td>Storm Water (Infrastructure)</td>
<td>$15,750</td>
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<td>Curbing</td>
<td>$12,100</td>
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<tr>
<td>Binder</td>
<td>$34,740</td>
</tr>
</tbody>
</table>

**TOTAL**: $112,090.00

**30% of Total**: $33,627.00

**BOND AMOUNT**: $33,627.00
RESOLUTION 20-07 OF THE
PLANNING COMMISSION
OF THE CITY OF SPRING HILL, TENNESSEE

A RESOLUTION TO ESTABLISH A PERFORMANCE BOND FOR
CROOKED CREEK PHASE 2 SECTION 3

WHEREAS, a Performance Bond is required to be established for this development prior to recording of a Final Plat; and

WHEREAS, the Performance Bond is guaranteeing the construction of certain improvements on 19 lots; and

WHEREAS, the following improvements are required pursuant to the Final Plat:
   Sidewalks, Street Lights, Street Signs, Stormwater Surface Maintenance
   and Final topping to all streets with 1 1/2 inches of hot mix asphalt; and

WHEREAS, to date, the improvements have not been completed and/or accepted by the City and, therefore, a Performance Bond is required; and

WHEREAS, it is the recommendation of the City Engineer that a Performance Bond be established in the amount of $76,378.00; and

WHEREAS, it is anticipated that the date of completion for the above referenced public improvements will be within the time prescribed for the bond and it is required that an automatic renewal clause, to the benefit of the City of Spring Hill, be included within the bond in case such improvements are not completed in a timely manner; and

WHEREAS, upon completion of the public improvements listed above, the Developer will be required to file a “maintenance” bond guaranteeing performance of the public improvements for a minimum of an additional one year period with the Planning Commission after the dedication and acceptance of such public improvements by the Board of Mayor and Aldermen.

NOW, THEREFORE, BE IT RESOLVED, that the Spring Hill Planning Commission approves the establishment of a Performance Bond for Crooked Creek Phase 2 Section 3 in the amount of $76,378.00.

Passed and adopted this 10th day of February, 2020.

Paul Downing, Chairman

Steve Foote, Secretary
Utility Information Sheet

Development ___ CROOKED CREEK ___
Phase ___ 2 ___ Section ___ 3 ___ # of lots ___ 19 ___

Cost to install Utility’s (Performance Bond)

- Signage ___ $750 _____________________________
- Street Lights ___ $5,000 ____________________________
- Storm Water Surface maintenance ___ $4,725 ______________
  (to include drainage area, ditches, retention and/detention ponds, open spaces)
- Sidewalks (feet) ___ 4,400' ___________________________
- Sidewalks (cost) ___ $24,200 __________________________
- Road linear feet ___ 2,200 LF __________________________
- Road width ___ 24' ___________________________
- Final Asphalt Topping cost ___ $34,760 __________________

TOTAL - $69,435.00
+ 10% OF TOTAL - $6,943.00

BOND AMOUNT - $76,378.00
# Application for Surety

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<td>Phase: 2 Section: 3</td>
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<td>Number of Lots Approved: 19 Number of Lots Remaining: 0</td>
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<td>Surety Type: Maintenance Performance Restoration</td>
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<td>Posted With: Letter of Credit Performance Bond Insurance Bond Cash</td>
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<td>Surety Amount: $ Expiration Date: /</td>
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<td>Automatic Renewal Clause Included with Surety: Yes / No (Circle One)</td>
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<td>Purpose of Surety:</td>
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<th>Financial Information</th>
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<tr>
<td>Name of Financial Institution: First National Bank</td>
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<tr>
<td>Contact Person: Clay Chirley Email: <a href="mailto:Clay.Chirley@fnn.com">Clay.Chirley@fnn.com</a></td>
</tr>
<tr>
<td>Address: 2230 Mercury Blvd</td>
</tr>
<tr>
<td>City, State, Zip: Murfreesboro, TN 37130</td>
</tr>
<tr>
<td>Phone Number: (615) 474-4200 Fax Number: ( )</td>
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<tr>
<td>Name of Owner/Developer or Representative: A1 Home Builders Inc</td>
</tr>
<tr>
<td>Address: 2520 Fieldstone Pkwy Frx. 700-220</td>
</tr>
<tr>
<td>City, State, Zip: Franklin, TN 37069</td>
</tr>
<tr>
<td>Phone Number: (724) 231-9817 Fax Numbers: ( )</td>
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### Action Request

I (we) request that the following action be taken:

- Establish New Surety
- Request Final Inspection and Release of Surety
- Request Reduction of Surety Amount
- Request extension of surety for (1) year
- Request Maintenance Bond

(Please provide proof of difficulty below)

**Explanation for Proof of Difficulty:**

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**Applicant Signature** 11/3/20  
**City Staff Signature** Date
DATE: January 22, 2020

REQUEST: Establish a maintenance bond and a performance bond for Harvest Point Phase 16 Section 1B

SUBMITTED BY: Thomas S. Wolf, P.E. – City Engineer

OVERVIEW:

- Final plat is on the February 2020 Planning Commission meeting agenda for approval.
- Developer has submitted application and corresponding documentation to establish bonds.

PC ACTION REQUESTED:

- Approve PC Resolution 20-08 to establish a maintenance bond for Harvest Point Phase 16 Section 1B
- Approve PC Resolution 20-09 to establish a performance bond for Harvest Point Phase 16 Section 1B
RESOLUTION 20-08 OF THE
PLANNING COMMISSION
OF THE CITY OF SPRING HILL, TENNESSEE

A RESOLUTION TO ESTABLISH A MAINTENANCE BOND FOR
HARVEST POINT PHASE 16 SECTION 1B

WHEREAS, a Maintenance Bond is required to be established for this development prior to recording of a Final Plat; and

WHEREAS, the Maintenance Bond is guaranteeing the workmanship and materials of certain improvements existing on 28 lots, and the repair of such should damage occur during covered period; and

WHEREAS, the following improvements are required pursuant to the Final Plat:
Water, Sewer, Storm Water Infrastructure, Streets and Curbs, Street Signs and Street Lights; and

WHEREAS, to date, the improvements have been completed, but not accepted by the City and, therefore, a Maintenance Bond is required; and

WHEREAS, it is the recommendation of the City Engineer that a Maintenance Bond be established for a minimum of twelve (12) months, in the amount of $127,322.00; and

WHEREAS, it is anticipated that the date of completion for the above referenced public improvements will be within the time prescribed for the bond and it is required that an automatic renewal clause, to the benefit of the City of Spring Hill, be included within the bond in case such improvements are not completed in a timely manner.

NOW, THEREFORE, BE IT RESOLVED, that the Spring Hill Planning Commission approves the establishment of a Maintenance Bond for Harvest Point Phase 16 Section 1B in the amount of $127,322.00.

Passed and adopted this 10th day of February, 2020.

Paul Downing, Chairman

Steve Foote, Secretary
Utility Information Sheet

Development ______ HARVEST POINT ________

Phase___16___  Section___1B___  #of lots__28__

Cost to install Utility’s (Maintenance Bond)

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<tr>
<th>Utility</th>
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<tr>
<td>Sewer line</td>
<td>$178,384</td>
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<td>Storm Water</td>
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<td>(Infrastructure)</td>
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<tr>
<td>Curbing</td>
<td>$3,750</td>
</tr>
<tr>
<td>Binder</td>
<td>$29,302</td>
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TOTAL - $424,408.00

30% OF TOTAL - $127,322.00

BOND AMOUNT - $127,322.00
RESOLUTION 20-09 OF THE 
PLANNING COMMISSION 
OF THE CITY OF SPRING HILL, TENNESSEE

A RESOLUTION TO ESTABLISH A PERFORMANCE BOND FOR 
HARVEST POINT PHASE 16 SECTION 1B

WHEREAS, a Performance Bond is required to be established for this development prior to recording of a Final Plat; and

WHEREAS, the Performance Bond is guaranteeing the construction of certain improvements on 28 lots; and

WHEREAS, the following improvements are required pursuant to the Final Plat: Sidewalks, Street Lights, Street Signs, Stormwater Surface Maintenance and Final topping to all streets with 1 ½ inches of hot mix asphalt; and

WHEREAS, to date, the improvements have not been completed and/or accepted by the City and, therefore, a Performance Bond is required; and

WHEREAS, it is the recommendation of the City Engineer that a Performance Bond be established in the amount of $46,971.00; and

WHEREAS, it is anticipated that the date of completion for the above referenced public improvements will be within the time prescribed for the bond and it is required that an automatic renewal clause, to the benefit of the City of Spring Hill, be included within the bond in case such improvements are not completed in a timely manner; and

WHEREAS, upon completion of the public improvements listed above, the Developer will be required to file a “maintenance” bond guaranteeing performance of the public improvements for a minimum of an additional one year period with the Planning Commission after the dedication and acceptance of such public improvements by the Board of Mayor and Aldermen.

NOW, THEREFORE, BE IT RESOLVED, that the Spring Hill Planning Commission approves the establishment of a Performance Bond for Harvest Point Phase 16 Section 1B in the amount of $46,971.00.

Passed and adopted this 10th day of February, 2020.

Paul Downing, Chairman

Steve Foote, Secretary
Utility Information Sheet

Development: HARVEST POINT
Phase: 16  Section: 1B  #of lots: 28

Cost to install Utility's (Performance Bond)

Signage: $0
Street Lights: $0
Storm Water Surface maintenance: $30,214 (to include drainage area, ditches, retention and/detention ponds, open spaces)

Sidewalks (feet): 0
Sidewalks (cost): 0
Road linear feet: 375 LF
Road width: 24'

Final Asphalt Topping cost: $12,487

TOTAL: $42,701.00
+ 10% OF TOTAL: $4,270.00

BOND AMOUNT: $46,971.00

(Signs, street lights and sidewalks are platted and bonded under Ph 16 Sec 1A)
**Application for Surety**

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<td><strong>Phase:</strong></td>
<td>Phase 1B</td>
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<td><strong>Number of Lots Approved:</strong></td>
<td>28</td>
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<td><strong>Number of Lots Remaining:</strong></td>
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<td>Maintenance</td>
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<td>Letter of Credit</td>
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<td><strong>Surety Amount:</strong></td>
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<td><strong>Expiration Date:</strong></td>
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<td><strong>Automatic Renewal Clause included with Surety:</strong></td>
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<td><strong>Purpose of Surety:</strong></td>
<td>Established Maintenance bond for Harvest Point Phase 1B &amp; sec. 1B</td>
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<tr>
<td><strong>Name of Financial Institution:</strong></td>
<td>First Horizon Bank</td>
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<tr>
<td><strong>Contact Person:</strong></td>
<td>International Operations</td>
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<tr>
<td><strong>Address:</strong></td>
<td>165 Mission Ave, Suite 410, P. O. Box 18454, Knoxville, TN 37918</td>
</tr>
<tr>
<td><strong>Phone Number:</strong></td>
<td>(803) 523-4431</td>
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<tr>
<td><strong>Fax Number:</strong></td>
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<td><strong>Name of Owner/Developer or Representative:</strong></td>
<td>Clayton Properties Group, TNC. J.J.A. Goodell</td>
</tr>
<tr>
<td><strong>Address:</strong></td>
<td>393 West Street, Suite 700, The Oaks</td>
</tr>
<tr>
<td><strong>City, State, Zip:</strong></td>
<td>Franklin, TN 37064</td>
</tr>
<tr>
<td><strong>Phone Number:</strong></td>
<td>(615) 541-5029</td>
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<td><strong>Fax Number:</strong></td>
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**Action Request**

I (we) request that the following action be taken:

- [ ] Establish New Surety
- [ ] Request Final Inspection and Release of Surety
- [ ] Request Reduction of Surety Amount
- [ ] Request extension of surety for (1) year
- [ ] Request Maintenance Bond

(Please provide proof of difficulty below)

**Explanation for Proof of Difficulty:**

---

**Applicant Signature:**

**Date:** 1/14/20

---

**City Staff Signature:**

**Date:** 1/14/20
### Application for Surety

#### Property Information

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<th>Harvest park</th>
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<td>Automatic Renewal Clause Included with Surety:</td>
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<td>Purpose of Surety:</td>
<td>Establish performance bond for harvest park phase 1B</td>
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#### Financial Information

| Name of Financial Institution: | First Horizon Bank | Surety #: |
| Contact Person: | International Operations | Email: |
| Address: | 165 Madison Ave., 4th Flr | |
| City, State, Zip: | Memphis, TN 38103 | |
| Phone Number: | (901) 523-4431 | Fax Number: |

#### Contact Information

| Name of Owner/Developer or Representative: | Clayton Properties Group, TNC, d.b.a. Goodall Homes |
| Address: | 393 Main St, Suite 200 | |
| City, State, Zip: | Franklin, TN 37064 | |
| Phone Number: | (615) 479-5029 | Fax Number: |

### Action Request

I (we) request that the following action be taken:

- [ ] Establish New Surety
- [X] Request Final Inspection and Release of Surety
- [ ] Request Reduction of Surety Amount
- [ ] Request extension of surety for (1) year
- [ ] Request Maintenance Bond

(Please provide proof of difficulty below)

**Explanation for Proof of Difficulty:**

---

Signature: [Signature]
Date: [Date]

City Staff Signature: [Signature]
Date: [Date]
Spring Hill Planning Commission Work Session

TO: Spring Hill Planning Commission
FROM: Steve Foote, AICP, Planning Director
       Austin Page, Associate Planner
MEETING: January 27, 2020
SUBJECT: STP 773-2019 (TN Children’s Home)

STP 773-2019: Submitted by Brewer Ingram Fuller Architects for the Tennessee Children’s Home. Property is located at 2225 Dr. Robertson Road, zoned I-C and contains approximately 46.25 acres. This item received site plan concept review in September 2019. The applicant requests site plan approval for the new Tennessee Children’s Home campus. Requested by Anthony Fuller.

Plan Update: This item was reviewed in the Planning Commission work session of October 28, 2019 and then deferred prior to the November 12, 2019 Planning Commission due to ongoing concerns with Maury County’s ability to provide water to the site. After several delays in obtaining the requested water service letter, the applicant has provided communication from Maury County indicating their ability to provide this property with water service. Staff has forwarded this information to the Public Works and Fire Departments for review and comment.

The applicant has incorporated changes and low impact development practices in response to Commission questions.

Property Description and History: This property is located on the west side of Dr. Robertson Road and contains 46 acres. The Tennessee Children’s Home also owns approximately 40 acres to the south which was approved recently for a 126-lot residential subdivision (NCP 465-2018).

The proposed site is planned as the future location and campus for the Tennessee Children’s Home and was rezoned recently (RZN 664-2019) from C-2 to IC (Institutional Campus District). This district allows the proposed use by right. The site received site concept plan review (SPC 742-2019) by the Planning Commission on September 9, 2019.

Access: Access is primarily from Dr. Robertson Road via a long driveway. A future secondary and emergency access is planned through the proposed residential neighborhood to the south. The question of off-site improvements to Dr. Robertson Road has been presented to the Planning Commission.

Buildings and Site Design: Development of the site will include; a multi-purpose building, residential dormitories, corporate offices, maintenance and other facilities for the use. The developed portion of the site sits over 700 feet west of Dr. Robertson Road. Elevation change from the road to the campus is approximately 60’ (from 690’ to 750’). The school building sits on the crest of the hill with the land sloping downward to the west. Most of the frontage along Dr. Robertson Road contains a stream and existing natural buffer area. These three characteristics provide an extensive visual and natural buffer and privacy for the Tennessee Children’s Home campus.

The applicant has provided a set of building elevations for the multipurpose building, corporate offices, group home facilities, and the maintenance building. The multi-purpose building shows material of the façade as brick with metal panel accents and an architectural asphalt shingle roof. In the IC district, metal panels are a prohibited material. However, the Planning Commission acting as the Design Review Commission offered verbal support for the use of these panels during the October meeting. The residential buildings on campus are shown using fiber-cement siding, brick veneer, E.I.F.S., with a shingled roof and metal roof accents. Siding on the maintenance building is shown as fiber-cement siding, brick veneer and a metal roof. The applicant has provided percentages of building façade and with the allowance for metal panels noted above, buildings are in compliance with the requirements of the IC zoning district in the UDC.
Landscaping and Buffering: A landscape plan has been provided by the applicant. Maple, Tulip, Oak and Elm tree species are shown along the two main access points and along the unnamed private roads on the site. Landscaping is provided in the parking lots, entrances and exits to buildings and the two dumpster enclosures to provide adequate screening. Additional landscaping has been added at the front of the school building and corporate offices. The landscape regulations are not perfectly or easily applicable to a campus use like the Tennessee Children's Home. The applicant has expressed concerns with heights of landscaping around the residential buildings as potential hiding spots for the children and wants to limit the amount of coverage. A 15’ landscape buffer is shown on the southern property line and provides multiple layers of coverage with Evergreen Trees, shrubs and grasses.

Parking and Loading: Parking is provided for the school and office uses. Students/residents of the Tennessee Children's Home do not have personal vehicles. Bicycle parking is required and is not currently shown on the site plan.

Streets and Sidewalks: Sidewalks are provided internal to the site to facilitate pedestrian access between the residential buildings and other buildings as appropriate. Sidewalks are shown at the minimum of 5’ in width.

Bicycle and Greenway Plan: This property is not impacted by the Bicycle and Greenway Plan.

Utilities: Written correspondence from the Maury County Board of Public Utilities (Maury County Water Service (MCWS) was received on January 23, 2020. This information was forwarded to the Fire Marshal and Public Works Department to determine if the calculations and certification will provide water to meet the City of Spring Hill fire flow requirement of 750 gpm @ 30 psi residual. The water system includes off-site improvements that are necessary for the MCWS to provide service. The applicant has submitted water and sewer service plans for the site. Additional information showing how sewer will be extended to the site and the design is required.

Summary: The applicant last met with staff to discuss the site plan on October 16, 2019. The following remaining items shall be addressed prior to the submittal for Revision Deadline #2 (February 3, 2020):

1. Staff is reviewing the letter from the Maury County Water District and will provide the Planning Commission with a review of the proposed water system. If the water system does not comply with Spring Hill regulations for fire and domestic use, deferral will be recommended until such time that adequate utilities can be provided.
2. Additional landscaping is needed at the entrance to the corporate office building.
3. Applicant shall complete the design of the sewer system, including how sewer will be made available to the property, and submit said plans to Jim Vrdoljak of the Spring Hill Public Works Department for review and approval.
4. Indicate areas where grass and/or sod are proposed.
5. Show the limits of disturbance for the entire development.
TN CHILDRENS HOME
2225 S Robertson Rd, City of Spring Hill, Maury County, Tennessee

PROJECT NO.: 18-061--1)

MATCHLINE - SEE SHEET C1.02

VICTINITY MAP

SITEN

DRIVEWAY

NAIL IN POWER POLE
ELEV 693.47 (NAVD88)

MAP 24, PARCEL 14.00

PROJECT BENCHMARK:

ELEVATION 693.47 IN POWER POLE

DESCRIPTION:

PROJECT: BENCHMARK

REVISION SCHEDULE:

DATE

SCALE

C1.01

PROJECT NO.: 2017-01-01
January 22, 2020

CSDG
Mr. Jim T. Harrison
2305 Kline Ave., Suite 300
Nashville, TN 37211

Re: Tennessee Children's Home - LOA-FF

Mr. Harrison:

Please find enclosed the Review of Water Availability and Fire Flow from Hethcoat & Davis, Inc. for the Tennessee Children's Home. Please contact me if you have any questions or concerns.

This letter of water availability is only valid for 120 days.

Sincerely,

Todd Shultz, Superintendent
tshultz@mymcws.com
931-375-1161

TS/db
Enclosure

CC: Brian L. King
MEMORANDUM

From: Cory Borum, P.E.
To: Todd Shultz, MCWS Superintendent
Re: Tennessee Children's Home - Review of Water Availability and Fire Flow

We have completed our review of the proposed Tennessee Children's Home, a concept plan prepared and submitted for review by Civil Site Design Group. In general, the development will consist of a gymnasium, office building, maintenance building, and 9 residential homes for students. Provisions for sewage treatment were not identified on the concept plan. The proposed development is located west of and adjoining Dr. Robertson Road near the intersection of Beechcroft Road/Dr. Robertson Road.

Existing water lines within the MCWS distribution system that are near the proposed development include an 8" PVC Class 200 water line along Dr. Robertson Rd. Based on existing operating conditions within the distribution system and existing ground contours, static water pressures will range between 70-85 psi at the proposed point of connection to MCWS along Dr. Robertson Rd. The water pressure at the proposed point of connection was determined by use of the Water System’s hydraulic model which has been calibrated and field verified with pressure recording devices. The projected domestic demand for the site is approximately 12,529 gpd which equates to 63 SFU equivalents. Projected demand was determined based on consumer use information provided by the Developer. Please note that hydraulic modeling evaluation of the proposed development included a 1.8 demand multiplier that was incorporated into the average demand in order to account for peak usage periods.

Summary of Findings
The Water System is capable of providing domestic water service to the proposed development. It should be noted that the available pressures stated above are at the point of connection to the MCWS and does not include losses that may occur due to metering, backflow prevention, changes in site elevation, or multi-story construction. Furthermore, due to anticipated water system improvements in the future, static water pressure may increase at some point in the future to 100 psi or greater. As a result, the Developer should consider installing individual pressure reducing valves for domestic and, if applicable, irrigation service lines.

The Water System is also capable of providing fire flow that meets the City of Spring Hill’s fire flow requirements of 750 gpm at 30 psi. However, off-site improvements will be required in order to meet the requisite level of fire flow. The necessary off-site improvements are shown in Exhibit 1. Implementation of these off-site improvements will ensure the provision of a system capable of meeting the required fire demands. Therefore, it is our recommendation that all proposed developments (current or future) within the existing MCWS "Beechcroft Service Zone" boundary be accountable for a pro-rata financial participation in the capital costs associated with the Beechcroft Road Water System Improvements Project. The specific contractual requirements associated with the pro-rata financial participation for the proposed Tennessee Children’s Home should be reviewed with the Developer and provided upon request. Please note, the provision of fire flow is contingent upon the Developer executing a Water System Improvements Contract.
Exhibit 2 displays a portion of the Beechcroft Road Water System Improvements Project that is near the proposed development and corresponding project notes that describe the scope of work, purpose of the project, and information about the pro-rate financial participation.

Please call if you have questions or require additional information.

Sincerely,

Cory Borum, P.E.

Attachments:
1. Exhibit 1 – Beechcroft Road Water System Improvements Project
2. Exhibit 2 – Maury County Water System Distribution System Requirements for Proposed TN Children’s Home
Exhibit 1
Maury County Water System
Beechcroft Rd. Water System Improvements Project

Notes
1. Water lines shown on map represent existing lines (and corresponding sizes) that are currently in service.

Installation of approx. 13,500 LF of new 16" water line inside designated area.
Exhibit 2
Maury County Water System Distribution System Requirements
For
Proposed TN Children's Home

Proposed TN Childrens Home Site

Proposed Beechcroft Subdivision

Proposed Meter Location For TN Childrens Home

Beechcroft Rd. Improvements Project (Not Designed or Constructed) (See Notes below & Exhibit 1)

Proposed TN Childrens Home Notes
1. It is assumed that the water meter for the Childrens Home will be located at the entrance drive on Dr. Roberton Rd. All water line improvements on the customer side of the water meter that are necessary in order to provide service to each building shall be the responsibility of the Childrens Home.

2. Fire-flow capabilities that meet the City of Spring Hill’s fire flow requirements of 750 gpm at 30 psi WILL NOT be available to the proposed site until the Beechcroft Rd. Water System Improvements Project designated in Exhibit 1 is complete and in service.

Beechcroft Rd. Improvements Project Notes
1. This project consists of the installation of approx. 13,600 LF of new 16" water line.

2. The purpose of this project is to improve water service in the Beechcroft Rd. Service Area and provide fireflow.

3. As a primary beneficiary of this project, the Developer for the proposed TN Childrens Home will be responsible for a pro-rata financial participation in the capital costs of said project. The pro-rata cost share for the proposed TN Childrens Home shall be 3.54% of the total capital costs of the Beechcroft Rd. Improvements Project. Contact the Water System to obtain a Water Systems Improvements Contract.

Property Description and History: This property is located at the southwest corner of Jim Warren Road and the proposed extension of Rice Road, west of I-65. The property is contiguous to the city limits via properties to the north, east and south. The property contains 5.04 acres and has an existing single-family home approximately 780’ off of Jim Warren Road. The property is approximately 915’ deep. Staff recommends that the annexation include the full width of the Jim Warren Rd. right-of-way between the east and west property lines of the site. The applicant intends to operate a reception facility to host events like weddings, etc. on the property. This use is considered a special use in the AG, Agricultural district, and requires approval from the Board of Zoning Appeals.

Access: Primary access to the site is via Jim Warren Road. The Planning Commission recently approved an amendment to the Cobblestone PUD that would have dedicated and improved Rice Road from Tom Lunn to Jim Warren Road. This project is on hold and it appears that the Rice Road improvement may not take place in the near future.

Plan of Services: Staff has prepared a Plan of Services in coordination with all applicable city departments. This document is included in your packet for review. This plan of services was reviewed by all applicable departments following submittal of the current annexation request.

Utilities: Currently, the existing home located on the subject property is served by the City of Spring Hill’s water system with a 4-inch water main located along Jim Warren Road. The 4-inch main does not meet current City of Spring Hill standards that require a minimum 8-inch water main to provide both domestic and fire protect flow and pressure. The City's Fire Department cannot currently connect to the existing 4-inch main to provide sufficient fire protection flow and pressure in the event of a structure fire on the subject property. Should the subject property be developed by the property owner or the current land use changed to a different and/or more intensive land use, the property owner should be required to improve and upgrade the water main located along Jim Warren Road to meet current City of Spring Hill standards for domestic and fire flow. The existing 4-inch water main located along Jim Warren Road should be upgraded to a minimum 8-inch main with a fire hydrant serving the subject property. The Plan of Services should reflect this requirement in consideration of future development of the property or a change in land use.

The property is on a septic system that was approved in 1995 for a four-bedroom house. The applicant has indicated that he recently discussed the septic system with Alan Floyd at TDEC and was told that the four-bedroom system could handle events of up to 150 people. Use of the system may require periodic pumping. Should the property be annexed and the applicant pursue the special use request for a reception facility, staff will require updated written confirmation from TDEC regarding the use of the system.

Land Use and Zoning: Upon annexation, the zoning classification will be designated as AG, Agricultural.

Spring Hill Rising: 2040: The Spring Hill Rising: 2040 comprehensive plan shows this property as Residential Neighborhood Area. Residential Neighborhood Areas are primarily residential and encourage a traditional neighborhood development that incorporates low-intensity nonresidential uses intended to serve the surrounding neighborhood on corners and along
connecting corridors. Currently, the property is a single-family residence and would comply with the 2040 Future Land Use Plan.

Summary: Staff met with the applicant and discussed the annexation on January 15, 2020. Staff has clearly discussed with the applicant that the annexation and plan of services would require that the applicant/property owner will be solely responsible for extending and installing all utility and other public improvements needed to support a change in use. The annexation includes the full width of the Jim Warren Rd. right-of-way between the east and west property lines of the site.
RESOLUTION 20-10

A RESOLUTION ADOPTING A PLAN OF SERVICES FOR AND ANNEXING 3651 JIM WARREN ROAD (TAX MAP 027 PARCEL 021.03), CONSISTING OF APPROXIMATELY 5.04 ACRES INTO THE CORPORATE LIMITS OF THE CITY OF SPRING HILL, TENNESSEE.

(ANX 790-2020, 3651 JIM WARREN ROAD)

WHEREAS, Tennessee Code Annotated Section 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, the property owners, Christopher & Cory Maimone, has requested annexation in order to ensure the value and availability for future uses; and

WHEREAS, the subject property is contiguous to the corporate limits of the City of Spring Hill; and

WHEREAS, the subject property is located within the Urban Growth Boundary of the City of Spring Hill; and

WHEREAS, the property will be zoned Agricultural (AG) upon the effective date of annexation; and

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

WHEREAS, the City of Spring Hill has prepared a Plan of Services for the property that describes how and when municipal services will be provided to the property and identifies the property owner/developer responsibilities for extending public infrastructure to the site; and

WHEREAS, the Spring Hill Planning Commission has reviewed and forwarded a recommendation on the Plan of Services and annexation to the Board of Mayor and Aldermen on February 3, 2020; and

WHEREAS, the City of Spring Hill contemplates annexation of the property known as Maury County Tax Map 027, Parcel 021.03, consisting of 5.04 acres as described herein.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF SPRING HILL, TENNESSEE, BOARD OF MAYOR AND ALDERMEN, that pursuant to Tennessee Code Annotated Title 6, Chapter 51, Section 102, approves the Plan of Services contained herein.

BE IT FURTHER RESOLVED BY THE CITY OF SPRING HILL, TENNESSEE, BOARD OF MAYOR AND ALDERMEN, that pursuant to Tennessee Code Annotated Title 6, Chapter 51, the property known as 3651 Jim Warren Road as shown and described in Exhibit A, is hereby annexed to the corporate limits of the City of Spring Hill, Tennessee, and made a part thereof.

SECTION 1: PLAN OF SERVICES

Police Protection: The subject property at 3651 Jim Warren Road shall be under the jurisdiction of the City of Spring Hill and the Police Department will patrol and respond to this area as with any other area in the city limits upon the effective date of annexation. These services include, but are
not limited to, patrolling, response calls for service, crime prevention services, traffic control and other routine police services. Radio operations are normal and uninhibited within the area. Services will be provided using existing personnel and equipment.

Fire Protection: The City of Spring Hill will assume primary responsibility for Fire Protection for the subject property immediately upon the effective date of annexation, with mutual assistance provided by Maury County Fire Department. Redevelopment of the property or a change of use on the property may require that the property owner/developer extend and provide appropriately sized water mains and/or fire hydrants to serve the site according to City of Spring Hill standards. Emergency Medical Services (EMS) is provided by contract through the City of Spring Hill and will be available upon the effective date of annexation. Other services provided through Mutual Aid may apply.

Electrical Service: Electrical service in the area is currently and will continue to be provided by Middle Tennessee Electric.

Public Water Service: The existing residence located on the subject property is served by the City of Spring Hill's water system with a 4-inch water main located along Jim Warren Road. The 4-inch main does not meet current City of Spring Hill standards that require a minimum 8-inch water main to provide both domestic and fire protect flow and pressure. The City's Fire Department cannot currently connect to the existing 4-inch main to provide sufficient fire protection flow and pressure in the event of a structure fire on the subject property. Should the subject property be developed by the property owner or the current land use changed to a different and/or more intensive land use, the property owner shall be solely responsible to improve and upgrade the water main located along Jim Warren Road to meet current City of Spring Hill standards for domestic and fire flow. The existing 4-inch water main located along Jim Warren Road shall be upgraded by the property owner at their sole expense to a minimum 8-inch main including installation of a fire hydrant serving the subject property. All utility installations shall be in compliance with applicable State of Tennessee and City of Spring Hill standards.

Public Sanitary Sewer Service: The property is currently on septic. Public sanitary sewer service is not directly available to the property. The property owner/developer shall be solely responsible for extending sanitary sewer service to the property and any required extension shall be in compliance with City of Spring Hill standards. Once sewer service is within 100 feet of the property the site shall be converted from septic to public sewer. All sanitary sewer inside city user rates and charges shall be applicable to the area inside the annexation area.

Solid Waste Collection: Spring Hill currently provides its businesses and residents refuse collection services via a city-wide contract with a private solid waste collection company. Residential collection may include recycling for single family dwellings. Yard and bulky waste collection services are also provided the City. These services will be extended to the annexed area within 90 days of the effective date of annexation.

Road and Street Construction and Repair: If any new public streets are constructed and appropriately dedicated in accordance with City standards on the property, the City will provide ongoing and routine maintenance similar to other streets within the jurisdiction of the City. Annexation includes the full width of the Jim Warren Rd. right-of-way between the east and west property lines of the site.
Signs and Lighting: Additionally, if new streets are developed within the site, traffic control and directional signage as well as street lighting will be furnished and installed by the property owner/developer according to established city policy or regulations.

Recreational Facilities and Programs: There is one existing dwelling within the proposed annexation area. All of the recreational areas and programs, current or future, provided for City residents will be made available upon the effective date of annexation to any current or future residents of the annexed area in the same manner as current citizens of the City of Spring Hill.

Planning and Zoning Services: The City's planning and zoning jurisdiction will be extended to the annexed area upon the effective date of annexation. When a property is annexed into the city, it is automatically zoned as AG, Agricultural. The Future Land Use Designation of the property on the 2040 Spring Hill Rising plan is Residential Neighborhood Area.

Storm Water and Drainage: The City of Spring Hill operates a Storm Water program in accordance with Tennessee Department of Environment and Conservation (TDEC) requiring the management of all storm water discharge within its jurisdiction. Annexation of the area expands the program into the annexed area thus making it subject to the current rules and regulations of TDEC pertaining to storm water runoff and discharge. All storm water user rates and charges inside city shall be applicable to the area inside the annexation area.

Inspection/Code Enforcement: The City of Spring Hill Codes Department provides plan review services, inspection and code enforcement services (i.e. building, plumbing, gas and unsafe building services, land use (zoning) and development, including flood plain NFIP/FEMA requirements, neighborhood services for housing, litter, overgrowth, illegal dumping) to all areas of the City of Spring Hill. These same services will be provided to the newly annexed area immediately upon the effective date of annexation.

Animal Control: The City of Spring Hill does not provide Animal Control. For the subject property Spring Hill relies upon Maury County for this service.

Schools: The entire annexation area is served by Maury County Schools:

Library: The City of Spring Hill public library will be available to residents of the property upon the effective date of annexation.

SECTION 2: ANNEXATION.

The property described herein below and as shown and further described on Exhibit A attached hereto, is hereby annexed into the City of Spring Hill. The annexed land will be subject to the provisions and requirements of Ordinance 18-21 the Unified Development Code, as amended, and all other applicable ordinances, rules, and regulations of the City of Spring Hill.

SECTION 3: ZONING.

Ordinance No. 18-21 (Zoning Map), adopted August 20, 2018, is hereby amended and altered by changing the zoning classification of those certain parcels of real property described below and on Exhibit A (attached), from Maury County A2 to City of Spring Hill AG (Agricultural). In the State of Tennessee,
County of Maury, and City of Spring Hill, Tax Map 027, Parcel 021.03, consisting of 5.04 acres and being more particularly described in Exhibit A, attached hereto:

Exhibit A (attached)

SECTION 4: In case conflict between this resolution or any part hereof, and the whole or part of any existing resolution of the City, the conflicting resolution is repealed to the extent of the conflict but no further. If any section, clause, provision or portion of the resolution is held to be invalid or unconstitutional by any court of competent jurisdiction, such holding shall not affect any other section, clause, provision or portion of the resolution.

Passed and adopted by the City of Spring Hill, this _____ day of __________, 2020.

This resolution shall take effect immediately upon adoption by the Board of Mayor and Alderman of the City of Spring Hill.

__________________________________________
Rick Graham, Mayor

ATTEST:

__________________________________________
April Goad, City Recorder

LEGAL FORM APPROVED:

__________________________________________
Patrick Carter, City Attorney
ANNEXATION OF 3651 JIM WARREN ROAD
CONSISTING OF 5.04 ACRES CURRENTLY KNOWN
AS MAURY COUNTY TAX MAP 027 PARCELS 021.03
AND ADJACENT RIGHT-OF-WAY AS SHOWN HEREIN

This sheet is an Exhibit to Resolution No. ______ adopted by the Board of Mayor and Aldermen of the City of Spring Hill, TN on the ___ of ________, 2020. The following described property is hereby annexed by the Board of Mayor and Aldermen of the City of Spring Hill and rezoned according to the attached Resolution.

Property Description:

A. Said land consists of the following property, also shown graphically below:

1. The 5.04 acres of Tax Map 027 Parcels 021.03 adjacent to Jim Warren Road, shown below.

Annex full width of Jim Warren Road right-of-way from the east end to the west end of the site.

Annex 5.04 Acres of Map 027 Parcels 021.03
Spring Hill Planning Commission Work Session

TO: Spring Hill Planning Commission
FROM: Steve Foote, AICP, Planning Director
         Austin Page, Associate Planner
MEETING: January 27, 2020
SUBJECT: SKP 791-2020 (South Pointe Square, formerly Magnolia Square)

**SKP 791-2020**: Submitted by Crunk Engineering for South Pointe Square. The property is located at 5081 Port Royal Road, zoned Commercial PUD and contains approximately 17.37 acres. This project was formerly named Magnolia Square. This application is governed by the old zoning ordinance. The applicant requests sketch plan approval for a mixed-use subdivision with 174 residential units (condominiums) and 48,100 sf of commercial space. Requested by Adam Crunk.

**Property Description & History**: This property is located at the northwest corner of Commonwealth Drive and Port Royal Road. It is zoned as a commercial PUD (Williams Park 2 Mixed Use PUD). The Planning Commission approved a sketch plan application for the subject site in 2018 for 174 condominium units. The sketch plan expired in 2019.

**Request**: The current sketch plan request seeks to re-authorize the previously approved Magnolia Square mixed-use plan. The Williams Park 2 Mixed Use PUD identifies the subject site for commercial uses and the Master Development Plan calls out that permitted uses within this site shall be as permitted in the B-4 District. The proposed uses (retail and multifamily) are permitted in the former B-4 zoning district provided, however, that the multifamily component follows a condominium ownership structure. The density is approximately 10.6 dwelling units per acre. This is a mixed-use project with commercial space located on the ground-floor of each of the buildings fronting along Port Royal Road. The Magnolia Square sketch plan (SKP 510-2018) was approved by the Planning Commission on June 11, 2018 with the following conditions of approval:

1. In the event restaurants or cafés are located within the first-floor retail tenant spaces of buildings fronting upon Port Royal Road, the applicant shall address additional refuse collection facilities and frequency of servicing to ensure adequate sanitary refuse collection facilities are provided.
2. In the event restaurants or cafés are located within the first-floor retail tenant spaces of buildings fronting upon Port Royal Road, the applicant shall be required to install grease traps and other improvements including providing sufficient access to such sewer system improvements.
3. The site plan should provide for loading zones to support the various retail uses located on the first floor of buildings fronting upon Port Royal Road. Parking spaces with restricted loading zone time periods may be considered a substitute for the provision of dedicated loading zones.
4. The northern entrance shall be reconfigured as a right-in/right-out entrance.
5. The applicant shall enter into a written agreement with the City of Spring Hill to be acted upon by the Board of Mayor and Aldermen in consideration of public infrastructure improvements that include the roundabout located at the intersection of Port Royal Road, Commonwealth Drive, and Countess Lane including associated approaches and utility improvements whereby the applicant is participating in partnership with the City of Spring Hill in part or whole in the cost of the public infrastructure improvements. The agreement entered into between the applicant and the City shall detail the installation of public improvements to be constructed, the anticipated schedule for construction of improvements, and the responsibilities of each party in the installation of said improvements including related financial considerations such as contributions, fees, payments in lieu of improvements, rebates and/or credits and the like.
6. Sketch plan approval shall remain valid for 1 year.

The applicant did not move forward with a site plan and as a result, the sketch plan approval expired in June of 2019.
Streets and Sidewalk: The proposal includes the installation of a sidewalk along Commonwealth Drive and Port Royal Road. Right-of-way dedication is shown for both streets with the appropriate amounts, per the requirements of the City’s Major Thoroughfare Plan. Internally, the plan shows a complete sidewalk network with connections to the greenway trail and sidewalk along Port Royal Road and Commonwealth Drive. As plans are finalized for the roundabout at Port Royal Road and Commonwealth Drive, the site plan may require minor refinement to ensure the site plan conforms to the required right-of-way plan including driveways and entrances upon these roads.

Access: Access is shown via one curb cut on Commonwealth Drive and two off Port Royal Road. At the May 29, 2018 Planning Commission work session, the applicant received comments, from the Commissioners, requesting that the northern entrance be a right in/ right out arrangement. This driveway has not been modified on the newly submitted plan.

Port Royal/Commonwealth/Countess Roundabout: The final design for the roundabout at Port Royal Road and Commonwealth Drive continues to progress. Kimley Horn conducted a second-round peer review of the design based upon standard best practices for roundabouts. The roundabout will provide a much-needed intersection improvement the design of which will be in the form of a roundabout to optimize traffic flow and efficiency through this key intersection along Port Royal Road. The proposed layout by WES Engineering provides detailed right of way layout required to build the roundabout. Adjacent property owners will be requested to donate right of way to the City to provide sufficient space for infrastructure construction associated with the roundabout. The Catholic Diocese of Nashville owns the northeast quadrant of the proposed roundabout. As of today, the City has not approached the Church for donation of right of way.

The City has been working collaboratively with developers along the Port Royal Road corridor to create a public-private partnership approach for the design and construction of this important intersection improvement project. Participation by developers in the design and construction of this intersection improvement project along with the City will ensure timely and cost-effective completion of the project.

Once design plans for the roundabout are finalized, development plans for all adjoining development projects including the subject development will need to be refined to reflect right-of-way requirements and access control measures along the approaches to the roundabout. There is an opportunity for the applicant to participate financially in the design and construction of the roundabout project including consideration for the issuance of credits on required fees that will require review and approval by the Board of Mayor and Aldermen. It is recommended such participation be formalized with the preparation and execution of a development agreement between the developer/applicant and the City of Spring Hill.

Parking and Loading: Preliminary parking calculations indicate 707 spaces required and 707 provided. Parking area landscaping details, bicycle parking and space dimensions will be required at site plan submittal. Based upon the intended retail uses on the first floor of the buildings fronting Port Royal Road, a dedicated loading zone is recommended to accommodate deliveries to the various retail establishments including restaurants. The loading zone(s) should be small scale and could be combined with parking stalls within which parking restrictions are provided during select times of the day to accommodate deliveries while not disrupting parking needs for the retail and residential uses during regular business hours. The plan identifies two loading areas.

Building and Site Design: Maximum building height is specified as 45’ (3 stories). No elevations have been provided. Further details including materials and percentages shall be required at site plan submittal and shall comply with the requirements of the City’s design review guidelines. The sketch plan clearly demonstrates what is intended for the site. Further refinement will occur at site plan submittal.

Refuse Collection: In the event retail space includes restaurants or café’s as part of tenant mix, modifications may become necessary in the location of dumpster facilities as well as the frequency by which the dumpsters are serviced. Grease traps and other related improvements may also be required for restaurant type uses and sufficient access will need to be provided for such improvements where required. Landscaped islands have been added as a buffer between the retail dumpster enclosures and the neighboring parking space to provide more room for accessibility.
Landscaping and Buffering: A 25' wide landscape buffer shall be required at the northern side of the property, as the development abuts a residential area. Fifteen-foot-wide parking area buffers along street R/W are required, as stipulated by the zoning ordinance. A creek and stream buffer exists along the western property line. Landscaping details, including no tree disturbances within stream buffers, will be required at site plan submittal. Staff requests that the zoning of adjacent property be provided on the site plan.

Bicycle and Greenway Plan: Both Commonwealth Drive and Port Royal Road are specified as bike lane routes in the City's Bicycle and Greenway Plan. Notes on the plan indicate acknowledgement of this requirement. Also, the western side of the property is specified as a greenway location. The applicant has accommodated this via a 10’ wide trail and 20’ wide public access easement.

Open Space & Amenities: A clubhouse, pool and two recreation areas are proposed for the development. Details of the proposed amenities shall be submitted with a site plan request.

Summary: The applicant met with staff to discuss the sketch plan on January 15, 2020. The following items shall be addressed prior to the submittal for Revision Deadline #2 (February 3, 2020):

1. Applicant should address conditions 1-4 of the prior sketch plan approval (SKP 510-2018).
PREVIOUSLY APPROVED SKP 510-2018
WILLIAMS PARK PUD
SUBJECT: FPL 792-2019 (Harvest Point Townhomes, Phase 16, Section 1B)

FPL 792-2020: Submitted by S&ME for Harvest Point, Phase 16, Section 1B. The property is zoned R-2 PUD and contains approximately 2.33 acres. The applicant requests final plat approval for 28 townhome lots and the request is being processed under provisions of the approved PUD and the previous zoning code. Requested by Zac Davis.

Property Description and History: The subject site is adjacent to the secondary access from Cleburne Road and is located at the southern end of Harvest Point. The southern and western boundaries of the property are external to the PUD and abut recently annexed land. The adjacent Hardison property has been annexed, but is currently zoned Agricultural. The development of this property is expected to provide the secondary access to Phase 16, Section 2.

In August of 2016, the Board of Mayor and Aldermen approved a request to rezone the parent tract, containing more than 473 acres, from R-2 to Planned Unit Development (PUD 199-2016) in order to allow for a mixed-use development of single-family homes, townhomes, and a live-work village with nonresidential uses. A final development plan for a portion of the overall PUD (PUD 254-2016) was approved in October, 2016 and, subsequently, preliminary plats for phases 1-4 and 7 in December, 2016 (PPL 282-2016). A site plan application (STP 627-2018) was submitted for townhomes on Phase 16 in December of 2018 and was approved by Planning Commission on February 11, 2019 with the following conditions:

1. Incorporate the new ADA ramp with truncated domes detail on construction plans (one ramp per corner).
2. Number of units in Section 1 does not exceed the threshold requiring two (2) access points to the development. Section 2 will exceed the threshold and provisions need to be made for a second access at site plan submittal.
3. Label the diameter of the temporary cul-de-sacs.
4. A detailed technical review of the construction plans is in process in advance of forwarding same to TDEC for their review and approval.
5. Site plan approval shall remain valid for a period of three (3) years, during which time all required permits shall be obtained. Modification to the approved site plan may require Planning Commission approval.

Planning Commission approved a final plat (FPL 723-2019) for Phase 16, Section 1A on August 12, 2019.

Access: Primary access is from recently improved Cleburne Road via Carraway Lane. All interior roads are private.

Streets and Sidewalk: Sidewalks are provided on the public street east of Phase 16. Internal streets, identified as June Wilde Ridge will be private and show 5' sidewalks on both sides of the roadway. There is a temporary cul-de-sac located at the end of June Wilde Ridge and shall be removed when future phase is developed. The diameter of the cul-de-sac is shown as 96', which is the required minimum. Street names have been approved by the Maury County Emergency Management Office.

Bulk and Area Requirements: The applicant’s proposal complies the Bulk & Area requirements of the PUD. Lots comply with zoning regulations.

Building & Site Design: The details of the buildings are not impacted by the final plat. The requirements of STP 627-2018 will apply.
Open Space & Amenities: On-site open space is consistent with the approved site plan and consists of an 8' wide gravel trail that connects into a 6' trail east of lot 1609 in Section 1A. Three open space areas are provided. USPS centralized mailboxes are shown on the plat. There are no benches shown along the trail in this phase. No other amenities are shown internal to the site. Rather, the site depends on open space amenities generally provided within Harvest Point. A trail connection is proposed to provide pedestrian access from Phase 16 to the main amenity center.

Each lot will meet or exceed the requirement for 750 sq. ft. of secluded open space within the rear yard. Selectively placed fence panels or landscape screens will be required to enhance privacy for patios and meet the secluded requirement.

Landscaping & Buffering: Landscaping will be installed as shown on the approved site plan for Phase 16.

Bicycle & Greenway Plan: The Plan is not impacted by this development proposal. Internal gravel trails are provided per the Harvest Point PUD.

Summary: The applicant met with staff to discuss the final plat on January 15, 2020. The following items shall be addressed prior to the submittal for Revision Deadline #2 (February 3, 2020):

1. Consistent with Section 1A, selectively placed fence panels or landscape screens shall be installed to enhance privacy for patios and meet the secluded requirement.
FPL 793-2020: Submitted by Wes Engineers & Surveyors for Crooked Creek Sec. 3 Phase 2. The property is zoned R-2 and contains approximately 23.83 acres. The applicant requests final plat approval for 19 single family residential lots. Requested by Allen O’Leary.

Property Description and History: The property is located east of Port Royal Road and north of Rice Road. A concept plan for this project was approved by the Planning Commission in 2015 and phase 1 received preliminary plat and final plat approval in 2015 and 2016, respectively. A neighborhood concept plan was approved for section 3, by the Planning Commission, on June 12, 2017 (NCP 362-2017) and a preliminary plat for section 3, phase 1 was approved in August of 2018 (PPL-386-2017). On May 14, 2018, Planning Commission approved a preliminary plat (PPL 498-2018) for Section 3, Phase 2. The approval was subject to the following conditions:

1. Show east property line for lot 88.
2. Show solid lot boundary lines for the north lines of lots 64 and 88.
3. Extend sidewalk across lot 88 to end of development.
4. Extend sidewalk to east property line of development near lot 85.
5. Remove stop bar on Ellyson Drive.
6. Show extended future road on all pages of drawings.
7. Label temporary cul-de-sac on all pages.
8. Preliminary plat approval shall remain valid for a period of three (3) years, during which time the applicant/developer shall obtain all necessary permits, complete all applicable improvements, and submit final plat applications for review and approval.

During preliminary plat approval the Planning Commission requested that the applicant look into the possibility of constructing an entrance sign for Crooked Creek. This sign has been installed and a picture has been provided.

Access: Primary Access is from Rice Road via Port Royal and from Beverly Road via Lincoln Road and Kedron Road.

Streets and Sidewalk: Internal, local streets Mitscher Drive and Ellyson Drive are shown with 50’ of ROW and 5’ wide sidewalks are proposed on both sides of streets. A Temporary cul-de-sac is shown at the end of Mistcher Drive with the minimum diameter of 96’.

Bulk and Area Requirements: All proposed lots are shown to be compliant with the minimum criteria of the underlying R-2 zoning district for area and setbacks. No lot is less than 10,000 square feet.

Buffers and Landscaping: No landscape buffering is required for this section.

Open Space & Amenities: A location for centralized mail will need to be determined and approved by USPS. The applicant has proposed a small narrow open space adjacent to lot 88. This open space will be adjacent to additional open space in the next phase. No pull off space has been provided.

Bicycle and Greenway Plan: The applicant has provided a 20' public access easement along Crooked Creek.

Summary: The applicant met with staff to discuss the final plat on January 15, 2020. All items have been addressed at this time.
Spring Hill Planning Commission Work Session

TO: Spring Hill Planning Commission
FROM: Steve Footé, AICP, Planning Director
Austin Page, Associate Planner
MEETING: January 27, 2020
SUBJECT: STP 794-2020 (O'Reilly Auto Parts)

STP 794-2020:Submitted by Berry Engineering for O'Reilly Auto Parts. The property is located at 4872 Port Royal Road, zoned C-4 and contains approximately 1.05 acres (Lot 2B of the Barclay Port Royal subdivision). The applicant requests site plan approval for a 7,500-sf commercial business. Requested by Scott Smith of Belterra Partners.

Request: The applicant proposes to construct a 7,500-sf commercial building for an O'Reilly Auto Parts store.

Property Description and History: This property is located at 4872 Port Royal Road, east of the Walgreens, with frontage on Old Port Royal Road North. The currently vacant site is bordered by a vacant C-4 property to the north and vacant I-1 property to the east.

Access: The site has a single access driveway from a private unnamed road off of Old Port Royal Road North. The driveway and drive aisles are two-way but the site does not provide full circulation around the building. Turning templates for fire, refuse, and delivery trucks have been submitted. There appears to be no issues with ingress and egress for these vehicles. The fire template has been forwarded to the Fire Marshal for confirmation that the design for fire apparatus access meets all applicable requirements.

Streets and Sidewalks: There is a 5’ wide existing sidewalk along Old Port Royal Road North and a proposed 5’ wide sidewalk along the unnamed private street to the west. A 5’ sidewalk connection is shown from Old Port Royal Road N to the main entrance of the building. Two-way drive aisles are shown as 30’ and 35’ wide. The minimum is 25’. Staff recommends that one parking space be removed on the south property line and that a narrow buffer be created where the pedestrian path goes between parking spaces.

Building and Site Design: The applicant has submitted revised building elevations since the initial submittal on January 6, 2020. The primary building façade materials are stone veneer and decorative concrete masonry unit. Horizontal and vertical bands have been incorporated into the design, as well as, minor roof undulations. The amount of 'red' wall has been reduced to the background of wall signs. The parapet has been extended to provide full screening of the roof mounted HVAC equipment. Staff recommends that a covered awning entrance be provided. The applicant has provided percentages of building façade materials that show compliance with the building material restrictions of the C-4 zoning district. EIFS is proposed on the elevations on the areas around signage and account for no more than 20% of the façade for a secondary material. The main entrance to the building is located on the west side of the building (front), with two additional doors on the north (rear) and one door on the east. The dumpster is enclosed on three sides and will use materials similar to the building façade.

Lighting: The photometric plan indicates compliance with city regulations. Wall packs are provided and light fixture details appear to direct light downward. The light source is to be cut off at 3 ½ ‘ above grade at the property line.

Parking and Loading: The site includes 30 parking spaces, which exceeds the minimum requirement of 15 spaces for a retail use. The site includes two ADA spaces, with a proposed 5’ crosswalk to the building. All of the parking on the site is shown as 90°. There is a loading area located at the southeast corner of the building, directly above the dumpster enclosure. A 35’ drive aisle is shown for increased accessibility.
Landscaping and Buffering: The applicant is providing a single row of landscaping along the eastern and northern property lines. Landscaping is shown around the dumpster enclosure and has been added to the front foundation of the building. Article 11-7 also requires additional landscaping along the south side of the building adjacent to the parking area. The plan meets the street tree requirement of a minimum one tree per 35 linear feet and uses permitted species from the recommended plant list. Single row landscaping is provided along Old Port Royal and the unnamed private road to the west. Landscaping has been added around the entrance sign in the form of Daylilies. Additional plantings, including shrubs, is required in this large island and around the sign base. The base of the sign should be adjusted slightly to allow for the planting of shrubs on all sides. Article 11 requires that 60% of parking lot islands be covered by shrubs. The applicant needs to comply with all applicable sections of Article 11 of the UDC. There is an existing overhead powerline on the eastern side of the site. Eastern Redbuds must be a minimum of 10' from the centerline of the OHE. The applicant has called out the 10' minimum and all trees meet this requirement. No existing vegetation on the site is being preserved because nothing on the site meets the minimum requirement to remain. The areas along Old Port Royal and the private street will be sodded while all other areas of the site shall be seeded with a hybrid fescue seed (Bermuda) mix.

Utilities: The previously approved Learning Experience to the north is no longer an active project. Therefore, O'Reilly will be responsible for extending water & Sewer improvements that would have been installed by the Learning Experience. A water extension is being required along Old Port Royal Road North.

Bulk and area requirements: The site complies with the requirements of the C-4 zoning district.

Bicycle and Greenway Plan: This project is not impacted by the Bicycle and Greenway Plan.

Summary: The applicant met with staff to discuss the site plan on January 15, 2020. The following items shall be addressed prior to the submittal for Revision Deadline #2 (February 3, 2020):

1. Fire truck turning templates have been forwarded to the Fire Marshal for review.
2. Article 11 requires that 60% of parking lot islands be covered by shrubs.
3. Per Article 11.7, foundation landscaping must be extended along the southside of the building.
4. Daylilies are not an appropriate plant for the base of the sign or for the corner. Replace with more substantial plantings and shrubs around the perimeter of the sign.
5. Project Engineer must meet with Water Department prior to the construction drawings going to TDEC. Waterlines must be extended as designed for the Learning Experience. Also, the water main must extend along the entire property frontage for private and public roads.
6. If the sewer and water main extensions are not completed by the Learning Experience then O'Reilly's will have to provide TDEC approved plans for these extensions before construction.
7. Add bicycle parking to the site data table.
8. The bike rack installation must comply with Article 10.7 for spacing and use areas. The current plan does not appear to provide this space. Please confirm and provide an installation detail.
9. Check the distance of 112' in the lower right corner of Sheet C-01 for accuracy.
10. Staff recommends that one parking space on the south property line be removed to provide a wider pedestrian path between vehicle parking spaces.
11. Staff recommends that the front entrance include a covered awning similar to the pictures presented to the Planning Commission and an awning feature on each side of the entrance. If awnings are not provided one taller columnar shrub or small tree is recommended in each landscape area.
12. Add notes to the top block refuse screen material to indicate the color.
13. The detention area along the private street should be contoured and natural looking.
EXTERIOR EXAMPLES FROM STAFF
TO: Spring Hill Planning Commission  
SUBMITTED BY: Chip Moore, P.E., Infrastructure Director  
DATE: January 27, 2020  
RE: Spring Hill UDC Chapters 15 and 16  

ADDITIONAL DOCUMENTS REQUIRED: UDC Chapters 15 and 16  

PURPOSE: 
To review Chapters 15 and 16 of the Unified Development Code (UDC) for draft clarifications and review of design standards.  

REQUEST: UDC Comments and Recommended Edits from Public Works  

BACKGROUND: 
The City of Spring Hill developed the UDC to create a single ‘unified’ location for development regulations within the City. This effort was completed in August 2018 and has been used and applied by staff since that time. The Planning Department has recently processed several amendments to the regulations. Public Works staff has now prepared a set of proposed regulation revisions, related to public infrastructure, that are intended to improve and better protect the city. Staff is requesting Planning Commission review and consideration of the proposed changes. 

All the requested changes are due to issues witnessed in the field or during plan review. Significant changes include as-built surveys to be required before the asphaltic base course is permitted to be installed, curb types have new specifications to better follow current development practices, and erosion control and drainage items have been updated to better follow the current TDEC Construction General Permit. These suggestions would significantly provide assurances that final products are installed in the correct location and elevation, reduces the issue of ponding on final topping, sewer installation settlement, and erosion along ponds and swales.  

STAFF RECOMMENDATION: 
Public Works Staff requests Planning Commission review and comments regarding the suggested attached edits. Article 15 and 16 are part of the UDC Subdivision Regulations and are subject to Planning Commission review. If additional time is required for the review or a special meeting is preferred please let staff know.
ARTICLE 15. SUBDIVISION REGULATIONS – REQUIRED PUBLIC IMPROVEMENTS AND BONDS

15.1 APPLICABILITY
Every lot created by subdivision must conform to the zoning district regulations of this Code applicable at the time of application; however, modifications or waivers of any applicable requirements may be made by the Planning Commission only where unique and inherent characteristics of the land proposed for development warrant such deviations. It is the sole responsibility of the property owner to request and justify such waivers to the Planning Commission. Any plat which has received preliminary plat approval is exempt from any subsequent amendments to the zoning regulations of this Code or dimensional subdivision regulations rendering the plat nonconforming as to dimensional or development standards, provided, that final approval is obtained within the effective period of preliminary approval.

15.2 REQUIRED LETTERS AND PUBLIC IMPROVEMENT SPECIFICATIONS
The City will provide language for required letters and bonds, and the detailed specifications for public improvement, which may be revised, changed, and/or added to on an as needed basis. For reference, these include but are not limited to:

A. Water letter for subdivisions
B. Letter of credit minimum requirements
C. Performance and/or maintenance bond
D. Roadway construction plan requirements for new development
E. Specifications for materials and construction procedures for roadways
F. Storm water drainage calculations submittal guidelines and requirements
G. Roadway cross-section and standard drawings
H. Standard Specifications for Water Addition

15.3 PUBLIC WAYS AND UTILITIES
Pursuant to TCA Section 13-4-306, the Planning Commission cannot, nor may any public authority accept, lay out, open, improve, grade, pave, or light any public way, lay or authorize the laying of water mains or sewers, or construct or authorize the construction of other facilities or utilities in any public way located within the jurisdictional area unless such way has been accepted, opened, or otherwise received the legal status of a public way prior to the attachment of
the Planning Commission's jurisdiction, or unless such way corresponds in its location and lines to a way shown on a subdivision plat approved by the Planning Commission, or on a public way plat made by the Planning Commission. However, the governing body may override the Planning Commission, as provided in TCA Title 13. In case of any state highway constructed or to be constructed within the jurisdictional area with state funds as a part of the state highway system, the submission to the Planning Commission must be by the Tennessee Commissioner of Transportation, who has the power to overrule the disapproval of the Planning Commission.

15.4 LOT CONFIGURATION

A. All lots created during subdivision must comply with the minimum lot area and width standards of the applicable zoning district.

B. Every lot created by subdivision must front on a street (public or private). However, the Planning Commission has the authority to approve minor subdivisions of commercially zoned property resulting in lots not fronting on private or public streets, but which use easements for access. A maximum of two lots relying on the access easement may result from such subdivision.

C. Double frontage and reversed frontage lots must be avoided except where necessary to overcome specific disadvantages of topography and orientation.

D. The creation of new flag lots is prohibited.

E. Every lot or parcel of land that is subdivided into two or more lots must be so divided that each separate lot contains a relatively straight boundary line between each lot as much as feasible.

F. The Planning Commission may require that lots within a development do not derive access exclusively from arterial or collector streets. If access from such streets is necessary for several adjoining lots, the Planning Commission as part of plat approval may require that the lots be served by a combined access drive in order to limit possible traffic hazards. Driveways must be designed and arranged to avoid vehicles having to back out onto arterial or collector streets public ways. Right-of-way design requirements are described in Article 16.

G. The Planning Commission may require lots be arranged so that further subdivision and the opening of future public ways can be in place where they would be necessary to serve potential lots, in compliance with the standards of the applicable zoning district and the subdivision requirements.

H. Lots must be laid out to provide positive drainage away from all buildings. Individual lot drainage must be coordinated with the overall storm water management for the development. Perimeter lot line drainage swales and/or storm piping may be required where it is necessary to achieve positive and adequate drainage runoff conveyance away from the buildings. Adequate and positive drainage must be provided by the developer and builder during grading and finished grading activities. No cross-lot drainage is allowed.

I. Lots should be arranged so that building sites maximize utilization of energy conservation measures, such as providing for solar access purposes.

J. Where a lot in any flood prone area must be improved to provide a building site free from flooding, such improvements must be made outside the floodway by elevation or fill to at least two feet above the regulatory flood protection elevation (100-year flood) for a distance extending at least 25 feet beyond the limits of intended structures and, additionally, extending a sufficient distance to include areas for subsurface sewage disposal if the lot is not to be connected to a public sanitary sewer system. Any fill must be protected against erosion by riprap, vegetative cover, or other methods deemed acceptable by the Planning Commission. In non-residential building sites outside a floodway but subject to flooding, the use of the structural flood proofing of these regulations, as an alternative to landfill, may be approved by the Planning Commission.
15.5 COMMON OPEN SPACE
Residential subdivisions require 15% of the total land area be set aside as common open space according to the following standards.

A. The minimum open space required must be owned and maintained as described in this section. The uses within the open space must be accessible to the residents of the development. These uses may also be available to the general public. The required open space must be conveyed to a Homeowners Association (HOA) for use by the HOA in perpetuity and may not be further divided or converted to a buildable lot without approval of a revised plat by the Planning Commission.

B. The following active and passive open space uses are counted as common open space:

1. Natural water features, wetlands, and conservation areas. This includes required buffers from natural resources that are not included as part of a private lot.
2. A trail system connecting open space areas. This includes hiking, biking, and equestrian trails. Where feasible, any trail system must connect and provide access to the proposed bicycle and greenway network, as shown in the Bicycle and Greenway Plan.
3. Recreational facilities containing hardscape or impervious surfaces such as swimming pools, tennis courts, and skateparks.
4. Parks and playgrounds.
5. Greenways. Where feasible, proposed greenways must connect and provide access to the citywide proposed bicycle and greenway network as shown in the Bicycle and Greenway Plan.
7. Reuse of structures existing on the site prior to development for community purposes (i.e. rehab of an existing barn or silo for the use of the residents, etc.).
8. Agricultural uses, including vineyards with wineries and stables.
9. On-site stormwater management facilities. No more than 10% of the required total open space area may consist of stormwater management facilities.

C. Yards on individual lots or yards that are reserved for the exclusive use of an individual property owner; dedicated streets, alleys, or other public rights-of-way; and vehicular drives, private streets, and parking, loading and storage areas do not count as common open space.

D. A management plan must be prepared and submitted for all common open space, including any man-made drainage facilities that serve more than one property, such as detention/retention ponds. The designated common open space and common facilities must be owned and maintained by one or a combination of the following and the management plan must meet the standards for each type:

1. **Homeowners Association/Property Owners Association**
   a. The developer must provide the City with a description of the association, proof of incorporation of the association, a copy of its bylaws, and satisfactory proof of adoption thereof, a copy of the declaration of covenants, easements, or restrictions or similar document(s) regulating the use of the property and setting forth methods for maintaining the open space.
   b. The association must be organized by the developer and operated with financial subsidization from the developer before the sale of any lots within the development.
   c. Membership in the association is mandatory for all homeowners and tenants therein and their successors. The conditions and timing of transferring control of the association from developer to the homeowners or tenants must be identified.
   d. The association is responsible for maintenance and insurance on open space owned by the association,
Article 15. Subdivision Regulations – Required Public Improvements and Bonds

enforceable by liens placed by the homeowners or property owners association. Maintenance obligations also may be enforced by the City, which may place liens to recover its costs. Any governmental body with jurisdiction in the area where the development is located may place liens on the owners of the open space to collect unpaid taxes.

e. The members of the association must share equitably the costs of maintaining open space owned by the association. Shares must be defined within the association bylaws or declaration. Association dues must be structured to provide for both annual operating costs and to cover projected long-range costs relating to the repair of any facilities and must be reserved for such purposes.

f. The association must have or hire adequate staff to administer common facilities and to properly and continually maintain the open space.

g. The homeowners or property owners association may lease open space lands to any other qualified person or corporation for operation and maintenance of such lands, but such a lease agreement must provide:

i. That the residents of the development will at all times have access to the open space lands contained therein (except that access to land that is actively farmed).

ii. That the open space lands to be leased must be maintained.

iii. That the operation of open space facilities may be for the benefit of the residents only or may be open to the public, at the election of the developer and/or homeowners’ association, as the case may be.

h. A homeowners or property owners association must provide documentation approved by the City demonstrating compliance with these provisions must be recorded with the final subdivision, and proof of recording thereof must be provided to the City prior to the issuance of any building permits for the property. The applicant must provide draft homeowners or property owners association documentation with sufficient detail to demonstrate compliance with this section.

2. Condominium Association
To the degree applicable, condominium documents must comply with the regulations above for homeowners associations. Condominium documents must be recorded with the final plat. At the time of preliminary plat submission, the applicant must provide draft condominium documents with sufficient detail to demonstrate compliance with this section.

3. Private Conservation Organization
With the permission of the City, an owner may transfer either fee-simple title of the open space or easements on the open space to a private, conservation organization, among whose purposes it is to conserve open space and/or natural resources, provided that:

a. The organization is acceptable to City, and is a bona fide conservation organization with perpetual existence.

b. The conveyance contains appropriate provision for proper reverter or retransfer in the event that the organization becomes unwilling or unable to continue carrying out its functions.

c. The open space is permanently restricted from future development through a conservation easement and the City is given the ability to enforce these restrictions.

d. A maintenance agreement acceptable to the City is entered into by the developer and the organization.

4. Private Ownership
An individual who will maintain the land for common open space purposes, as provided by a conservation easement. This option may be used only on a very limited basis for unique situations where no other options are feasible, as approved by the Planning Commission.
5. Assurances Involving the Provision of Common Open Space
The Planning Commission may require adequate assurance, in a form and manner which it approves, that the common open space shown in the final development plan will be provided and developed. The following methods of assurance are illustrative of the types of assurances which may be provided and used singly, in combination or in conjunction with other similar methods:

a. The City may accept a bond, corporate surety, or other acceptable financial guarantee in an amount sufficient to purchase the common open space shown in the final development plan or alternative acreage which is equivalent in size and character.

b. The title to the land shown as common open space may be put in escrow, the escrow agreement to provide that the land is to be held in escrow until the Planning Commission has certified to the escrow agent that the planned development has been completed, at which time the common open space is to be conveyed to a public agency or trustees provided in an indenture establishing an association, funded trust, or similar organization. The escrow agreement may provide for the release of common open space by the escrow agent in stages. In such instance, the Planning Commission is to certify the completion of each stage of the planned development to the escrow agent and the escrow agreement must provide that the open space may be conveyed in stages. In this event, the open space which is conveyed is to be of the same proportions to the open space provided on the final development plan as the dwelling units that have been built are to the total number of dwelling units which are allowable by the final development plan.

c. If any planned development which includes common open space is held by the developer on option, the developer shall assign to the city the right to exercise the option to acquire the common open space.

d. In general, the construction and provision of all common open spaces and public and recreational facilities which are shown on the final development plan must proceed at no slower rate than the construction of dwelling units. From time to time, the Planning Commission must compare the actual development with the development schedule. If the Commission finds that the rate of construction of dwelling units or other commercial or industrial structures is substantially greater than the rate at which common open spaces and public and recreational facilities have been constructed and provided, then the Planning Commission may either cease to approve any additional final plats or instruct the Building Inspector to discontinue issuance of building permits.

6. Dedication of Public Facilities
The Planning Commission and the Board of Mayor and Aldermen may, as a condition of approval and adoption, in accordance with the final development plan, require that suitable areas for streets, public rights-of-way, schools, parks, and other public areas be set aside, improved and/or dedicated for public use.

**15.6 NATURAL LAND CHARACTERISTICS**

A. Areas Unsuitable for Development and Hazardous Conditions

1. Land that the Planning Commission finds to be unsuitable for subdivision or development due to flooding, improper drainage, steep slopes, rock formations, adverse earth formations or topography, utility easements, or other features that would be harmful to safety, health, and general welfare of residents and/or businesses cannot be subdivided or developed unless adequate methods are implemented by the developer and approved by the Planning Commission, upon recommendation of the Planning Department and/or other governmental representative, if any, to solve the problems created by the unsuitable land conditions. Such land should be set aside for uses, such as open space, which would not create a danger.

2. Each developer may be required to furnish and install fences wherever the Planning Commission determines that a hazardous condition exists. Such fences must be constructed according to standards established by the Planning Commission, as appropriate, and noted on the final plat as to height and required materials. No certificate of occupancy will be issued for any affected lot until such fence improvements have been installed.
B. Preservation of Natural Features and Amenities
Existing features that would add value to residential development or to the area as a whole, such as trees, watercourses and falls, areas of historic or cultural significance, and similar assets, must be preserved in the design of the subdivision when required by the Planning Commission. No grade change or removal of features are permitted until a preliminary plat has been approved by the Planning Commission.

C. Water Quality Buffer Zone Easements
1. On all preliminary and final plats, where a stream, as defined by Tennessee Department of Environment and Conservation (TDEC), is located on any lot or portion of a lot within a proposed subdivision, the developer must dedicate water quality buffer zone easements of 30 feet on each side for unimpaired streams and 60 feet for impaired streams, as measured from the edge of the top-of-bank, on both sides of the creek. This stream buffer must not encroach onto any platted lots created by subdivision. No structures or improvements, as defined by TDEC, are allowed in this area.

2. The easements must be in accordance with the City’s Storm Water Department MS4 Program requirements for floodways, public utilities, and riparian protection within which no use may be made or allowed of the area by the property owner that will cause change or damage to the creek or its banks and within which public authority may repair and restore damage to creeks and their banks.

3. The water quality buffer zones easements are designated so as not to disturb the natural vegetation and tree canopies of the creeks and water courses in order to preserve water quality of runoff and to prevent unwarranted sedimentation and pollutants entering the waters of the state. For the purpose of this section, the natural edge of any creek is determined by the City Engineer or the Storm Water Coordinator.

4. Water quality buffer zone easements must be indicated on all plats.

D. Water Bodies and Watercourses
1. If a subdivision contains a water body, or portion thereof, lot lines must be so drawn as to distribute the entire ownership of the water body among the adjacent lots. No more than 10% of the minimum lot area required by any zoning district may be satisfied by land that is under water.

2. The Planning Commission may approve an alternative plan whereby the ownership of and responsibility for safe maintenance of the water body is so placed that it will not become a governmental responsibility and become the responsibility of a homeowner’s association or similar.

3. Where a watercourse separates a buildable area of a lot from the public right-of-way by which it has access, provisions must be made for installation of a culvert or other structure approved by the Planning Commission and no certificate of occupancy will be issued for a structure on such a lot until the installation is completed and approved by the Planning Commission and/or the appropriate governmental representative.

E. Soil Preservation, Grading, Erosion Control, and Seeding
No certificate of occupancy will be issued until final grading has been completed in accordance with the approved construction plan. Unless approved by the City Engineer, topsoil cannot be removed from residential lots or used as spoil, but must be redistributed so as to provide cover on the lots and between any sidewalks and curbs, and must be stabilized by seeding or planting.

F. Karsts
When requested by the Planning Commission, the applicant must submit a geotechnical report that contains a summary of findings from a geotechnical analysis performed on the site along with recommendations to address any identified karst or other geotechnical features existing on the development site. In cases where the report finds evidence that karst features exist, no development is permitted to take place over such karst feature.

G. Disposal of Natural and Construction Waste Materials
No cut trees, timber, debris, junk, rubbish, or other waste materials of any kind may be buried in any land or left or deposited on any lot or public right-of-way. Removal of such waste is required prior to issuance of any certificate of occupancy. No such waste may be left behind or deposited in any area of the subdivision at the time of expiration of the performance bond or dedication of public improvements, whichever is sooner.
15.7 STORMWATER MANAGEMENT

A. Subdivision is subject to Title 18, Storm Water Management Ordinance of the Municipal Code. Per Section 18-404, Land Disturbance Permits, are required prior to the start of construction. Per Title 18, a performance agreement or letter of credit may be required.

B. Maintenance of onsite stormwater facilities must execute an inspection and maintenance agreement that operates as a deed restriction binding on the current property owner or the applicable management association, such as a Homeowners or Property Owners Association, or Condominium Association. The maintenance agreement must:

1. Assign responsibility for the maintenance and repair of the stormwater facility and landscaping to the owner or management association.
2. Provide for a periodic inspection.
3. Provide for minimum maintenance and repair needs that include, but are not limited to, removal of silt, litter and other debris, cutting of grass, and vegetation removal, and replacement of landscape vegetation in detention or retention ponds and inlets and drainage pipes and any other storm water appurtenance.

C. The City will not be responsible for maintenance of the open ditches, swales, or swales between properties. The City will be responsible for maintenance of physical structures such as, but not limited to, headwalls, catch basins, and piping.

15.8 PUBLIC RIGHTS-OF-WAY

Public rights-of-way must be constructed and designed in accordance with Article 16 of this Code.

15.9 DRAINAGE AND STORMWATER SEWERS

All stormwater drainage systems must be separate and independent from any wastewater sewer.

A. Accessibility to Public Stormwater Sewers

1. Where a public storm sewer is accessible, generally within 300 feet, the developer must install connections to stormwater sewer facilities. Stormwater sewer lines must be extended through and to the end of the development as determined by the City Engineer.

2. If a connection to a public stormwater sewer will be provided eventually, as verified by the City Engineer, the developer must make arrangement for future stormwater disposal by that public system at the time the plat receives final approval. Provisions for such connection must be incorporated into the performance bond required for the final plat.

3. All underground stormwater conveyances will be inspected by the City to ensure proper installation prior to acceptance by the City. All DVD recording, or other electronic format acceptable to the City, and inspection must be performed by the developer for verification. Any pipe over five (5) feet deep will be verified with a TV inspection and a copy given to the City inspector for review.

4. All underground stormwater conveyances that are found to be contaminated with sediment must be cleaned by equipment suitable for the work performed and by the Public Works Director and all material or installation defects must be repaired to the satisfaction of the City at the developer’s expense. All final work will be re-verified by pipe camera inspection on DVD recording, or other electronic format acceptable to the City, by the developer.

5. If no access to public stormwater sewers are within a reasonable distance, adequate provision must be made for the disposal of stormwater, in compliance with the Storm Water Management Ordinance.

6. Storm sewer lines must be extended through and to the end of the development when requested by the City Engineer to service future development.

7. Public stormwater sewer pipe must be installed in public rights-of-way or public dedicated easements. Pipe or other stormwater structures must be placed in the center of easements and no closer than five feet from the edge of any public right-of-way.
8. Surface swales draining multiple lots cannot flow over sidewalks or curbs. Surface water flow must be intercepted by area drains or headwalls and piped to the nearest underground storm sewer system.

B. Storm Water Drainage Calculations Specifications
All stormwater drainage calculations must be submitted to the City Engineer as part of the plan approval process for site plans, preliminary plats, and planned developments. Calculations must include the following:

1. Surface water drainage calculations for each drainage sub-basin within the development. This must include the 100-year and 25-year maximum discharge in accordance with Title 18 of the Municipal Code. Other information must include runoff coefficients and time of concentration for each drainage sub-basin associated with stormwater inlets or other conveyance systems to channel and/or intercept surface water flows.

2. Inlet capacity of stormwater inlets along with any storm water bypass. Inlets capacity calculations must include the clogging factor used by the engineer in the design.

3. Width of surface water spread on streets prior to interception of flows by inlets.

4. Maximum flow capacity for each stretch of stormwater sewer pipe between manholes along with the HGL associated with anticipated flows.

5. Pipe roughness coefficient used for design.

6. Sub-basin characteristics such as max flow, runoff coefficients, time of concentration, peak discharge.

7. Hydrological methods used for surface water calculations must follow the methodologies and practices outlined in the Tennessee Department of Transportation Division Drainage Manual, except where design standards are otherwise described in this article.

C. Dedication of Drainage Easements

1. Where a subdivision is traversed by a watercourse, drainage way, channel, or stream, either a stormwater easement or drainage way conforming substantially to the lines of such watercourse, and of appropriate width and construction, must be provided. Where open drainage ways are utilized, they must be designed for a 25-year flood. In addition, the 50-year and 100-year storm events must be evaluated by the developer’s engineer to determine if additional capacity is necessary due to the potential of flooding during high intensity storm events.

2. Where topography or other conditions make the inclusion of drainage facilities within a public way impractical, perpetual unobstructed easements are required. Such easements must be 20 feet wide. Easements containing storm sewer, sanitary sewer and/or water lines must have a minimum width that is adequate to provide for a ten foot separation between pipelines and allow ten feet from the centerline of the outside pipes to the easement boundary. Easements must be indicated on the preliminary and final plats. Drainage easements must be carried from the public way to a natural watercourse or other drainage facilities.

3. When a new drainage system is to be constructed that will carry water across private land outside the subdivision, appropriate drainage rights and easements must be secured and indicated on the plat.

4. The applicant must preserve an area, parallel to the watercourse, containing a width equal to and not less than two times the water course width (as measured from top-of-bank to top-of-bank). This area will be designated as a water quality buffer zone easement and cannot be disturbed by the proposed development. Details of this requirement are located within the City’s Water Quality Buffer Zone Policy.

5. Along watercourses, low-lying lands within any floodway, as determined by the Planning Commission whether or not included in areas for dedication, must be preserved and retained in their natural state as drainage ways.

D. Accommodation of Upstream Drainage Areas
A culvert or other drainage facility must be large enough to accommodate potential runoff from its entire upstream drainage area, whether inside or outside the subdivision. Necessary facilities will be sized based on the construction specifications and assuming conditions of maximum potential watershed development permitted by any zoning regulations.

E. Effect on Downstream Drainage Areas
The Planning Commission will also study the effect of each subdivision and development of single lots on existing downstream drainage facilities outside the area of the subdivision. Where it is anticipated that the additional runoff incident to the development of the subdivision will overload an existing downstream drainage facility, the Planning Commission may withhold approval of the subdivision until provision has been made for adequate improvement of such drainage facilities in such sum as the Planning Commission determines. No subdivision will be approved unless adequate drainage is provided to an adequate drainage watercourse or facility.

F. Spring or Surface Water On Site
The developer may be required by the Planning Commission to transport by pipe or open ditch any spring or surface water that may exist prior to or as a result of the subdivision. Such drainage facilities must be located in the public way, where feasible, or in perpetual unobstructed easements of appropriate width, and must be constructed in accordance with the storm water construction specifications.

G. Floodplain Areas
The Planning Commission may prohibit, when it deems it necessary for the health, safety, or welfare of the present and future population of the area or necessary to the conservation of water, drainage, and sanitary facilities, the subdivision of any portion of the property that lies within the floodplain of any stream or drainage course. The regulatory floodway must be preserved from any and all destruction or damage resulting from clearing, grading, or dumping of earth, waste material, or stumps.

H. Areas of Poor Drainage
Whenever a plat is submitted for an area which is subject to flooding, the Planning Commission may approve such subdivision provided that the applicant fills the affected floodway fringe area of said subdivision so that public right-of-way elevations are at no less than two feet above the regulatory flood elevation and first floor elevations (including basements) at no less than two feet above the regulatory flood elevation. The plat of such subdivision must provide for a floodway along the bank of any stream or watercourse of width sufficient to contain or move the water of the regulatory flood, and no fill may be placed and no building nor flood-restrictive structure may be erected or placed in the floodway.

I. Design Standards

1. Detention Volume
The required detention volume must be that volume necessary, given the hydraulic characteristics of the primary outlet structure, to attenuate the post-development of mass outflow of water from the structure from hour 11 to hour 18 of the 24-hour storm to a level not to exceed the pre-development mass outflow for the same time period for both the 2-year and 5-year 24-hour storms. Detention storage volume must be drained within 72 hours.

2. Maximum Release Rate
The release rate from any detention pond must be for the site for the same storm prior to the proposed development. The peak outflow rate from the 2-year 24-hour storm, 10-year 24-hour storm, and 25-year 24-hour storm cannot exceed that of the site prior to development. Detention facilities must have a primary discharge structure capable of accommodating the 24-hour storms up through the 25-year with an emergency overflow capable of handling at least the 100-year 24-hour post development discharge unless waived by the Planning Commission.

3. Storm Sewer Design Requirement
Design storm frequency for land use/development type for storm systems must be as follows:
   a. Residential 25-year storm
   b. Commercial/Business/industrial 25-year storm
   c. For drainage swales, lined channels and natural channels, the system must be designed to carry the 100-year storm and have the capacity to convey storm runoff without life hazard or property damage.

4. Existing Water Facilities
   a. Existing streams, lakes, and wetland cannot be modified for use as stormwater detention or retention ponds.
   b. On-stream impoundments are prohibited.

5. Stream Buffer Requirements
No stormwater management facilities may be located within streamside buffers, nor can they be detrimental to such buffers, unless a plan with appropriate mitigation is authorized by the City Engineer.

6. **Stormwater Detention and Surface Infiltration Basins**
Stormwater detention and surface infiltration basins must be design as naturalized basins for multiple uses, including stormwater detention, habitat enhancement and passive recreation use. Basins cannot be designed solely for stormwater detention purposes.

a. Stormwater basins must be designed and incorporated into usable open space, accessible and open to the public.

b. Water level fluctuations between the normal and high water level cannot exceed 18 inches for the 2-year design event and cannot exceed five feet for the 100-year design event.

c. If fish are to be supported at least 25% of the permanent pool of water must be a minimum of ten feet in depth.

d. Detention and outlet structure must be located at opposite ends of the basin to maximize water quality benefits.

e. For wet detention basins, water entry slopes between one foot above and one boot below cannot exceed ten to one (10:1) to minimize shoreline erosion. Shallow entry angle will improve water quality treatment and increase aquatic habitat.

f. Drainage area for wet detention ponds is a 15 acre minimum, to ensure hydrologic input sufficient to maintain permanent pool. Ten acres or less may be acceptable, particularly if the groundwater table is intercepted and a water balance indicates that a permanent pool can be sustained.

g. All basins, trap embankments, swales, perimeter dikes, and permanent slopes steeper or equal to 3:1 shall be stabilized with sod, seed and anchored straw mulch or other approved stabilization measures, within seven (7) calendar days of establishment. All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization. Re-stabilization or over-seeding will be required, if necessary as determined by the inspector.

7. **Stormwater Inlets**

a. Stormwater Inlets must be John Bouchard 3103 V Curb inlet or 3300-V Curb Inlet. Curb types shall match the inlets as specified on the construction drawings.

b. Clogging factor for design and spacing must be 50%.

c. Inlets cannot be spaced in the pathway or ADA ramps and must intercept surface water before ADA ramps.

d. All stormwater inlet boxes must be precast with inlet and outlet pipes grouted inside and outside to make the joint water tight

8. **Stormwater Manholes**

a. Manholes must be installed at the end of each line, at all changes in grade, size or alignment at all sewer main intersections and at distances not greater than 400 feet apart for sewers 18 inches in diameter and not greater than 450 feet apart for sewer greater than 18 inches in diameter.

b. Floor troughs must be furnished for all sewers entering manholes. A larger diameter manhole must be utilized in order to properly construct floor troughs where the incoming sewer inverts are substantially higher than the outgoing sewer invert. At all manholes with a change of direction, a drop from the entrance to the outlet of at least 0.1 feet must be provided to account for head loss through the manhole. Additional drop in elevation may be required for sewer mains 12 inches and larger. Inverts must be U-shaped to the pipe crown before sloping at a one to twelve (1:12) slope to the manhole walls.

c. Four foot diameter manholes can be used for pipes up to 18 inches. Five foot diameter manholes must be used for pipes 21 inches in diameter and larger.
d. Manhole frame and cover must be John Bouchard 1111 or approved equal.
9. Stormwater Pipe, Manholes, Catch basins, Inlets and Pipe End Walls, and Bedding Aggregate

a. Reinforced concrete pipe must conform to the minimum standards for Class III, ASTM C76, and must be utilized under roadways and all paved areas whether public or private development. All RCP stormwater pipe and structure joints and connections must be grouted with non-shrink grout and/or otherwise sealed both inside and out. Butylene gasket materials must also be utilized within pre-cast manholes and structures to further seal the joints and connections.

b. Concrete and HDPE All storm piping connections must be sealed with proper collar rings when applicable and directed by the City as per manufacturer’s specifications.

c. Dual wall polypropylene (PP) storm drainage pipe (18” to 60”) is also allowed for use within paved areas (public and private) only if the installation requirements and backfill materials are utilized as recommended by the manufacturer. Dual walled smooth interior PP pipe must be in accordance with AASHTO HB Section 30, T-341, R-16 and MP-21-11 along with ASTM C969, C1103, D2321, D3212, F477, F1417, F2487, F2736, and F2881. Detectable warning tape must be utilized in the trench of the PP pipe when installed.

d. HDPE pipe is permitted outside of paved areas as long as its installation is in accordance with the manufacturer’s recommendations.

e. All stormwater piping must have a minimum velocity of three feet per second.

f. All pipe headwall must be of TDOT Class A Concrete. Poured in place headwalls cannot be less than 12 inches thick for pipes 18 inches through 30 inches. Precast discharge structures must meet the requirements of TDOT standard drawings. The tops of all headwalls shall be installed with no more than 6” of concrete exposed on the inlet side.

g. Nyloplast (H2O) structures are permitted in turf areas.

10. Excavation, Bedding, and Backfill

a. A minimum cover of two feet is required on all PP pipe. Six inches of pipe bedding of TDOT No. 67 stone is required for all PP pipe.

b. A minimum cover of two feet to final surface elevation is required for all storm drainage pipe installation whether RCP or PP pipe. Approved backfill soil material, free of any rock material great than two inches or total depth backfill with TDOT No. 67 stone allowed. Approved soil backfill must be at maximum lifts of eight inches compacted to 98% density or as directed by a geotechnical engineer. Outside of the right of way, the final 8 inches to grade must be top soil unless approved by the City Engineer.

c. When in the public right of way, no soil back fill shall be utilized unless inspected and tested by a geotechnical engineer and reports provided to the City inspector. If soil backfill is utilized out of the right of way, a two-year maintenance bond is required instead of the standard one-year maintenance bond to assure no settlement or pipe failures occur. Where in public or private roadway, if soil backfill is utilized an additional two-year maintenance bond is required above the standard one-year maintenance bond to assure no settlement or pipe failures occur.

d. Pipe bedding for HDPE must be as per manufacturer’s requirements. Backfill for HDPE pipe must be free of rocks. Minimum cover above HDPE pipe is two feet.

11. Roadway Drainage Systems

Drainage structures to be constructed within streets and driveways are to be installed prior to construction of the pavement base. Roadway drainage systems must provide adequate capacity so that the spread of water in the roadway:

a. Be limited so that not more than one traffic lane is inundated in either direction for arterial roadways.

b. Leave at least one lane free of water in each direction for collectors.

c. Be limited so as to maintain a minimum of one lane (eight feet total) free of water for local roads.
d. All stormwater sewer improvements shall be surveyed as built prior to the installation of any binder pavement. These elevations and locations shall be verified before release of installation of asphalt.

12. Culverts
The design flow for culverts is based on the following return frequencies:

a. 100-year, 24-hour for residential collector and arterial commercial road crossings.

b. 25-year, 24-hour for local residential roads and crossings.

13. Drainage Ditches

a. Through lot drainage ditches must be built to a grade that will provide positive drainage, and in no case may the slope of the ditch be less than 0.5% slope with a preferred slope of 1%.

b. Stormwater cannot be directed in such a manner that it flows outside of the designated easements or rights of way during a 25-year rainfall event or less or as directed by the City Engineer.

c. If excessive grades or elevations dictate, gutters and downspouts must be directed in a manner to prevent stormwater drainage onto neighboring property at lower elevations.

d. All drainage ditches must be stabilized to prevent erosion as indicated by the protection shown in the Table 15-1: Erosion Protection.

<table>
<thead>
<tr>
<th>Upstream</th>
<th>Seed and Erosion Blanket</th>
<th>Sod</th>
<th>Concrete Lined</th>
</tr>
</thead>
<tbody>
<tr>
<td>18” pipe</td>
<td>Grades less than 3%</td>
<td>Grades 3 to 12%</td>
<td>Grades greater than 12%</td>
</tr>
<tr>
<td>21” to 24” pipe</td>
<td>Grades less than 1.5%</td>
<td>Grades 1.5% to 7%</td>
<td>Grades greater than 7%</td>
</tr>
<tr>
<td>30” to 36” pipe</td>
<td>Grades less than 1%</td>
<td>Grades 1% to 4%</td>
<td>Grades greater than 4%</td>
</tr>
<tr>
<td>42” and greater</td>
<td>Not applicable</td>
<td>Grade 1% to 2.5%</td>
<td>Grades greater than 2.5%</td>
</tr>
</tbody>
</table>

e. Ditches that require lining with concrete must be lined to a height above the bottom of the ditch no less than one-half the diameter of the nearest culvert (upstream). However, in no case can the lining extend less than one foot above the bottom of the ditch.

f. Lined ditches must be constructed of TDOT Class A. Concrete or approved alternate.

g. Ditches that require sodding must be sodded to the top of the slope of the ditch. The sod must consist of a live, dense, well rooted growth of permanent grasses free from Johnson grass and other objectionable grasses, and suitable for the soil in which it is to be placed. All sod and erosion blankets shall have full contact with soil underneath and installed per manufacturer’s specifications.

h. All swales not requiring sod will be required to use erosion blankets.

15.10 WATER DISTRIBUTION FACILITIES

A. Necessary action must be taken by the developer to extend a water supply system capable of providing domestic water use and fire protection through the development and providing connection of the system to adjoining properties, as required by the Planning Commission.

B. Where a public water main is within reasonable access of the subdivision, as determined by the Planning Commission and verified by the City Engineer, the developer must install adequate water facilities that are capable of providing the minimum protection flows (750 GPM @ a minimum residual psi of 30), including fire hydrants, subject to construction and material specifications of the Tennessee Department of Environment and Conservation and Spring Hill’s Standard Specifications for Water Additions, and by any other applicable standards and specifications and additional requirements of the Planning Commission.
C. Water lines must be extended to the property boundaries of the development as to allow future connection of the adjacent property. An end-of-line fire hydrant with a line sized gate valve and reverse thrust blocking must be installed as to allow uninterrupted water service when the future connection is made. If an existing water line, extended to boundary from the adjacent property, is present, then the proposed development must connect to the existing water line.

D. All water line plans and calculations are required to be first submitted to the Spring Hill’s Water Department for review and approval prior to submitting to the Tennessee Department of Environment and Conservation. The City’s Water Department representative is required to sign-off on the signature block indicating the City has reviewed and approved the proposed water line additions of the development prior to submittal to the Tennessee Department of Environment and Conservation, whether the additions are proposed as private or public. TDEC stamped approved plans must be submitted to the City’s Water Department prior to any installation activities begin for the proposed water additions.
E. All water systems, whether public or private, located in a flood prone area must be floodproofed to the regulatory flood protection elevation. All water supply facilities located below the regulatory flood protection elevation must be designed to prevent the infiltration of floodwaters into the water supply system and discharges from the system into floodwaters.

F. All water lines must be located outside the pavement and curbing of roadways. They are permitted and are allowed only within the roadway rights-of-way or within a designated water utility easement. Easements must be a minimum of 20 feet in width unless otherwise required by the City Engineer.

G. Water lines must be designed and constructed to provide a minimum of two water feeds to each development, as to allow uninterrupted water conveyance to the development should one feed connection line experience a break.

H. Water mains must be no less than eight inches in diameter, except for fire hydrant leads. The Planning Commission may make exceptions to this subject to verification by the City Engineer.

I. Fire hydrants are required in all subdivisions. They must be located no more than 1,000 feet apart and be within 500 feet of any part of a building. All hydrants must be located a minimum of 1,000 feet apart. However, the Planning Commission may require closer spacing where physical conditions or types of structures so warrant. Fire hydrants must remain at the end of water mains in all cul-de-sacs. To eliminate future public way cutting or openings, all underground utilities for fire hydrants, together with the fire hydrants themselves, and all other water supply improvements must be installed before any final paving of a public right-of-way shown on the subdivision plat, unless otherwise approved by the Planning Commission.

J. Individual (separate) water service lines and water meters will be required for each unit in a PUD or cluster type development, regardless of operation and maintenance responsibilities for water lines within the development. Water service lines may be connected together into one service line extending to a water main, if each service line has it's own curb stop installed in a street or right of way granted to the city for access, and a curb stop exists on the one service line extending to the main.

K. The City is not responsible for the operation and maintenance of water and sewer mains in a private street, unless such utilities are located within a dedicated public utility easement and the responsibility has been formally accepted by the City and subsequently is recorded as part of the plat.

L. Water pipelines and ancillary materials are subject to the following:

1. The type of water pipe for distribution pipelines is specified within the City of Spring Hill, Standard Specifications for Water Additions.

2. The type of water valves and hydrants is specified within the City of Spring Hill, Standard Specifications for Water Addition.

3. The type of service assemblies, such as corporation cocks, service pipes, meter yokes, and water meters, are specified within the City of Spring Hill, Standard Specifications for Water Addition.

M. All pipelines and ancillary materials must be furnished and installed in accordance with the City of Spring Hill, Standard Specifications for Water Additions.

N. Master water metering: a master meter is required for multi-tenant complexes. These meters must be placed inside public rights-of-way at the City’s main point of service. There must also be a secondary point of connection with backflow device for emergency uses only if the primary source fails.

15.11 SANITARY SEWER FACILITIES

All subdivisions require a connection to sanitary sewers. No new subdivisions are permitted connected to individual disposal systems. This does not apply to existing lots in residential subdivisions or lot splits.

A. The applicant must install sanitary sewer facilities in a manner prescribed by the regulations of the Tennessee Department of Environment and Conservation, Spring Hill’s Standard Specifications for Sewage Addition, and by any other applicable standards and specifications, including requirements of the Planning Commission. All plans must be designed and approved in accordance with the rules, regulations, specifications, and standards, of any applicable governmental agency or appropriate unit thereof.
B. Gravity flow must be used with lift stations and force mains only considered when necessary, such as in order to deal with extreme terrain or the protection of significant natural resources. The developer must bear the cost of lift stations.

C. When public sanitary sewers are within reasonable access of the subdivision, as determined by the City Engineer, the developer must provide sanitary sewer facilities to each lot therein and connect the facilities to the public system.

D. All sanitary sewer facilities located in a flood hazard area must be flood-proofed to the regulatory flood protection elevation. All sewer facilities located below the regulatory flood protection elevation must be designed to prevent infiltration of floodwaters into the sewer system and discharges from the system into floodwaters.

E. Sewer lines must be extended to the property boundaries of the development as to allow future connection of the adjacent property. An end-of-line manhole must be installed as to allow uninterrupted sewer service when the future connection is made. If an existing sewer line, extended to boundary from the adjacent property, is present then the proposed development must connect to the existing sewer line.

F. All sewer line, pump station, and force main plans and calculations are required to be first submitted to the City’s Sewer Department for review and approval prior to submitting to the Tennessee Department of Environment and Conservation. The City’s Sewer Department representative is required to sign-off on the signature block indicating the City has reviewed and approved the proposed sewage additions of the development prior to submittal to the Tennessee Department of Environment and Conservation, whether the additions are proposed as private or public. TDEC stamped approved plans must be submitted to the City’s Sewer Department prior to when any installation activities begin for the proposed water additions.

G. All underground sanitary sewer conveyances must be inspected by the City to ensure proper installation prior to acceptance by the City. DVD or other video recording must be completed by the developer and submitted to the City for verification.

H. All underground sanitary sewer conveyances that are found to be contaminated with sediment or debris must be cleaned by equipment suitable for the work performed and by the City Engineer or their designee and all material and installation I defects must be repaired to the satisfaction of the Spring Hill Sewer Department at the developer's expense. All final work must be re-verified by pipe camera inspection recorded on DVD or other video recording and inspection must be completed by the developer and submitted to the City for verification.

I. These design criteria are not intended to cover extraordinary situations. Deviations may be allowed in those instances when approved by the City Engineer.

1. Sanitary sewer systems must be designed for the ultimate build out conditions within the proposed development sanitary sewer basin and projected development served within the basin based upon appropriate plans and zoning regulations. Due consideration may be given to any current zoning regulations and approved planning reports, where applicable.

2. Sewer capacities must be adequate to accommodate the anticipated maximum hourly flow of sewage and industrial wastes, together with an adequate allowance for infiltration and other extraneous flow. Design basis for wastewater flow and loadings must be acquired from TDEC Chapter 2, Sewers and Wastewater Pumping Stations.

J. Sewer lines must be located as follows:

1. Sewer lines must be located under the pavement in the center of roadways and, where possible, located outside of areas subject to flooding. Where manholes lie within the natural flow of stormwater within the roadway, an inflow preventer must be installed in the manhole to prevent stormwater inflow.

2. Sewer lines and manholes located within flood prone areas must be watertight and contain watertight manhole castings. Sewer manholes installed by others shall be fitted with water tight manhole inserts provided by the City at their expense.

3. Sewers lines and manholes shall not be located within or inside detention basins.
4. Manhole castings shall be at final topping grade exposing only enough casting to accommodate thickness of final asphalt wearing course. Acceptable materials to adjust manhole castings to fit the grade of the asphalt surface wearing course consists of metal riser ring adjusters or approved equals; brick, grout, or precast adjusters are not allowed. All sewer shall be required to be as-built surveyed before binder pavement is approved for placement.

K. The City will not have responsibility for the operation and maintenance of wastewater sewer mains in private streets located within PD or cluster-type development, unless responsibility is formally accepted by the City and subsequently is established through a maintenance agreement and public utility easement.

L. Sewer pipelines and appurtenances:
   1. The type of pipe for sanitary sewers is specified within the City of Spring Hill, Standard Specifications for Sewage Additions.
   2. The type of manholes for sanitary sewers is specified within the City of Spring Hill, Standard Specifications for Sewage Additions.
   3. The type of pipe for sewage force mains is specified within the City of Spring Hill, Standard Specifications for Sewage Additions.

M. All pipelines must be furnished and installed in accordance with the City of Spring Hill, Standard Specifications for Sewage Additions.

N. Testing of sewage additions:
   1. Wastewater sewers must be air tested when installation of the improvements including service lines and all remaining underground utilities, including water, electric, gas and telephone are installed complete.
   2. Wastewater sewer manholes must be air tested after the base course of the roadway is installed.
   3. All air testing must be in accordance to the City of Spring Hill, Standard Specifications for Sewage Additions.

O. Wastewater sewer flow study:
   1. The developer must prepare a wastewater sewer flow study to determine average daily flow and maximum daily flow for all commercial and industrial units and residential developments consisting of 20 or more dwelling units. The study must provide information on the increased demand from the development on the existing capacity of the City’s sanitary sewer system. The study’s extent must include all collection pipes up to when the sewer system expands to the next available larger diameter pipe downstream. The City will evaluate the findings of the study and make a determination as to whether the City’s sewer system has the capacity to meet the new demand.
2. The study must provide the following information.
   a. Table of estimated sewage flows (peak and average daily flows) for the development as a whole and for each land use. The table must include the number of dwelling units and commercial units.
   b. The City will provide average daily and maximum daily wastewater flows for residential units. Other design values must be acquired from the Tennessee Department of Environment and Conservation (TDEC).
   c. Depth of sewer flow in the downstream manhole from the proposed connection during the max flow of day normally between the hours of 8:00 to 10:00 am.

P. Alignment:
   1. General Wastewater Sewer Alignment: In general, wastewater sewers must be designed for uniform slope and alignment between manholes, and located in the center of the street pavement whenever possible. All sewers must have a clear minimum distance of ten feet separation between water lines.
   2. Energy Gradient Line: The energy gradient line must be maintained whenever a small sewer joins a larger sewer. This must be approximated by placing the 0.8 depth of both sewers at the same elevation (not considering the head loss through the manhole).

Q. Manholes:
   1. Manholes must be installed at the end of each line, at all changes in grade, size, or alignment at all sewer main intersections and at distances not greater than 350 feet apart for sewers 15 inches in diameter or less and not greater than 400 feet apart for sewer 18 inches in diameter and larger.
   2. Lampholes are not acceptable as a substitute for manholes.
   3. Drop manholes cannot be used unless the invert elevations between the receiving pipe and the discharging pipe is more than three feet. If the discharging pipe has less than five feet of bury to the top of the pipe at the proposed drop manhole, the pipe must be laid at a uniform grade to the manhole invert and no drop manhole are permitted.
   4. Floor troughs must be furnished for all sewers entering manholes. A larger diameter manhole must be utilized in order to properly construct floor troughs where the incoming sewer inverts are substantially higher than the outgoing sewer invert. At all manholes with a change of direction, a drop from the entrance to the outlet of at least 0.1 feet must be provided to account for head loss through the manhole. More drop may be required for sewer mains 12 inches and larger. Inverts must be U-shaped to the pipe crown before sloping at a one to twelve (1:12) slope to the manhole walls.
   5. All manholes located in areas of special flood hazards must be flat top manholes. All manhole ring and covers must be water tight.
   6. Four foot diameter manholes can be used for pipes up to 18 inches. Five foot diameter manholes must be used for pipes 21 inches in diameter and larger.
   7. All new and existing manholes receiving sewage from force mains must have its interior epoxy lined. Should the existing manhole not be suitable for epoxy lining, the manhole must be replaced and a new epoxy lined manhole installed.

R. Service connections:
   1. Service connections to any wastewater sewer must be made only to a wye connection installed at the time of the sewer main installation or by machine tap and approved saddle appropriate to the main line sewer material. All connections to existing public sewer must be made at the 10:00 or 2:00 o’clock position.
   2. All sewer connection must be sized in accordance with the Uniform Plumbing Code.
   3. Only one residence, structure, or building may be served by each lateral connected to the public or private sewer main, unless otherwise approved of by the City.
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4. Commercial and industrial waste must comply with the City’s Municipal Code relative to the use of public sewers and the requirements for discharge of certain materials (pretreatment).

5. An inspection manhole or other suitable structure are required on the service line for any use other than normal domestic use.

6. In addition to the above requirements, acceptable grease interceptors are required of all restaurants, food preparations centers, or for any other discharge containing oil and grease.

7. In addition to the above requirements, acceptable sand and oil interceptors must be provided for all car washes and similar facilities, which may discharge sand or dirt into the sewer.

8. Townhouse developments may use a “manifold” sewage collection system for service to individual properties, if a valid Homeowners or Property Owners Association exists among all property owners. The manifold system is restricted to only townhouse developments and must conform to the following requirements:
   a. The “manifold” system must be owned and maintained by a viable Homeowners or Property Owners Association. The association is responsible for the manifold to the point of connection to the sewer main.
   b. No more than five privately owned units may be placed on any “manifold.”
   c. The “manifold” must be located at the back side of the front lot utility easement.
   d. The common header pipe to the main must be six inches in size and must be provided with cleanouts at the ends and at all bends.
   e. The “manifold” must meet all requirements of the local Plumbing Code, as adopted by the City.
   f. The City will extend the wastewater sewer service line to the street right-of-way line and cap it off for future connection. The builder is responsible for extending the service from the building to the street right-of-way and install the proper cleanout according to the City’s Sewer Specifications. The maximum spacing between sewer cleanouts is 75 lineal feet.

S. Sewage lift stations:

1. Total dynamic head rating of pumping units is based on pipe friction, pressure losses from piping entrances, exits, appurtenances, (bends, valves, etc.) and static head at the rated flow.

2. Design considerations:
   a. Where no grit removal is provided ahead of the pumping station, equipment and piping design must minimize the deleterious effects of grit in the sewage.
   b. Screens or comminutors must be provided ahead of the pumps where the average daily flow is in excess of one million gallons per day (mgd) to prevent solids larger than 2.5 inches from entering the pump.
   c. Except for grinder pumps, raw sewage pumps must be capable of passing spheres of at least three inches in diameter. Pump suction and discharge piping in all sewage and sludge services must be no smaller than four inches in diameter.
   d. Intermittently operated pumps must be designed to start no more often that one every ten minutes at the minimum operating interval.
   e. Pumping stations must be designed to permit removal of all items of equipment including pumps, valves, electrical and control equipment. Equipment located in wet wells must be removable without entering the wet well.
   f. Piping systems must be designed to withstand the maximum possible surge from the pumping station or adequate surge control provided to protect the piping. Pressure relief valves are not acceptable surge controls.
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g. Pumps must be selected so that the net positive suction head required at the maximum flow (NPSHR) is less than the NPSH available minus four feet based on the hydraulic conditions and altitude of the lift station.

h. The pumping station chambers must resist hydrostatic uplift pressures.

3. Siting requirements:
   a. Pumping stations must be located so that they are readily accessible to operating and maintenance personnel at all times of day or night, and under all weather conditions. Pumping stations must be located off of traffic ways.
   b. Pumping stations must be designed so there is no equipment or structural damage in the 100-year floodplain and so that the pumping station’s operation is uninterrupted by the 25-year flood.
   c. The pumping station must be surrounded by a six foot high chain link fence with appropriate gates to access the facility for maintenance. Outdoor security lighting must be provided.

4. The City of Spring Hill only permits suction lift pumping stations. Pumping stations utilizing suction lift pumps must have adequate priming means to prime the pumps quickly and designed for priming the pumps when the water level in the wet well is one foot below the lead pump starting elevation in the suction wet well and for maintaining prime when the wet well level is one foot below the lead pump stopping level. Valving cannot be located in the wet well.

5. Reliability:
   a. Multiple units: every pumping station must have no less than two pumping units. The number of units and their size must be sufficient to permit pumping the maximum design flow with the largest pumping unit out of service.
   b. Where the pumping station serves more than 150 residential homes or equivalency, permanently installed or portable engine driven pumps or a separate independent utility source must be provided. Where annual starting is required sufficient storage must be provided to allow notifying the operator and performing whatever it task are necessary to get the pumping station in service.

6. Electrical:
   a. All electrical equipment including motors, motor starters, and controls must be located so as to be undamaged by the 100-year flood.
   b. The lift station must be equipped with a SCADA system compatible with the City of Spring Hill.
   c. All motors must be 3-phase unless waived by the City Engineer.

7. Complete design criteria for the proposed pumping station includes, but is not limited to, the following:
   a. Topographic map with the drainage area clearly defined and the acreage.
   b. Complete information concerning the proposed area of service, including the number and type of proposed units.
   c. Complete anticipated flow data based on Tennessee Department of Environment and Conservation design criteria and utilizing a peak factor 2.5.
   d. Complete details of possible alternate gravity sewers to serve the same area, including cost estimates of both type systems.

T. Sewage force mains:
   a. Sewage force mains must be buried a minimum of 36 inches to the top of the pipe.
   b. Sewage force mains must be four inches in diameter or greater.
c. Sewage force mains minimum velocity must be 2.5 fps with a maximum permitted velocity of 10 fps.

d. Air release valves must be provided at the high point in the piping whenever the pipe crown elevation falls below the pipe invert elevation. Access to air release manholes must not be in traffic ways.

e. Sewage force mains must be ductile iron pipe class 200 or AWWA C 900 PVC pipe.

15.12 UTILITIES AND UTILITY EASEMENTS

A. Utility services should be clustered within a single easement when feasible.

B. Utilities must be buried/installed underground unless the Planning Commission, subject to verification from the City Engineer and Department of Public Works, deems it infeasible. New residential subdivisions must be designed for underground distribution of electrical service. Non-residential subdivisions must give preference to design and construction of underground distribution of electric service provided existing facilities in the project location and electrical loading requirements allow for a full underground distribution system. Non-residential subdivisions and lots located therein may be served from overhead power distribution systems using underground risers to connect to new underground lines when serving solely by full underground distribution system is impractical due to site considerations.

C. On all preliminary and final plats, developers are required to dedicate easements for public utilities. Such easement must be at least ten feet wide along all street rights-of-way and along all rear lot lines, except for across-lot easements, which must be at least 20 feet wide. Such easements are also required along all side lot lines and must be at least five feet wide. The subdivider must take such actions as are necessary to ensure the coordination and continuation of utility easements established on adjacent properties with those proposed within his/her development. Easements must be indicated on the plats.

D. Temporary construction easements exceeding the width of permanent easements may be required as necessary until completion of any one project. Developers are required to install a stone base a minimum of 100 feet from an existing roadway along any temporary construction entrance, meeting the City’s Storm Water Department’s MS4 Program requirements.

E. In the case of electric transmission lines where easement widths are not definitively established, a minimum building setback line from the center of the transmission line must be established as follows:

1. Voltage of Line – 46KV: Building setback of 37.5 feet
2. Voltage of Line – 69KV: Building setback of 50 feet
3. Voltage of Line – 161KV: Building setback of 75 feet

F. Within these easements, the right is also granted to cut down and trim or remove any fences, temporary structures, trees, shrubs, or other plants, without compensation, that interfere with operation of the utilities.

15.13 PUBLIC USES

A. Plat to Provide for Public Uses

1. Whenever a subdivision, or any portion thereof, includes a school, recreation use, a portion of a major public right-of-way, greenway, or other public use, as indicated on the Comprehensive Plan, Major Thoroughfare Plan, Bicycle and Greenway Plan, Parks Master Plan, or any other duly approved City planning document, such tract must be suitably incorporated into the plat when first presented for review by the Planning Commission.

2. After proper determination of its necessity by the Planning Commission and the appropriate representative(s) involved in the acquisition and/or dedication, and use of such site, and after a determination has been made to acquire the site by the public agency, the site must be suitably incorporated into the plat prior to final approval by the Planning Commission and recording of the plat

B. Referral to the Governmental Agency Concerned
1. The Planning Commission may refer any plat presented in accordance with these subdivision regulations to the agency concerned with acquisition and/or dedication of the land. The Planning Commission may propose alternate areas for such acquisition and must allow the appropriate governmental agency 30 days for reply.

2. Among the areas that the Planning Commission may propose for public acquisition, when the Commission deems it appropriate and consistent with the policies and purposes set forth in these regulations, is any land within a floodway or floodway fringe.

3. The acquiring agency’s recommendation, if affirmative, must include a map showing the boundaries and area of the parcel to be acquired and an estimate of the time required to complete the acquisition. Documentation memorializing the recommendation as well as the actions of acquisition and/or dedication whereby the property is being transferred and any terms and conditions is required.

C. Notice to Property Owner
Upon receipt of an affirmative report, the Planning Commission must notify the property to be acquired by any agency. Upon such designation by the Planning Commission, any reserved portion of any floodway or floodway fringe cannot be altered from its natural state by the development in any manner whatsoever, except upon written approval of the Planning Commission.

D. Duration of Land Reservation
The acquisition of land reserved by an agency on the final plat must be initiated within 24 months of notification, in writing, from the owner that he/she intends to develop the land unless the Planning Commission allows or a longer period of time. Such letter of intent must be accompanied by a plat of a proposed development and a tentative schedule of construction. Failure on the part of the governmental agency to initiate acquisition within the prescribed 24 months will result in the removal of the “reserved” designation from the property involved and the freeing of the property for development in accordance with these regulations.

15.14 EASEMENTS GENERALLY
Where easements are required by these regulations, the following apply.

A. Easements are reserved for the City for the performance of governmental services, including water, storm, and sanitary sewer service and maintenance, and to those public utility companies that operate under franchises from the City, and their successors and assigns.

B. The City and public utility companies have the perpetual right, privilege, and authority to construct, reconstruct, repair, inspect, maintain, and operate the variety of utility transmission and distribution systems within such easement, together with right of access across the property for necessary personnel and equipment to do work.

C. Within these easements, the right is also granted to cut down and trim or remove any fences, temporary structures, trees, shrubs, or other plants, without compensation, that interfere with operation of the utilities.

D. No permanent buildings are permitted within the easement, but the easement may be used for gardens, shrubs, landscape, and other purposes that do not interfere with the utility and its maintenance. HVAC equipment on a single-family lot may not be located within a public utility and drainage easement containing a buried pipe or similar physical improvement.

E. The City may vacate such easements dedicated when the utility companies or other affected governmental units have agreed to the release of the easement. In order to vacate a utility easement, the City Engineer must receive written confirmation from all utility companies and other governmental units that provide infrastructure at that location indicating there is no objection to the vacation. An easement may be vacated by a re-plat of the plat that originally dedicated the easement.

15.15 SUBDIVISION NAME
The proposed name of the subdivision and any rights-of-way cannot duplicate or too closely approximate phonetically the name of any other subdivision or rights-of-way in the City. These names shall be submitted to the County’s Emergency Communication Office, which has the authority to designate the name of the subdivision and rights-of-way. These names will be determined at neighborhood concept plan or preliminary plat approval.

15.16 MONUMENTS
The developer must place permanent reference monuments on the subdivision when new streets are to be constructed and as required herein by a licensed surveyor in the State of Tennessee. Monuments must be located and set as described in this section.

A. All monuments must be placed on property corners or referenced to property lines or road alignments.

B. The external boundaries of a subdivision must be monumented in accordance with Chapter 0820-03 Standards of Practice, Rules of Tennessee State Board of Examiners for Land Surveyors, except that metal monuments must be no less than five-eighths of an inch in diameter. One permanent control monument, both vertical and horizontal, must be placed within each subdivision where roads are to be constructed. Control monuments must be located within dedicated right-of-way near the entrance of the subdivision and, if possible, in non-fill areas or affixed to a natural rock outcrop and shall comply with the following:


2. Field ties and reference notes defining magnetic north bearings and distances to the nearest established street line or official benchmark must be accurately described on the final plat.

3. A description must be included on the final plat using words and/or symbols as to allow it to be easily located at the site.

4. Azimuth information provided to either a second monument or a substitute such as an antenna, church steeple, or other natural object of which disturbance is unlikely, must be included on the final plat.

C. Internal monuments and lot pins are required as follows:

1. One monument for each four lots, or fraction thereof, and placed within sight distance of one another.

2. Lot corners and lot line breaks must be staked with iron surveyor’s pins.

3. All internal boundaries and those corners and points, not referred to in the preceding paragraphs, must be monumented in the field by like monuments as described above. Such monuments must be placed at each end of all curves, at a point where a river changed its radius, and at all angle points in any line. All lot corners not falling on any of the above described points must be marked by iron surveyor pins at least 18 inches long and 5/8 inch in diameter.

4. The lines of lots that extend to rivers or streams must be monumented in the field by iron surveyor pins at least 18 inches long and 5/8 inch in diameter. Such pins must be placed at the point of intersection of the river or stream and lot line, with a meander line established not less than 20 feet back from the bank of the river or stream.

5. All monuments and pins must be properly set in the ground and approved by a surveyor prior to the time the Planning Commission recommends approval of the final plat or release of the bond where bond is made in lieu of improvements.

**15.17 IMPROVEMENT COSTS AND PERFORMANCE BONDS**

A. Costs of Improvements

All required improvements must be constructed and/or installed by the applicant at his/her expense. Any provisions for reimbursement by the governing body or any utility agency must be stipulated clearly in the provisions of any bonds.

B. Temporary Improvements

The applicant must build and pay for all costs of temporary improvements required by the Planning Commission, and must maintain such improvements to a reasonable satisfaction for the period specified by the Planning Commission. Prior to construction of any temporary facility or improvement, the applicant must file with the City a separate suitable bond for temporary facilities, which ensures that the temporary facilities will be properly constructed, maintained, and removed.

C. Performance Bond
Article 15. Subdivision Regulations – Required Public Improvements and Bonds

A performance bond or insurance bond is required in the amount of 110% of the cost of the following required improvements: pavement, curbs, gutters, stormwater systems, sidewalks, traffic control devices, street lights, utilities, ditches and/or drainage system, and amenities and open space (if required).

1. The performance bond or insurance bond must be secured by a letter of credit or a certified check, either of which must be from an approved financial institution chartered by the State of Tennessee with an office or branch authorized to accept a demand or “call” on the securing document within 50 miles of Spring Hill, Tennessee.

2. Such performance bond or insurance bond must comply with all statutory requirements and must be satisfactory as to form, sufficiency, and manner of execution as set forth in these regulations. Bonding instruments must include an automatic renewal or evergreen clause. The Planning Commission must specify the period within which required public improvements must be completed in the approval of the bond, but the time period cannot exceed two years from date of recording of final plat. The bond must be reviewed at least once every two years by the Planning Commission, at which time it may be reduced, if significant work has been accomplished.

3. The Planning Commission may extend the completion date set forth in the bond for a maximum of two years at its discretion. Any extension of the performance period may necessitate an increase in the bond amount.

4. This performance bond or insurance bond must also be used as a guarantee for any repairs which may be required to City roads that have been identified or designated during the review process by the City Engineer as having been damaged as a result of any construction vehicle or equipment or other means during the construction by the developer/owner.

5. If the applicant has properly constructed pavement, curbs, gutters, stormwater systems, sidewalks, traffic control devices, street lights, utilities, ditches and/or drainage system, and amenities and open space (if required), and has obtained a satisfactory inspection by the City, the development may convert the bond to an appropriate maintenance bond. This maintenance bond is required for a minimum of a one or three year period depending upon the backfill material used, prior to the final inspection and release of the bond by the City.

D. Failure to Complete Improvements

1. Where a performance bond has been posted and required improvements have not been installed within the terms of such performance bond, the Planning Commission may thereupon declare the development to be in default. The City requires that all the improvements be installed regardless of the extent of the building development, or build-out, at which time the bond may be called by the City to complete the public improvements and open space and amenities (if required). Vacation of the plat may be considered by the Planning Commission if no building has occurred or lots sold.

2. Should the bond(s) and supporting surety not be renewed or extended as approved by the City within 14 days of the expiration date, or if the new documentation is not in accordance with the requirements set forth herein, then the bond will be assumed to be in default and will be “called” in its full amount by the City. Further, building permits may be suspended for remaining lots in the subject subdivision until all required public infrastructure has been completed and accepted by the City.

E. Building Performance Bond

In a phase of a subdivision where public improvements have been fully completed, dedicated, and accepted by the City, but for which undeveloped lots remain, the builder is required to post with the City a continuous non-revocable surety bond in the amount of $10,000.00 prior to issuance of a building permit. This bond may be posted to provide for two outstanding building permits at any time. This bonding will be used to ensure that damage caused to, but not limited to, the road and drainage system and/or other installed improvements such as curbs, gutters, headwalls, pipes, sidewalks and driveways by a builder are repaired to the satisfaction of the City at the sold cost of said builder. This bond may be released when the last structure intended to be built as part of said building performance bond is completed and a Certificate of Occupancy has been issued by the Building Official.
15.18 MAINTENANCE OF IMPROVEMENTS

A. The applicant must maintain all completed public improvements until they are formally accepted for maintenance by the City.

B. A maintenance bond to guarantee the asphalt binder course, curbs, gutters, stormwater systems, and utilities, secured by a letter of credit, certified check, cash account, or insurance bond from an approved financial institution, is required of each applicant for a minimum period of one or three years depending upon the backfill material used, prior to the final inspection, a signed Certificate of Satisfactory Completion approved by the City Engineer, Public Works Department representative, and Utility Inspector and release of the bond by the City. During the final inspection, the City Engineer shall identify all needed repairs for the asphalt binder course, curbs, gutters, stormwater systems, and utilities. The maintenance bond will not be released until such repairs are satisfactorily completed as determined by the City Engineer.

C. A maintenance bond to guarantee the final layer of asphalt wearing course, sidewalks, street lighting, traffic control devices, and stormwater management facilities, secured by a letter of credit, certified check, cash account, or insurance bond from an approved financial institution, is required of each applicant for a minimum period of one or three years depending upon the backfill material used, prior to the final inspection, a signed Certificate of Satisfactory Completion approved by the City Engineer, Public Works Department representative, and Utility Inspector and release of the bond by the City. During the final inspection, the City Engineer will identify all needed repairs for the asphalt wearing course, sidewalks, street lighting, traffic control devices, and stormwater management facilities. The maintenance bond cannot be released until such repairs are satisfactorily completed.

D. The maintenance bond must be 30% of the actual construction cost of all public improvements. At 80% build out (80% of houses within the development or particular phase to be bonded have received their certificate of occupancy), unless otherwise allowed by the Planning Commission, the applicant must install the final asphalt layer.

E. The maintenance period begins when the roadway is constructed to binder and all other public improvements have been properly constructed by the developer, and a Certificate of Satisfactory Completion has been approved by the City Engineer, Public Works Department representative, and Utility Inspector, and also the Planning Commission formally approves a resolution establishing the maintenance bond.

F. If the developer chooses to install the final asphalt layer/topping prior to 80% build out, then he/she must be required to post the maintenance bond at the time of final asphalt layer installation. The maintenance bond must be continuous until a minimum of one year after the 80% build out has been complete. The release of the maintenance bond must be contingent upon the completion of the above and, in the case of road construction and/or improvements, acceptance of the dedication by the Board of Mayor and Aldermen.

15.19 INSPECTION OF IMPROVEMENTS

A. A pre-construction conference between the applicant, City Engineer, and any affected department head must be held prior to any work being initiated. The applicant must furnish the required number of full size copies of the approved overall construction plans, TDEC approved sanitary sewer and water main plans, SWPP, and all TDEC issued permits required for the project. This includes the implementation of the erosion control plan. A grading permit is required prior to commencement of any grading work.

B. It is the responsibility of the applicant to properly notify the City Engineer and each affected department of City of Spring Hill to inspect the required improvements, which will eventually become the maintenance responsibility of that department. All required improvements that will not be the responsibility of a specific department of the City will be inspected by the Planning Department staff with assistance, as necessary, from other departments and the City Engineer, or the affected utility vendors. Upon inspection, if any of the required road improvements have not been constructed in accordance with the applicable construction standards and specifications, the applicant is responsible for completing the improvements to the required standards. Whenever the cost of improvements is covered by a performance bond, the applicant and the bonding company are severally and jointly liable for completing the improvements according to specifications.

C. The City will inspect the required improvements during construction to ensure their satisfactory completion, per City standards. Inspection of improvements by City representatives will not be the basis of the applicant's evaluation of the work performed by his/her contractors. The applicant's design engineer for the development must ensure compliance of the improvements in a certification to City. If the appropriate governmental representative finds upon
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inspection that any of the required improvements have not been constructed in accordance with the governing body's construction standards and specifications, the applicant is responsible for completing the improvements to the required standards and specifications. Whenever the cost of improvements is covered by a performance bond, the applicant and the bonding company are liable severally and jointly for completing said improvements according to specifications.

D. Prior to release of the performance bond, the applicant must provide a letter from the design engineer indicating that he/she has inspected the project and attest that it has been constructed, as per the approved design. This letter must be signed and sealed by the design engineer.

E. Incidental improvements and appurtenances not constructed under the performance bond (i.e. driveway pipes and headwalls) must be included in the building performance bond.

F. The performance and maintenance bonds may be reduced or released by authorization of the Planning Commission as recommended by the City Engineer, as follows:

1. Reducing a performance bond to a maintenance bond and releasing maintenance bonds may be considered only upon written request by the developer/owner for a walk-through site inspection. Reducing and releasing bonds may be recommended by the developer to the City Engineer and approved by the Planning Commission and will be based upon satisfactory completion of the work items included in the particular bond under consideration. The final release of any maintenance bonds must be made by the Planning Commission one year after the acceptance of the public improvements. This one year period is a maintenance guarantee for the public improvements.

2. If the developer/owner fails to complete or construct the public improvements as originally planned and as approved by the City Engineer or if there has been unsatisfactory installation of the required improvements, the City will proceed to withdraw funds from the financial institution and use the funds for the purpose of paying for the construction and engineering associated with the completion of the public improvements as originally planned and approved.

3. The City Engineer cannot make a recommendation to reduce a performance bond or release a maintenance bond prior to the satisfactory installation of all required improvements, as determined by the following:

   a. One year after the completion of all improvements required for the approved final plat.

   b. After the submission of the project engineer's certification that the project installation has been observed in the field and completed in substantial compliance with the plans and specification and with all applicable ordinances and laws.

   c. After the submission of a record drawing prepared by the project engineer that shows improvements, and clearly designates any and all changes from the approved plans and specifications.

4. After acceptance of the improvements, the applicant is responsible for the maintenance of all improvements until the release of the maintenance bond. Where a development has been improved in phases, the applicant is responsible for the proper functioning of drainage improvements for the entire development site.

5. In the event the City Engineer denies release or reduction of existing bonds, the developer may apply for an appeal to the Planning Commission. The City Engineer will present a discussion item to the Planning Commission, detailing the developer’s request and the City Engineer’s findings. The Planning Commission has the authority to approve the request only with a two-thirds majority vote of the full membership.
ARTICLE 16. SUBDIVISION REGULATIONS – RIGHT-OF-WAY DESIGN AND ACCESS MANAGEMENT

16.1 APPLICABILITY

A. All new construction, reconstruction, and reconfiguration of City rights-of-way must comply with this Article; however, any standard may be modified as needed by the Planning Commission and verified by the City Engineer to address specific site conditions. A right-of-way must be designed in relation to topographic and drainage conditions, public convenience and safety, and the existing and proposed development served by the right-of-way.

B. Right-of-way design and construction is subject to or may reference standards outside of this Code. These include but are not limited to most recent editions and as updated:

1. Standards issued by the Tennessee Department of Transportation (TDOT)
2. Manual on Uniform Traffic Control Devices (MUTCD)
3. Standards issued by American Association of State Highway and Transportation Officials (AASHTO)
4. Standards issued by National Association of City Transportation Officials (NACTO)

16.2 GENERAL RIGHT-OF-WAY ARRANGEMENT

A. Public rights-of-way must be properly integrated with existing and proposed system of public rights-of-way and dedicated rights-of-way as established in the Major Thoroughfare Plan.

B. Public right-of-way design and capacity must take into consideration land use traffic generators, such as industrial uses, commercial districts and retail centers, schools, and places of worship, as well as the density of residential neighborhoods.

C. Public rights-of-way must be laid out to conform as much as possible to the topography, permit efficient drainage and utility systems, and provide convenient and safe access to abutting lots.

16.3 REQUIRED CONNECTIVITY

A. New public rights-of-way must extend to the boundary lines of the tract to be subdivided to connect to abutting rights-of-way. The Planning Commission may require construction easements to be established on the plat to allow the adjacent development to construct and adjoin the streets in the future onto the property currently under consideration for development. When proposed streets are extended by dedication to the boundary of such property, stub streets must be provided with a temporary turnaround easement and constructed of hard surfacing.

1. The turn-around must be constructed to the same standards as streets aggregate base course, asphaltic concrete binder course, and asphaltic concrete surface course, and Portland cement concrete curb and gutter or extruded curb.

2. All turn-arounds must be maintained by the developer until the release of the maintenance bond by the City.

3. A sign provided by the developer must be placed at the end of the turnaround or stub street stating: “STREET TO BE EXTENDED BY THE AUTHORITY OF THE CITY OF SPRING HILL.” The sign must be similar in size and design to a typical speed limit sign with a white background and black lettering on metal sheeting erected on a wood or metal post consistent with size and shape of City standards.

B. Extensions must include street construction and dedication of rights-of-way to the property lines. If the street cannot be constructed without the use of retaining walls or other special features it is the responsibility of the owner/developer to construct such features to facilitate construction of the roadway to the property line for a future connection by adjoining property development. In lieu of designing and constructing such improvement, with the approval of the Planning Commission, the developer/applicant may request to post a performance surety to be reviewed and renewed every three years. The surety shall be increased for updated construction costs. Pay a fee in lieu of with the approval of the Planning Commission.

C. All major subdivisions must provide a minimum of two separate remote means of ingress and egress for emergency apparatus access unless topography or land acquisition creates a difficulty. Such difficulty must be approved by the Planning Commission and verified by the City Engineer. Major subdivisions are considered to include the following:

1. Multi-family developments exceeding 100 dwelling units.
2. Single-family and two-family residential developments exceeding 30 dwelling units.
3. Non-residential developments with one or more structures exceeding 30 feet or three stories in height. For developments with multiple structures, a minimum of two means of access to each structure, including cross-access within the site, must be provided for each structure exceeding 30 feet or three stories in height; the development site as a whole must have two separate remote means of ingress and egress.

D. The creation of reserve strips adjacent to any existing or proposed public right-of-way to deny access from adjacent property to the right-of-way are prohibited.

E. Blocks must connect to and extend the existing block network where possible. This requirement does not apply when connections cannot be made because of a natural or man-made barrier, such as existing structures, steep slopes, waterbodies, railroad and utility rights-of-way, and parks.

F. All rights-of-way must terminate at other rights-of-way, forming a network. The Planning Commission may approve, with verification from the City Engineer, cul-de-sacs and dead-end streets where a natural or man-made barrier, such as a waterway, railroad, limited-access expressway, or unusual topography exists that prevents connection. Any cul-de-sac or dead-end street must meet the following:

1. The cul-de-sac or dead-end street has a length of no more than 750 feet in length, as measured along the centerline from the closest intersection to the center of the cul-de-sac.
2. If a cul-de-sac or dead-end street is allowed, a 96 foot minimum diameter measured to the front face of the curb is required for the paved area of the turnaround.

G. Fire apparatus access roads which are not public access roads must be designed as follows:

1. Fire apparatus access roads must be paved or constructed with a hard compacted surface that can support the load of fire apparatus at a minimum of 75,000 pounds.
2. The minimum fire apparatus access roads width is 25 feet exclusive of shoulders unless otherwise allowed by the City Engineer.
3. Fire apparatus access roads cannot exceed 10% in grade.
4. The minimum turning radius must be 25 feet on the inside and 50 feet on the outside.
5. Dead end fire apparatus access roads must meet the standards of Table 16-1: Turnaround Requirements:
Table 16-1: Turnaround Requirements

<table>
<thead>
<tr>
<th>Length of Dead End Road</th>
<th>Minimum Width</th>
<th>Turnaround Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>0’ to 150’</td>
<td>20’</td>
<td>None</td>
</tr>
<tr>
<td>151’ to 500’</td>
<td>20’</td>
<td>120’ hammerhead, 60’ “Y-bar,” or 96’ cul-de-sac</td>
</tr>
<tr>
<td>501’ to 750’</td>
<td>20’</td>
<td>120’ hammerhead, 60’ “Y-bar,” or 96’ cul-de-sac</td>
</tr>
<tr>
<td>Over 750’</td>
<td>City Engineer Recommendation and Planning Commission approval</td>
<td>City Engineer Recommendation and Planning Commission approval</td>
</tr>
</tbody>
</table>

16.4 BLOCKS

A. Blocks must be of a sufficient width to provide for two tiers of lots of appropriate depth. Exceptions to this prescribed block width may be permitted in blocks adjacent to major public rights-of-way, railroads, or waterways.

B. Residential blocks must not exceed 1,400 feet in length in the R-A, R-R, AG, PR, and NA Districts and 1,000 feet in length in all other districts, unless the Planning Commission approves a longer length due to unique conditions.

C. Non-residential blocks must be of such length and width as may be deemed necessary by the Planning Commission.

D. The shape of a new block must conform to natural features, highway and rail rights-of-way, park boundaries, or site constraints. Where blocks curve, they must generally maintain their general orientation of north/south and east/west over their trajectory.

16.5 RIGHT-OF-WAY DESIGN

In order to provide public rights-of-way of suitable location, width, and improvement to accommodate prospective traffic and afford satisfactory access to emergency services, sanitation, and road maintenance equipment, and to coordinate public ways so as to compose a convenient and safe system and avoid undue hardships to adjoining properties, public right-of-way design standards are set forth in this section.

A. Right-of-Way Construction

1. All street right-of-way construction and repair must be in accordance with City’s Standard Specifications for Roadway Construction or the latest edition of the Tennessee Department of Transportation Standard Specifications for Road and Bridge Construction. The road construction specifications are the minimum standards for any subdivision within the jurisdictional area. Design standards must also be in accordance with standards of TDOT, AASHTO, and MUTCD.

2. Roads whether public or privately maintained located within public rights of way must be graded and improved in accordance with design and constructions specified herein. No asphaltic concrete binder course or Portland cement concrete or other hard surfacing may be applied to the aggregate base course prior to the approval of any section of the subdivision in question without having been properly inspected and accepted by the City.

3. Grades of public rights-of-way must conform as closely as possible to the original topography. A combination of steep grades and curves is not permitted. The maximum grade is 15% for local and 8% for collector and arterial streets unless otherwise approved by the Planning Commission and verified by the City Engineer.

B. Right-of-Way Surfacing

1. No street section may be surfaced until the preliminary plat is approved. The depth of the pavement and bases courses must be of such character as is suitable for expected traffic. Types and methods of paving must be according to the specifications of the plat approval.

a. For local streets, the paving section must consist of 1.5 inches of asphaltic concrete surface course over 2 inches of asphaltic concrete binder, over 8 inches of aggregate base course.

b. For collector streets, the paving section must consist of 1.5 inches of asphaltic concrete surface course over 3 inches of asphaltic concrete binder, over 10 inches of aggregate base course.

c. For arterial streets, the paving section must consist of 2 inches of asphaltic concrete surface course over 4 inches of asphaltic concrete binder, over 10 inches of aggregate base course.

d. Alternate paving sections may be substituted in lieu of the above with approval of the Planning Commission and verified by the City Engineer.

2. After underground utilities have been installed, the developer shall construct the pavement section and curbs or curbs with gutters, where required.

3. All right-of-way pavements, shoulders, drainage improvements and structures, curb turnabouts, and sidewalks must conform to City construction standards and specifications, and must be incorporated into the construction plans required to be submitted by the developer for plat approval.

4. Adequate provisions must be made for culverts or other drains and bridges, as required.

5. The asphalt binder course shall not be installed prior to performing an as-built survey and verifying all other infrastructure is installed at the proper location and grade. The asphalt binder course must be installed to grade with the stormwater catch basins, manhole castings, or other castings within the roadway as to allow proper surface water drainage. Prior to installation of the asphalt concrete surface course, the asphalt concrete wearing course must be installed within three years after the final plat is recorded, unless waived by the Planning Commission.

6. Collector and arterial roadways must have 24 inch concrete curb and gutter. Local roadways may utilize either 18 or 24 inch concrete curb and gutter or eight inch extruded concrete curb. Eight inch extruded concrete curb may only be utilized on roads exceeding 1% or greater slopes. All roadways in a given subdivision shall utilize the same type of curb unless otherwise directed by the City Engineer.

7. All curb, gutter and sidewalk concrete materials must be Class A as per Tennessee Department of Transportation Standard Specifications for Road and Bridge Construction, Section 604.03.

8. Where a subdivision adjoins an existing narrow paved street not meeting the street section called out for in the Major Thoroughfare Plan, the developer is responsible for the design and construction of that part of the roadway lying in front of the subdivision. This includes asphaltic concrete pavement, base course, binder, bicycle lanes, curb and gutter and sidewalks. In lieu of designing and constructing the street section, the developer/applicant may request to pay a fee in lieu of with the approval of the Planning Commission.

9. The construction of a half street prohibited unless approved by the Planning Commission and verified by the City Engineer in unusual circumstances that make it essential and where satisfactory assurance for dedication of the remaining part of the street is provided.

C. Deceleration and Left-Turn Lanes
A deceleration lane and left-turn lane is required as follows:

1. Developers of subdivisions containing more than 50 dwelling units and other type developments exiting onto a collector or arterial roadway are required to construct deceleration and left turn lanes generally in accordance with the guidance provided in Table 16-2: Deceleration/Left Turn Lanes. Table 16-2 was developed using the latest edition of Trip Generation, An Informational Report by the Institute of Transportation Engineers.

2. The dimensional standards and construction requirements for deceleration and left turn lanes must conform to the AASHTO Policy on Geometric Design of Highways and Streets, latest edition.
### D. Curb Cuts

1. **Industrial and Commercial Districts**

   a. The minimum width of a curb cut is 2444 feet and a maximum width of 35 feet. Right in right out shall be a minimum of 12 feet.

   b. Each platted lot is allowed either one two-way curb cut or two one-way curb cuts, with the following exceptions:

      i. Property frontages are too narrow to satisfy minimum driveway spacing requirements. Common access at property lines, frontage roads, restricted curb cut designs, or other modifications may be required contingent on the approval of the Planning Commission and verified by the City Engineer.

      ii. Additional driveways may be allowed if shown to be warranted through traffic impact studies.

      iii. If traffic impact studies indicate traffic volumes will meet any signal warrant, access traffic must be consolidated to a single signalized point.

      iv. Where a property has frontages on more than one street, accesses are allowed on only the frontages where standards can be met. If access standards cannot be met on any frontage, access points will be designated by the City Engineer based on traffic safety, operational needs, and traffic impact studies.

2. **Curb Cuts on Collector and Arterial Streets**

   a. Curb cuts on opposite sides of collector and arterial streets must be placed as to not interfere with each other as follows:

      i. Placed directly opposite is the most desirable.

      ii. If this is not possible, a minimum spacing of the resulting "T" must be as follows:

         (A) 100 feet on collector streets.

         (B) 200 feet on arterial streets.

   b. The City Engineer may modify these spacings based on existing through traffic and site trip generation.

3. **Driveway Spacing for Collector and Arterial Streets in Urban Development**

   a. The following minimums of Table 16-3: Driveway Spacing apply:
Table 16-3: Driveway Spacing

<table>
<thead>
<tr>
<th>Speed (mph)</th>
<th>Minimum Separation (ft.) based on sight distance (2011 AASHTO Policy on Geometric Design)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>220'</td>
</tr>
<tr>
<td>35</td>
<td>275'</td>
</tr>
<tr>
<td>40</td>
<td>330'</td>
</tr>
<tr>
<td>45</td>
<td>395'</td>
</tr>
<tr>
<td>50</td>
<td>465'</td>
</tr>
</tbody>
</table>

b. Additional lanes may be required to provide for turning and exiting vehicles.

c. There must be a minimum of 1,200 feet between any two signalized intersections.

E. Intersections

1. Public rights-of-way must be laid out to intersect as nearly as possible at right angles. A proposed intersection of two new public ways at an angle of less than 80 degrees is prohibited. **All intersections shall conform to current AASHTO design standards.**

2. An oblique public right-of-way should be curved approaching an intersection and should be approximately at right angles for at least 100 feet there from. Not more than two public rights-of-way can intersect at any one point unless specifically approved by the Planning Commission.

3. Proposed new intersections along one side of an existing public right-of-way must coincide, wherever feasible, with any existing intersections on the opposite side of such public right-of-way. Jogs within public ways having centerline offsets of less than 125 feet are prohibited, except where the intersected public ways have separated dual drives without median breaks at either intersection. Where rights-of-way intersect arterial or collector streets, their alignment must be continuous. Intersections of arterial or collector streets must be at least 800 feet apart.

4. Minimum curb radius at the intersection must be as follows:
   a. For local streets connected to collector or arterial: 25-12.5-foot radius
   b. For connector streets connected to connector or arterial streets: 30-25-foot radius

5. **Alley intersections and abrupt changes in alignment within a block must have the corners cut off in accordance with standard engineering practice to permit safe vehicular movement.**

6. Where a public way intersection will involve earth banks or existing vegetation inside any lot comer that would create a traffic hazard by limiting visibility, the developer must cut such ground or vegetation (including trees) in connection with the grading of the public right-of-way to the extent necessary to provide adequate sight distance as approved by the City Engineer.

7. Intersections must be designed with a flat grade wherever feasible. In hilly or rolling areas, at the approach to an intersection, a leveling area must be provided having not greater than a 2% grade for a distance of 60 feet, measured from the nearest right-of-way line of the intersecting right-of-way.

8. The cross-slope on all public rights-of-way, including intersections, must be 3% or less.

9. For vertical alignment, an extension of the through street cross slope must be provided as follows:
   a. This cross slope must be carried back 100 to 200 feet or as directed by the City Engineer, each way from the intersection of the two street centerlines.
   b. An allowance of 2% maximum intersection grade is permitted.

10. The curb radius at intersections involving alleys must meet driveway curb radius requirements.
F. Railroads and Limited Access Highway
Railroad right-of-way and limited access highways, where located so that they affect the subdivision of adjoining lands, must be treated as follows:

1. In residential areas, a buffer strip of at least 25 feet in depth may be required adjacent to the railroad right-of-way or limited access highway. This strip must be designated on the plat: “This strip is reserved for screening; the placement of structures hereon is prohibited.” The strip must be part of common areas and cannot be part of individual lots.

2. In commercial or industrial areas, the nearest public way extending parallel or approximately parallel to the railroad must, wherever feasible, be at a sufficient distance therefrom to ensure suitable depth for commercial or industrial use.

3. Public ways parallel to a railroad, when intersecting a public right-of-way which crosses the railroad at grade, must, to the extent feasible, be at a distance of at least 150 feet from the railroad right-of-way. Such distance is determined with due consideration of the minimum distance required for future separation of grades by means of appropriate approach gradients.

G. Excess Right-of-Way
A slope easement in excess of the right-of-way designated in these regulations may be required whenever, due to topography, additional width is necessary to provide adequate earth slopes. Such slopes cannot be steeper than 3:1. Where solid rock is encountered, slopes shall be designed by a geotechnical engineer and provided to the City Engineer cannot be steeper than 2:1.

H. Headwalls
The developer must impose by subdivision restrictions and by plat notations, a requirement that all headwalls in or near public rights-of-way will comply with Tennessee Department of Transportation requirements. The construction specifications of headwall details for driveway and storm drainage culverts are as required by the City. These specifications are the minimum standards for any subdivision within the jurisdictional area.

I. Improvements in Floodable Areas
The finished elevation of proposed public rights-of-way subject to flood must be no less than two feet above the one 100-year regulatory flood protection elevation. The Planning Commission may require profiles and elevations of public ways to determine compliance with this requirement. All drainage structures must be sufficient to discharge flood flows without increasing flood height. Where fill is used to bring the finished elevation of any public right-of-way to the required elevation, such fill cannot encroach upon a floodway except for such crossing of floodway by means of a bridge or culvert, and the fill must be protected against erosion by rip-rap, vegetative cover, or other methods deemed acceptable by the Floodplain Administrator.

J. Right-of-Way Dimensions
Rights-of-way must be designed in accordance with Section 16.9 below.

16.6 SIDEWALKS AND PEDESTRIAN ACCESS DESIGN

A. Sidewalks, multi-use trails, or other pedestrian access improvements must be included as part of any arterial, collector, or local street, and as shown on the Major Thoroughfare Plan, Bicycle and Greenway Plan, or as determined by the Planning Commission during subdivision approval. Sidewalks are not required in the AG, R-A, and R-R Districts.

1. Residential Districts (Excluding AG, R-A, RR Districts)
Curb and gutter with sidewalk or extruded curb with sidewalk is required on both sides of local and collector streets except as follows:

a. Sidewalks are not required on either side of the street where lot density development is less than 0.75 dwelling units per acre.

b. Sidewalks are required on only one side of the street or cul-de-sac where lot density development is between 0.76 and 2.0 dwelling units per acre.

c. As otherwise determined by the Planning Commission.

2. Commercial Districts
Curb and gutter with sidewalk are required on both sides of the street in all commercial districts except when the requirement is waived by the Planning Commission.

3. Industrial Areas
Curb and gutter is required on both sides of streets. Sidewalks are not required except as determined by the Planning Commission.

B. Sidewalks are required to be installed along private roadways and developments to allow the general public access to these sites and developments, unless otherwise exempted by the Planning Commission, to be determined on a case-by-case basis. If the Planning Commission exempts sidewalks, a fee-in-lieu of must be paid to the City. Fee-in-lieu of must include costs of engineering, design, geotechnical, grading, clearing, excavation and embankment and material placement and drainage for a five foot wide sidewalk or a width otherwise required for the sidewalk.

C. All sidewalk construction and repair must be in accordance with City standards and specifications. In addition, sidewalks must meet the following standards:

1. The minimum width of any sidewalk located on a local street in a Residential District must be five feet and must meet all standards of the Americans with Disabilities Act (ADA), including properly constructed accessibility ramps with installation of truncated/bubble tread plate brick inserts constructed as part of the ramp. The minimum width of any sidewalk located on a collector or arterial street in any district must be five feet and must meet all standards of the Americans with Disabilities Act (ADA), including properly constructed accessibility ramps with installation of truncated/bubble tread plate brick inserts constructed as part of the ramp. The Planning Commission reserves the right to require wider sidewalks when necessary to serve existing and anticipated pedestrian traffic, especially in the C-D and C-G Districts.

2. Concrete curb and gutters or extruded concrete curbs are required for all public rights-of-way where sidewalks are to be constructed. Permissions for when curb and gutter or extruded curb design may be used is found in Section 16.5.B.6 above.

3. Concrete curbing widths are not calculated as part of the required sidewalk width. The curb of a curb and gutter section must contain an expansion joint between the curb and the sidewalk when the sidewalk is constructed against the back of curb and gutter section. The expansion joint is not calculated as part of the required sidewalk width.

4. Sidewalks must be constructed of concrete or other masonry material (brick, stone, etc.) approved by the Planning Commission and verified by the City Engineer.

D. Sidewalk location, width, and material must be delineated on the neighborhood concept plan, preliminary plat, and final plat. Sidewalks must be completed within all subdivisions within four years of the recording of the final plat for that particular phase/section of the development, unless the Planning Commission approves a longer time period. The builder is responsible for the installation of sidewalks along the frontage of recorded lots, as illustrated on the approved development plans. The developer is responsible for the installation of sidewalks along portions that do not front upon recorded lots, such as along common open space.

E. Final completion of public improvements prior to end of warranty period is: Four years after the issuance of the first building permit, all defects of public improvements must be corrected and completed, regardless of the percentage of subdivision lots having received building permits, including, but not limited to, installing the remaining sidewalks for the phase.

F. A multi-use path extending from a public way to schools, parks, playgrounds, or other nearby public rights-of-way, should be a minimum of 12 feet in width and be accommodated within a dedicated common open space or an easement with the exception of lots within residential districts. Easements must be indicated on the preliminary and final plat. These multi-use paths may include both sidewalks and bike paths, must be constructed to City construction standards and specifications and the regulations of this Code, as well as any ADA requirements.
EXAMPLES OF MULTI-USE PATHS

Paved Multi-Use Path

Unpaved Multi-Use Path

12’ Min.
16.7 BICYCLE LANE DESIGN
Where bicycles lanes are required per Bicycle and Greenway Plan and/or included in right-of-way construction, appropriate designs include, but are not limited to, the types of design described in this section. Where installed, bicycle facilities should be constructed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and the Urban Bikeway Design Guide published by the National Association of City Transportation Officials (NACTO).

A. Shared: A marking placed in a vehicular travel lane to indicate that a bicyclist may use the full lane. Also called a shared-lane marking. (SHARROW)

B. Bike Lane: A portion of the roadway that has been designated by striping, signs, and pavement markings for the preferential or exclusive use of bicyclists, typically located adjacent to motor vehicle travel lanes and flowing in the same direction as motor vehicle traffic.

C. Buffered Bike Lane: A conventional bicycle lane paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane.

D. Side Bike Lane: A conventional bike lane.

E. Cycle Track: An exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk.

F. Raised Cycle Track. A bicycle facility that is vertically separated from motor vehicle traffic, typically paired with a furnishing zone between the cycle track and motor vehicle travel lane and/or pedestrian area, and allowing for one-way or two-way travel by bicyclists.

G. Two-Way Cycle Track. A physically separated cycle track that allows bicycle movement in both directions on one side of the road.

EXAMPLES OF BICYCLE FACILITIES

Shared Lane
EXAMPLES OF BICYCLE FACILITIES

Bike Lane

Cycle Track
**EXAMPLES OF BICYCLE FACILITIES**

**Buffered Bike Lane**

16.8 **STREET SIGNS AND STREET LIGHTS**

**A. Street Signs**

1. Street signs designating the name of streets in the subdivision are required in all subdivisions. Street signs designating the name of streets are required at each intersection within the subdivision and must be placed at the point of street intersection.

2. Street signs must be constructed and be of the same size as street signs currently placed and in use by the City of Spring Hill, or such design as may be approved by the Planning Commission.

3. Street signs, traffic control signs and pavement markings must meet the current standards as listed in the MUTCD in size, lettering size, and nighttime visibility (retro-reflectivity). The Planning Commission may allow decorative sign posts and street signs that meet MUTCD standards so long as the costs for installation are borne by the developer and the homeowners associations or property owners associations maintains such signs following installation.

**B. Street Lights**

1. The applicant must arrange with the local electric power company for electric service and bear the expense of any charge by the electric power company to furnish the service connection.
   
   a. The location of any service connection and the control equipment must be shown on the construction drawings.
   
   b. Conduit must be placed for all street lighting prior to pavement construction.

2. Street lights are required in all subdivisions.

3. Guidelines for street lighting:
a. Street Light Requests

i. The local power company is responsible for providing street lighting as requested by the City.

ii. Before considering new or additional local street light request, the City requires unanimous consent of all affected property owners within 100 feet of proposed street light locations and the support of at least 51% of the total number of owners of properties within 300 feet of proposed locations.

b. Costs

The installation of costs of street light fixtures, excluding those that provide demonstrated safety need, will be paid for by the applicant requesting the installation or relocation. The City will assume continued maintenance and energy costs associated with new installation.

c. Design

Street lights installed in public rights-of-way must be an energy efficient lighting source with a minimum of ambient or reflected light (full cut-off fixtures). All street lighting must be in accordance with the Illuminating Engineering Society’s (IES) American National Standard practices for roadway lighting as the design standard for all City streets with the following modifications.

i. Arterials: Street lighting is based on I.E.S standards.

ii. Other Streets: Street lighting may be provided at intersections and identified pedestrian crossings only. Lighting may be considered at locations with demonstrated needs based on changes in horizontal or vertical alignments.

iii. Alleys: Except for alleys in commercial areas with significant night time pedestrian activity, the City will not provide alley lighting.

iv. All poles must be metal. The minimum luminaire sizing must be 9,500 lumens for local and collector streets. The minimum luminaire sizing shall be 22,000 lumens for arterial streets. All power conductors must be buried in accordance with standards issued by the power company.

v. Minimum requirements for street lighting per Table 16-4: Street Lighting:

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Design Traffic Volume (ADT)</th>
<th>Luminaire Size</th>
<th>Lighting Height (ft.)</th>
<th>Pole Type</th>
<th>Spacing (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local</td>
<td>NA</td>
<td>9,500</td>
<td>20’ - 26’</td>
<td>Metal</td>
<td>250’ – 300’</td>
</tr>
<tr>
<td>Collector</td>
<td>2,000 – 5,000</td>
<td>9,500</td>
<td>26’</td>
<td>Metal</td>
<td>200’ – 250’</td>
</tr>
<tr>
<td>Arterial</td>
<td>10,000 – and higher</td>
<td>22,000</td>
<td>30’</td>
<td>Metal</td>
<td>100’ – 130’</td>
</tr>
</tbody>
</table>

4. Street lights must be consistent (the same type) throughout a subdivision.

5. In cases where the developer elects to install decorative poles and/or lighting not mounted on standard wooden poles as provided by the electrical utility or metal poles considered standard by the City, the developer is responsible for the cost of such poles and lights and related improvements including metering devices. The homeowners or property owners associations is responsible for the cost of maintenance and maintenance of such decorative poles and lights. Unless privately owned or otherwise agreed upon between the applicant and the City, the energy expense for street lights is the responsibility of the City. Any non-standard alternative fixture must provide the same intensity and lighting radius as street lights provided by the City.

6. After all approved installations of standard City street lights, the developer must give title of ownership of the system to the City.

7. All street lights must be installed prior to the first certificate of occupancy being issued. The installation of street lights must be completed within the same time frame, as well as meeting the same satisfaction requirement, as the completion of all other improvements. The street lights must be operational upon the issuance of the first certificate of occupancy in each subdivision phase.
16.9 Right-of-Way Dimensions

All rights-of-way must meet the right-of-way dimensions of this section, which may be modified as needed by the Planning Commission and verified by the City Engineer to address specific site conditions. Right-of-way dimensions and designs must implement the policies of the Major Thoroughfare Plan.

A. Right-of-Way Types
The right-of-way classifications are divided into the following types:

1. Arterial streets are designed to move traffic and provide some access to major developments.
2. Collector streets collect traffic from local streets and other collectors and distribute the traffic to roadways with higher classifications.
3. Local streets primarily provide direct access to abutting land and are lower speed facilities.
4. This Code also provides for special right-of-way types:
   a. Alleys are a vehicular drive located to the rear of lots providing access to service areas, parking, and outbuildings, and often containing utility easements.

B. Right-of-Way Dedication
Right-of-way dedication is required where a subdivision or site plan adjoins an existing public right-of-way or future public right-of-way as depicted on the Major Thoroughfare Plan, Bicycle and Greenway Plan, or any other regulations that indicate plans for realignment or widening of a public way that would require use of some of the land in the subdivision. The applicant must dedicate, at his/her expense, areas for widening or realigning such public way as set forth below:

1. The entire right-of-way width must be provided where any part of the subdivision is on both sides of the existing public way.
2. When the subdivision or development is located on only one side of an existing public way, 1/2 of the required right-of-way width, measured from the centerline of the existing pavement, must be provided.
3. The Planning Commission may request additional rights of way within 100 feet of the following types of intersections: arterial to arterial; collector to arterial; or collector to collector.

C. Right-of-Way Dimensions

1. This section provides the minimum dimensions for rights-of-way types and well as the components that make up these rights-of-way. The minimum right-of-way width for each type must be reserved, however the components within that area are determined by the applicant and the Planning Commission, verified by the City Engineer, subject to the requirements of this Code. Larger minimum right-of-way width reservation as well as increase in the size of the components is permitted. The Planning Commission may modify and the City Engineer verify the minimum width for the right-of-way and any component based on site specific conditions.
2. Local streets should incorporate the City’s Neighborhood Traffic Calming Program (NTCP).
3. Utility, drainage, and stormwater easements may be located within the right-of-way area.
4. Right-of-way types must meet the following minimum widths of Table 16-5: Minimum Right-of-Way Widths:

<table>
<thead>
<tr>
<th>Table 16-5: Minimum ROW Widths</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Right-Of-Way Types</td>
<td>Minimum ROW Width</td>
</tr>
<tr>
<td>Alley</td>
<td>20’</td>
</tr>
<tr>
<td>Local Street</td>
<td>50’</td>
</tr>
<tr>
<td>Collector Street</td>
<td>75’</td>
</tr>
<tr>
<td>Arterial Street</td>
<td>95’</td>
</tr>
</tbody>
</table>

5. Street trees are required as per Section 11.9 of this Code.
6. Table 16-6: Minimum ROW Component Widths are the minimum widths for the components of rights-of-way:

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Local</th>
<th>Collector</th>
<th>Arterial</th>
<th>Alley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Capacity</td>
<td>Less than 1,000 vehicles/day</td>
<td>5,000 to 10,000 vehicles/day</td>
<td>Greater than 10,000 vehicles/day</td>
<td>Less than 200 vehicles/day</td>
</tr>
<tr>
<td>Minimum Right-of-Way Width</td>
<td>50'</td>
<td>75'</td>
<td>95'</td>
<td>20'</td>
</tr>
<tr>
<td>Lane Width</td>
<td>11'</td>
<td>12'</td>
<td>12'</td>
<td>18'</td>
</tr>
<tr>
<td>Bicycle Lane Width</td>
<td>Shared</td>
<td>4' – 6'</td>
<td>4' – 6'</td>
<td>Shared</td>
</tr>
<tr>
<td>Travel Lane</td>
<td>1 each direction</td>
<td>1 each direction, with or without center turn lane</td>
<td>2 each direction, with or without center turn lane</td>
<td>Shared</td>
</tr>
<tr>
<td>Center Turn Lane</td>
<td>Not permitted except at intersections with collector or arterial</td>
<td>10' to 12' may be used in lieu of median for left turn only</td>
<td>10' to 12' may be used in lieu of median for left turn only</td>
<td>None</td>
</tr>
<tr>
<td>Parking Lanes</td>
<td>All parking must be parallel</td>
<td>None permitted</td>
<td>None permitted</td>
<td>Shared with travel lane</td>
</tr>
<tr>
<td>Type of Curb</td>
<td>12' extruded or 18' curb and gutter</td>
<td>24' curb and gutter</td>
<td>24' curb and gutter</td>
<td>No curb and gutter</td>
</tr>
<tr>
<td>Sidewalk Distance from Curb Face</td>
<td>0’ to 5’</td>
<td>0’ to 6’</td>
<td>0’ to 6’</td>
<td>None</td>
</tr>
<tr>
<td>Sidewalk Width</td>
<td>5’</td>
<td>Varies, 5’ minimum</td>
<td>Varies, 5’ minimum</td>
<td>None</td>
</tr>
<tr>
<td>Median</td>
<td>None</td>
<td>0’ to 12’; Median may be used for left turn lanes only</td>
<td>0’ to 12’; Median may be used for left turn lanes only</td>
<td>None</td>
</tr>
</tbody>
</table>
EXAMPLE OF RIGHT-OF-WAY TYPE DESIGN
The following examples contain a variety of permitted right-of-way components. Providing more right-of-way components may require more right-of-way width than dictated by this Code as a minimum width.

Local Street

All dimensions labeled are the minimum required width for each right-of-way component.
EXAMPLE OF RIGHT-OF-WAY TYPE DESIGN
The following examples contain a variety of permitted right-of-way components. Providing more right-of-way components may require more right-of-way width than dictated by this Code as a minimum width.

Collector Street

Collector Street Minimum ROW Width: 75'

All dimensions labeled are the minimum required width for each right-of-way component.
EXAMPLE OF RIGHT-OF-WAY TYPE DESIGN
The following examples contain a variety of permitted right-of-way components. Providing more right-of-way components may require more right-of-way width than dictated by this Code as a minimum width.

Arterial Street

Arterial Street Minimum ROW Width: 95'

All dimensions labeled are the minimum required width for each right-of-way component.
Request: Staff is requesting Planning Commission feedback and input regarding the potential map and text revisions presented in this report. Any other map revisions that a Commission member would like to suggest are also invited for discussion.

Update: These proposed revisions were initially presented to the Planning Commission in the December 23, 2019 work session. Only three of the Planning Commission members were in attendance at that meet. For this reason, no substantive changes have been made to the modifications included in this memo.

Background: The amendments to the Spring Hill Rising 2040 Plan are being initiated at the request of Alderman Fitterer. The initial exhibits and subject sites addressed herein have been suggested by Alderman Fitterer as part of a broader effort to consider map updates. Suggested revisions to these locations are based on recent growth patterns in Spring Hill, the construction of new schools, and the future I-65 interchange. All changes have occurred since the Plan was adopted in 2015. Staff has also included a few additional changes for Planning Commission consideration.

Proposed Map Amendments:

1. **Eastern Approach Road.** Change from Residential Neighborhood Area to Mixed-Use Neighborhood Area.

   This site includes the eastern portions of two properties recently annexed by the City of Spring Hill. As discussed during the annexation of these two properties it is currently anticipated that the interchange connector from I-65 to Lewisburg Pike will go through this area.

   Staff has generally adhered to the position that the Residential Neighborhood Area is intended for single family uses from a low to moderate density. However, a townhome rezoning request was approved this year by the city within this classification. While a change to the Mixed Use Neighborhood Area would recognize the future road connection through these properties, staff is concerned regarding the potential impact this change could have on the abutting Brienz Valley subdivision, a rural large lot residential neighborhood. Because of the narrow and long configuration of this area and the proposal for a new road, the property may be better suited to a PD (Planned Development) application in the future that can address appropriate development while protecting adjacent neighborhoods. There are currently no plans in place to provide public utility infrastructure to the parcels so careful consideration should be given to intensifying the potential permitted land uses until adequate utility infrastructure is available to support such land uses.
2. **Industrial Development Board Parcel.** Change from Mixed Use Neighborhood Area and City Neighborhood Area to Innovation Area.

This site represents approximately 330 acres south of Rippavilla owned by the Industrial Development Board of Maury County. The proposed Innovation Area classification is more in keeping with the interests and expectations of the property owner than the Mixed Use Neighborhood Area would be. The change in land use classification is viewed as an appropriate change in classification by City staff. A related question would be whether the current approximately 32 acres of City Neighborhood Area (blue area within the red circle) should also be changed to Innovation Area. This classification permits multi-family dwellings, professional offices, eating places, retail, places of worship, schools, municipal services, community centers, and entertainment. Based on the proximity to Rippavilla, staff does not foresee any adverse implication from the reclassification of this area. Staff also recommends that the remaining Mixed Use Neighborhood Area to the south also be included in this change.

3. **Fire Station Parcel.** Change from City Neighborhood Area to Residential Neighborhood Area.

The northeast corner of Buckner Lane and Duplex Road contains roughly 3 acres that was recently purchased by the City of Spring Hill for a future fire station site. The parcel abuts existing single family residential uses on two sides. Prior to the purchase by Spring Hill the site was intended for neighborhood commercial uses, consistent with the current classification. The site is accessible from the adjacent residential neighborhood from Sakari Drive. The change in land use classification is viewed as an appropriate change in classification by City staff.
4. **Mahlon Moore Road area.** Change from Rural Neighborhood to Residential Neighborhood Area.

The Rural Neighborhood Area is proposed for low density and intensity; up to one dwelling unit per two acres (0.5 du/ac). The southern area of the Spring Hill Urban Growth Boundary is wrapped with a band of this low density classification. The Rural Neighborhood Area is characterized by farm land and natural features, containing sparsely scattered buildings, including residential homes and structures for agricultural activities. Civic uses may be located at primary intersections. A change to the Residential Neighborhood Area could significantly increase the potential density and intensity of development within this area.

The City and its consultant engineer performed a sewer capacity analysis for this area following development of the recent school facilities by Maury County. The analysis revealed a capacity deficiency in the collection system serving this area that must be addressed in order to support future school facility and residential development. The change in land use classification from Rural Neighborhood to Low Density Residential and the resulting potential increase in residential density cannot be supported by the current sewer collection system without significant corrective work being performed. Consideration may need to be given to deferring a change in land use classification until such time as the capacity deficiency has been satisfactorily addressed in a manner that would provide sufficient capacity to support a more intensive land use classification for the subject property. Adequacy of public infrastructure to support changes in land use should be a key consideration in amending land use classifications.

5. **Northfield.** Change the classification of Northfield and the adjacent building from Industrial Area to Innovation Area. Both classifications include ‘municipal services’ and the Innovation Area is geared to uses that better reflect the future of the area.
6. **Urban Growth Boundary (Williamson County portion).** In addition to the above considerations, staff recommends that the land use map be revised to clearly show the correct location of the Urban Growth Boundary for Spring Hill including specifically the Williamson County portion of the plan.

**Text Changes.** The Residential Neighborhood Area page in the 2040 Plan includes a loosely defined description of the uses proposed within this classification. Regarding residential uses the text refers to “low to moderate density” and “different housing types of appropriate scale and context”. The associated Design Principles refer to “residential lots” and “moderate density”.

Staff has interpreted the Residential Neighborhood Area as permitting varying forms of residential housing, but excluding multi-family and townhome uses. Earlier this year a rezoning to townhomes on Buckner Road was supported by the Planning Commission and approved by the BOMA. Since the wording is somewhat ambiguous and open to interpretation staff is reminding the Planning Commission of this issue should there be an interest in addressing and clarifying the language. If so, staff recommends the following for consideration.

a. Revise paragraph 2, the second sentence to read as follows: New development should integrate different housing types, including various forms of single family and two family dwellings, of appropriate scale and context and increase the connections between neighborhoods and other areas. Multi-family and townhome uses are not permitted in the Residential Neighborhood Area except through the Planned Development process.

b. Revise Design Principles, Density/Intensity as follows: Low to moderate density and intensity. Less than 4 du/ac.

**Summary:** The discussion of these land use map and text amendments is currently intended for general discussion by the Planning Commission. If there is a general consensus at the work session, staff will provide notice for the consideration of comprehensive plan amendments and prepare the changes for formal consideration at the February 24th work session.

Video of the Planning Commission discussion from December 23, 2019 is available on the city’s web page under Other Business.