



Agenda for the Regular Meeting of Board of Commissioners
Monday, May 9, 2022 - 7:00 pm
Brentwood City Hall

Call to Order by Mayor
Roll Call
Invocation by Commissioner Gorman
Pledge of Allegiance to the Flag by Vice Mayor Andrews
Proclamation - National Public Works Week
Proclamation - Children's Mental Health Acceptance Week

Public Hearing

1. Public hearing for Ordinance 2022-01- AN ORDINANCE ESTABLISHING THE OSRD (OPEN SPACE RESIDENTIAL DEVELOPMENT) ZONING CLASSIFICATION FOR APPROXIMATELY 122 ACRES OF LAND LOCATED EAST OF SPLIT LOG AND NORTH OF SAM DONALD ROADS
2. Public hearing for Ordinance 2022-04- AN ORDINANCE ESTABLISHING THE OSRD (OPEN SPACE RESIDENTIAL DEVELOPMENT) AND R-2 (SUBURBAN RESIDENTIAL) ZONING CLASSIFICATIONS FOR APPROXIMATELY 84 ACRES OF LAND LOCATED WEST OF SPLIT LOG AND SOUTH OF THE EXISTING ROSEBROOKE SUBDIVISION

Public hearings on rezoning ordinances are primarily intended as opportunities for citizens to voice their views in support of or opposition to a rezoning that has been proposed by other parties. Persons speaking on behalf of the property owner or the applicant for the rezoning are allowed opportunities to speak when the ordinance is considered for passage on first and second reading, and are encouraged to confine their remarks to those opportunities.

Approval or Correction of Minutes

April 25, 2022

Comments from Citizens – *Individuals may comment on any item included in the Consent/Regular agenda or on any other matter regarding the City of Brentwood. All comments should be directed to the Board of Commissioners. Citizens who wish to request that an item be moved from the Consent Agenda to the Regular Agenda for discussion should make that known to the Board at this time.*

Report from City Manager
Report from the City Attorney
Reports and comments by Commissioners and Mayor

Note: All matters listed under the Consent Agenda are considered to be routine and will generally be enacted by one motion. Except for any items that are removed from the Consent Agenda, there will be no separate discussion of these items at this time.

Consent Agenda

1. Resolution 2022-48 - A RESOLUTION AUTHORIZING AN AGREEMENT WITH FOUR STAR PAVING, LLC FOR ANNUAL ROADWAY REPAIRS AND IMPROVEMENTS, for adoption
2. Resolution 2022-49 - A RESOLUTION AUTHORIZING THE ACQUISITION OF EASEMENTS NECESSARY FOR THE ARDEN WOODS SEWER STATION ABANDONMENT PROJECT, for adoption
3. Approval of recommended street resurfacing list for Fiscal Year 2023
4. Approval to purchase Pure Storage solution
5. Approval to purchase ammunition for the Police Department

Old Business

1. Ordinance 2022-05 - AN ORDINANCE REZONING PROPERTY LOCATED AT 2 MARYLAND WAY FROM C-1 (COMMERCIAL-OFFICE) TO C-2 (COMMERCIAL-RETAIL), for consideration on first reading
2. Other old business

New Business

1. Other new business
 - a. Approval to purchase Cisco 48-port switch for Fire Station 5



Kirk Bednar
City Manager

Anyone requesting accommodations due to disabilities should contact April Curlin, A.D.A. Coordinator, at 371-0060, before the meeting.

Brentwood City Commission Agenda

Meeting Date: 05/09/2022

Ordinance 2022-01 -- Proposing to Assign the OSRD Zoning District to the Property Annexed Pursuant to Resolution 2022-33

Submitted by: Jeff Dobson, Planning & Codes

Department: Planning & Codes

Information

Subject

Public hearing for Ordinance 2022-01, which proposes the establishment of a City zoning district for $\approx$ 122 acres of land, located east of Split Log and north of Sam Donald Roads. The subject properties are currently zoned MGA-1 by Williamson County and would be assigned the OSRD (Open Space Residential Development) zoning district.

Background

The attached ordinance requests approval of the assignment of the Open Space Residential Development (OSRD) zoning district to $\approx$ 122 acres located east of Split Log Road and north of Sam Donald Road. The subject properties are currently zoned MGA-1 by Williamson County and are located within the City's Urban Growth Boundary (UGB) and adjacent to the existing city limits. The assignment of zoning is being considered in conjunction with an annexation request for the property.

The properties, under consideration for annexation and assignment of a zoning district are currently under the ownership of four different property owners. Refer to the following table.

<i>PROPERTY DESCRIPTION -- ROSEBROOKE EAST</i>			
<i>OWNER</i>	<i>ADDRESS</i>	<i>PARCEL #</i>	<i>AREA (AC)</i>
J & M Albright	9810 Sam Donald Rd.	055 01200	35.59
June Albright	Sam Donald Rd.	055 01205	7.95
R.H. Adcock/Moskal	9829 Split Log Rd.	056 08400	49.88
R.H. Adcock/Moskal #2	Split Log Rd.	056 09300	28.75
TOTAL			122.17 +/-

The proposed concept development plan shows a proposed future alignment of Split Log Road, which was developed in 2014. A current alignment has for the road not yet been established. The developer will be expected to provide the necessary additional right-of-way and/or adjust the lot layout to accommodate the future roadway improvements once an alignment has been established.

According to the Property Assessor, there is one home and one outbuilding currently located on Parcel Number 055 01200. Additionally, there is one home and several out buildings located on Parcel Number 056 08410. The other two parcels are vacant.

Since first reading of the ordinance, several changes have concurred to the plans, as a result of staff comments:

1. The splitter islands in the entrance streets have been revised, relocating them outside the ROW.
2. An "eyebrow" has been added to Road "N" as a block break. The eyebrow will serve as the location for the Post Office required CBUs.
3. The plan now labels Sam Donald Road as a future Arterial Road.
4. A 150-foot-wide arterial road buffer has been added along the frontage of Sam Donald Road. Note that the arterial road buffer is also shown along the preliminary alignment of Split Log Road.
5. A ROW dedication of 20 feet wide has been added along Sam Donald Road.
6. The 100-year floodplain has been added to the plans

Several other comments were provided by staff which will be addressed as part of the preliminary plan and/or construction plan review process.

The changes have resulted in a slight modification in the open space calculations, reducing the amount of excess open space from 35.80 acres to 35.13 acres (0.67 ac.). The comparison of the open space calculations as originally submitted and those provided as part of the re-submittal is attached below.

The revised plan still includes a total of 74 lots. The average lot area is 30,407 sq. ft or 0.70 acres. The overall density is 0.61 dwelling units per acres (DUPA). An R-2 concept plan was also included as part of the submittal. That plan also showed a total of 74 lots, all at or above the required one-acre lot area.

Utility service to the properties is provided by the Nolensville/College Grove Utility District (water) and Metro Nashville Water Services (sewer). The provision of utilities will not change with the annexation of the property into the City of Brentwood. The future development will not be served by Brentwood's Water and Sewer system and therefore, the project will not impact the City's water/sewer infrastructure.

The tract can be developed under the existing zoning classification in the County. As noted above, the properties are currently zoned MGA-1 by Williamson County. The district was established in 2013 and assigned to all properties outside municipal boundaries and within the various UGBs around the County. The district standards require a minimum lot area of one acre and a gross density of one dwelling unit per acre, similar to the City's Suburban Residential (R-2) district. However, there are differences in the technical standards related to accessory uses and structure standards. MGA-1 allows the following accessory uses/structure standards:

1. Accessory dwelling units within an existing dwelling unit (interior apartment) or as a separate or converted structure (converted garage, carriage house or stable);
2. Only one accessory dwelling unit, regardless of the number of principle dwellings located

- on a single parcel are permitted;
3. Accessory dwellings shall be limited to 750 sq. ft. or 25% of the square footage of the principal structure, whichever is greater. In no case shall the accessory dwelling be more than 75% of the square footage of the principal dwelling; and
 4. Interior apartments may be contained within the existing house or attached onto the exterior. They must be constructed so that the exterior appearance of the home is maintained. A second front door is not permitted.

Please note that the County does not regulate the existence or operation of Short Term Rentals (STRs) in the MGA-1 district. Requirements are that each operator must register with the County and collect the applicable Hotel/Motel taxes, which are charged to the occupant and collected by the property owner.

SCHOOLS

The proposed plan was provided to Williamson County Schools (WCS) for an assessment of the impact of the proposed development on the schools in the area. The properties lie between the Ravenwood and Nolensville High zone lines. WCS will review to determine if the school board needs to vote on a line change. WCS is rezoning for the new elementary schools this fall. Based upon the WCS review, the approximate student enrollment projections at build-out for the Rosebrooke East properties are as follows:

Jordan Elementary -- 33 Students;
Sunset Middle -- 19 Students;
High school -- 15 Students (either Ravenwood or Nolensville).

The current capacity and enrollment numbers for the 2020/2021 school year, according to WCS data for the three impacted schools as of September 2, 2021, are as follows: Jordan Elementary (890 capacity/593 students enrolled), Sunset Middle (869 capacity/621 students enrolled), and Ravenwood High (1,649 capacity/1,875 students enrolled), Nolensville High (1,671 capacity/1,330 enrolled). Note that the enrollment for Ravenwood High exceeds its capacity, but construction is underway to enlarge the school.

TRAFFIC IMPACTS

A Traffic Impact Study (TIS) was provided as part of the initial request for annexation of the property. A copy of the TIS was forwarded to Mr. Greg Judy with Neel-Shaffer Inc., who assists staff in the review of the submitted TIS. The applicant will pay for the Neel-Shaffer review per the requirements of Section 50-29(b) of the Municipal Code.

Site Traffic

ROSEBROOKE ADDITION									
TRIP GENERATION (1)									
Proposed Development	ITE Land Use Code	Total Units	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Rosebrooke South (50 Single Family Detached Homes)	210	50 Homes	550	10	30	40	33	19	52
Rosebrooke East (74 Single Family Detached Homes)	210	74 Homes	788	14	43	57	48	28	76
(1) <i>Trip Generation Manual, 10th Edition</i> published by the Institute of Transportation Engineers (ITE)									

A copy of the Executive Summary, which is included as part of the TIS is attached below. Additionally, the entire TIS is also attached below.

The TIS recommends the following improvements be incorporated into the design of the proposed access to Split Log Road (Access #2) include the following.

- The intersection is projected to operate at acceptable levels of service in total traffic conditions during the a.m. and p.m. peak hours.
- The project access should be constructed to allow a minimum of one ingress lane and two (2) egress lanes with a storage length of 75 feet.
- These proposed access locations will intersect Split Log Road in between existing curves and should provide acceptable intersection sight distance. Site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at this intersection.

Additionally, the TIS recommends that the following improvements be incorporated into the access to Sam Donald Road (Access #4):

- The intersection is projected to operate at acceptable levels of service in total traffic conditions during the a.m. and p.m. peak hours.
- The project access should be constructed to allow a minimum of one ingress lane and two (2) egress lanes with a storage length of 75 feet.
- This proposed access will be near an existing driveway within a straight section of Sam Donald Road and should provide acceptable intersection sight distance. Site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at this intersection.

As mentioned above the TIS was forwarded to Neel-Shaffer for their staff review. Their review will be attached below upon receipt.

The developer will be expected to design the project in consideration of the recommendations included as part of the TIS and the recommendations from Neel-Shaffer.

The request will track along the following hearing schedule.

<i>PROPOSED HEARING SCHEDULE</i>	
<i>April 11, 2022</i>	Board of Commissioners -- First Reading of the Ordinance 2022-01 Assigning OSRD to the Property
<i>April 28, 2022</i>	Required Community Meeting -- 6:00 p.m. -- Annex Room
<i>May 2, 2022</i>	Planning Commission -- Review & Recommendation of the Ordinance 2022-01 Assigning OSRD to the Property
<i>May 9, 2022</i>	Board of Commissioners -- Public Hearing on the Ordinance 2022-01 Assigning OSRD to the Property
<i>May 23, 2022</i>	Board of Commissioners -- Second and Final Reading of the Ordinance 2022-01 Assigning OSRD to the Property
<i>May 23, 2022</i>	Board of Commissioners -- Review of Resolution 2022-33 Annexing the properties into the City of Brentwood

A total of six residents attended the community meeting. A copy of the staff notes from the meeting is attached below.

As noted above the Planning Commission will provide their review and recommendation of the ordinance at its May 2, 2022, regular meeting.

Should you have any questions or require additional information, please contact the Planning and Codes Director.

Staff Recommendation

Not Applicable. .

Previous Commission Action

On April 11, 2022, the Board of Commissioners voted unanimously, seven for and zero against (7-0) to approve Ordinance 2022-01 on first reading.

On March 28, 2022, the Board of Commissioners conducted the required public hearing for the plan of services and the annexation. No one spoke during the public hearing.

On February 14, 2022, the Board of Commissioners voted unanimously six for and zero against (6-0) to approve Resolution 2022-08, scheduling the required public hearing for the plan of services for March 28, 2022.

Fiscal Impact

Attachments

Ordinance 2022-01

Attachment B -- OS Calcs, Dev. Plan W/ Enlargements

Project Rendering

R-2 Concept Plan

OS Comparison

Rosebrooke East Landscape Sheets

Rosebrooke East Tree Preservation Sheets

List of Trees to Remain

Owner Authorizations

TIS Executive Summary

Traffic Impact Study

Split Log Road Realignment -- 2014

Resolution 2022-33

Staff Notes -- Community Meeting

PC Review Memo -- Ordinance 2022-01

ORDINANCE 2022-01

AN ORDINANCE OF THE CITY OF BRENTWOOD, TENNESSEE TO AMEND THE ZONING ORDINANCE, SAME BEING CHAPTER 78 OF THE CODE OF ORDINANCES OF THE CITY OF BRENTWOOD, TO ESTABLISH A CERTAIN ZONING CLASSIFICATION, SAME BEING THE OSRD (OPEN SPACE RESIDENTIAL DEVELOPMENT) FOR CERTAIN PROPERTY LOCATED EAST OF SPLIT LOG ROAD AND NORTH OF SAM DONALD ROAD, SAID TERRITORY BEING ADJACENT TO AND INCLUDING SECTIONS OF SPLIT LOG ROAD, BEING MORE SPECIFICALLY DESCRIBED IN THE PROPERTY DESCRIPTION ATTACHED HERETO AND MADE A PART OF THIS ORDINANCE BY REFERENCE, AND SHOWN ON THE MAP ATTACHED HERETO AND MADE A PART OF THIS ORDINANCE BY REFERENCE; AND TO AMEND THE OFFICIAL ZONING MAP ACCORDINGLY

WHEREAS, the City of Brentwood intends to annex certain territory, adjacent to and including a certain section Split Log Road into its corporate limits by Resolution 2022-33, pursuant to Tennessee Code Annotated Section 6-51-101 *et seq.*; and

WHEREAS, it is in the best interest of the City of Brentwood and the said annexed territory that a zoning classification be established for said territory: and

WHEREAS, the zoning of the property shall be contingent upon approval of the proposed annexation, pursuant to Resolution 2022-33.

NOW THEREFORE, BE IT ORDAINED BY THE CITY OF BRENTWOOD, TENNESSEE, AS FOLLOWS:

SECTION 1. That the OSRD (Open Space Residential Development) zoning district, as defined by the zoning ordinance of the City of Brentwood, Tennessee, be and the same is hereby established for the properties identified on the current Williamson County tax maps as Map 055, Parcel 01200, 055 01205, 056 08400 and 056 09300, said property being more particularly described in the property description attached hereto as Attachment “A,” and being more particularly shown on Attachment “B,” said attachments being made a part of this ordinance by reference.

SECTION 2. That approval of the zoning shall be contingent upon approval of the proposed annexation of the property, pursuant to Resolution 2022-33.

SECTION 3. That the official zoning map be and the same is hereby amended accordingly.

PASSED:	1st reading	_____	PLANNING COMMISSION	_____
	2nd reading	_____	NOTICE OF PASSAGE	
			Notice published in:	_____
PUBLIC HEARING			Date of publication:	_____
	Notice published in:	<u>Williamson A.M.</u>		
	Date of publication:	_____		
	Date of hearing:	_____	EFFECTIVE DATE	_____

RECORDER Holly Earls

CITY ATTORNEY Kristen L. Corn

**ATTACHMENT A
ORDINANCE 2022-01
ANNEXED TERRITORY
PROPERTY DESCRIPTION
SPLIT LOG AND SAM DONALD ROADS
MAP 055 PARCEL 01200, MAP 055 PARCEL 01205, MAP 056 PARCEL 08400 AND
MAP 056 PARCEL 09300**

JOHN AND MARGARET ALBRIGHT PROPERTY

MAP 055, PARCEL 012.00

SAM DONALD ROAD

WILLIAMSON COUNTY

PROPOSED OSRD ZONING DESCRIPTION

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County, Tennessee. Being bounded on the north by the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 3), Register's Office for Williamson County, Tennessee (R.O.W.C.T.); at the northeast by the Paula K. Taube property of record in Book 3204, Page 941, R.O.W.C.T.); on the east by the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540, R.O.W.C.T. and the Clark A. Presley and Tamara C. Presley property of record in Book 1250, Page 463, R.O.W.C.T.; on the south by Sam Donald Road (right-of-way width varies); on the west by the June M. Albright property of record in Book 1070, Page 679, R.O.W.C.T., the Eric S. Simon and wife, Anca R. Simon property of record in Book 5196, Page 93, R.O.W.C.T. and the Magdalena Samuchin and Michael G. Samuchin, wife and husband property of record in Book 1876, Page 634, R.O.W.C.T.; at the southwest by the Joe Ann Wilburn Griggs, Trustee property of record in Book 7694, Page 563, R.O.W.C.T; and being more particularly described as follows:

Commencing at the centerline intersection of Sunset Road (right-of-way width varies) with said Split Log Road (right-of-way width varies), said intersection being the northeast corner of the Sunset Road Development, LLC property of record in Book 8670, Page 432, R.O.W.C.T.;

Thence, leaving said Sunset Road, with the centerline of said Split Log Road the following three (3) calls:

1. With a curve to the left having a radius of 1500.00 feet, an arc length of 183.29 feet, a delta angle of 07 degrees 00 minutes 05 seconds, a tangent of 91.76 feet and a chord bearing and distance of South 10 degrees 37 minutes 11 seconds West, 183.18 feet;
2. South 07 degrees 07 minutes 09 seconds West, 520.57 feet to the northeast corner of the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 2), R.O.W.C.T.;
3. South 06 degrees 19 minutes 07 seconds West, 570.11 feet;

Thence, leaving the centerline of said Split Log Road with the common line of said Taube property and said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 3), South

06 degrees 24 minutes 03 seconds West, 1232.68 feet to a 1/2-inch iron rod (old) at the northwest corner of said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 1), R.O.W.C.T.;

Thence, with the west line of said property, South 06 degrees 38 minutes 30 seconds West, 1004.24 feet to a 1/2-inch iron rod (old) with no cap at the northwest corner of said Presley property;

Thence, with the west line of said property the following three (3) calls:

1. South 06 degrees 26 minutes 01 seconds West, 443.50 feet to a 1/2-inch iron rod (old) with no cap;
2. South 05 degrees 57 minutes 23 seconds West, 203.67 feet to a 1/2-inch iron rod (old) with no cap;
3. South 07 degrees 33 minutes 18 seconds West, 278.45 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" in the north right-of-way line of said Sam Donald Road and the **Point of Beginning** of herein described tract;

Thence, with the north right-of-way line of said Sam Donald Road the following three (3) calls:

1. North 71 degrees 32 minutes 38 seconds West, 314.20 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
2. Along a curve to the left, having an arc length of 384.43 feet, a radius of 2601.20 feet, a delta angle of 08 degrees 28 minutes 04 seconds and a chord bearing and distance of North 75 degrees 46 minutes 40 seconds West, 384.08 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
3. North 80 degrees 00 minutes 42 seconds West, 119.40 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" at the southeast corner of said June M. Albright property;

Thence leaving said north right-of-way line of Sam Donald Road with the east and north lines of said property the following three (3) calls:

1. North 11 degrees 24 minutes 50 seconds East, 604.15 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
2. North 14 degrees 51 minutes 48 seconds East, 438.66 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
3. North 80 degrees 01 minutes 06 seconds West, 268.19 feet to a 1/2-inch iron rod (old) with no cap at the northeast corner of said Griggs, Trustee property and the southeast corner of said Simon property;

Thence, with the east line of Simon, North 16 degrees 39 minutes 01 seconds East, 285.85 feet to a 1/2-inch iron rod (old) with no cap at the southeast corner of said Samuchin property;

Thence, with the east line of said Samuchin property, North 10 degrees 13 minutes 28 seconds East, 522.05 feet to a nail (old) in the south line of said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 3);

Thence, with the south line of said Adcock Marital Trust property property, South 80 degrees 19 minutes 58 seconds East, 881.52 feet to a 1/2-inch iron rod (old) with no cap at the southwest corner of said Taube property and the northwest corner of the said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 1);

Thence, with the west line of said Adcock Marital Trust property property, South 06 degrees 38 minutes 30 seconds West, 1004.24 feet to a 1/2-inch iron rod (old) with no cap at the northeast corner of said Presley property;

Thence, with the west line of said Presley property, the following three (3) calls:

1. South 06 degrees 26 minutes 01 seconds West, 443.50 feet to a 1/2-inch iron rod (old) with no cap;
2. South 05 degrees 57 minutes 23 seconds West, 203.67 feet to a 1/2-inch iron rod (old) with no cap;
3. South 07 degrees 33 minutes 18 seconds West, 278.45 feet to the **Point of Beginning** containing 1,550,145 square feet or 35.59 acres, more or less.

Being the same property conveyed to John J. Albright and wife, Margaret C. Albright by Quitclaim Deed of record in Book 1256, page 429, Register's Office for Williamson County, Tennessee.

JUNE M. ALBRIGHT PROPERTY
MAP 055, PARCEL 012.05
SAM DONALD ROAD
WILLIAMSON COUNTY
PROPOSED OSRD ZONING DESCRIPTION

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County, Tennessee. Being bounded on the north and east by the John J. Albright and wife, Margaret C. Albright property of record in Book 1256, Page 429, Register's Office for Williamson County, Tennessee (R.O.W.C.T.); on the south by Sam Donald Road (right-of-way width varies); on the west by the Joe Ann Wilburn Griggs property of record in Book 7694, Page 994, R.O.W.C.T. and the Joe Ann Wilburn Griggs, Trustee property of record in Book 7694, Page 563, R.O.W.C.T.; at the northwest by the Eric S. Simon and wife, Anca R. Simon property of record in Book 5196, Page 93, R.O.W.C.T. and being more particularly described as follows:

Beginning on a 1/2-inch iron rod (old) in the north right-of-way line of said Sam Donald Road and at the southeast corner of said Griggs property of record in Book 7694, Page 994, R.O.W.C.T.

Thence, leaving said north right-of-way line with the east line of said Griggs property and the Griggs property of record in Book 7694, Page 563, R.O.W.C.T., North 20 degrees 41 minutes 27 seconds East, 1059.44 feet to a 1/2-inch iron rod (old) with no cap at the southeast corner of said Simon property and at a southwest corner of said Albright property;

Thence, with the south and west line of Albright the following three (3) calls:

1. South 80 degrees 01 minutes 06 seconds East, 268.19 feet to a 1/2-inch iron rod (old) with no cap;
2. South 14 degrees 51 minutes 48 seconds West, 438.66 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
3. South 11 degrees 24 minutes 50 seconds West, 604.15 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" in the north right-of-way line of Sam Donald Road;

Thence, with said right-of-way line, North 80 degrees 00 minutes 42 seconds West, 412.63 feet to the **Point of Beginning** containing 346,398 square feet or 7.95 acres, more or less.

Being the same property conveyed to June M. Albright by Quitclaim Deed of record in Book 1070, page 679, Register's Office for Williamson County, Tennessee.

ROBERT H. ADCOCK PROPERTY
MAP 056, PARCEL 084.00
SPLIT LOG ROAD
WILLIAMSON COUNTY
PROPOSED OSRD ZONING DESCRIPTION

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County, Tennessee. Being bounded on the north and west by the Sunset Road Development, LLC property of record in Book 8670, Page 432, Register's Office for Williamson County, Tennessee (R.O.W.C.T.); on the east by the Paula K. Taube property of record in Book 3204, Page 941, R.O.W.C.T. and the Paula K. Taube property of record in Book 2189, Page 725, R.O.W.C.T.; at the southeast by the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 1), R.O.W.C.T. on the south by: the John J. Albright and wife, Margaret C. Albright property of record in Book 1256, Page 429, R.O.W.C.T., the Magdalena Samuchin and Michael G. Samuchin, wife and husband property of record in Book 1876, Page 634, R.O.W.C.T., the Magdalena Samuchin and Michael G. Samuchin, wife and husband property of record in Book 971, Page 129, R.O.W.C.T.; on the west by: Split Log Road (right-of-way width varies), the Michael D. Culbreth and Lynette Culbreth property of record in Book 6010, Page 611, R.O.W.C.T. and the John A. McArthur and wife, Norma D. McArthur property of record in Book 220, Page 602, R.O.W.C.T. and being more particularly described as follows:

Commencing at the centerline intersection of Sunset Road (right-of-way width varies) with said Split Log Road (right-of-way width varies), said intersection being the northeast corner of said Sunset Road Development, LLC property;

Thence, leaving said Sunset Road, with the centerline of said Split Log Road the following two (2) calls:

1. With a curve to the left having a radius of 1500.00 feet, an arc length of 183.29 feet, a delta angle of 07 degrees 00 minutes 05 seconds, a tangent of 91.76 feet and a chord bearing and distance of South 10 degrees 37 minutes 11 seconds West, 183.18 feet;
2. South 07 degrees 07 minutes 09 seconds West, 520.57 feet to the northeast corner of the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 2), R.O.W.C.T. and the **Point of Beginning** of herein described tract;

Thence, continuing with the centerline of Split Log Road, South 06 degrees 19 minutes 07 seconds West, 570.11 feet to the northwest corner of the Taube property of record in Book 3204, Page 941, R.O.W.C.T. and the southwest corner of the Taube property of record in Book 2189, Page 725, R.O.W.C.T.;

Thence, leaving said centerline with the west line of Taube, South 06 degrees 24 minutes 03 seconds West, 1232.68 feet to a 1/2 inch iron rod (old) at the northwest corner of said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 1) and the northeast corner of said Albright property;

Thence, with the north line of Albright, North 80 degrees 19 minutes 58 seconds West, 881.52 feet to a nail (old) at the northeast corner of said Samuchin property of record in Book 1876, Page 634, R.O.W.C.T.;

Thence, with the north line of said property, North 79 degrees 45 minutes 24 seconds West, 256.67 feet to a metal fence post at the northeast corner of the Samuchin property of record in Book 971, Page 129, R.O.W.C.T.;

Thence, with said north line the following two (2) calls:

1. North 77 degrees 36 minutes 15 seconds West, 161.26 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
2. North 28 degrees 31 minutes 37 seconds West, 62.19 feet to the centerline of Split Log Road;

Thence, with said centerline the following five (5) calls:

1. Along a curve to the left, having an arc length of 290.36 feet, a radius of 489.76 feet, a delta angle of 33 degrees 58 minutes 06 seconds and a chord bearing and distance of North 29 degrees 28 minutes 53 seconds East, 286.13 feet;
2. North 12 degrees 29 minutes 50 seconds East, 306.63 feet;
3. North 16 degrees 05 minutes 12 seconds East, 246.86 feet;
4. Along a curve to the right, having an arc length of 133.22 feet, a radius of 128.43 feet, a delta angle of 59 degrees 25 minutes 53 second sand a chord bearing and distance of North 45 degrees 48 minutes 08 seconds East, 127.32 feet;
5. Along a curve to the right, having an arc length of 60.18 feet, a radius of 327.13 feet, a delta angle of 10 degrees 32 minutes 27 seconds and a chord bearing and distance of North 80 degrees 47 minutes 18 seconds East, 60.10 feet;

Thence, leaving said centerline with the north line of said McArthur property, North 72 degrees 18 minutes 48 seconds West, 257.60 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" in the east line of said Sunset Road Development, LLC property;

Thence, with the east and south lines of said property the following two (2) calls:

1. North 06 degrees 11 minutes 12 seconds East, 702.90 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
2. South 83 degrees 03 minutes 48 seconds East, 1261.68 feet the **Point of Beginning**, containing 2,172,582 square feet, or 49.88 acres, more or less.

Being a portion of the same property conveyed to Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust by Trustee's Quitclaim Deed of record in Book 5792, Page 540 (Tracts 2 and 3), R.O.W.C.T, Register's Office for Williamson County, Tennessee.

**ROBERT H. ADCOCK PROPERTY
MAP 056, PARCEL 093.00
EAST OF SPLIT LOG ROAD
NORTH OF SAM DONALD ROAD
WILLIAMSON COUNTY
PROPOSED OSRD ZONING DESCRIPTION**

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County. Being bounded on the north by the Paula K. Taube property of record in Book 3204, Page 941, Register's Office for Williamson County, Tennessee (R.O.W.C.T.); on the east by Open Space 1 as shown on plan entitled "Bennington, Section 10" of record in Plat Book P65, Page 97, R.O.W.C.T.; on the south by the Annette Thompson Parkes property of record in Book 4188, Page 283, R.O.W.C.T. and the Daniel R. Vasta and Victoria L. Vasta, husband and wife property of record in Book 7552, Page 3, R.O.W.C.T. and the Clark A. Presley and Tamara C. Presley property of record in Book 1250, Page 463, R.O.W.C.T.; on the west by the John J. Albright and wife, Margaret C. Albright property of record in Book 1256, Page 429, R.O.W.C.T.; at the northwest by the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 3) R.O.W.C.T., and being more particularly described as follows:

Commencing at the centerline intersection of Sunset Road (right-of-way width varies) with said Split Log Road (right-of-way width varies), said intersection being the northeast corner of Sunset Road Development, LLC property of record in Book 8670, Page 432, R.O.W.C.T.;

Thence, leaving said Sunset Road, with the centerline of said Split Log Road the following three (3) calls:

1. With a curve to the left having a radius of 1500.00 feet, an arc length of 183.29 feet, a delta angle of 07 degrees 00 minutes 05 seconds, a tangent of 91.76 feet and a chord bearing and distance of South 10 degrees 37 minutes 11 seconds West, 183.18 feet;
2. South 07 degrees 07 minutes 09 seconds West, 520.57 feet to the northeast corner of the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 2), R.O.W.C.T.;
3. South 06 degrees 19 minutes 07 seconds West, 570.11 feet;

Thence, leaving the centerline of said Split Log Road with the common line of said Taube property and said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 3), South 06 degrees 24 minutes 03 seconds West, 1232.68 feet to a 1/2-inch iron rod (old) at the northeast corner of said Albright property and the **Point of Beginning** of herein described tract;

Thence, with the south line of Taube, South 79 degrees 44 minutes 16 seconds East, 1179.27 feet to a 1/2-inch iron rod (old) in the west line of said Open Space 1 as shown on "Bennington, Section 10";

Thence, with said west line, South 06 degrees 30 minutes 27 seconds West, 977.34 feet to a 1/2-inch iron rod (old) with no cap at the northwest corner of said Parkes property and the northeast corner of

said Parkes property;

Thence, with the north line of Parkes, North 81 degrees 43 minutes 58 seconds West, 231.62 feet to a 1/2-inch iron rod (old) with no cap at the northeast corner of said Vasta property;

Thence, with the north line of Vasta, North 82 degrees 36 minutes 15 seconds West, 1167.82 feet to a 1/2-inch iron rod (old) with no cap;

Thence, North 06 degrees 38 minutes 30 seconds East, 1004.24 feet to the **Point of Beginning** containing 1,252,288 square feet or 28.75 acres, more less.

Being a portion of the same property conveyed to Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust by Trustee's Quitclaim Deed of record in Book 5792, Page 540 (Tract 1), R.O.W.C.T, Register's Office for Williamson County, Tennessee.

Total land area to include 122.107 acres, not including that portion of the Split Log Road right-of-way as shown on the attached concept plan

And a Portion of the Split Log Road right-of-way to include the following:

A portion of Split Log Road that fronts the subject properties to include the east side measured from the centerline of Split Log Road along Adcock (056 08400), then the entire portion of Split Log Road that bisects Adcock and the westerly portion measured from the centerline of Split Log Road to the northerly boundary of Adcock.

GENERAL NOTES AND SITE DATA

1. SUBJECT PROPERTY CONSISTS OF PARCELS 12.00 AND 12.05 AS SHOWN ON WILLIAMSON COUNTY PROPERTY MAP NO. 55 AND PARCELS 84.00 AND 93.00 ON WILLIAMSON COUNTY PROPERTY MAP NO. 56.
2. PROPERTY OWNERS:
(MAP 55, PARCEL 12.00) JOHN J. ALBRIGHT AND MARGARET C. ALBRIGHT
BOOK 1256, PAGE 429, R.O.W.C.T.

(MAP 55, PARCEL 12.05) JUNE ALBRIGHT
BOOK 1070, PAGE 679, R.O.W.C.T.

(MAP 56, PARCELS 84.00 AND 93.00) DEBORAH MOSKAL, TRUSTEE OF
THE ROBERT H. ADCOCK MARITAL TRUST
BOOK 5792, PAGE 540, R.O.W.C.T.
3. EXISTING ZONING: MGA-1 (MUNICIPAL GROWTH AREA DISTRICT 1).
PROPOSED ZONING: OSRD (OPEN SPACE RESIDENTIAL DEVELOPMENT).
4. GROSS SITE AREA: 122.16 ACRES.
5. BOUNDARY INFORMATION TAKEN FROM FIELD RUN SURVEY PERFORMED BY RAGANSMITH ON OCTOBER 13, 2021 - CHRIS MABERY, RLS.
6. FOR TOPOGRAPHIC ASPECTS OF THIS SURVEY, RTK GPS POSITIONAL DATA WAS OBSERVED ON JULY 23, 2021 UTILIZING A TRIMBLE R10 DUAL FREQUENCY RECEIVER. THE GRID COORDINATES OF THE FIXED STATION(S) SHOWN WERE DERIVED USING A VRS NETWORK OF CORS STATIONS REFERENCED TO NAD 83 (2011) (EPOCH 2010), GEOID 12B.

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88. CONTOURS ARE AT TWO FOOT INTERVALS AND ARE BASED ON A FIELD RUN SURVEY USING RANDOM SPOT ELEVATIONS. CONTOURS WERE DERIVED USING SURFACE MODELING TECHNIQUES.
7. NUMBER OF PROPOSED LOTS: 74.
8. PROPOSED DENSITY: 0.61 DU/AC. (1.0 DU/AC. MAXIMUM).
9. MAXIMUM BUILDING COVERAGE OF PROPOSED LOTS: 25%.
10. EACH PROPOSED LOT SHALL PROVIDE A MINIMUM OF TWO OFF-STREET PARKING SPACES.
11. MINIMUM LOT WIDTH AT BUILDING LINE: 110' OR 120' FOR TRANSITIONAL LOTS.
12. MINIMUM BUILDING SETBACKS: (UNLESS SHOWN OTHERWISE)
- FRONT - 50'
SIDE ABUTTING A STREET - 15'/25' OR 20'/20' (TOTAL 40' BETWEEN BUILDING)
REAR - 30'
ABUTTING PROJECT PERIMETER - 35'
13. ALL ELECTRIC SERVICE FOR THE PROPOSED DEVELOPMENT SHALL BE UNDERGROUND. ALL PUBLIC UTILITY UTILITIES SHALL BE SUBJECT TO THE APPROVAL OF THE APPLICABLE UTILITY COMPANIES.
14. UTILITY PROVIDERS:
- ELECTRICITY: MIDDLE TN ELECTRIC MEMBERSHIP CORP. (615) 794-1102
TELEPHONE: UNITED TELEPHONE (931) 364-2289
SANITARY SEWER: METRO WATER SERVICES (615) 862-4600
WATER: NOLENSVILLE COLLEGE GROVE UTILITY DISTRICT (615) 776-2511
NATURAL GAS: ATMOS GAS (888) 286-6700
15. PER REQUIREMENTS 78-184(3) & (7), ANY OSRD LOT SHOWN HEREON AS A "TRANSITIONAL" LOT SHALL HAVE A MINIMUM WIDTH OF 120' AT THE BUILDING SETBACK.
16. EXISTING VEGETATION TO REMAIN SHALL BE CONTAINED WITHIN A SCENIC EASEMENT. ALL OPEN SPACE AREAS DESIGNATED AS SCENIC EASEMENTS SHALL REMAIN UNDISTURBED. SCENIC EASEMENT LOCATIONS TO BE DETERMINED ON FINAL PLATS.
17. WATERWAY NATURAL AREAS RELATE TO WATERCOURSES CLASSIFIED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENTAL AND CONSERVATION AS STREAMS OR "WATERS OF THE STATE." THESE STREAMS ARE INTENDED TO REMAIN IN THEIR NATURAL CONDITION AND TO BE BUFFERED IN ACCORDANCE WITH TDEC CRITERIA. NO DISTURBANCE IS TO OCCUR WITHIN THE BUFFER LIMITS EXCEPT AS PERMITTED BY TDEC OR THE U.S. CORPS OF ENGINEERS.
18. THIS OSRD PLAN IS SUBJECT TO A THREE YEAR VESTING PERIOD, DURING WHICH THE DEVELOPMENT STANDARDS IN EFFECT ON THE DATE OF APPROVAL WILL REMAIN THE STANDARDS APPLICABLE TO THIS PLAN, IF UPON EXPIRATION OF THE VESTING PERIOD, DEVELOPMENT OF THE PROPERTY SHOWN ON THIS PLAN MAY BE SUBJECT TO STANDARDS OTHER THAN THOSE THAT WERE APPLICABLE DURING THE VESTING PERIOD. THE VESTING PERIOD FOR THIS PLAN EXPIRES ON _____, UNLESS EXTENDED BY THE CITY OF BRENTWOOD. PERSONS RELYING ON THIS PLAN AFTER SAID DATE SHOULD CONTACT THE CITY OF BRENTWOOD TO DETERMINE IF DEVELOPMENT MAY CONTINUE AS DEPICTED ON THE PLAN.
19. LOTS DESIGNATED WITH  HAVE NATURAL SLOPES OF GREATER THAN 15%. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR A RESIDENTIAL LOT WITH A SLOPE OF 15% OR GREATER, A PLAN SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER FOR APPROVAL BY THE CITY ENGINEER SHOWING EXISTING TOPOGRAPHIC INFORMATION FROM SURVEY DATA, BOUNDARY AND SETBACK LINES, UTILITY AND DRAINAGE EASEMENTS, EXISTING AND PROPOSED DRAINAGE PIPES, DITCHES AND SWALES TO BE CONNECTED TO PUBLIC DRAINAGE LINES AND/OR TO DIRECT OR RE-DIRECT STORMWATER RUNOFF, THE PROPOSED BUILDING FOOTPRINT AND THE DRIVEWAY PLAN, INCLUDING THE FINISHED FLOOR ELEVATIONS AND FINISHED GRADES OF PAVEMENTS AND GROUND LINES, IDENTIFICATION OF EXISTING TREES IN EXCESS OF FOUR-INCH CALIPER AND TREES TO BE PRESERVED, AND THE LOCATION AND TIMING OF INSTALLATION OF EROSION CONTROL FEATURES. NO CLEAR CUTTING OF TREES OR GRADING OF THE LOT SHALL BE PERMITTED UNTIL APPROVAL OF THE SITE PLAN BY THE CITY ENGINEER.
20. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN ZONE "X", AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47187C0230G, WITH AN EFFECTIVE DATE OF FEBRUARY 26, 2021, WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT, COMMUNITY NO. 470204, PANEL NO. 0230, SUFFIX G, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AREAS OF MINIMAL FLOOD HAZARD.
21. THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION WITHIN THE WATERWAY NATURAL AREA, EXCEPT AS PERMITTED BY THE CITY OF BRENTWOOD.
22. MIDDLE TENNESSEE ELECTRIC MEMBERSHIP CORPORATION (MTEM) SHALL HAVE ACCESS TO INSTALL, CONSTRUCT, REPHASE, OPERATE, AND MAINTAIN ITS ELECTRIC FACILITIES LOCATED WITHIN THE SUBJECT PROPERTY. MTEM HAS THE RIGHT TO CUT, TRIM AND CONTROL THE GROWTH BY CHEMICAL MEANS, MACHINERY, OR OTHERWISE, OF TREES AND SHRUBBERY LOCATED WITHIN 20 FEET OF THE CENTER LINE (A TOTAL OF 40') OF ITS FACILITIES, OR ANY VEGETATION THAT MAY INTERFERE WITH OR THREATEN TO ENDANGER THE OPERATION AND MAINTENANCE OF ITS FACILITIES.
23. MTEM WILL PROVIDE ELECTRIC SERVICE TO THE SUBJECT PROPERTY ACCORDING TO THE NORMAL OPERATING PRACTICES OF MTEM AS DEFINED IN ITS RULES AND REGULATIONS, BYLAWS, AND POLICIES, AND IN ACCORDANCE WITH THE PLAT APPROVAL CHECKLIST, TREE PLANTING GUIDELINES AND OTHER REQUIREMENTS CONTAINED ON THE MTEM WEBSITE AT WWW.MTEM.COM (COLLECTIVELY THE "REQUIREMENTS"). NO ELECTRIC SERVICE WILL BE PROVIDED UNTIL MTEM'S REQUIREMENTS HAVE BEEN MET AND APPROVED IN WRITING BY AN AUTHORIZED REPRESENTATIVE OF MTEM. ANY APPROVAL IS, AT ALL TIMES, CONTINGENT UPON CONTINUING COMPLIANCE WITH MTEM'S REQUIREMENTS.

OVERALL OSRD CALCULATIONS

ROSEBROOKE EAST OVERALL OSRD CALCULATIONS			
Total Site Area (AC)	122.16		
Less R.O.W. dedication -- Split Log Road	3.99		
Less R.O.W. dedication -- Sam Donald Road	0.56		
Less R.O.W. dedication -- Internal streets	8.47		
TOTAL	109.14		
Less Areas in 25% Slopes	0.05		
Plus 25% of slopes over 25%	0.01		
Less Areas in Floodway	0.00		
Plus 25% Areas in Floodways	0.00		
Less Areas in Electrical Natural & Gas Easements	0.00		
Plus 25% of Areas in Electrical Natural & Gas Easements	0.00		
Total Usable Land Area (AC)	109.10		
Less area in lots > 1 acre	0.68		
TOTAL LAND AREA AVAILABLE	108.42		
Total Land Area Required @ 1 DU/PA (AC)	74.00		
Land Area in Lots	51.65		
Open Space Required	22.35		
Dedicated Open Space	57.48		
EXCESS OPEN SPACE	35.13		

OSRD LOT AREA TABLES

LOT	SQ. FT.	AC.
175	30581	0.70
176	32050	0.74
177	32733	0.75
178	36312	0.83
179	35809	0.82
180	27166	0.62
181	28148	0.65
182	28000	0.64
183	31195	0.72
184	26001	0.60
185	26787	0.61
186	26360	0.61
187	26000	0.60
188	26731	0.61
189	34593	0.79
190	60408	1.39
* 191	54036	1.24
192	44462	1.02
193	33008	0.76
194	44605	1.02
* 195	34829	0.80
196	34329	0.79
197	34619	0.79
198	30411	0.70
199	26147	0.60
* 200	26000	0.60
201	26000	0.60
202	26819	0.62
203	25924	0.60
204	30150	0.69
205	26538	0.61
206	25950	0.60
207	24078	0.55
208	25194	0.58
209	24294	0.56
210	23011	0.53
211	24000	0.55

LOT	SQ. FT.	AC.
212	24000	0.55
213	23930	0.55
214	32944	0.76
* 215	25479	0.58
216	29764	0.68
217	31209	0.72
218	40588	0.93
219	32261	0.74
220	32539	0.75
221	26796	0.62
222	25866	0.59
223	24000	0.55
224	23836	0.55
* 225	25557	0.59
226	26327	0.60
* 227	26308	0.60
* 228	29749	0.68
* 229	28000	0.64
* 230	28744	0.66
* 231	29888	0.69
* 232	28191	0.65
233	27311	0.63
* 234	28782	0.66
235	30179	0.69
236	34663	0.80
237	35891	0.82
* 238	29909	0.69
* 239	26032	0.60
240	27597	0.63
241	30008	0.69
* 242	26123	0.60
243	29984	0.69
244	29974	0.69
245	27881	0.64
246	29616	0.68
247	42061	0.97
248	44817	1.03

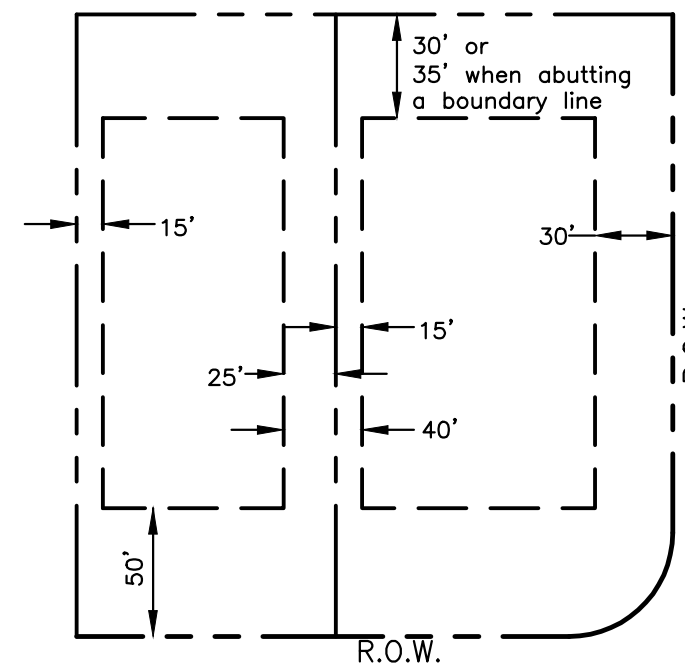
TOTAL	
LOTS	74
SQ. FT.	2250081
ACRES	51.65

* - TRANSITIONAL LOT

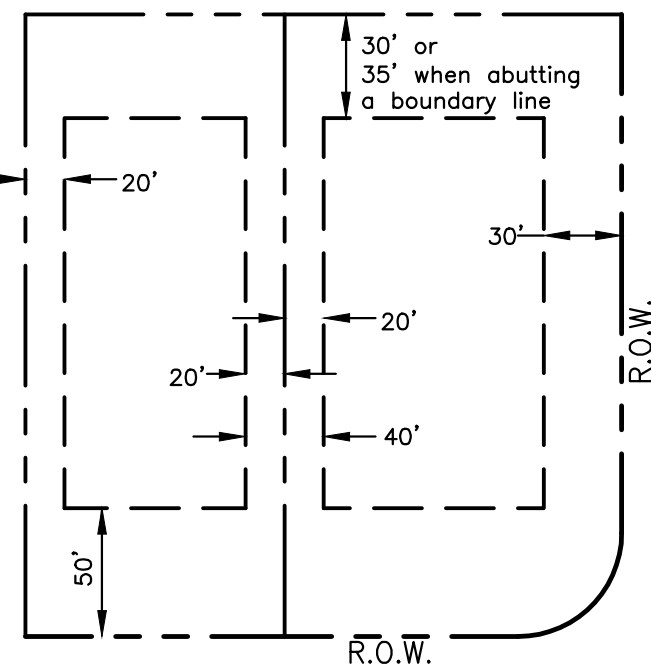
OPEN SPACE

OPEN SPACE	SQ. FT.	ACRES
26	129863	2.98
27	77860	1.78
28	1075	0.02
29	282250	6.48
30	1257	0.03
31	62991	1.45
32	1075	0.02
33	1075	0.02
34	1168375	26.82
35	240418	5.52
36	326571	7.50
37	210726	4.84
38	644	0.01

TOTAL	
SQ. FT.	2,503,981
ACRES	57.48



TYPICAL LOT SETBACK LINES
(UNLESS SHOWN OTHERWISE)
N.T.S.

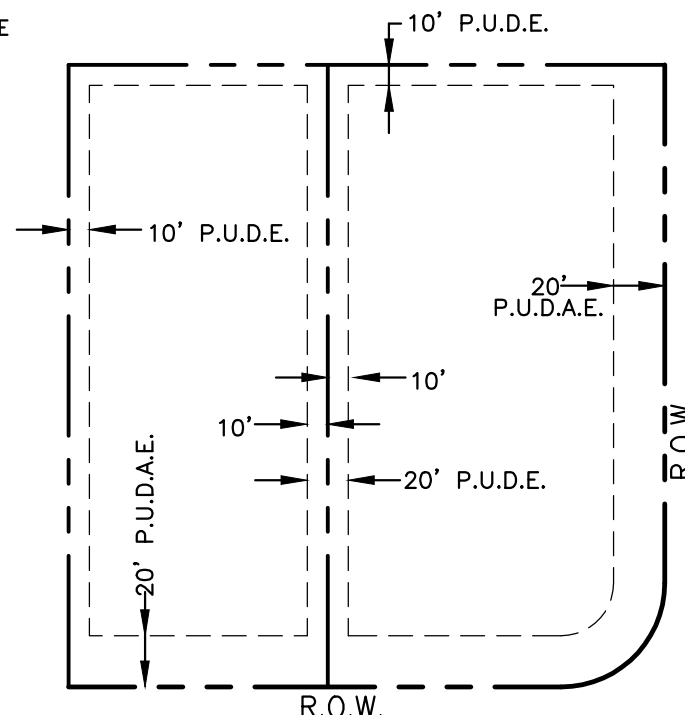


TYPICAL LOT SETBACK LINES
(UNLESS SHOWN OTHERWISE)
N.T.S.

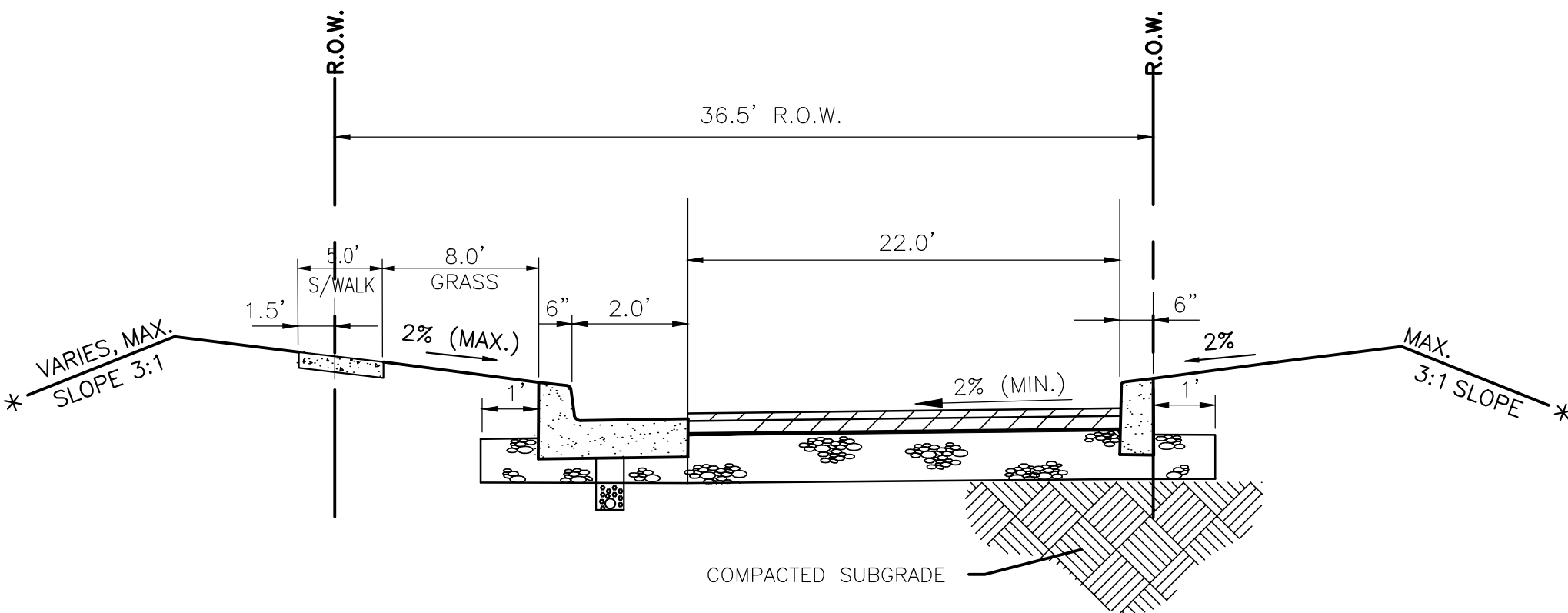
(OSRD LOTS 175-248)

LEGEND

R.O.W. RIGHT-OF-WAY
P.U.D.E. PUBLIC UTILITY & DRAINAGE EASEMENT
P.U.D.A.E. PUBLIC UTILITY DRAINAGE & ACCESS EASEMENT

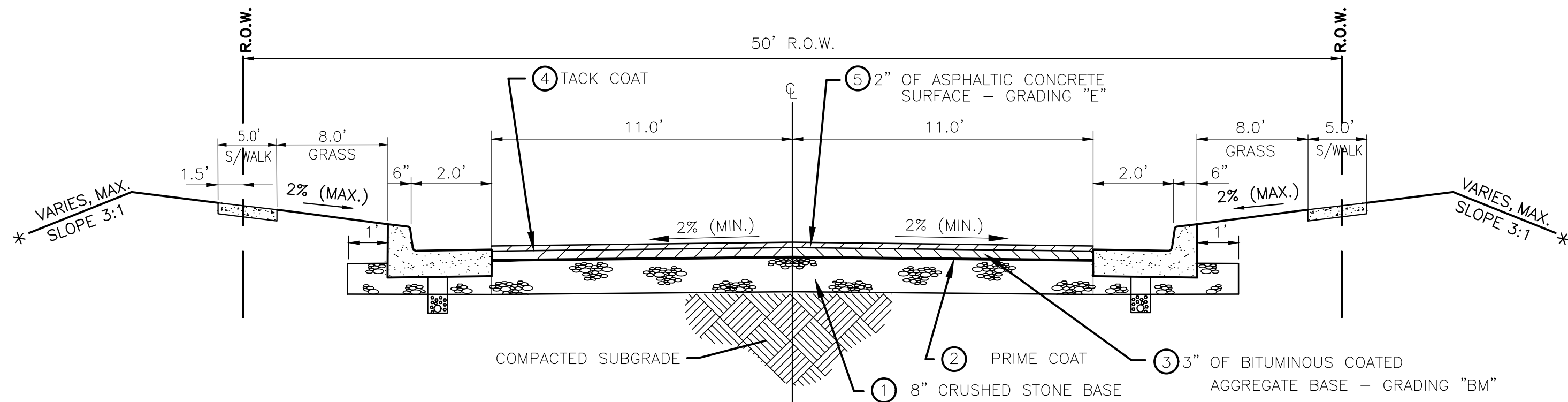


TYPICAL LOT EASEMENT LINES
(UNLESS SHOWN OTHERWISE)
N.T.S.



ROADWAY CROSS SECTION 36.5' R.O.W. (CUL DE SAC)

NOT TO SCALE



ROADWAY CROSS SECTION 50' R.O.W.

NOT TO SCALE



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04/28/2022

ROSEBROOKE EAST

FOR

CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH DISTRICT OF WILLIAMSON COUNTY

Scale: N/A

Date: JANUARY 7, 2022

Approved By: JFV

Revisions:

-	-	-
-	-	-
-	-	-
-	-	-
2	2022.04.28	PER STAFF COMMENTS
1	2022.03.14	LANDSCAPE REVISIONS

Drawing Title:

GENERAL NOTES,
AREA TABLES,
ROADWAY SECTIONS

Drawing No.

2

Project No.
21-0337

GENERAL NOTES

1. SEE SHEET 2 FOR GENERAL NOTES, SITE DATA, AREA TABLES, AND OSDR CALCULATIONS.

TRANSITIONAL LOT NOTE:

LOTS DESIGNATED WITH  HAVE NATURAL SLOPES OF GREATER THAN 15%. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR A RESIDENTIAL LOT WITH A SLOPE OF 15% OR GREATER, A SITE DEVELOPMENT PLAN SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL BY THE ENGINEERING DEPARTMENT SHOWING EXISTING TOPOGRAPHIC INFORMATION FROM FIELD RUN SURVEY DATA; BOUNDARY AND SETBACK LINES, PUBLIC UTILITY AND DRAINAGE EASEMENTS, PROPOSED CITY-OWNED UTILITIES; EXISTING AND PROPOSED DRAINAGE PIPES, SURFACE DRAINAGE FEATURES SUCH AS DITCHES AND SWALES TO BE CONNECTED TO PUBLIC DRAINAGE LINES AND/OR TO DIRECT OR REDIRECT STORMWATER RUN-OFF; LOCATION OF RETAINING WALLS; THE PROPOSED BUILDING FOOTPRINT AND THE DRIVEWAY PLAN, INCLUDING FINISHED FLOOR ELEVATIONS AND FINISHED GRADES OF PAVEMENT AND GROUND LINES; IDENTIFICATION OF EXISTING TREES IN EXCESS OF FOUR-INCH CALIPER AND TREES TO BE PRESERVED; AND THE LOCATION AND TIMING OF INSTALLATION OF EROSION CONTROL FEATURES. NO CLEAR CUTTING OF TREES OR GRADING OF THE LOT SHALL BE PERMITTED UNTIL APPROVAL OF THE SITE PLAN BY THE ENGINEERING DEPARTMENT.



ROSEBROOKE EAST
FOR
CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH DISTRICT OF WILLIAMSON COUNTY

Scale: 1"=200'

Date: JANUARY 7, 2022

Approved By: JFV

Revisions:

2	2022.04.28	PER STAFF COMMENTS
1	2022.03.14	LANDSCAPE REVISIONS

Drawing Title:

OVERALL SITE PLAN

Drawing No.

3

Project No.
21-0337

GENERAL NOTES

1. SEE SHEET 2 FOR GENERAL NOTES, SITE DATA, AREA TABLES, AND OSRD CALCULATIONS.

TRANSITIONAL LOT NOTE:

LOTS DESIGNATED WITH  HAVE NATURAL SLOPES OF GREATER THAN 15%. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR A RESIDENTIAL LOT WITH A SLOPE OF 15% OR GREATER, A SITE DEVELOPMENT PLAN SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL BY THE ENGINEERING DEPARTMENT SHOWING EXISTING TOPOGRAPHIC INFORMATION FROM FIELD RUN SURVEY DATA; BOUNDARY AND SETBACK LINES, PUBLIC UTILITY AND DRAINAGE EASEMENTS, PROPOSED CITY-OWNED UTILITIES, EXISTING AND PROPOSED DRAINAGE PIPES, SURFACE DRAINAGE FEATURES SUCH AS DITCHES AND SWALES TO BE CONNECTED TO PUBLIC DRAINAGE LINES AND/OR TO DIRECT OR REDIRECT STORMWATER RUN-OFF; LOCATION OF RETAINING WALLS; THE PROPOSED BUILDING FOOTPRINT AND THE DRIVEWAY PLAN, INCLUDING FINISHED FLOOR ELEVATIONS AND FINISHED GRADES OF PAVEMENT AND GROUND LINES; IDENTIFICATION OF EXISTING TREES IN EXCESS OF FOUR-INCH CALIPER AND TREES TO BE PRESERVED; AND THE LOCATION AND TIMING OF INSTALLATION OF EROSION CONTROL FEATURES. NO CLEAR CUTTING OF TREES OR GRADING OF THE LOT SHALL BE PERMITTED UNTIL APPROVAL OF THE SITE PLAN BY THE ENGINEERING DEPARTMENT.

CURVE TABLE						
CURVE	RADIUS	LENGTH	DELTA	TANGENT	CHORD	CHD BRG
C1	2601.20'	384.43'	8°28'04"	192.57'	384.08'	N75°46'40"W
C2	489.76'	290.36'	33°58'06"	149.59'	286.13'	N29°28'53"E
C3	128.43'	133.22'	59°25'53"	73.30'	127.32'	S45°48'08"W
C4	327.13'	60.18'	10°32'27"	30.18'	60.10'	S80°47'18"W

ROADWAY INFORMATION TABLE				
ROAD	R.O.W. WIDTH	CLASSIFICATION	DESIGN SPEED (MPH)	POSTED SPEED (MPH)
ROAD J	50'	LOCAL	30	25
ROAD N	50'	LOCAL	30	25
ROAD O	50'	LOCAL	30	25
ROAD P	50'	LOCAL	30	25
SPRINGWOOD TRAIL	50'	LOCAL	30	25

LEGEND

	IRON ROD (OLD)		UTILITY POLE
	EXISTING FIRE HYDRANT		UTILITY POLE W/ ANCHOR
	PROPOSED FIRE HYDRANT		UTILITY POLE W/ LIGHT
	WATER VALVE		SIGN
	WATER METER		OVERHEAD POWER AND TELEPHONE LINES
	SEWER VALVE		PROPOSED SANITARY SEWER LINE
	CATCH BASIN		PROPOSED FORCE MAIN LINE
	PROPOSED STORM INLET		WATER LINE
	PROPOSED SANITARY MANHOLE		PROPOSED STORM PIPE
	25% + SLOPES		AIR CONDITIONER
	15%-25% SLOPES		MINIMUM BUILDING SETBACK LINE
	WATERWAY NATURAL AREA/ WETLAND BUFFER AREA		PUBLIC UTILITY, DRAINAGE & ACCESS EASEMENT
			TRANSITIONAL LOT (SEE NOTE 19)
			WET WEATHER CONVEYANCE
			REGISTER'S OFFICE FOR WILLIAMSON COUNTY, TENNESSEE

Scale: 1"=100'

Date: JANUARY 7, 2022

Approved By: JFV

Revisions:

2	2022.04.28	PER STAFF COMMENTS
1	2022.03.14	LANDSCAPE REVISIONS

Drawing Title:

ENLARGED
SITE PLAN

Drawing No.

4

Project No.
21-0337



Nashville - Murfreesboro - Chattanooga
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ROSEBROOKE EAST
FOR
CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH DISTRICT OF WILLIAMSON COUNTY

Scale: 1"=100'

Date: JANUARY 7, 2022

Approved By: JFV

Revisions:

2	2022.04.28	PER STAFF COMMENTS
1	2022.03.14	LANDSCAPE REVISIONS

Drawing Title:

ENLARGED
SITE PLAN

Drawing No.

4

Project No.
21-0337



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ROSEBROOKE EAST

FOR
CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH DISTRICT OF WILLIAMSON COUNTY

Scale: 1"=100'

Date: JANUARY 7, 2022

Approved By: JFV

Revisions:

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1 2022.03.14 LANDSCAPE REVISIONS

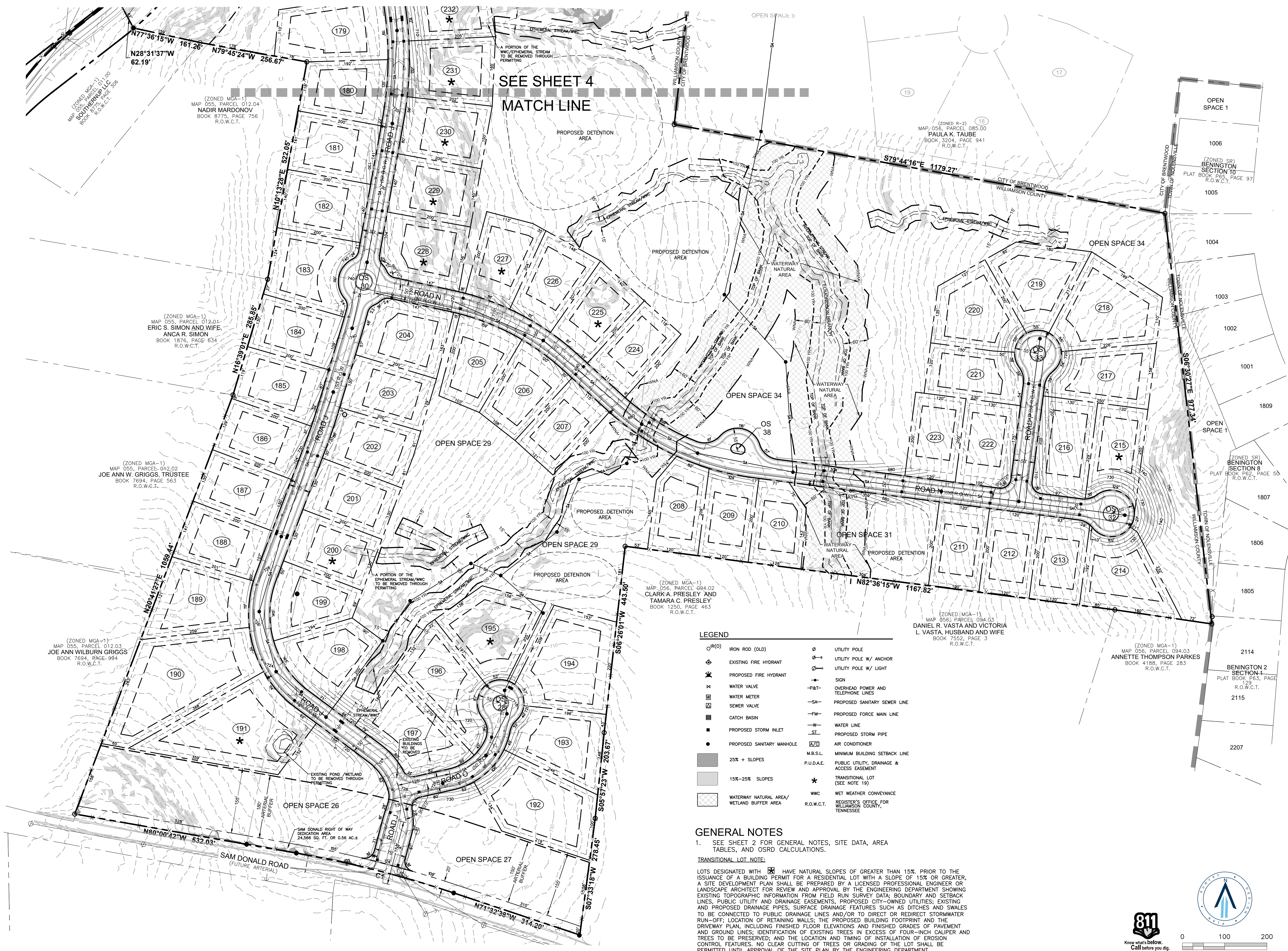
Drawing Title:

ENLARGED
SITE PLAN

Drawing No.

5

Project No.
21-0337



KS-021-033711-CIVIL ENGINEERING-08RD PLAN/PLAN SHEETS/EAST0337 EAST 08RD.DWG

LOTS:

OSRD LOTS:
- SOUTH: 47
- EAST: 74
- MAIN: 116

R2 LOTS:
- SOUTH: 3
- EAST: 0
- MAIN: 8

TOTAL SITE AREA:

SOUTH: 69.69 AC
EAST: 122.16 AC

LEGEND:

OSRD LOTS

R2 LOTS

PONDS

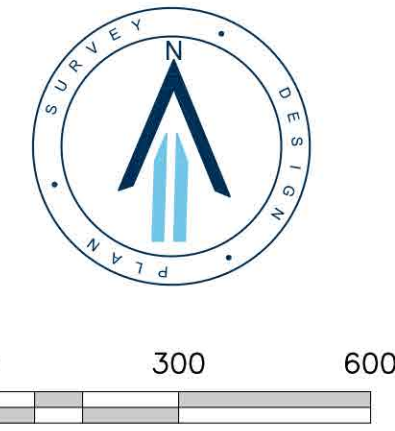
WETLANDS

BRENTWOOD CITY LIMITS

BRENTWOOD UGB

EXISTING SPLIT LOG RD.

ROSEBROKE SOUTH:	
PROPOSED SPLIT LOG ROAD R.O.W. DEDICATION	0.47AC
OSRD PORTION	0.75 AC
R-2 PORTION	
ROSEBROOKE EAST:	
PROPOSED SPLIT LOG ROAD R.O.W. DEDICATION	
OSRD PORTION	3.99 AC
TOTAL PROPOSED SPLIT LOG ROAD R.O.W. AREA (90' R.O.W.)	
	5.21 AC
TOTAL EXISTING SPLIT LOG ROAD R.O.W. AREA (50' ASSUMED R.O.W.) THROUGH PROPERTIES	
	3.11 AC



ROSEBROOKE ADDITION

FOR

CPS LAND (CPS)

16th CIVIL DISTRICT OF WILLIAMSON COUNTY, CITY OF BRENTWOOD, TENNESSEE

Scale:	1"=300'
Date:	APRIL 27, 2022
Approved By:	TF
Drawn By:	TF
Revisions:	

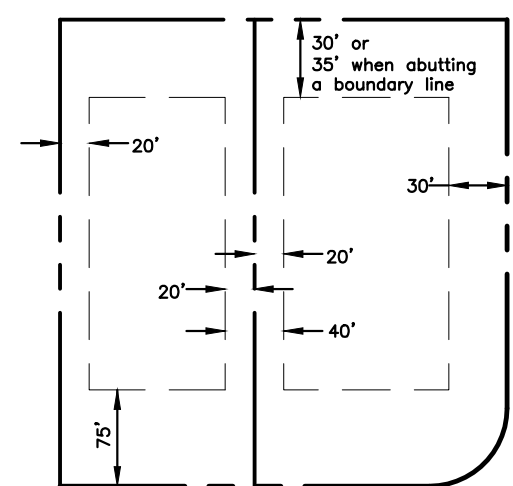
GIS: 07/27/24 AM, ANNUAL/STATE RESUBMISSION DWS
PLOTTER: 07/27/24 PM, 07/27/24 PM, 07/27/24 PM
LAST UPDATED BY CLIENT ON: 07/27/24 AM

GENERAL NOTES AND SITE DATA

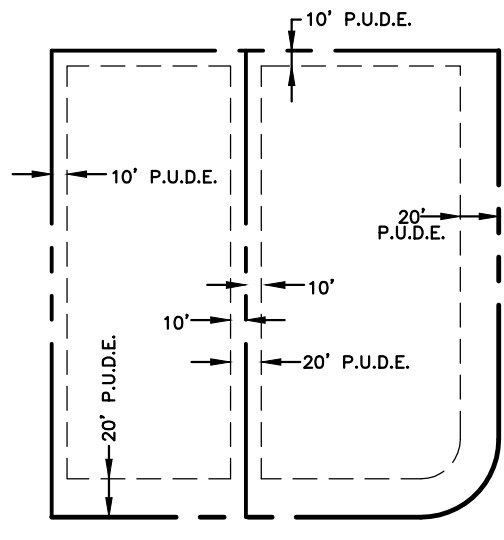
1. SUBJECT PROPERTY CONSISTS OF PARCELS 12.00 AND 12.05 AS SHOWN ON WILLIAMSON COUNTY PROPERTY MAP NO. 55 AND PARCELS 84.00 AND 93.00 ON WILLIAMSON COUNTY PROPERTY MAP NO. 56.
2. PROPERTY OWNERS:
- (MAP 55, PARCEL 12.00) JOHN J. ALBRIGHT AND MARGARET C. ALBRIGHT
BOOK 1256, PAGE 429, R.O.W.C.T.
- (MAP 55, PARCEL 12.05) JUNE ALBRIGHT
BOOK 1070, PAGE 679, R.O.W.C.T.
- (MAP 56, PARCELS 84.00 AND 93.00) DEBORAH MOSKAL, TRUSTEE OF
THE ROBERT H. ADCOCK MARITAL TRUST
BOOK 5792, PAGE 540, R.O.W.C.T.
3. EXISTING ZONING: MGA-1 (MUNICIPAL GROWTH AREA DISTRICT 1). PROPOSED LAYOUT SHOWN FOR BRENTWOOD R-2 ZONING.
4. GROSS SITE AREA: 122.16 ACRES.
5. BOUNDARY INFORMATION TAKEN FROM FIELD RUN SURVEY PERFORMED BY RAGAN-SMITH ASSOCIATES ON OCTOBER 13, 2021 - CHRIS MABERY, RLS.
6. FOR TOPOGRAPHIC ASPECTS OF THIS SURVEY, RTK GPS POSITIONAL DATA WAS OBSERVED ON JULY 23, 2021 UTILIZING A TRIMBLE R10 DUAL FREQUENCY RECEIVER. THE GRID COORDINATES OF THE FIXED STATION(S) SHOWN WERE DERIVED USING A VRS NETWORK OF CORS STATIONS REFERENCED TO NAD 83 (2011) (EPOCH 2010), GEOID 12B.
- ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88. CONTOURS ARE AT TWO FOOT INTERVALS AND ARE BASED ON A FIELD RUN SURVEY USING RANDOM SPOT ELEVATIONS. CONTOURS WERE DERIVED USING SURFACE MODELING TECHNIQUES.
7. NUMBER OF PROPOSED LOTS: 74.
8. PROPOSED DENSITY: 0.61 DU/AC. (1.0 DU/AC. MAXIMUM).
9. MAXIMUM BUILDING COVERAGE OF PROPOSED LOTS: 25%.
10. EACH PROPOSED LOT SHALL PROVIDE A MINIMUM OF TWO OFF-STREET PARKING SPACES.
11. MINIMUM BUILDING SETBACKS: (UNLESS SHOWN OTHERWISE)
- FRONT - 75'
SIDE - 20'
SIDE ABUTTING A STREET - 30'
REAR - 30'
ABUTTING PROJECT PERIMETER - 35'
13. ALL ELECTRIC SERVICE FOR THE PROPOSED DEVELOPMENT SHALL BE UNDERGROUND. ALL PUBLIC PUBLIC UTILITIES SHALL BE SUBJECT TO THE APPROVAL OF THE APPLICABLE UTILITY COMPANIES.
14. LOTS DESIGNATED AS TRANSITIONAL SHALL REQUIRE DETAILED SITE AND GRADING PLANS REVIEW BY THE CITY ENGINEER PRIOR TO ISSUANCE OF A BUILDING PERMIT.
15. UTILITY PROVIDERS:
- ELECTRICITY: MIDDLE TN ELECTRIC MEMBERSHIP CORP. (615) 794-1102
TELEPHONE: UNITED TELEPHONE (931) 364-2289
SANITARY SEWER: METRO WATER SERVICES (615) 862-4600
- WATER: NOLENSVILLE COLLEGE GROVE UTILITY DISTRICT (615) 776-2511
NATURAL GAS: ATMOS GAS (888) 286-6700



16. WATERWAY NATURAL AREAS RELATE TO WATERCOURSES CLASSIFIED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENTAL AND CONSERVATION AS STREAMS OR "WATERS OF THE STATE." THESE STREAMS ARE INTENDED TO REMAIN IN THEIR NATURAL CONDITION AND TO BE BUFFERED IN ACCORDANCE WITH TDEC CRITERIA. NO DISTURBANCE IS TO OCCUR WITHIN THE BUFFER LIMITS EXCEPT AS PERMITTED BY TDEC OR THE U.S. CORPS OF ENGINEERS.
17. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN ZONE "X", AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47187C0230G, WITH AN EFFECTIVE DATE OF FEBRUARY 26, 2021, WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 470204, PANEL NO. 0230, SUFFIX G, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AREAS OF MINIMAL FLOOD HAZARD.



TYPICAL LOT SETBACK LINES
(UNLESS SHOWN OTHERWISE)
N.T.S.



TYPICAL LOT EASEMENT LINES
N.T.S.

TRANSITIONAL LOT NOTE:

LOTS DESIGNATED WITH  HAVE NATURAL SLOPES OF GREATER THAN 15%. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR A RESIDENTIAL LOT WITH A SLOPE OF 15% OR GREATER, A SITE DEVELOPMENT PLAN SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL BY THE ENGINEERING DEPARTMENT SHOWING EXISTING TOPOGRAPHIC INFORMATION FROM FIELD RUN SURVEY DATA; BOUNDARY AND SETBACK LINES, PUBLIC UTILITY AND DRAINAGE EASEMENTS; PROPOSED CITY-OWNED UTILITIES; EXISTING AND PROPOSED DRAINAGE PIPES, SURFACE DRAINAGE FEATURES SUCH AS DITCHES AND SWALES TO BE CONNECTED TO PUBLIC DRAINAGE LINES AND/OR TO DIRECT OR REDIRECT STORMWATER RUN-OFF; LOCATION OF RETAINING WALLS; THE PROPOSED BUILDING FOOTPRINT AND THE DRIVEWAY PLAN, INCLUDING FINISHED FLOOR ELEVATIONS AND FINISHED GRADES OF PAVEMENT AND GROUND LINES; IDENTIFICATION OF EXISTING TREES IN EXCESS OF FOUR-INCH CALIPER AND TREES TO BE PRESERVED; AND THE LOCATION AND TIMING OF INSTALLATION OF EROSION CONTROL FEATURES. NO CLEAR CUTTING OF TREES OR GRADING OF THE LOT SHALL BE PERMITTED UNTIL APPROVAL OF THE SITE PLAN BY THE ENGINEERING DEPARTMENT.

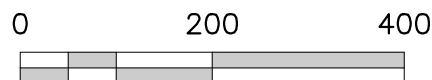
LEGEND

-  15-25% SLOPES
-  25% + SLOPES



CURVE TABLE						
CURVE	RADIUS	LENGTH	DELTA	TANGENT	CHORD	CHD BRG
C1	2601.20'	384.43'	8°28'04"	192.57	384.08'	N75°46'40"W
C2	489.76'	290.36'	33°58'06"	149.59	286.13'	N29°28'53"E
C3	128.43'	133.22'	59°25'53"	73.30	127.32'	S45°48'08"W
C4	327.13'	60.18'	10°32'27"	30.18	60.10'	S80°47'18"W

LOT AREA TABLE		
LOT	SQ. FT.±	ACRES±
1	134,525	3.09
2	81,473	1.87
3	49,621	1.14
4	46,216	1.06
5	44,796	1.03
6	43,799	1.01
7	43,641	1.00
8	43,806	1.01
9	43,721	1.00
10	43,750	1.00
11	43,750	1.00
12	44,573	1.02
13	45,448	1.04
14	44,280	1.02
15	43,602	1.00
16	44,523	1.02
17	60,898	1.40
18	43,830	1.01
19	44,771	1.03
20	44,490	1.02
21	46,015	1.06
22	43,864	1.01
23	44,159	1.01
24	43,659	1.00
25	49,737	1.14
26	45,359	1.04
27	45,030	1.03
28	48,695	1.12
29	52,723	1.21
30	43,881	1.01
31	54,095	1.24
32	45,825	1.05
33	48,226	1.11
34	46,952	1.08
35	46,632	1.07
36	43,832	1.01
37	43,582	1.00
38	43,608	1.00
39	43,634	1.00
40	43,636	1.00
41	49,342	1.13
42	46,472	1.07
43	45,074	1.03
44	47,620	1.09
45	53,574	1.23
46	49,699	1.14
47	43,681	1.00
48	44,398	1.02
49	44,102	1.01
50	43,597	1.00
51	45,013	1.03
52	44,635	1.02
53	44,641	1.02
54	43,896	1.01
55	45,259	1.04
56	43,621	1.00
57	43,652	1.00
58	43,683	1.00
59	43,714	1.00
60	43,974	1.01
61	46,340	1.06
62	45,472	1.04
63	78,483	1.80
64	43,569	1.00
65	43,624	1.00
66	61,113	1.40
67	51,162	1.17
68	45,281	1.04
69	45,161	1.04
70	46,643	1.07
71	45,835	1.05
72	44,607	1.02
73	48,323	1.11
74	63,682	1.46



RaganSmith

Nashville - Murfreesboro - Chattanooga
ragansmith.com



ROSEBROOKE EAST

FOR
CPS LAND, LLC

Scale: 1"=200'

Date: JANUARY 7, 2022

Approved By: JFV

Revisions:

- | | | |
|---|------------|---------------------|
| 1 | 2022.04.28 | PER STAFF COMMENTS |
| 2 | 2022.03.14 | LANDSCAPE REVISIONS |

Drawing Title:

ALTERNATE R-2
SITE PLAN

Drawing No.

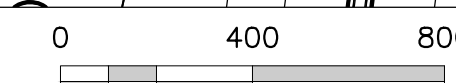
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Project No.

21-0337

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH DISTRICT OF WILLIAMSON COUNTY

ROSEBROOKE EAST OVERALL OSRD CALCULATIONS -- COMPARISON		
	1/2022	4/2022
Total Site Area (AC)	122.16	122.16
Less R.O.W. dedication -- Split Log Road	3.99	3.99
Less R.O.W. dedication -- Sam Donald Road	0.00	0.56
Less R.O.W. dedication -- Internal streets	8.36	8.47
TOTAL	109.81	109.14
Less Areas in 25% Slopes	0.05	0.05
Plus 25% of slopes over 25%	0.01	0.01
Less Areas in Floodway	0.00	0.00
Plus 25% Areas in Floodways	0.00	0.00
Less Areas in Electrical Natural & Gas Easements	0.00	0.00
Plus 25% of Areas in Electrical Natural & Gas Easements	0.00	0.00
Total Usable Land Area (AC)	109.77	109.10
Less area in lots>1 acre	1.09	0.68
TOTAL LAND AREA AVAILABLE	108.68	108.42
Total Land Area Required @ 1 DUPA (AC)	74.00	74.00
Land Area in Lots	52.17	51.65
Open Space Required	21.83	22.35
Dedicated Open Space	57.63	57.48
EXCESS OPEN SPACE	35.80	35.13
AVERAGE LOT SIZE	0.71	0.70

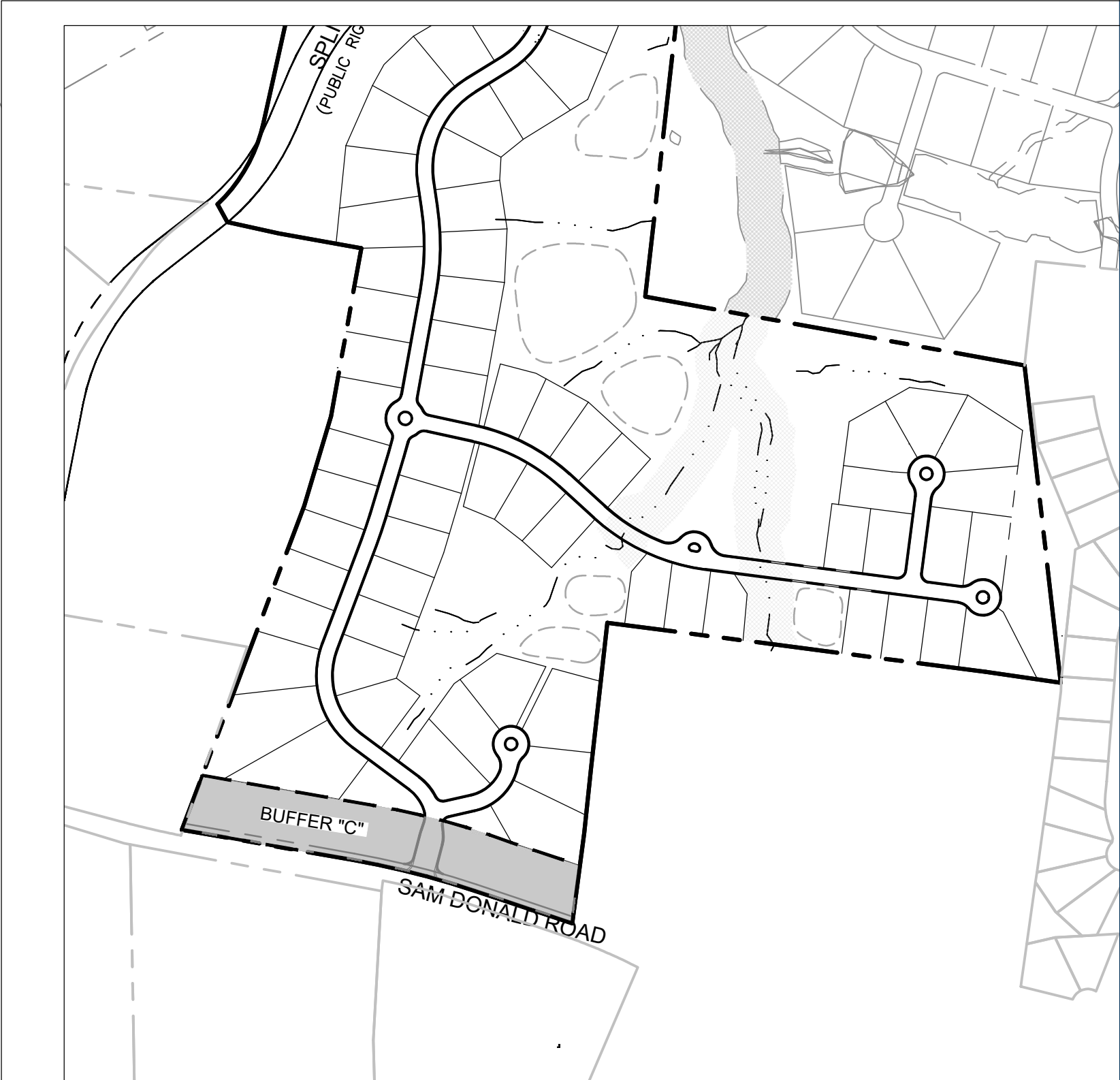


G:\21-033711-CIVIL ENGINEERING\08RD PLAN\LANDSCAPE\LANDSCAPE SHEETS EAST.DWG
 PLOTTED BY TYLOR FISCHER ON: 4/28/2022 2:55 PM
 LAST UPDATED BY TFIISCHER ON: 4/29/2022 2:42 PM

LANDSCAPE BUFFER "C" REQUIREMENT:
ROAD FRONTAGE (SAM DONALD RD.) 1646 L.F.
BUFFER WIDTH PROVIDED: 150'
TREES REQUIRED (1228/100 X 45): 552
TREES PROVIDED:
EXISTING VEGETATION: 545 TREES
PROPOSED VEGETATION: 7 TREES
RESIDENTIAL STANDARDS:
CALIPERS REQUIRED (25 CAL PER AC) 122.16 X 25: 3,054"
CALIPERS PROVIDED: 65,751"
STREET TREES (206 X 3"): 618"
BUFFER TREES (260 X 2"): 520"
EXISTING VEGETATION TO REMAIN: 64,613"



BUFFER "C"



CONTEXT MAP





RaganSmith

Nashville - Murfreesboro - Chattanooga
ragansmith.com



ROSEBROOKE EAST

FOR

CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH DISTRICT OF WILLIAMSON COUNTY

Scale:	#'-##"
Date:	JANUARY 7, 2022
Approved By:	XXX
Revisions:	
2	4/28/22 PER STAFF COMMENTS

Drawing Title:
LANDSCAPE PLAN

Drawing No.
L1.1

Project No.
21-0337



ROSEBROOKE EAST
FOR
CPS LAND, LLC
SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH DISTRICT OF WILLIAMSON COUNTY

Scale:	#"=##"	
Date:	JANUARY 7, 2022	
Approved By:	XXX	
Revisions:		
-	-	-
-	-	-
-	-	-
-	-	-
2	4/28/22	PER STAFF COMMENTS
-	-	-

Drawing Title:

LANDSCAPE PLAN

Drawing No.

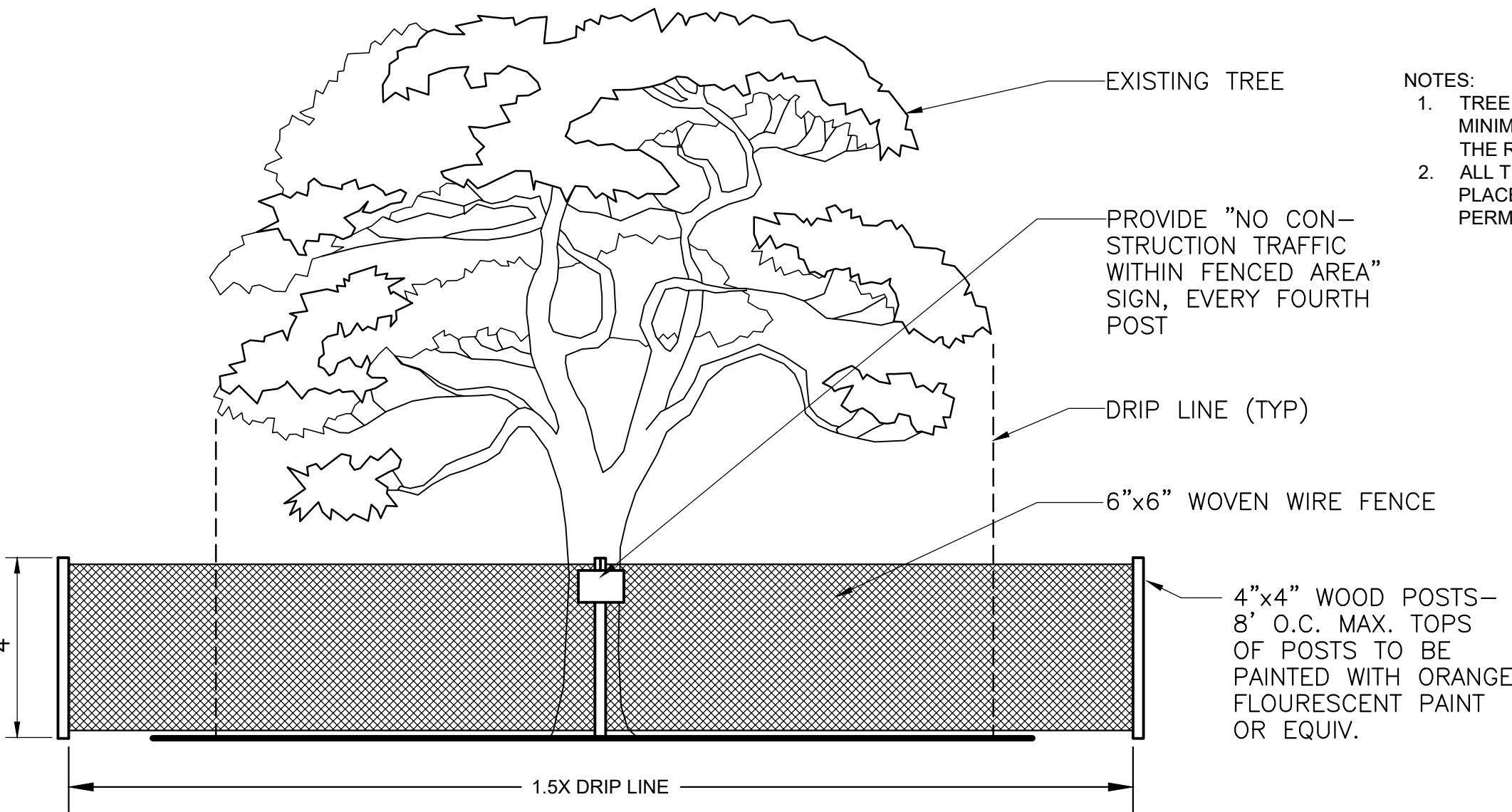
L1.2

Project No.

21-0337

PLANT SCHEDULE OSRD LANDSCAPE

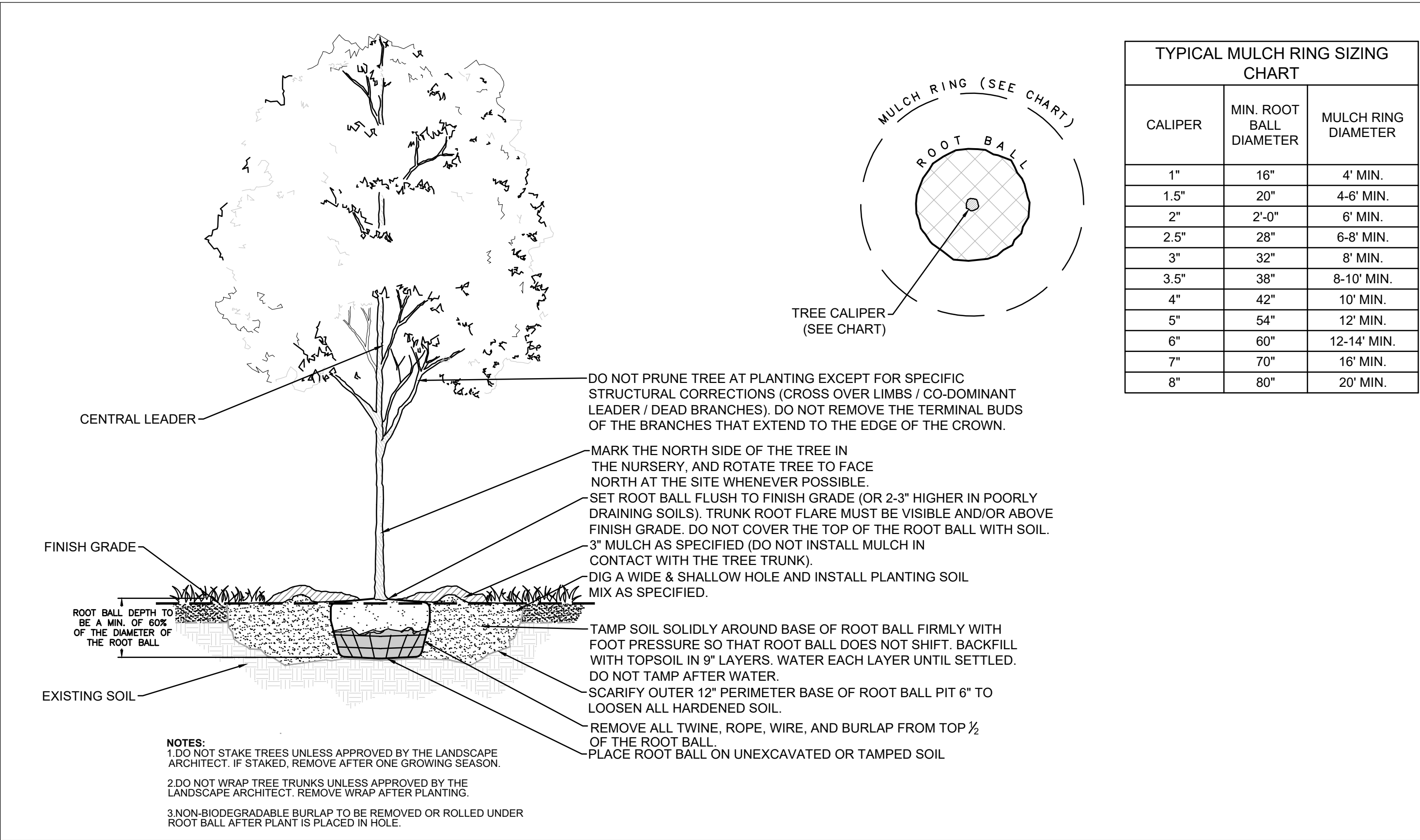
BUFFER TREES	CODE	QTY	BOTANICAL / COMMON NAME	TYPE	SIZE	HEIGHT	SPACING	REMARKS
	Ia	32	ILEX 'OPACA ' AIKEN RED' / AMERICAN HOLLY ' AIKEN RED'	EVERGREEN	2" CAL.	8' MIN.	AS SHOWN	B&B, FULL TO BASE.
	Je	69	JUNIPERUS VIRGINIANA / EASTERN REDCEDAR	EVERGREEN	2" CAL.	8' MIN.	AS SHOWN	B&B, FULL TO BASE.
	Jb	75	JUNIPERUS VIRGINIANA 'BURKII' / BURK EASTERN REDCEDAR	EVERGREEN	2" CAL.	8' MIN.	AS SHOWN	B&B, FULL TO BASE.
	Mb	39	MAGNOLIA GRANDIFLORA 'BRACKENS BROWN BEAUTY' / BRACKEN'S BEAUTY SOUTHERN MAGNOLIA	EVERGREEN	2" CAL.	8' MIN.	AS SHOWN	B&B, FULL TO BASE.
	Mi	45	MAGNOLIA GRANDIFLORA 'LITTLE GEM' / LITTLE GEM DWARF SOUTHERN MAGNOLIA	EVERGREEN	2" CAL.	8' MIN.	AS SHOWN	B&B, FULL TO BASE.
STREET TREES	CODE	QTY	BOTANICAL / COMMON NAME	TYPE	SIZE	HEIGHT	SPACING	REMARKS
	Pp	11	PARROTIA PERSICA 'CONTEMPLATION' / CONTEMPLATION PERSIAN PARROTIA	DECIDUOUS	3" CAL.	14 – 16' HT.	AS SHOWN	B&B, STRONG CENTRAL LEADER, FULL CANOPY, WELL-MATCHED, 6' CLEAR TRUNK.
	Ql	58	QUERCUS LYRATA / OVERCUP OAK	DECIDUOUS	3" CAL.	14 – 16' HT.	AS SHOWN	B&B, STRONG CENTRAL LEADER, FULL CANOPY, WELL-MATCHED, 6' CLEAR TRUNK.
	Qn	70	QUERCUS NUTTALLII / NUTTALL OAK	DECIDUOUS	3" CAL.	14 – 16' HT.	AS SHOWN	B&B, STRONG CENTRAL LEADER, FULL CANOPY, WELL-MATCHED, 6' CLEAR TRUNK.
	Qp	45	QUERCUS PHELLOS / WILLOW OAK	DECIDUOUS	3" CAL.	14 – 16' HT.	AS SHOWN	B&B, STRONG CENTRAL LEADER, FULL CANOPY, WELL-MATCHED, 6' CLEAR TRUNK.
	Qs	11	QUERCUS SHUMARDII / SHUMARD OAK	DECIDUOUS	3" CAL.	14 – 16' HT.	AS SHOWN	B&B, STRONG CENTRAL LEADER, FULL CANOPY, WELL-MATCHED, 6' CLEAR TRUNK.
	Uo	11	ULMUS PARVIFOLIA 'ALLEE' TM / ALLEE LACEBARK ELM	DECIDUOUS	3" CAL.	14 – 16' HT.	AS SHOWN	B&B, STRONG CENTRAL LEADER, FULL CANOPY, WELL-MATCHED, 6' CLEAR TRUNK.



TREE PROTECTION DETAIL
NOT TO SCALE

PLANTING NOTES:

- ANY SERIES OF TREES TO BE PLACED IN A PARTICULAR ARRANGEMENT WILL BE FIELD CHECKED FOR ACCURACY. ANY PLANTS MISARRANGED WILL BE RELOCATED.
- SOIL USED IN BACKFILLING PLANTING PITS SHALL BE TOPSOIL AND MIXED WITH 25% PEAT BY VOLUME. EXCEPT FOR ERICACEOUS PLANTS, VERY ACID OR SOUR SOIL (SOIL HAVING A pH less than 6) SHALL BE MIXED WITH SUFFICIENT LIME TO PRODUCE A SLIGHTLY ACID REACTION (A pH of 6.0 to 6.5). ADD 10-10-10 COMMERCIAL FERTILIZER AT THE RATE OF 2 POUNDS PER CUBIC YARD. MIX BOTH FERTILIZER AND PEAT THOROUGHLY BY HAND OR ROTARY TILLER.
- SOIL USED IN BACKFILLING ERICACEOUS PLANTS SHALL BE TOPSOIL MIXED WITH 50% PEAT BY VOLUME. ADD 5-10-5 COMMERCIAL FERTILIZER AT THE RATE OF 5 POUNDS PER CUBIC YARD. MIX BOTH FERTILIZER AND PEAT THOROUGHLY BY HAND OR ROTARY TILLER.
- UPON SECURING PLANT MATERIAL AND BEFORE INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE FOR A PRE-INSTALLATION INSPECTION TO VERIFY ALL PLANT MATERIAL MEETS SPECIFICATION. MATCH TREES OF SAME SPECIES IN GROWTH CHARACTER AND UNIFORMITY.
- APPLY HERBICIDE (TREFLAN OR EQUIVALENT) TO ALL PLANT BEDS PRIOR TO PLANTING FOR NOXIOUS WEED CONTROL AT A RATE OF 2 POUNDS PER 1,000 SQUARE FEET.
- CONTRACTOR SHALL SUBMIT A 10 OUNCE SAMPLE OF THE TOPSOIL PROPOSED TO A TESTING LABORATORY FOR ANALYSIS. SUBMIT TEST RESULTS WITH RECOMMENDATIONS FOR SUITABILITY TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
- PLANTS SHALL BE ORIENTED FOR BEST APPEARANCE AND VERTICAL. ALL NON-BIODEGRADABLE ROOT CONTAINERS SHALL BE REMOVED.
- SELECTIVELY TRIM TREE BRANCHES BY 25%, MAINTAINING NATURAL SHAPE. PRUNE ALL DEAD AND BROKEN BRANCHES IN TREES AND SHRUBS. REMOVE TAGS, TWINE OR OTHER NON-BIODEGRADABLE MATERIAL.
- SCARIFY SUBSOIL IN PLANTING BEDS TO A DEPTH OF 3 INCHES. ALL PLANTING BEDS SHALL RECEIVE A MINIMUM OF 6 INCHES OF TOPSOIL.
- CONTRACTOR SHALL PROVIDE SMOOTH, NEATLY TRENCHED (3 INCH DEEP) BED EDGES.
- ALL PLANTING BEDS TO HAVE A MINIMUM 4 INCH DEEP PINE BARK MULCH, PINE STRAW MULCH OR OTHER MULCH AS SPECIFIED.
- DIMENSIONS FOR TRUNK CALIPER, HEIGHTS, AND SPREAD SPECIFIED ON THE MATERIAL SCHEDULE ARE A GENERAL GUIDE FOR THE MINIMUM REQUIRED SIZE OF EACH PLANT. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH A.N.S.I. Z80 'AMERICAN STANDARD FOR NURSERY STOCK' (CURRENT EDITION) AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSEYMEN, INC.
- THE QUANTITIES INDICATED ON THE MATERIAL SCHEDULE ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR, BUT SHOULD NOT BE ASSUMED TO ALWAYS BE CORRECT. IN THE EVENT OF A DISCREPANCY, THE PLANTING PLAN (PLANT SYMBOLS) WILL TAKE PRECEDENCE OVER THE MATERIAL SCHEDULE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN QUANTITY CALCULATIONS AND THE LIABILITY PERTAINING TO THOSE QUANTITIES AND ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS.
- CONTRACTOR TO WARRANTY ALL MATERIAL FOR ONE YEAR AFTER DATE OF FINAL ACCEPTANCE.



SEEDING NOTES:

- SEED ALL DISTURBED AREAS WITH KY-31 AT THE RATE OF 5 POUNDS PER 1,000 S.F. ALL SEED TO BE 98% PURE WITH 85% GERMINATION AND CONFORM TO ALL STATE REQUIREMENTS FOR GRASS SEED. THE FERTILIZER TO BE 6-12-12 COMMERCIAL TYPE WITH 50% OF ITS ELEMENTS DERIVED FROM ORGANIC SOURCES.
- PLACE STRAW MULCH ON SEEDED AREAS. STRAW TO BE OATS OR WHEAT STRAW, FREE FROM WEEDS, FOREIGN MATTER DETRIMENTAL TO PLANT LIFE, AND DRY. HAY OR CHOPPED CORNSTALKS ARE NOT ACCEPTABLE.
- THE CONTRACTOR SHALL VERIFY THAT THE PREPARED SOIL BASE IS READY TO RECEIVE WORK. CULTIVATE THE TOPSOIL TO A DEPTH OF 4 INCHES WITH A MECHANICAL TILLER AND SUBSEQUENTLY RAKE UNTIL SMOOTH. REMOVE FOREIGN MATERIALS COLLECTED DURING CULTIVATION AND RAKING OPERATIONS.
- APPLY FERTILIZER ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. LIMESTONE MAY BE APPLIED WITH THE FERTILIZER. APPLY FERTILIZER AFTER SMOOTH RAKING AND PRIOR TO ROLLER COMPACTION AND MIX THOROUGHLY IN THE UPPER 2 INCHES OF TOPSOIL.
- APPLY SEED EVENLY IN TWO INTERSECTING DIRECTIONS AND RAKE IN LIGHTLY. WATER TOPSOIL LIGHTLY PRIOR TO APPLYING SEED. DO NOT SEED AREA IN EXCESS OF THAT WHICH CAN BE MULCHED ON THE SAME DAY.
- ROLL SEEDED AREA WITH ROLLER NOT EXCEEDING 112 POUNDS.
- IMMEDIATELY FOLLOWING SEEDING AND COMPACTION, APPLY STRAW MULCH AT THE RATE OF ONE AND ONE HALF BALES PER 1,000 SQUARE FEET. IMMEDIATELY AFTER MULCHING, APPLY WATER WITH A FINE SPRAY AND SATURATE THE GROUND TO A DEPTH OF 4 INCHES.
- CONTRACTOR IS RESPONSIBLE FOR WATERING SEEDED AREAS TO PREVENT GRASS AND SOIL FROM DRYING OUT UNTIL THE INSTALLATION IS INSPECTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE.
- CONTRACTOR IS RESPONSIBLE FOR RESEEDING BARE SPOTS FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF INSTALLATION.

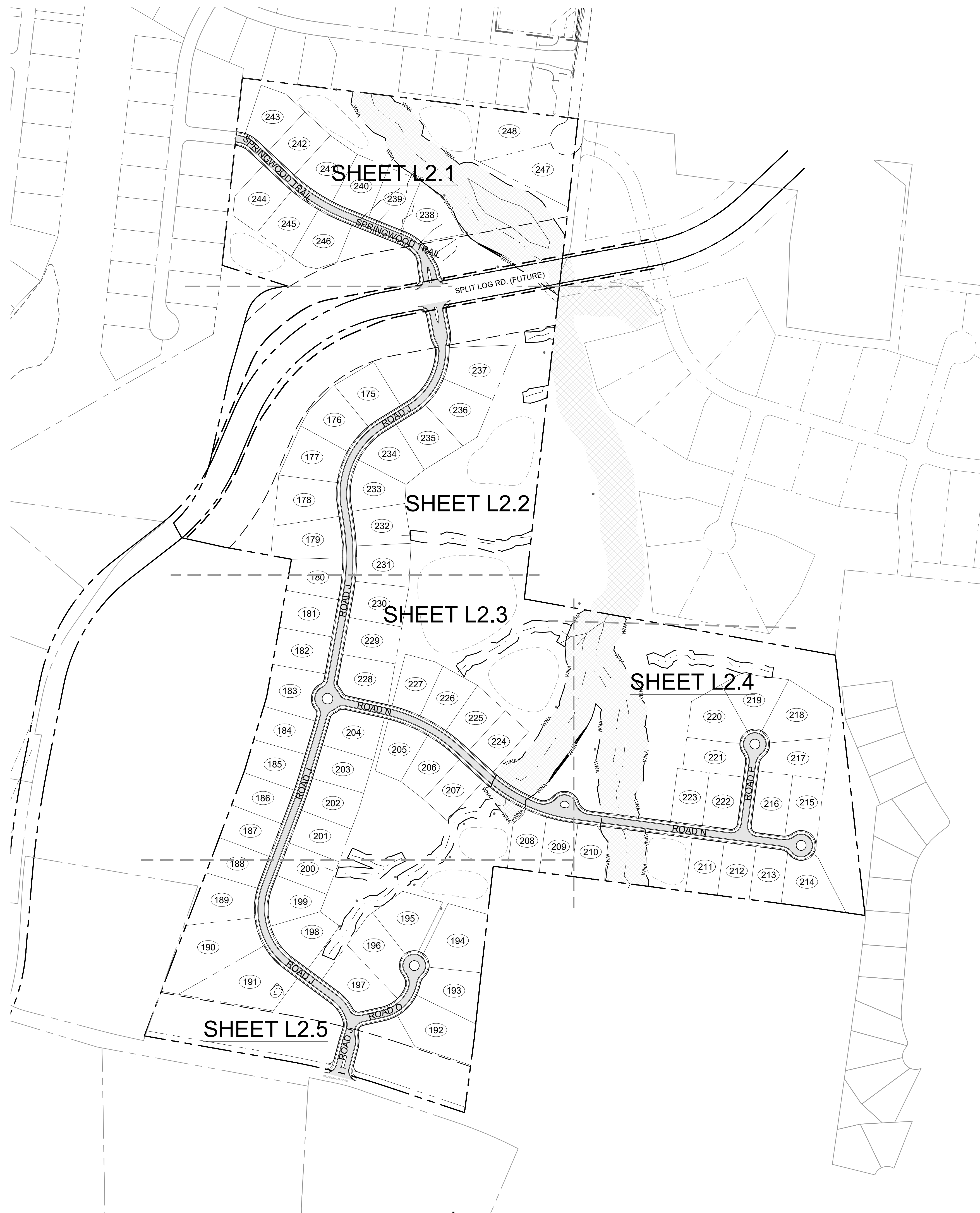
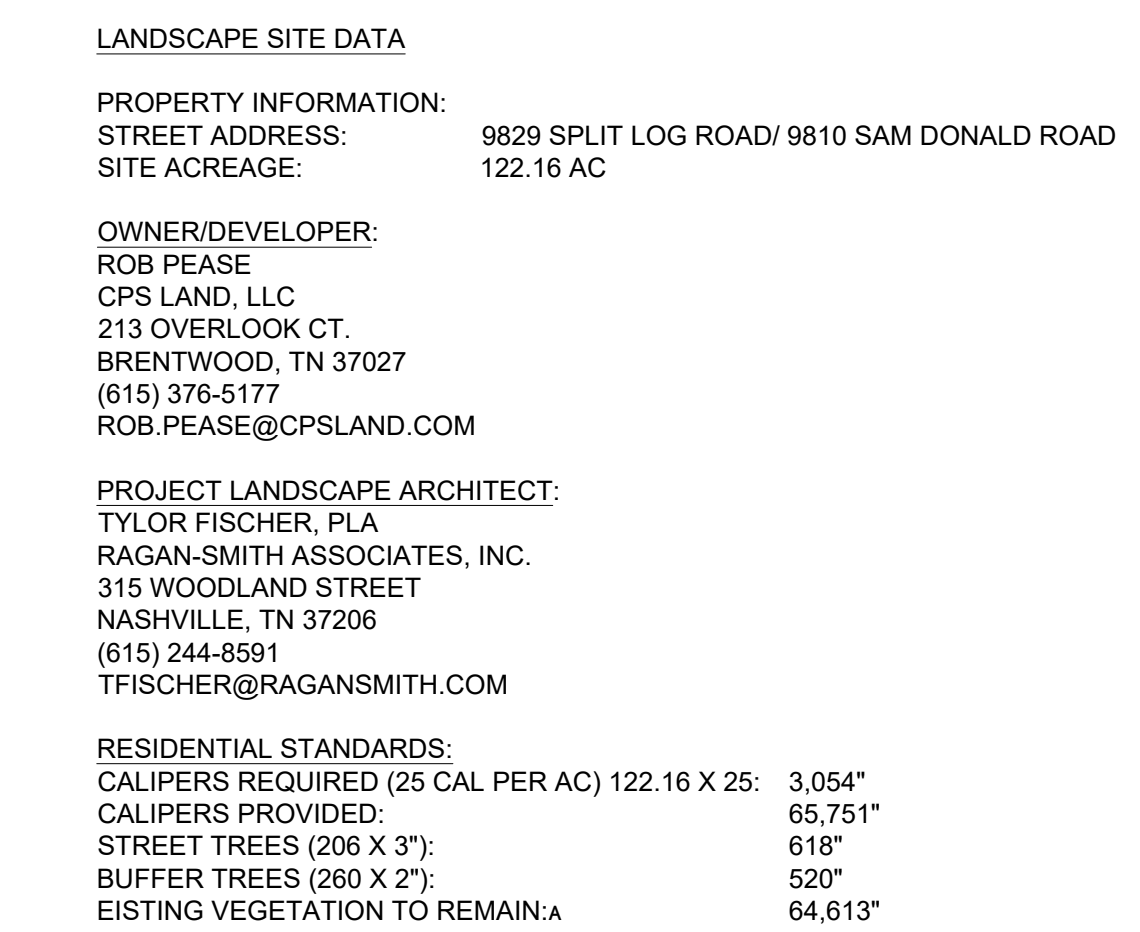
NOTE:
ALL DISTURBED LAND NOT OTHERWISE PLANTED SHALL BE SEEDED PER SEEDING NOTES ON THIS SHEET.



ROSEBROOKE EAST
FOR
CPS LAND, LLC

Scale: #1"=##'
Date: JANUARY 7, 2022
Approved By: XXX

Revisions:
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Nashville - Murfreesboro - Chattanooga
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ROSEBROOKE EAST
FOR
CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH DISTRICT OF WILLIAMSON COUNTY

Scale: 1"=100'

Date: JANUARY 7, 2022

Approved By: T. FISCHER

Revisions:

1 4/28/22 PER STAFF
COMMENTS

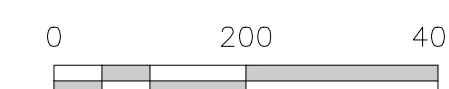
Drawing Title:

TREE
PRESERVATION
SHEET KEY

Drawing No.

L2.0

Project No.
21-0337



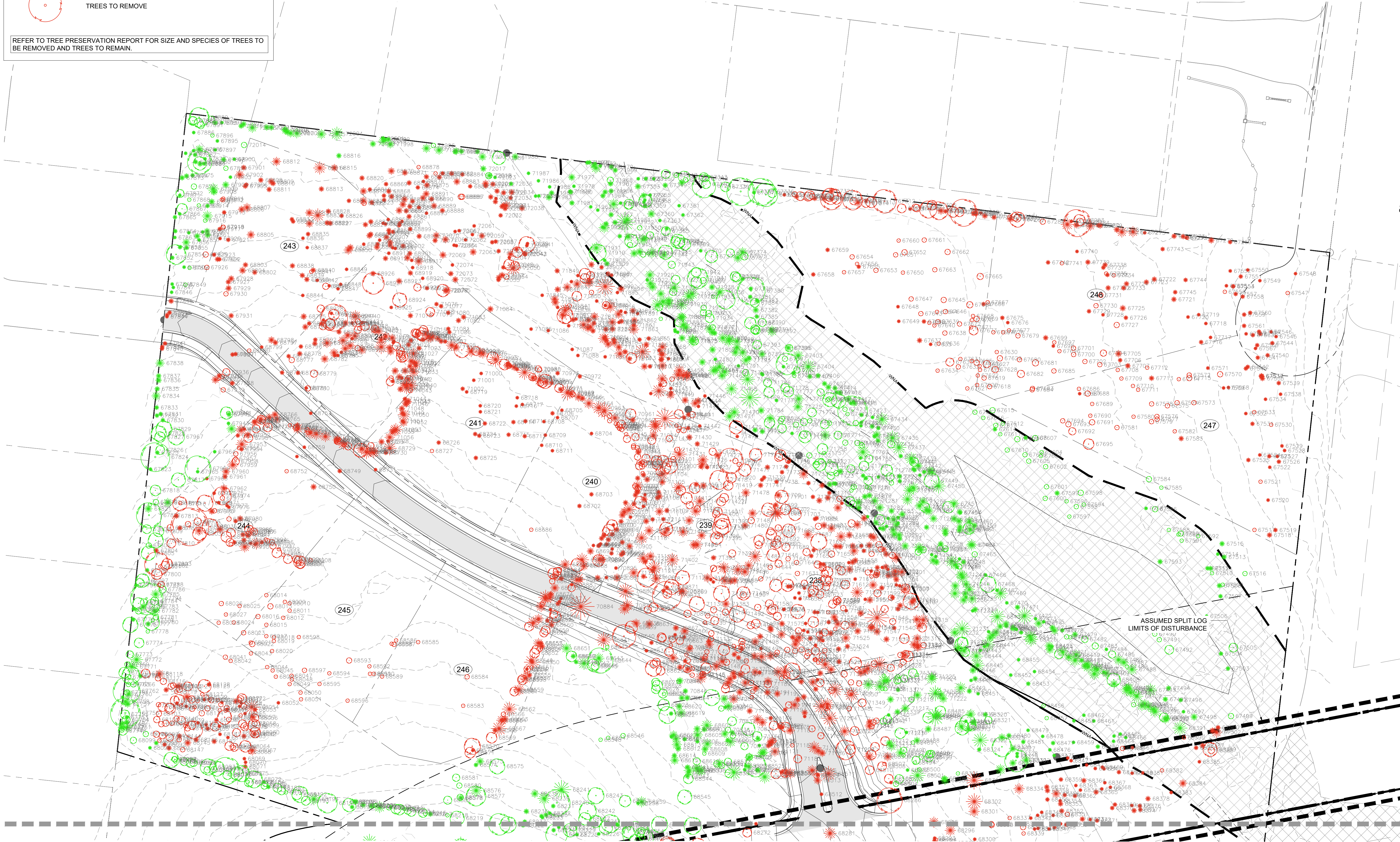
NOTED BY TAYLOR FISCHER ON: 4/28/2022 2:42 PM LAST UPDATED BY TFISCHER ON: 4/29/2022 2:30 PM

LEGEND

TREES TO REMAIN

TREES TO REMOVE

REFER TO TREE PRESERVATION REPORT FOR SIZE AND SPECIES OF TREES TO BE REMOVED AND TREES TO REMAIN.



SEE SHEET L2.2



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ROSEBROOKE EAST

FOR
CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH DISTRICT OF WILLIAMSON COUNTY

Scale: 1"=50'

Date: MARCH 14, 2022

Approved By: T. FISCHER

Revisions:

- - -

- - -

- - -

1 4/28/22 PER STAFF COMMENTS

Drawing Title:

TREE PRESERVATION
PLAN

Drawing No.

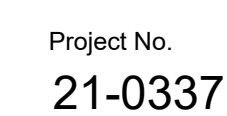
L2.1

Project No.

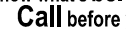
21-0337



Know what's below.
Call before you dig.



SEE SHEET L2.3



811
Know what's below.
Call before you dig.

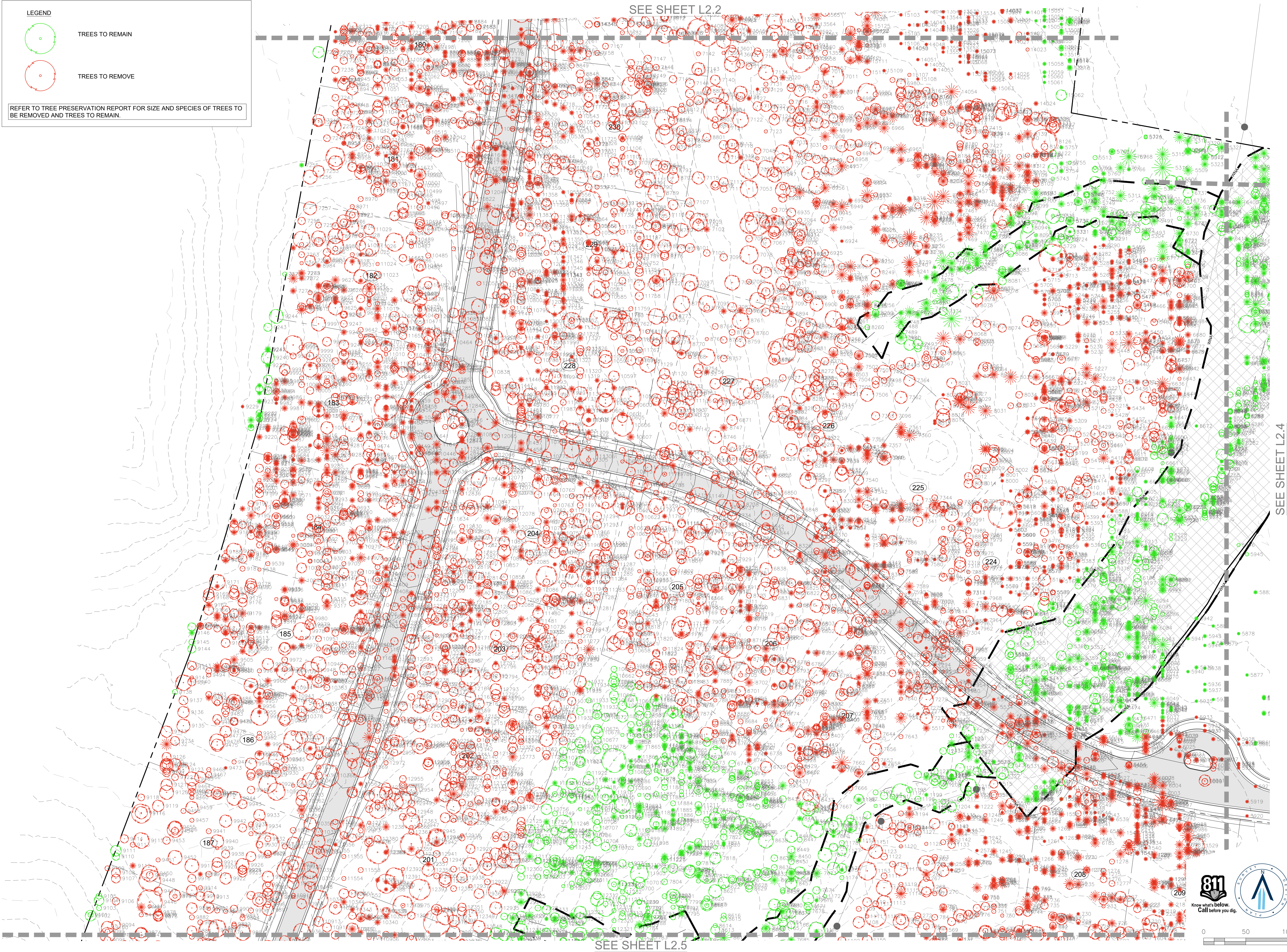
NATIONAL ASSOCIATION OF PUBLIC WORKS CONTRACTORS

LEGEND

TREES TO REMAIN

TREES TO REMOVE

REFER TO TREE PRESERVATION REPORT FOR SIZE AND SPECIES OF TREES TO BE REMOVED AND TREES TO REMAIN.



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ROSEBROOKE EAST

FOR

CPS LAND, LLC

Scale: 1"=50'

Date: MARCH 14, 2022

Approved By: T. FISCHER

Revisions:

1	4/28/22	PER STAFF COMMENTS
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Drawing Title:

TREE PRESERVATION PLAN

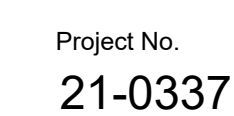
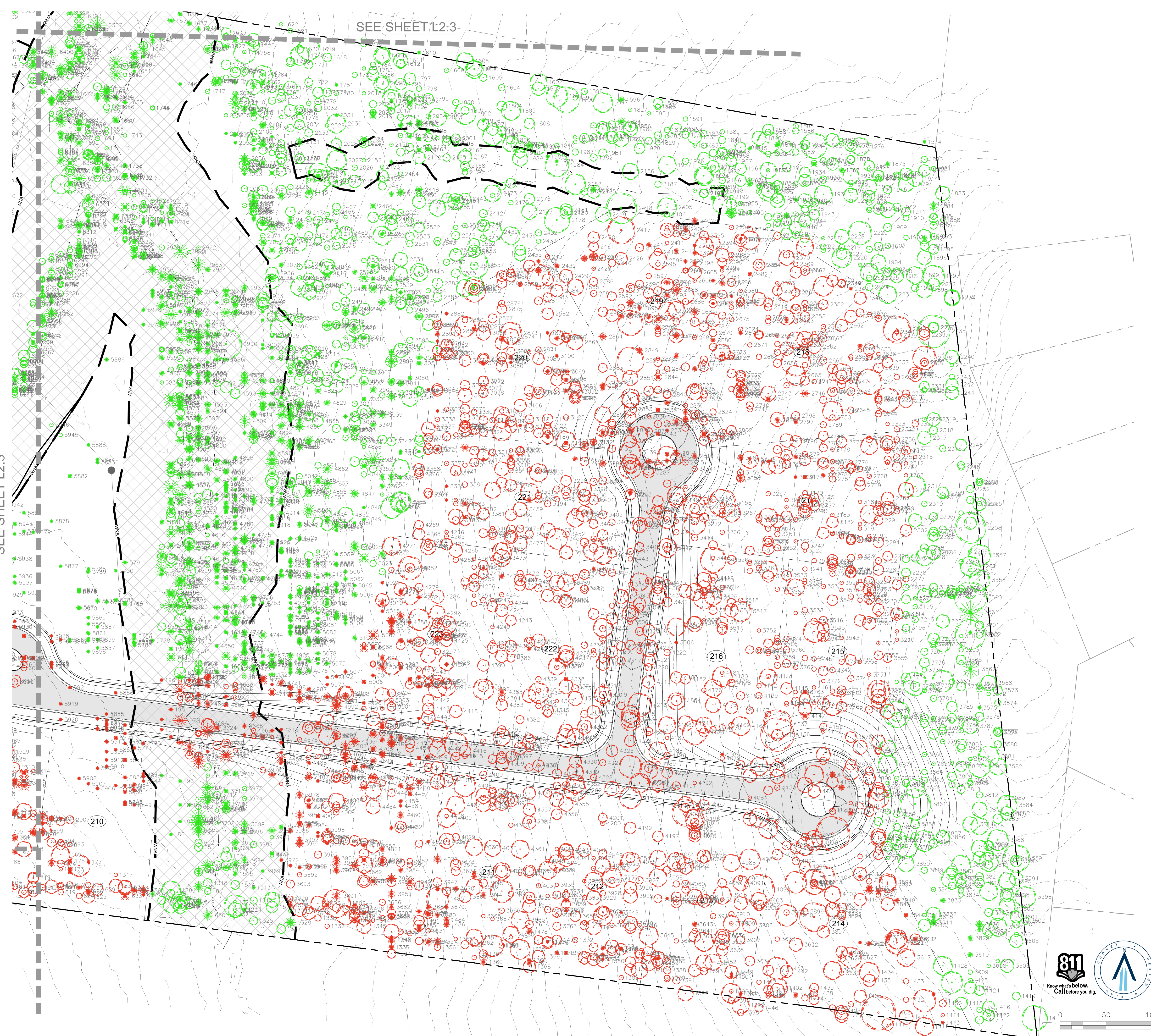
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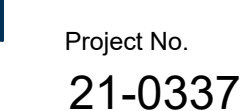
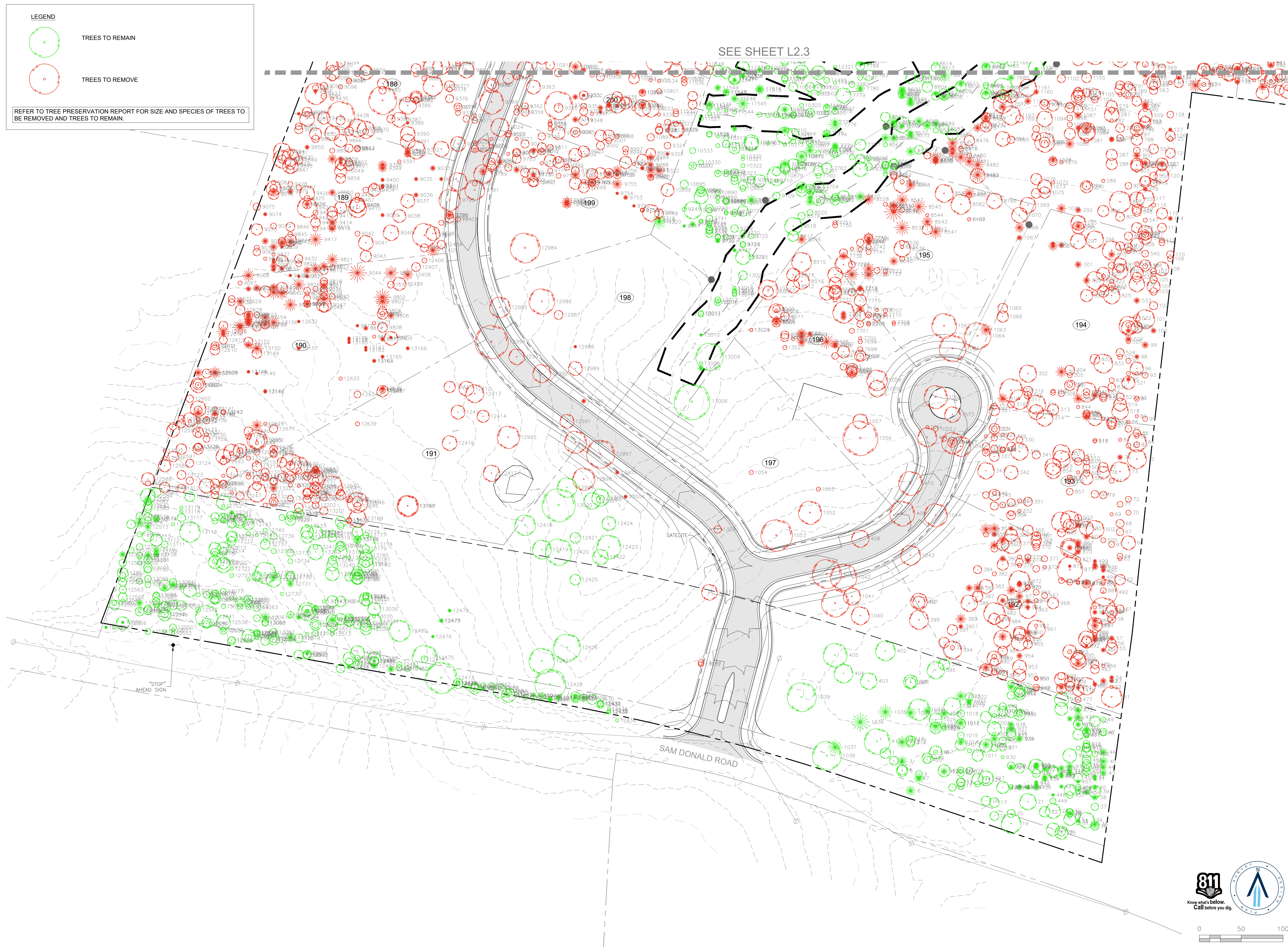
Project No.

21-0337

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH DISTRICT OF WILLIAMSON COUNTY



2023-03-21-03371-CIVIL ENGINEERING/ORD PLAN/LANDSCAPE/TREE PRESERVATION PLAN EAST.DWG
 PLOTTED BY TYLOR FISCHER ON 4/28/2022 2:44 PM LAST UPDATED BY TFIISCHER ON 4/28/2022 2:30 PM



EAST- REMAINING TREES REPORT

#	CALIPER IN.		TYPE
1	13	BURR	OAK
2	11	SHAGBARK	HICKORY
3	13	CEDAR	
4	12	ASH	
5	14	ASH	
6	13	CEDAR	
7	13	CEDAR	
8	5	ELM	
9	8	ASH	
10	9	ELM	
11	9	ELM	
12	11	ASH	
13	10	ASH	
14	14	SHUMARD	OAK
15	7	ASH	
16	12	HICKORY	
17	12	HICKORY	
18	11	SHUMARD	OAK
19	24	SHUMARD	OAK
20	10	SHAGBARK	HICKORY
21	20	SHAGBARK	HICKORY
22	13	ASH	
23	18	ASH	
24	16	SHUMARD	OAK
25	16	CHINQUAPIN	OAK
26	10	CHINQUAPIN	OAK
27	15	SHUMARD	OAK
28	8	CEDAR	
29	10	SHUMARD	OAK
30	7	ASH	
31	6	ASH	
32	5	CEDAR	
33	5	HACKBERRY	
34	19	CHINQUAPIN	OAK
35	12	CEDAR	
36	10	ASH	
37	9	ASH	
38	8	CEDAR	
39	15	SHUMARD	OAK
40	7	CEDAR	
41	5	CEDAR	
42	5	CEDAR	
43	9	CEDAR	
44	8	CEDAR	
45	12	CEDAR	
46	11	CEDAR	
47	9	ELM	
48	6	ELM	
49	6	ASH	
50	13	SHUMARD	OAK
178	21	SHUMARD	OAK
179	8	SHUMARD	OAK
180	12	CEDAR	
181	7	ELM	
182	9	ELM	
183	7	ELM	
184	10	CEDAR	
185	14	CEDAR	
186	4	CEDAR	
187	4	CEDAR	
188	4	CEDAR	
189	4	CEDAR	
190	4	CEDAR	
191	4	CEDAR	
197	5	CEDAR	
198	8	CEDAR	
199	12	HACKBERRY	
395	14	ASH	
396	21	CHINQUAPIN	OAK
397	13	CHINQUAPIN	OAK
398	17	BLACK	WALNUT
402	24	CHINQUAPIN	OAK
403	20	SUGAR	MAPLE
404	23	SHUMARD	OAK
405	29	SHUMARD	OAK
412	31	RED	OAK
413	15	CEDAR	
414	10	ELM	
415	12	ASH	
416	6	ELM	
417	16	ELM	
418	5	ELM	
419	13	ASH	
420	9	ASH	
421	15	HICKORY	
422	9	CEDAR	
423	8	ELM	
424	5	ELM	
425	7	ELM	
426	8	WHITE	OAK
427	18	RED	OAK
428	9	WHITE	OAK

429	15	HICKORY	
430	4	HICKORY	
431	5	ELM	
432	6	CEDAR	
433	5	SUGAR	MAPLE
434	6	CEDAR	
435	6	CEDAR	
436	9	CEDAR	
437	5	CEDAR	
438	6	CEDAR	
439	8	CEDAR	
440	7	CEDAR	
441	12	ASH	
442	4	CEDAR	
443	7	CEDAR	
444	5	CEDAR	
445	8	CEDAR	
446	7	CEDAR	
447	5	CEDAR	
448	4	CEDAR	
449	7	ASH	
450	8	WHITE	OAK
451	14	ASH	
452	4	HACKBERRY	
453	6	HICKORY	
454	7	CEDAR	
455	5	HACKBERRY	
456	7	HACKBERRY	
457	5	CEDAR	
458	11	RED	OAK
459	9	WHITE	OAK
460	7	ASH	
461	4	WHITE	OAK
462	12	RED	OAK
463	11	RED	OAK
464	11	RED	OAK
465	13	WHITE	OAK
466	7	RED	OAK
467	6	ELM	
468	10	ASH	
469	5	ELM	
470	8	CEDAR	
471	6	WHITE	OAK
472	8	CEDAR	
473	7	CEDAR	
474	13	CEDAR	
475	8	CEDAR	
476	9	HACKBERRY	
638	6	CEDAR	
639	9	HICKORY	
640	17	ASH	
641	15	ELM	
642	5	CEDAR	
643	11	ASH	
644	21	HICKORY	
645	7	CEDAR	
646	16	RED	OAK
647	6	HICKORY	
648	12	RED	OAK
649	9	CEDAR	
650	12	CEDAR	
651	9	HACKBERRY	
652	8	HACKBERRY	
653	6	HACKBERRY	
654	8	CEDAR	
655	18	CEDAR	
656	21	CEDAR	
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658	4	ASH	
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660	10	ASH	
661	22	CEDAR	
662	6	ELM	
663	6	ASH	
664	6	CEDAR	
665	6	ELM	
666	16	CEDAR	
667	5	ELM	
668	4	PERSIMMON	
669	13	CEDAR	
670	4	HACKBERRY	
671	8	ELM	
689	10	CEDAR	
690	13	HACKBERRY	
691	11	CEDAR	
692	5	HACKBERRY	
907	17	HICKORY	
908	16	ELM	
909	7	CEDAR	
910	12	ASH	
911	13	ASH	
912	10	ASH	
913	11	ASH	
914	7	ASH	

915	8	WHITE	OAK
916	5	HACKBERRY	
917	17	RED	OAK
918	10	CEDAR	
919	8	CEDAR	
920	15	RED	OAK
921	7	CEDAR	
922	18	HICKORY	
923	6	CEDAR	
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925	9	CEDAR	
926	10	ELM	
927	12	ELM	
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929	7	CEDAR	
930	4	ASH	
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933	12	ASH	
934	9	CEDAR	
935	8	CEDAR	
936	12	ASH	
937	12	CEDAR	
938	8	CEDAR	
939	14	ASH	
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941	6	ASH	
942	15	ASH	
943	12	HICKORY	
944	14	HICKORY	
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946	9	HICKORY	
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996	8	HICKORY	
997	10	CEDAR	
998	10	ELM	
999	8	ASH	
1000	12	ASH	
1001	14	ASH	
1002	5	ASH	
1003	14	ASH	
1004	4	HICKORY	
1005	17	ELM	
1006	4	ASH	
1007	11	CEDAR	
1008	10	CEDAR	
1009	16	RED	OAK
1010	8	WHITE	OAK
1011	14	HICKORY	
1012	5	ASH	
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1014	9	CEDAR	
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1016	12	ASH	
1017	11	CEDAR	
1018	9	WHITE	OAK
1019	4	ASH	
1020	6	CEDAR	
1021	8	CEDAR	
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1024	21	HICKORY	
1025	11	CEDAR	
1026	16	RED	OAK
1027	4	ASH	
1028	5	ELM	
1029	5	RED	OAK
1030	14	ASH	
1031	16	CEDAR	
1032	12	CEDAR	
1033	26	RED	OAK
1034	14	CEDAR	
1035	18	CEDAR	
1036	23	CEDAR	
1037	18	CEDAR	
1038	35	RED	OAK
1039	35	RED	OAK
1152	5	CHINQUAPIN	OAK
1165	6	ASH	
1166	9	RED	OAK
1167	7	CEDAR	
1168	6	CEDAR	
1169	6	POST	OAK
1170	19	POST	OAK
1171	10	ELM	
1172	4	OSTRAYA	
1173	15	POST	OAK
1174	5	ASH	
1175	5	CEDAR	
1176	12	ASH	
1177	12	RED	OAK
1178	6	CHINQUAPIN	OAK
1179	7	CEDAR	
1180	17	CHINQUAPIN	OAK

1182	9	CHINQUAPIN	OAK
1183	6	CEDAR	
1184	7	CEDAR	
1185	9	ASH	
1186	7	CEDAR	
1187	12	ASH	
1188	4	OSTRAYA	
1189	9	ASH	
1190	6	SHAGBARK	HICKORY
1191	6	CHINQUAPIN	OAK
1192	12	ASH	
1196	7	ELM	
1197	23	ASH	
1198	7	CHINQUAPIN	OAK
1199	5	CEDAR	
1200	4	ASH	
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1202	5	ASH	
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1204	12	RED	OAK
1205	6	CHINQUAPIN	OAK
1206	4	CHINQUAPIN	OAK
1207	8	HICKORY	
1208	10	CHINQUAPIN	OAK
1209	13	CHINQUAPIN	OAK
1210	5	HACKBERRY	
1211	7	CHINQUAPIN	OAK
1212	5	CEDAR	
1213	4	HICKORY	
1214	11	CHINQUAPIN	OAK
1215	20	RED	OAK
1216	7	CHINQUAPIN	OAK
1217	6	ASH	
1218	6	CHINQUAPIN	OAK
1219	6	ELM	
1223	9	CEDAR	
1224	7	CEDAR	
1225	12	CEDAR	
1226	8	CEDAR	
1227	8	SHAGBARK	HICKORY
1228	11	CEDAR	
1229	4	PERSIMMON	
1230	16	CHINQUAPIN	OAK
1231	10	CEDAR	
1232	9	CEDAR	
1233	10	CEDAR	
1234	11	BLACK	WALNUT
1235	6	CEDAR	
1236	11	ELM	
1237	8	CHINQUAPIN	OAK
1238	9	CEDAR	
1239	9	HICKORY	
1240	13	ASH	
1241	9	ASH	
1242	5	RED	OAK
1243	8	ELM	
1244	5	ASH	
1318	10	ASH	
1319	25	RED	OAK
1320	4	CHINQUAPIN	OAK
1321	4	ASH	
1322	4	OSTRAYA	
1323	16	RED	OAK
1324	4	CEDAR	
1325	9	CHINQUAPIN	OAK
1326	17	BLACK	WALNUT
1327	10	ASH	
1328	12	CEDAR	
1415	14	ASH	
1416	14	ASH	
1417	9	CHINQUAPIN	OAK
1418	28	RED	OAK
1419	9	ELM	
1420	13	ELM	
1421	4	ASH	
1422	13	ASH	
1423	6	SUGAR	MAPLE
1424	11	ASH	
1425	5	RED	OAK
1426	14	ASH	
1427	24	RED	OAK
1428	21	ASH	
1509	4	OSAGE	ORANGE
1510	13	ASH	
1511	9	BLACK	WALNUT
1512	8	CHINQUAPIN	OAK
1513	4	CEDAR	
1514	10	ELM	
1515	6	CEDAR	
1516	5	ELM	
1517	8	CEDAR	
1518	12	CEDAR	
1519	11	ASH	
1520	11	ELM	

1521	12	SHAGBARK	HICKORY
1522	7	ELM	
1557	5	CEDAR	
1574	4	CEDAR	
1575	8	CHINQUAPIN	OAK
1576	20	RED	OAK
1577	13	ASH	
1578	7	RED	OAK
1579	4	RED	OAK
1580	5	RED	OAK
1581	15	RED	OAK
1582	28	RED	OAK
1583	7	CHINQUAPIN	OAK
1584	13	RED	OAK
1585	6	ELM	
1586	7	ELM	
1587	13	ASH	
1588	6	CHINQUAPIN	OAK
1589	5	CHINQUAPIN	OAK
1590	8	ASH	
1591	5	ASH	
1592	11	ASH	
1593	6	ASH	
1594	5	OSTRAYA	
1595	4	CHINQUAPIN	OAK
1596	8	CEDAR	
1597	22	RED	OAK
1598	7	CHINQUAPIN	OAK
1599	5	RED	OAK
1600	29	RED	OAK
1601	24	RED	OAK
1602	19	RED	OAK
1603	15	RED	OAK
1604	7	SUGAR	MAPLE
1605	8	SUGAR	MAPLE
1606	20	RED	OAK
1607	17	RED	OAK
1608	19	RED	OAK
1609	5	CHINQUAPIN	OAK
1610	4	CEDAR	
1611	16	RED	OAK
1612	10	RED	OAK
1613	10	RED	OAK
1614	16	RED	OAK
1615	19	RED	OAK
1616	7	ELM	
1617	9	CEDAR	
1618	10	CHINQUAPIN	OAK
1619	25	RED	OAK
1620	9	RED	OAK
1621	5	RED	OAK
1622	4	OSTRAYA	
1623	4	CHINQUAPIN	OAK
1624	15	RED	OAK
1625	13	ASH	
1626	9	CEDAR	
1627	9	CEDAR	
1628	13	ELM	
1629	4	CEDAR	
1630	9	ELM	
1631	5	ELM	
1632	4	HICKORY	
1633	11	CHINQUAPIN	OAK
1634	8	ELM	
1635	4	HACKBERRY	
1636	6	CEDAR	
1637	6	CEDAR	
1638	6	CEDAR	
1639	8	CEDAR	
1640	7	CEDAR	
1641	4	CHINQUAPIN	OAK
1642	5	CHINQUAPIN	OAK
1643	10	CEDAR	
1644	9	ELM	
1645	15	CEDAR	
1646	4	CEDAR	
1647	10	CEDAR	
1648	9	CEDAR	
1649	14	CEDAR	
1650	6	ELM	
1651	4	CEDAR	
1652	4	REDBUD	
1653	7	CEDAR	
1654	4	HACKBERRY	
1655	6	CEDAR	
1656	7	ELM	
1657	9	CEDAR	
1658	4	HACKBERRY	
1659	4	ELM	
1660	7	CEDAR	
1661	7	ELM	
1662	9	CEDAR	
1663	9	CEDAR	
1664	17	CEDAR	

1665	5	HACKBERRY	
1666	7	HACKBERRY	
1667	7	HACKBERRY	
1668	18	CEDAR	
1669	12	HACKBERRY	
1670	8	ASH	
1671	14	CEDAR	
1672	16	CEDAR	
1673	8	CEDAR	
1674	9	ELM	
1675	8	CEDAR	
1676	10	CEDAR	
1677	18	CEDAR	
1678	9	HACKBERRY	
1679	12	CEDAR	
1680	4	CHINQUAPIN	OAK
1681	7	ELM	
1682	4	ELM	
1683	9	PERSIMMON	
1684	6	CEDAR	
1685	7	CEDAR	
1686	10	CEDAR	
1687	5	CEDAR	
1688	6	PERSIMMON	
1689	4	OSAGE	ORANGE
1690	6	ELM	
1691	5	ELM	
1692	10	CEDAR	
1693	12	CHINQUAPIN	OAK
1694	13	CEDAR	
1695	12	BLACK	WALNUT
1696	10	CEDAR	
1697	10	HACKBERRY	
1698	13	CEDAR	
1699	9	ASH	
1700	12	HACKBERRY	
1701	4	CEDAR	
1702	7	CEDAR	
1703	7	HACKBERRY	
1704	16	CEDAR	
1705	4	ELM	
1706	12	CEDAR	
1707	10	OSAGE	ORANGE
1708	6	OSAGE	ORANGE
1709	4	CEDAR	
1710	5	ELM	
1711	4	CEDAR	
1712	4	CEDAR	
1713	4	CEDAR	
1714	6	CEDAR	
1715	4	PERSIMMON	
1716	7	CEDAR	
1717	8	CEDAR	
1718	4	REDBUD	
1719	4	CEDAR	
1720	4	CEDAR	
1721	8	HONEY	LOCUST
1722	5	CEDAR	
1723	4	ELM	
1724	5	CEDAR	
1725	6	ELM	
1726	4	ELM	
1727	5	ELM	
1728	4	ELM	
1729	6	ELM	
1730	4	ELM	
1731	5	ELM	
1732	6	PERSIMMON	
1733	7	CEDAR	
1734	7	CEDAR	
1735	6	CEDAR	
1736	6	ELM	
1737	5	CEDAR	
1738	5	REDBUD	
1739	5	CEDAR	
1740	9	CEDAR	
1741	4	HACKBERRY	
1742	4	ELM	
1743	4	REDBUD	
1744	4	OSAGE	ORANGE
1745	5	OSAGE	ORANGE
1746	4	CEDAR	
1747	5	CHINQUAPIN	OAK
1748	11	CEDAR	
1749	5	CHINQUAPIN	OAK
1750	10	ELM	
1751	15	CEDAR	
1752	6	ELM	
1753	6	CEDAR	
1754	12	ASH	
1755	6	ELM	
1756	11	ELM	
1757	4	CHINQUAPIN	OAK
1758	24	RED	OAK

1759	4	ELM	
1760	9	ASH	
1761	7	CHINQUAPIN	OAK
1762	6	CEDAR	
1763	6	CHINQUAPIN	OAK
1764	21	RED	OAK
1765	7	CHINQUAPIN	OAK
1766	15	RED	OAK
1767	5	RED	OAK
1768	21	RED	OAK
1769	10	RED	OAK
1770	8	CHINQUAPIN	OAK
1771	9	CHINQUAPIN	OAK
1772	9	CHINQUAPIN	OAK
1773	12	CHINQUAPIN	OAK
1774	6	SUGAR	MAPLE
1775	11	SUGAR	MAPLE
1776	8	CHINQUAPIN	OAK
1777	5	ASH	
1778	7	ASH	
1779	10	ELM	
1780	5	HACKBERRY	
1781	4	CEDAR	
1782	6	ELM	
1783	9	ASH	
1784	6	CHINQUAPIN	OAK
1785	4	ELM	
1786	13	ASH	
1787	19	RED	OAK
1788	8	ASH	
1789	4	CEDAR	
1790	7	CEDAR	
1791	7	CHINQUAPIN	OAK
1792	10	ASH	
1793	5	ELM	
1794	5	CHINQUAPIN	OAK
1795	12	ASH	
1796	13	CHINQUAPIN	OAK
1797	13	ASH	
1798	6	CHINQUAPIN	OAK
1799	12	CHINQUAPIN	OAK
1800	7	SUGAR	MAPLE
1801	9	CHINQUAPIN	OAK
1802	24	RED	OAK
1803	14	CHINQUAPIN	OAK
1804	11	RED	OAK
1805	21	RED	OAK
1806	9	ELM	
1807	18	RED	OAK
1808	12	ASH	
1809	4	OSTRAYA	
1810	5	CHINQUAPIN	OAK
1811	4	CHINQUAPIN	OAK
1812	4	CHINQUAPIN	OAK
1813	4	CHINQUAPIN	OAK
1814	11	CHINQUAPIN	OAK
1815	8	RED	OAK
1816	6	CHINQUAPIN	OAK
1817	11	RED	OAK
1818	8	CHINQUAPIN	OAK
1819	15	ASH	
1820	12	ELM	
1821	14	ELM	
1822	4	CHINQUAPIN	OAK
1823	17	ASH	
1824	10	CEDAR	
1825	4	CEDAR	
1826	12	ASH	
1827	4	CHINQUAPIN	OAK
1828	8	CHINQUAPIN	OAK
1829	5	ASH	
1830	8	CHINQUAPIN	OAK
1831	4	CHINQUAPIN	OAK
1832	13	CHINQUAPIN	OAK
1833	6	ELM	
1834	4	OSTRAYA	
1835	15	ASH	
1836	4	CHINQUAPIN	OAK
1837	6	ASH	
1838	7	ELM	
1839	14	ASH	
1840	8	SUGAR	MAPLE
1841	4	ASH	
1842	12	ASH	
1843	7	CHINQUAPIN	OAK
1844	12	ASH	
1845	5	CEDAR	
1846	16	RED	OAK
1847	25	ASH	
1848	6	CEDAR	
1849	5	CHINQUAPIN	OAK
1850	6	CHINQUAPIN	OAK
1851	10	ASH	
1852	18	ASH	

1853	4	RED	OAK
1854	6	CHINQUAPIN	OAK
1855	5	ELM	
1856	12	ASH	
1857	16	ASH	
1858	5	CHINQUAPIN	OAK
1859	14	ASH	
1860	8	CEDAR	
1861	6	CHINQUAPIN	OAK
1862	11	ASH	
1863	6	CHINQUAPIN	OAK
1864	14	ASH	
1865	6	RED	OAK
1866	8	ASH	
1867	6	CEDAR	
1868	9	ELM	
1869	12	CHINQUAPIN	OAK
1870	13	ASH	
1871	7	RED	OAK
1872	4	SUGAR	MAPLE
1873	5	CHINQUAPIN	OAK
1874	4	ELM	
1875	6	CEDAR	
1876	9	SUGAR	MAPLE
1877	5	SUGAR	MAPLE
1878	5	CHINQUAPIN	OAK
1879	17	ASH	
1880	7	RED	OAK
1881	5	HACKBERRY	
1882	13	SUGAR	MAPLE
1883	16	RED	OAK
1884	11	CEDAR	
1885	7	CHINQUAPIN	OAK
1886	4	HACKBERRY	
1887	10	CHINQUAPIN	OAK
1888	5	CHINQUAPIN	OAK
1889	8	CHINQUAPIN	OAK
1890	4	CHINQUAPIN	OAK
1891	16	CHINQUAPIN	OAK
1892	7	CEDAR	
1893	7	ASH	
1894	10	CHINQUAPIN	OAK
1895	11	SUGAR	MAPLE
1896	16	RED	OAK
1897	24	RED	OAK
1898	18	CHINQUAPIN	OAK
1899	19	WHITE	OAK
1900	8	SUGAR	MAPLE
1901	8	SUGAR	MAPLE
1902	15	ASH	
1903	6	SUGAR	MAPLE
1904	17	ELM	
1905	7	SUGAR	MAPLE
1906	10	ASH	
1907	6	ELM	
1908	5	CHINQUAPIN	OAK
1909	9	ELM	
1910	6	CHINQUAPIN	OAK
1911	10	RED	OAK
1912	9	CHINQUAPIN	OAK
1913	14	ASH	
1914	17	ASH	
1915	9	CHINQUAPIN	OAK
1916	9	SUGAR	MAPLE
1917	17	ASH	
1918	12	ASH	
1919	6	SUGAR	MAPLE
1920	6	SUGAR	MAPLE
1921	4	SUGAR	MAPLE
1922	5	SUGAR	MAPLE
1923	13	ASH	
1924	17	ASH	
1925	5	CHINQUAPIN	OAK
1926	5	SUGAR	MAPLE
1927	16	ASH	
1928	4	SUGAR	MAPLE
1929	4	OSTRAYA	
1930	18	ASH	
1931	20	ASH	
1932	8	ASH	
1933	4	CHINQUAPIN	OAK
1934	12	ASH	
1935	5	ELM	
1936	5	CEDAR	
1937	6	ASH	
1938	8	ASH	
1939	4	ASH	
1940	16	ASH	
1941	10	ASH	
1942	4	CHINQUAPIN	OAK
1943	12	ASH	
1944	14	ASH	
1945	4	CHINQUAPIN	OAK
1946	14	ASH	

1947	11	ASH	
1948	7	CEDAR	
1949	12	ELM	
1950	8	CHINQUAPIN	OAK
1951	8	BLACK	WALNUT
1952	10	ELM	
1953	5	CHINQUAPIN	OAK
1954	5	CHINQUAPIN	OAK
1955	5	HACKBERRY	
1956	6	ASH	
1957	5	ELM	
1958	21	ASH	
1959	21	ASH	
1960	15	ASH	
1961	4	RED	OAK
1962	7	CEDAR	
1963	4	ASH	
1964	6	ASH	
1965	13	ASH	
1966	13	ASH	
1967	12	ASH	
1968	6	ASH	
1969	11	ASH	
1970	8	ASH	
1971	6	ASH	
1972	6	CHINQUAPIN	OAK
1973	14	ASH	
1974	21	ASH	
1975	18	ASH	
1976	7	CHINQUAPIN	OAK
1977	20	RED	OAK
1978	12	CHINQUAPIN	OAK
1979	4	CHINQUAPIN	OAK
1980	16	RED	OAK
1981	9	CHINQUAPIN	OAK
1982	8	ASH	
1983	7	ELM	
1984	26	RED	OAK
1985	4	CEDAR	
1986	4	CEDAR	
1987	14	RED	OAK
1988	9	CEDAR	
1989	17	ASH	
1990	11	RED	OAK
1991	10	CHINQUAPIN	OAK
1992	20	RED	OAK
1993	10	ELM	
1994	4	CEDAR	
1995	22	RED	OAK
1996	4	CEDAR	
1997	13	ASH	
1998	6	ASH	
1999	7	ASH	
2000	9	ASH	
2001	10	CHINQUAPIN	OAK
2002	4	CHINQUAPIN	OAK
2003	20	RED	OAK
2004	5	CHINQUAPIN	OAK
2005	6	CEDAR	
2006	7	CEDAR	
2007	9	CEDAR	
2008	6	CEDAR	
2009	6	CEDAR	
2010	5	ASH	
2011	6	CEDAR	
2012	20	ASH	
2013	7	ASH	
2014	7	ASH	
2015	8	ASH	
2016	21	RED	OAK
2017	14	ASH	
2018	4	HACKBERRY	
2019	8	CEDAR	
2020	8	ASH	
2021	8	CEDAR	
2022	7	ASH	
2023	11	ASH	
2024	9	CEDAR	
2025	4	OSAGE	ORANGE
2026	6	ELM	
2027	22	RED	OAK
2028	12	SUGAR	MAPLE
2029	4	HACKBERRY	
2030	21	ASH	
2031	4	CEDAR	
2032	8	CHINQUAPIN	OAK
2033	9	RED	OAK
2034	11	CHINQUAPIN	OAK
2035	8	CHINQUAPIN	OAK
2036	4	CEDAR	
2037	10	RED	OAK
2038	14	RED	OAK
2039	4	CHINQUAPIN	OAK
2040	8	ASH	

2041	11	ASH	
2042	4	ELM	
2043	17	ASH	
2044	10	CEDAR	
2045	5	HACKBERRY	
2046	10	CEDAR	
2047	16	CEDAR	
2048	6	ELM	
2049	7	ELM	
2050	4	CHINQUAPIN	OAK
2051	6	ELM	
2052	4	CEDAR	
2053	4	REDBUD	
2054	6	CEDAR	
2055	4	CEDAR	
2056	11	CEDAR	
2057	7	CEDAR	
2058	5	ELM	
2059	12	ELM	
2060	5	RED	OAK
2061	6	ELM	
2062	4	OSTRAYA	
2063	4	CEDAR	
2064	7	RED	OAK
2065	8	CEDAR	
2066	11	ELM	
2067	10	CEDAR	
2068	5	ELM	
2069	6	CEDAR	
2070	6	CEDAR	
2071	5	ELM	
2072	10	CEDAR	
2073	21	ASH	
2074	9	CEDAR	
2075	20	RED	OAK
2076	4	ELM	
2077	7	CHINQUAPIN	OAK
2078	7	CEDAR	
2079	12	RED	OAK
2080	4	ELM	
2081	6	CHINQUAPIN	OAK
2082	7	CHINQUAPIN	OAK
2083	12	RED	OAK
2084	6	CEDAR	
2085	14	ASH	
2086	9	CEDAR	
2087	5	CHINQUAPIN	OAK
2088	7	ELM	
2089	5	ELM	
2090	7	ELM	
2091	4	ELM	
2092	5	ELM	
2093	9	ELM	
2094	13	CHINQUAPIN	OAK
2095	12	CEDAR	
2096	6	CEDAR	
2097	12	ASH	
2098	12	ASH	
2099	15	ASH	
2100	5	CEDAR	
2101	9	CHINQUAPIN	OAK
2102	5	CEDAR	
2103	14	ASH	
2104	6	ELM	
2105	7	CHINQUAPIN	OAK
2106	9	CEDAR	
2107	6	ASH	
2108	8	CEDAR	
2109	5	CEDAR	
2110	11	ASH	
2111	8	CEDAR	
2112	10	ASH	
2113	11	ASH	
2114	7	CEDAR	
2115	5	CEDAR	
2116	4	CEDAR	
2117	4	ASH	
2118	9	CEDAR	
2119	9	CEDAR	
2120	8	ASH	
2121	10	CEDAR	
2122	8	CEDAR	
2123	12	CHINQUAPIN	OAK
2124	4	RED	OAK
2125	10	CEDAR	
2126	6	RED	OAK
2127	11	RED	OAK
2128	4	SUGAR	MAPLE
2129	12	ASH	
2130	8	RED	OAK
2131	10	CEDAR	
2132	6	CHINQUAPIN	OAK
2133	13	RED	OAK
2134	7	ASH	

2135	4	CHINQUAPIN	OAK
2136	11	RED	OAK
2137	11	RED	OAK
2138	4	ASH	
2139	21	RED	OAK
2140	26	ASH	
2141	9	RED	OAK
2142	5	CEDAR	
2143	4	CHINQUAPIN	OAK
2144	8	ASH	
2145	8	CEDAR	
2146	11	RED	OAK
2147	7	ASH	
2148	21	RED	OAK
2149	4	CEDAR	
2150	6	HACKBERRY	
2151	14	ASH	
2152	4	ELM	
2153	4	ASH	
2154	5	CEDAR	
2155	4	HACKBERRY	
2156	9	ASH	
2157	9	ASH	
2158	8	CEDAR	
2159	6	CEDAR	
2160	10	ASH	
2161	7	CHINQUAPIN	OAK
2162	14	ASH	
2163	6	CEDAR	
2164	4	ELM	
2165	8	CHINQUAPIN	OAK
2166	4	ELM	
2167	15	RED	OAK
2168	10	CHINQUAPIN	OAK
2169	4	ELM	
2170	6	HACKBERRY	
2171	9	HACKBERRY	
2172	11	CHINQUAPIN	OAK
2173	19	ASH	
2174	5	CHINQUAPIN	OAK
2175	5	CHINQUAPIN	OAK
2176	12	SUGAR	MAPLE
2177	17	RED	OAK
2178	28	RED	OAK
2179	4	CHINQUAPIN	OAK
2180	14	CHINQUAPIN	OAK
2181	14	ASH	
2182	23	RED	OAK
2183	8	ASH	
2184	7	CEDAR	
2185	15	CHINQUAPIN	OAK
2186	18	CHINQUAPIN	OAK
2187	7	RED	OAK
2188	4	ELM	
2189	9	ELM	
2190	10	ASH	
2191	10	ASH	
2192	6	CEDAR	
2193	21	ASH	
2194	4	CEDAR	
2195	4	CHINQUAPIN	OAK
2196	7	ASH	
2197	4	CHINQUAPIN	OAK
2198	12	CHINQUAPIN	OAK
2199	4	RED	OAK
2200	12	ASH	
2201	11	ASH	
2202	6	OSTRAYA	
2203	11	CEDAR	
2212	13	ELM	
2213	8	ASH	
2214	10	ASH	
2216	6	RED	OAK
2217	5	ELM	
2218	4	HACKBERRY	
2219	7	SUGAR	MAPLE
2220	22	CHINQUAPIN	OAK
2221	4	ASH	
2222	20	RED	OAK
2223	6	ELM	
2224	8	CHINQUAPIN	OAK
2225	11	ELM	
2226	9	SUGAR	MAPLE
2227	12	ASH	
2228	16	CHINQUAPIN	OAK
2229	26	RED	OAK
2231	20	ASH	
2232	14	ASH	
2233	17	SUGAR	MAPLE
2234	17	SUGAR	MAPLE
2235	36	RED	OAK
2236	12	SUGAR	MAPLE
2237	11	ELM	
2240	15	SUGAR	MAPLE

2241	4	SUGAR	MAPLE
2242	14	SUGAR	MAPLE
2243	6	CHINQUAPIN	OAK
2244	15	CHINQUAPIN	OAK
2245	13	CHINQUAPIN	OAK
2246	13	CHINQUAPIN	OAK
2247	8	CHINQUAPIN	OAK
2248	7	ASH	
2249	5	HACKBERRY	
2250	7	CHINQUAPIN	OAK
2251	8	CHINQUAPIN	OAK
2252	8	CHINQUAPIN	OAK
2253	8	HACKBERRY	
2254	5	HICKORY	
2255	15	BLACK	LOCUST
2256	5	CHINQUAPIN	OAK
2257	14	ELM	
2258	34	SUGAR	MAPLE
2259	4	SUGAR	MAPLE
2260	5	SUGAR	MAPLE
2261	22	CHINQUAPIN	OAK
2262	22	CHINQUAPIN	OAK
2263	4	SUGAR	MAPLE
2264	4	HICKORY	
2265	7	ASH	
2266	4	ASH	
2267	11	BLACK	LOCUST
2268	5	ASH	
2269	12	ASH	
2270	7	ASH	
2271	4	SUGAR	MAPLE
2272	4	HACKBERRY	
2273	9	ASH	
2274	16	ASH	
2275	4	HACKBERRY	
2276	4	HACKBERRY	
2278	10	ASH	
2279	8	ASH	
2280	9	ASH	
2281	19	ASH	
2282	5	HACKBERRY	
2283	10	ASH	
2284	13	SUGAR	MAPLE
2285	9	ASH	
2286	16	ASH	
2287	7	ASH	
2303	15	BLACK	LOCUST
2304	9	HACKBERRY	
2305	8	HACKBERRY	
2306	9	ELM	
2307	4	HACKBERRY	
2308	6	HACKBERRY	
2309	13	HACKBERRY	
2310	6	ELM	
2311	23	CHINQUAPIN	OAK
2316	7	ELM	
2317	15	ASH	
2318	9	CHINQUAPIN	OAK
2319	15	CHINQUAPIN	OAK
2320	5	CHINQUAPIN	OAK
2328	5	CHINQUAPIN	OAK
2329	4	ELM	
2330	6	ELM	
2331	11	ELM	
2405	21	CHINQUAPIN	OAK
2406	6	SUGAR	MAPLE
2418	34	RED	OAK
2419	17	CHINQUAPIN	OAK
2432	7	CHINQUAPIN	OAK
2433	5	ELM	
2434	12	ASH	
2435	13	CHINQUAPIN	OAK
2436	20	RED	OAK
2437	5	CHINQUAPIN	OAK
2438	7	CHINQUAPIN	OAK
2439	21	RED	OAK
2440	7	CHINQUAPIN	OAK
2441	14	RED	OAK
2442	9	CHINQUAPIN	OAK
2443	13	ASH	
2444	18	RED	OAK
2445	10	CEDAR	
2446	9	ASH	
2447	11	ASH	
2448	9	CEDAR	
2449	9	CEDAR	
2450	4	CHINQUAPIN	OAK
2451	6	CHINQUAPIN	OAK
2452	15	ASH	
2453	10	CEDAR	
2454	5	CHINQUAPIN	OAK
2455	14	ASH	
2456	6	ASH	
2457	9	ASH	

2458	6	CEDAR	
2459	12	ASH	
2460	4	CEDAR	
2461	15	ASH	
2462	7	ASH	
2463	12	ASH	
2464	8	CEDAR	
2465	5	CHINQUAPIN	OAK
2466	6	CHINQUAPIN	OAK
2467	9	RED	OAK
2468	24	RED	OAK
2469	15	RED	OAK
2470	12	RED	OAK
2471	8	CHINQUAPIN	OAK
2472	9	CHINQUAPIN	OAK
2473	6	ASH	
2474	4	CHINQUAPIN	OAK
2475	11	ASH	
2476	11	CHINQUAPIN	OAK
2477	12	CEDAR	
2478	8	CEDAR	
2479	9	CEDAR	
2480	16	ASH	
2481	9	CHINQUAPIN	OAK
2482	6	DOGWOOD	
2483	5	RED	OAK
2484	13	RED	OAK
2485	4	CHINQUAPIN	OAK
2486	11	CHINQUAPIN	OAK
2487	12	RED	OAK
2488	4	ASH	
2489	14	RED	OAK
2490	10	CHINQUAPIN	OAK
2491	7	CEDAR	
2492	8	CEDAR	
2493	14	ASH	
2494	9	CEDAR	
2495	11	ASH	
2496	7	ASH	
2497	12	CHINQUAPIN	OAK
2498	8	CEDAR	
2499	9	ASH	
2500	6	CHINQUAPIN	OAK
2501	13	CHINQUAPIN	OAK
2502	5	CEDAR	
2503	10	ELM	
2504	10	CEDAR	
2505	11	CEDAR	
2506	5	CEDAR	
2507	4	ELM	
2508	13	CEDAR	
2509	7	CEDAR	
2510	8	ASH	
2511	9	CEDAR	
2512	14	ASH	
2513	4	CHINQUAPIN	OAK
2514	18	RED	OAK
2515	6	CHINQUAPIN	OAK
2516	8	ELM	
2517	4	ELM	
2518	6	CEDAR	
2519	13	ASH	
2520	14	ASH	
2521	5	CEDAR	
2522	5	ELM	
2523	5	ELM	
2524	4	BLACK	WALNUT
2525	21	RED	OAK
2526	8	ASH	
2527	5	CEDAR	
2528	14	RED	OAK
2529	7	CHINQUAPIN	OAK
2530	9	ASH	
2531	7	CHINQUAPIN	OAK
2532	12	ASH	
2533	10	CHINQUAPIN	OAK
2534	16	RED	OAK
2535	16	RED	OAK
2536	5	CEDAR	
2537	8	ASH	
2538	4	OSTRAYA	
2539	13	ASH	
2540	20	RED	OAK
2541	12	CHINQUAPIN	OAK
2542	7	ELM	
2543	6	ELM	
2544	8	ELM	
2545	5	SHAGBARK	HICKORY
2546	14	RED	OAK
2547	9	CHINQUAPIN	OAK
2548	5	CHINQUAPIN	OAK
2549	5	CHINQUAPIN	OAK
2550	18	ASH	
2551	5	CHINQUAPIN	OAK

2552	12	RED	OAK
2553	14	RED	OAK
2554	5	ELM	
2555	10	ASH	
2556	7	CHINQUAPIN	OAK
2557	31	RED	OAK
2558	9	CHINQUAPIN	OAK
2559	19	RED	OAK
2560	21	RED	OAK
2563	6	ASH	
2883	12	ASH	
2884	5	ASH	
2885	10	SUGAR	MAPLE
2886	10	CEDAR	
2887	8	CHINQUAPIN	OAK
2888	13	ASH	
2893	21	RED	OAK
2894	5	ASH	
2895	7	ASH	
2896	16	ASH	
2897	5	HACKBERRY	
2898	7	CEDAR	
2899	13	ASH	
2900	12	CEDAR	
2901	6	CEDAR	
2902	9	CEDAR	
2903	11	CEDAR	
2904	6	ELM	
2905	6	CEDAR	
2906	10	ELM	
2907	5	CHINQUAPIN	OAK
2908	5	RED	OAK
2909	7	CEDAR	
2910	13	ELM	
2911	10	CEDAR	
2912	8	CEDAR	
2913	8	CHINQUAPIN	OAK
2914	9	CHINQUAPIN	OAK
2915	7	CHINQUAPIN	OAK
2916	9	CHINQUAPIN	OAK
2917	6	ASH	
2918	7	CHINQUAPIN	OAK
2919	11	CHINQUAPIN	OAK
2920	10	CEDAR	
2921	17	RED	OAK
2922	5	CHINQUAPIN	OAK
2923	10	CHINQUAPIN	OAK
2924	6	CHINQUAPIN	OAK
2925	9	RED	OAK
2926	13	CHINQUAPIN	OAK
2927	13	CHINQUAPIN	OAK
2928	16	RED	OAK
2929	14	ELM	
2930	10	ASH	
2931	4	CEDAR	
2932	4	CEDAR	
2933	10	ELM	
2934	11	CEDAR	
2935	16	ASH	
2936	14	ASH	
2937	9	CEDAR	
2938	9	PERSIMMON	
2939	5	PERSIMMON	
2940	6	ELM	
2941	7	PERSIMMON	
2942	5	PERSIMMON	
2943	9	CEDAR	
2944	4	ELM	
2945	4	CEDAR	
2946	4	CEDAR	
2947	7	CEDAR	
2948	10	CEDAR	
2949	4	ELM	
2950	4	ELM	
2951	9	ELM	
2952	7	CEDAR	
2953	9	CEDAR	
2954	18	CEDAR	
2955	12	CEDAR	
2956	11	CEDAR	
2957	7	ELM	
2958	4	MULBERRY	
2959	6	ELM	
2960	20	CEDAR	
2961	4	ELM	
2962	4	ELM	
2963	17	CEDAR	
2964	6	CEDAR	
2965	13	CEDAR	
2966	4	CEDAR	
2967	7	CEDAR	
2968	4	ELM	
2969	11	CEDAR	
2970	5	CEDAR	

2971	5	ELM	
2972	8	CEDAR	
2973	9	CEDAR	
2974	10	CEDAR	
2975	12	CEDAR	
2976	13	CEDAR	
2977	8	CEDAR	
2978	11	CEDAR	
2979	7	CEDAR	
2980	5	CEDAR	
2981	8	CHINQUAPIN	OAK
2982	11	CEDAR	
2983	8	CEDAR	
2984	9	CEDAR	
2985	4	ELM	
2986	7	CEDAR	
2987	8	CEDAR	
2988	5	CEDAR	
2989	8	CEDAR	
2990	34	RED	OAK
2991	4	CEDAR	
2992	11	ASH	
2993	4	ELM	
2994	4	ELM	
2995	5	CHINQUAPIN	OAK
2996	24	RED	OAK
2997	5	ELM	
2998	12	ASH	
2999	4	ELM	
3000	6	CEDAR	
3001	4	CEDAR	
3002	4	CEDAR	
3003	5	CEDAR	
3004	4	ELM	
3005	4	ELM	
3006	5	CHINQUAPIN	OAK
3007	10	ASH	
3008	6	CHINQUAPIN	OAK
3009	5	CEDAR	
3010	6	CHINQUAPIN	OAK
3011	14	SUGAR	MAPLE
3012	7	CEDAR	
3013	5	CEDAR	
3014	16	RED	OAK
3015	13	CEDAR	
3016	8	CHINQUAPIN	OAK
3017	9	CHINQUAPIN	OAK
3018	9	ASH	
3019	7	CEDAR	
3020	13	CHINQUAPIN	OAK
3021	20	RED	OAK
3022	4	CHINQUAPIN	OAK
3023	24	CHINQUAPIN	OAK
3024	13	RED	OAK
3025	5	CEDAR	
3026	12	ASH	
3027	12	CHINQUAPIN	OAK
3028	10	ASH	
3029	15	ASH	
3030	7	CEDAR	
3031	6	RED	OAK
3032	5	CEDAR	
3033	12	ASH	
3034	6	RED	OAK
3035	13	ASH	
3036	7	CHINQUAPIN	OAK
3037	16	ELM	
3038	10	CEDAR	
3039	10	CEDAR	
3040	6	ASH	
3041	8	CEDAR	
3042	8	ASH	
3043	18	ASH	
3045	6	ELM	
3048	4	ASH	
3049	10	ASH	
3050	6	CEDAR	
3051	7	CEDAR	
3052	7	CEDAR	
3194	10	ASH	
3195	5	SUGAR	MAPLE
3196	8	HACKBERRY	
3197	9	HACKBERRY	
3198	11	ASH	
3199	4	ASH	
3200	5	SUGAR	MAPLE
3201	9	HACKBERRY	
3202	4	SUGAR	MAPLE
3203	5	SUGAR	MAPLE
3204	15	SUGAR	MAPLE
3205	5	ELM	
3206	8	HACKBERRY	
3207	17	CHINQUAPIN	OAK
3208	13	CHINQUAPIN	OAK

3209	8	ASH	
3213	7	ELM	
3214	6	ELM	
3340	8	ASH	
3341	10	ASH	
3342	13	ASH	
3343	4	CEDAR	
3344	4	CEDAR	
3345	4	CEDAR	
3346	19	ASH	
3347	10	ASH	
3348	10	CHINQUAPIN	OAK
3349	8	CEDAR	
3350	10	CEDAR	
3351	8	CEDAR	
3352	8	ASH	
3353	6	ASH	
3354	4	ASH	
3355	4	CHINQUAPIN	OAK
3356	24	RED	OAK
3357	10	CHINQUAPIN	OAK
3358	21	RED	OAK
3359	23	RED	OAK
3360	11	ASH	
3361	6	CHINQUAPIN	OAK
3362	6	CEDAR	
3363	4	CEDAR	
3557	24	CHINQUAPIN	OAK
3558	23	CHINQUAPIN	OAK
3559	13	HACKBERRY	
3560	35	CHINQUAPIN	OAK
3561	27	CEDAR	
3562	33	CHINQUAPIN	OAK
3563	7	ELM	
3564	4	CEDAR	
3565	11	ASH	
3566	5	ELM	
3567	21	CEDAR	
3568	17	CHINQUAPIN	OAK
3569	6	PERSIMMON	
3570	6	ELM	
3571	4	SUGAR	MAPLE
3572	4	SUGAR	MAPLE
3573	10	PERSIMMON	
3574	7	ELM	
3575	4	CEDAR	
3576	10	ELM	
3577	10	ELM	
3578	6	ELM	
3579	9	PERSIMMON	
3580	8	CHINQUAPIN	OAK
3581	23	WHITE	OAK
3582	19	CHINQUAPIN	OAK
3583	5	RED	OAK
3584	22	RED	OAK
3585	11	ELM	
3586	15	CHINQUAPIN	OAK
3587	4	ELM	
3588	23	ASH	
3589	8	SUGAR	MAPLE
3590	12	SUGAR	MAPLE
3591	30	ASH	
3592	6	CHINQUAPIN	OAK
3593	13	SUGAR	MAPLE
3594	15	ASH	
3595	19	SUGAR	MAPLE
3596	23	ASH	
3597	10	SUGAR	MAPLE
3598	15	ASH	
3599	18	SUGAR	MAPLE
3600	4	ELM	
3601	13	PERSIMMON	
3602	8	ELM	
3603	8	ELM	
3604	5	ELM	
3605	15	ASH	
3606	15	ASH	
3607	4	OSTRAYA	
3608	4	SHAGBARK	HICKORY
3609	5	RED	OAK
3610	6	CEDAR	
3613	14	ASH	
3614	7	CEDAR	
3615	8	CEDAR	
3616	4	OSTRAYA	
3694	9	CEDAR	
3695	4	CEDAR	
3696	6	CEDAR	
3697	9	CEDAR	
3698	4	ELM	
3699	10	CEDAR	
3700	5	CEDAR	
3701	7	CEDAR	
3702	5	CEDAR	

3703	4	ASH	
3704	8	ELM	
3705	5	ELM	
3706	4	ELM	
3707	12	CEDAR	
3708	6	CEDAR	
3709	5	HACKBERRY	
3710	12	CEDAR	
3711	7	ELM	
3712	8	ELM	
3713	6	CEDAR	
3714	9	CEDAR	
3715	7	CEDAR	
3728	4	ELM	
3729	11	CHINQUAPIN	OAK
3730	4	SUGAR	MAPLE
3731	24	ASH	
3732	10	HICKORY	
3733	6	SUGAR	MAPLE
3734	10	ASH	
3735	5	SUGAR	MAPLE
3736	11	ASH	
3777	29	RED	OAK
3778	4	ELM	
3779	11	SUGAR	MAPLE
3781	26	CHINQUAPIN	OAK
3782	4	SUGAR	MAPLE
3783	5	ASH	
3784	7	ASH	
3785	12	CHINQUAPIN	OAK
3786	5	SUGAR	MAPLE
3787	17	CHINQUAPIN	OAK
3788	5	SUGAR	MAPLE
3789	10	ASH	
3790	6	ASH	
3791	8	PERSIMMON	
3792	7	SUGAR	MAPLE
3793	5	ASH	
3794	9	ASH	
3795	4	ASH	
3796	9	ASH	
3797	11	ASH	
3798	5	SUGAR	MAPLE
3799	5	ASH	
3800	9	ASH	
3801	12	ASH	
3802	4	ASH	
3803	24	ASH	
3804	4	ASH	
3805	6	ASH	
3806	5	ASH	
3807	12	ASH	
3808	4	SUGAR	MAPLE
3809	10	BLACK	WALNUT
3810	7	ASH	
3811	9	ASH	
3812	7	CHINQUAPIN	OAK
3813	17	CHINQUAPIN	OAK
3814	17	SUGAR	MAPLE
3815	19	ASH	
3816	11	SUGAR	MAPLE
3817	18	RED	OAK
3818	21	ASH	
3819	9	ELM	
3820	14	ELM	
3821	9	SUGAR	MAPLE
3822	20	ASH	
3823	11	SUGAR	MAPLE
3824	14	ELM	
3825	9	ELM	
3826	9	CEDAR	
3827	20	ASH	
3828	7	CEDAR	
3829	7	CEDAR	
3830	14	ELM	
3831	8	ASH	
3832	16	ASH	
3833	6	CEDAR	
3834	5	ELM	
3835	23	ASH	
3836	11	SUGAR	MAPLE
3837	13	ASH	
3838	6	SUGAR	MAPLE
3839	21	ASH	
3840	12	SUGAR	MAPLE
3841	6	ELM	
3842	8	ELM	
3843	5	ELM	
3849	7	ASH	
3850	18	ELM	
3851	21	ASH	
3852	12	SUGAR	MAPLE
3853	8	ASH	
3854	23	ASH	

3855	10	SUGAR	MAPLE
3856	15	ASH	
3857	6	SUGAR	MAPLE
3858	10	SUGAR	MAPLE
3859	7	CHINQUAPIN	OAK
3860	8	CHINQUAPIN	OAK
3861	34	RED	OAK
3862	20	RED	OAK
3863	7	SHAGBARK	HICKORY
3864	6	SHAGBARK	HICKORY
3865	4	SUGAR	MAPLE
3866	5	SHAGBARK	HICKORY
3867	4	RED	OAK
3868	8	CHINQUAPIN	OAK
3869	5	CHINQUAPIN	OAK
3870	4	SUGAR	MAPLE
3871	21	CHINQUAPIN	OAK
3874	18	SUGAR	MAPLE
3884	9	ELM	
3885	8	HACKBERRY	
3886	11	ASH	
3887	24	ASH	
3888	4	ELM	
3969	4	CEDAR	
3970	4	ELM	
3971	4	CEDAR	
3973	4	ASH	
3974	5	PERSIMMON	
3975	5	PERSIMMON	
3987	7	CEDAR	
3988	10	CEDAR	
3989	7	ELM	
3990	4	BOXELDER	
4163	6	ELM	
4270	10	CEDAR	
4505	10	CEDAR	
4506	6	CEDAR	
4507	9	ELM	
4508	8	ELM	
4509	4	ELM	
4510	6	CHINQUAPIN	OAK
4511	12	CEDAR	
4512	13	CEDAR	
4513	14	CEDAR	
4514	6	ELM	
4515	12	CEDAR	
4516	5	ELM	
4517	5	HACKBERRY	
4518	6	ELM	
4519	14	ASH	
4520	14	ELM	
4521	12	CEDAR	
4522	4	CHINQUAPIN	OAK
4523	6	CEDAR	
4524	8	CEDAR	
4525	14	CEDAR	
4526	11	ASH	
4527	8	OSAGE	ORANGE
4528	6	OSAGE	ORANGE
4529	14	RED	OAK
4530	5	CEDAR	
4531	14	CEDAR	
4532	12	CEDAR	
4533	4	ELM	
4534	6	CEDAR	
4535	11	ELM	
4536	7	CEDAR	
4537	13	ASH	
4538	12	CEDAR	
4539	11	CEDAR	
4540	12	CEDAR	
4541	7	CEDAR	
4542	10	ELM	
4543	4	ELM	
4544	11	CEDAR	
4545	10	ASH	
4546	9	CEDAR	
4547	15	CEDAR	
4548	10	CEDAR	
4549	5	ELM	
4550	6	ELM	
4551	5	PERSIMMON	
4552	6	PERSIMMON	
4553	4	PERSIMMON	
4554	12	OSAGE	ORANGE
4555	10	HACKBERRY	
4556	11	CEDAR	
4557	10	CEDAR	
4558	11	CEDAR	
4559	11	CEDAR	
4560	13	CEDAR	
4561	6	ELM	
4562	7	CEDAR	
4563	10	CEDAR	

4564	11	CEDAR	
4565	4	CEDAR	
4566	7	CEDAR	
4567	11	CEDAR	
4568	8	CEDAR	
4569	10	CEDAR	
4570	9	CEDAR	
4571	10	HACKBERRY	
4572	5	CEDAR	
4573	7	CEDAR	
4574	8	CEDAR	
4575	7	CEDAR	
4576	6	CEDAR	
4577	6	CEDAR	
4578	8	CEDAR	
4579	7	CEDAR	
4580	7	CEDAR	
4581	10	CEDAR	
4582	9	CEDAR	
4583	6	CEDAR	
4584	4	HACKBERRY	
4585	4	CEDAR	
4586	5	CEDAR	
4587	6	ELM	
4588	9	CEDAR	
4589	12	CEDAR	
4590	11	ASH	
4591	13	ASH	
4592	7	ELM	
4593	8	CEDAR	
4594	7	CEDAR	
4595	10	CEDAR	
4596	6	CEDAR	
4597	14	CEDAR	
4598	10	CEDAR	
4599	5	BLACK	WALNUT
4600	6	ELM	
4601	7	CEDAR	
4602	6	CEDAR	
4603	7	ELM	
4604	13	CEDAR	
4605	10	CEDAR	
4606	6	CEDAR	
4607	11	CEDAR	
4608	4	ELM	
4609	8	CEDAR	
4610	7	CEDAR	
4611	9	CEDAR	
4612	5	CEDAR	
4613	6	CEDAR	
4614	5	CEDAR	
4615	5	PERSIMMON	
4616	4	CEDAR	
4617	4	CEDAR	
4618	7	CEDAR	
4619	5	CEDAR	
4620	10	CEDAR	
4621	5	CEDAR	
4622	5	CEDAR	
4623	6	CEDAR	
4624	4	CEDAR	
4625	5	CEDAR	
4626	4	PERSIMMON	
4627	6	CEDAR	
4628	4	HACKBERRY	
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6193	13	ASH	
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6198	9	ASH	
6199	6	CHINQUAPIN	OAK
6200	7	ELM	
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6227	14	ASH	
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6229	4	HACKBERRY	
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6235	18	ASH	
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6240	6	HACKBERRY	
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6242	7	HACKBERRY	
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6248	7	HACKBERRY	
6249	4	HACKBERRY	
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6259	10	ASH	
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6263	5	HACKBERRY	
6264	9	HACKBERRY	
6265	5	REDBUD	
6266	13	HACKBERRY	
6267	13	BLACK	WALNUT
6268	9	HACKBERRY	
6269	10	HONEY	LOCUST
6270	5	CEDAR	
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6275	14	BLACK	WALNUT
6276	9	BLACK	WALNUT
6277	7	BLACK	WALNUT
6278	7	CEDAR	
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6288	7	HACKBERRY	
6289	5	HACKBERRY	
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6334	5	CEDAR	
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6336	10	CHINQUAPIN	OAK
6337	5	CEDAR	
6338	5	HACKBERRY	
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6426	4	SWEET	GUM
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6501	4	ASH	
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6562	15	CEDAR	
6563	4	CEDAR	
6564	10	CEDAR	
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6574	11	ASH	
6575	4	ASH	
6576	6	ASH	
6577	11	BLACK	WALNUT
6578	8	ASH	
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6580	7	ASH	

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6615	4	ASH	
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6650	4	MULBERRY	
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6652	10	CEDAR	
6653	7	CEDAR	
6654	7	BLACK	WALNUT
6655	12	ASH	
6656	6	ASH	
6657	6	ASH	
6658	15	SHUMARD	OAK
6659	4	ELM	
6660	9	CHINQUAPIN	OAK
6661	4	MULBERRY	
6662	6	OSAGE	ORANGE
6663	6	CEDAR	
6664	6	CEDAR	
6665	12	CEDAR	
6666	6	CEDAR	
6667	13	CEDAR	
6668	10	ASH	
6669	8	CEDAR	
6670	10	CEDAR	
6671	10	CEDAR	
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6718	16	CEDAR	
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6720	8	CEDAR	
6721	9	CEDAR	
6722	8	ASH	
6723	8	ELM	
6724	9	ELM	
6726	7	ELM	
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6735	12	CEDAR	
6736	9	ASH	
6737	12	ELM	
6740	9	CEDAR	
6741	9	ASH	
6742	6	ASH	
6743	8	RED	OAK
6744	7	ASH	
6745	8	RED	OAK
7221	7	OSAGE	ORANGE
7222	5	ASH	
7234	14	RED	OAK
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7392	8	ASH	
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7394	4	ELM	
7395	9	CEDAR	
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7472	6	DOGWOOD	
7473	5	REDBUD	
7474	12	CEDAR	
7475	4	DOGWOOD	
7476	19	CEDAR	
7477	7	CEDAR	
7478	10	CEDAR	
7479	4	ELM	
7480	5	DOGWOOD	
7481	5	DOGWOOD	
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7483	10	CEDAR	
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7485	14	CEDAR	
7486	7	CEDAR	
7487	17	CEDAR	
7488	6	ASH	
7489	5	DOGWOOD	
7490	14	ELM	
7491	11	CEDAR	
7492	13	ASH	
7493	12	SASSAFRAS	
7494	8	SASSAFRAS	
7668	12	CHINQUAPIN	OAK
7669	22	RED	OAK
7670	4	CEDAR	
7671	10	RED	OAK
7672	17	CHINQUAPIN	OAK
7673	13	CEDAR	
7674	9	SUGAR	MAPLE
7675	14	ASH	
7676	5	CEDAR	
7677	5	HICKORY	
7678	5	CHINQUAPIN	OAK
7679	12	RED	OAK
7680	13	ASH	
7681	7	RED	OAK
7682	9	CEDAR	
7683	18	ASH	
7684	11	RED	OAK
7685	9	CEDAR	
7686	24	RED	OAK
7687	4	CHINQUAPIN	OAK
7689	6	CHINQUAPIN	OAK
7752	5	ASH	
7753	17	ASH	
7754	14	ELM	
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7757	12	ASH	
7758	14	ASH	
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7760	6	ASH	
7761	12	ASH	
7762	13	ASH	
7763	18	ASH	
7764	9	HICKORY	
7765	12	ASH	
7766	6	DOGWOOD	
7767	14	ASH	
7768	5	DOGWOOD	
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7770	9	CEDAR	
7771	8	CEDAR	
7772	13	ELM	
7773	7	ASH	
7774	14	CEDAR	
7775	7	ASH	
7776	17	CEDAR	
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7779	18	ASH	
7780	11	CEDAR	
7781	6	ASH	
7782	7	ELM	
7783	13	RED	OAK
7784	11	RED	OAK
7785	11	CEDAR	
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7787	9	CEDAR	
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7789	11	RED	OAK
7790	5	CHINQUAPIN	OAK
7791	5	CHINQUAPIN	OAK
7792	20	RED	OAK
7793	10	RED	OAK
7794	6	ELM	
7795	9	CEDAR	
7796	7	ELM	
7797	6	CHINQUAPIN	OAK
7798	5	CHINQUAPIN	OAK
7799	14	ASH	

7800	7	CHINQUAPIN	OAK
7801	17	ASH	
7802	6	CHINQUAPIN	OAK
7803	8	CHINQUAPIN	OAK
7804	7	HICKORY	
7805	12	RED	OAK
7806	13	ASH	
7807	15	ASH	
7808	10	CEDAR	
7809	5	CHINQUAPIN	OAK
7810	5	CEDAR	
7811	10	CHINQUAPIN	OAK
7812	18	ASH	
7813	4	HICKORY	
7814	4	MULBERRY	
7815	4	MULBERRY	
7816	5	CHINQUAPIN	OAK
7817	8	CEDAR	
7818	14	RED	OAK
7819	5	MULBERRY	
7820	5	CEDAR	
7821	5	CEDAR	
7822	8	ASH	
7823	7	CHINQUAPIN	OAK
7824	4	CEDAR	
7825	6	CEDAR	
7826	4	CHINQUAPIN	OAK
7827	6	PERSIMMON	
7828	4	ASH	
7829	6	RED	OAK
7830	14	CHINQUAPIN	OAK
7831	11	CHINQUAPIN	OAK
7832	5	CHINQUAPIN	OAK
7833	5	CHINQUAPIN	OAK
7834	18	RED	OAK
7835	17	RED	OAK
7836	21	RED	OAK
7837	5	ELM	
7838	7	CEDAR	
7839	6	CEDAR	
7840	9	CEDAR	
7841	16	RED	OAK
7842	5	SHAGBARK	HICKORY
7843	4	SHAGBARK	HICKORY
7844	7	CHINQUAPIN	OAK
7845	4	ELM	
7846	6	ELM	
7847	13	CEDAR	
7848	7	CEDAR	
7849	8	ASH	
7850	4	ASH	
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7852	4	ASH	
7853	5	ASH	
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7856	5	CEDAR	
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7861	6	CEDAR	
7862	7	CEDAR	
7863	15	RED	OAK
7864	14	RED	OAK
7865	7	CEDAR	
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7867	9	CEDAR	
7868	5	CEDAR	
7869	17	ASH	
7870	6	CEDAR	
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7872	7	CEDAR	
7873	4	ELM	
8038	5	HACKBERRY	
8039	6	HACKBERRY	
8040	7	HACKBERRY	
8041	4	HACKBERRY	
8042	6	HACKBERRY	
8043	8	ELM	
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8049	5	HACKBERRY	
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8060	5	HACKBERRY	
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8082	14	CEDAR	
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8085	8	CHINQUAPIN	OAK
8086	7	ELM	
8087	15	RED	OAK
8088	11	CEDAR	
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8090	6	RED	OAK
8091	5	CEDAR	
8092	7	CEDAR	
8093	4	CHINQUAPIN	OAK
8094	13	RED	OAK
8095	6	RED	OAK
8096	9	ASH	
8097	9	CEDAR	
8099	16	RED	OAK
8100	13	CEDAR	
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8104	8	CEDAR	
8122	8	HICKORY	
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8243	11	ELM	
8244	11	CEDAR	
8245	7	ELM	
8256	11	ELM	
8258	11	CEDAR	
8259	8	DOGWOOD	
8260	6	ELM	
8434	11	CEDAR	
8435	8	HICKORY	
8438	9	CEDAR	
8439	18	ASH	
8441	5	OSTRAYA	
8442	5	ELM	
8443	7	CEDAR	
8444	15	ASH	
8445	6	CEDAR	
8446	17	CHINQUAPIN	OAK
8447	6	RED	OAK
8448	15	RED	OAK
8449	9	RED	OAK
8450	13	CEDAR	
8451	7	RED	OAK
8452	7	CEDAR	
8453	9	CEDAR	
8454	12	ASH	
8455	14	ASH	
8456	9	CEDAR	
8457	14	RED	OAK
8458	5	CHINQUAPIN	OAK
8459	6	HICKORY	
8460	14	RED	OAK
8461	19	ASH	
8462	12	CEDAR	
8463	10	RED	OAK
8464	7	RED	OAK
8465	5	CHINQUAPIN	OAK
8466	8	CEDAR	
8467	9	ASH	
8468	13	ASH	
8517	13	ELM	
8518	21	ASH	
8519	9	BLACK	LOCUST
8520	7	BLACK	LOCUST
8521	11	CEDAR	
8522	12	ELM	
8523	8	BLACK	LOCUST
8524	4	ASH	
8525	8	ELM	
8526	15	BLACK	LOCUST
8527	13	CEDAR	
8553	5	ASH	
8554	4	ASH	
8555	7	BLACK	LOCUST
8556	8	BLACK	LOCUST
8557	9	HACKBERRY	
8558	8	BLACK	LOCUST
8559	8	BLACK	LOCUST
8560	5	ASH	
8561	12	ASH	
8562	7	BLACK	LOCUST
8563	5	BLACK	LOCUST
8564	12	CEDAR	
8565	12	CEDAR	
8566	5	ASH	

8567	7	ASH	
8568	17	CEDAR	
8569	12	ASH	
8570	7	CEDAR	
8571	19	ASH	
8572	7	CEDAR	
8573	11	CEDAR	
8574	11	PERSIMMON	
8575	12	CEDAR	
8586	13	ASH	
8587	12	BLACK	LOCUST
8588	6	REDBUD	
8589	11	CEDAR	
8590	6	ELM	
8591	13	CEDAR	
8592	12	CEDAR	
8593	9	CEDAR	
8594	13	CEDAR	
8595	5	CEDAR	
8596	7	CEDAR	
8597	10	ASH	
8598	7	CEDAR	
8599	12	CEDAR	
8600	9	CEDAR	
8601	12	HACKBERRY	
8602	10	CHINQUAPIN	OAK
8603	11	ASH	
8604	13	SUGAR	MAPLE
8605	10	RED	OAK
8606	7	CEDAR	
8607	14	ELM	
8608	10	CEDAR	
8609	12	ASH	
8610	13	ASH	
8611	9	CEDAR	
8612	19	CEDAR	
8613	11	CHINQUAPIN	OAK
8614	5	HACKBERRY	
8615	7	HACKBERRY	
8616	6	HACKBERRY	
8617	12	RED	OAK
8618	5	CHINQUAPIN	OAK
8619	15	ELM	
8620	7	CHINQUAPIN	OAK
8621	16	ELM	
8622	5	CHINQUAPIN	OAK
8623	14	RED	OAK
8624	6	POST	OAK
8625	10	RED	OAK
8626	10	CHINQUAPIN	OAK
8627	4	OSTRAYA	
8628	10	CHINQUAPIN	OAK
8629	8	HACKBERRY	
8630	12	CEDAR	
8631	7	ASH	
8632	16	RED	OAK
8633	11	RED	OAK
8634	7	ASH	
8635	16	RED	OAK
8636	7	CHINQUAPIN	OAK
8637	8	RED	OAK
8638	18	RED	OAK
8639	9	RED	OAK
8640	13	CHINQUAPIN	OAK
8641	10	ASH	
8642	6	RED	OAK
8643	6	PERSIMMON	
8644	5	PERSIMMON	
8645	5	PERSIMMON	
8646	9	RED	OAK
8647	4	CHINQUAPIN	OAK
8648	4	CHINQUAPIN	OAK
8649	7	ASH	
8650	6	ASH	
8651	4	ASH	
8652	7	ASH	
8653	4	ELM	
8654	5	ASH	
8655	4	ASH	
8656	11	ASH	
8657	5	ASH	
8658	7	ASH	
8659	11	RED	OAK
8660	5	CHINQUAPIN	OAK
8661	6	CEDAR	
8662	10	ASH	
8663	4	ELM	
8664	6	ASH	
8665	4	ASH	
8666	7	ASH	
8667	8	ASH	
8668	6	ASH	
8669	7	ASH	
8670	4	REDBUD	

8671	10	RED	OAK
8672	9	RED	OAK
8673	9	RED	OAK
8674	5	RED	OAK
8675	5	ASH	
8676	16	RED	OAK
8677	5	ASH	
8678	9	ASH	
8679	6	ELM	
9101	6	CHINQUAPIN	OAK
9102	13	SHUMARD	OAK
9103	6	SUGAR	MAPLE
9104	12	SUGAR	MAPLE
9105	7	ASH	
9110	9	ASH	
9111	13	ASH	
9138	6	SUGAR	MAPLE
9144	10	ASH	
9145	7	ELM	
9146	8	CEDAR	
9147	10	ASH	
9221	7	ASH	
9222	7	CEDAR	
9223	9	CEDAR	
9224	7	CEDAR	
9225	8	ASH	
9230	6	CEDAR	
9231	6	CEDAR	
9232	8	ASH	
9233	7	CEDAR	
9234	6	CEDAR	
9235	9	ASH	
9236	6	CEDAR	
9237	10	ASH	
9238	11	ASH	
9239	7	CEDAR	
9240	16	ASH	
9241	7	CEDAR	
9242	8	CEDAR	
9243	10	CHINQUAPIN	OAK
9244	17	ASH	
9319	4	CEDAR	
9320	18	CEDAR	
9708	13	ASH	
9709	9	ELM	
9710	4	DOGWOOD	
9711	13	CEDAR	
9712	4	ELM	
9713	13	ELM	
9714	6	ASH	
9715	5	DOGWOOD	
9716	5	DOGWOOD	
9717	5	DOGWOOD	
9718	4	DOGWOOD	
9719	9	ASH	
9720	6	ASH	
9721	5	ASH	
9722	6	ASH	
9723	7	ASH	
9724	6	ASH	
9725	6	ASH	
9726	18	ASH	
9727	5	CEDAR	
9728	7	ELM	
9729	6	ELM	
9730	5	CEDAR	
9731	7	ELM	
9732	7	CEDAR	
9733	9	PERSIMMON	
9734	7	ASH	
9735	9	ELM	
9736	8	ELM	
9737	5	ASH	
9738	6	ELM	
9739	4	ELM	
9740	5	ELM	
9741	8	ASH	
9742	7	HACKBERRY	
9743	10	ELM	
9744	21	ASH	
9745	5	ELM	
9746	8	CEDAR	
9747	4	CEDAR	
10055	32	RED	OAK
10129	6	CEDAR	
10131	5	CEDAR	
10132	8	ELM	
10133	12	SUGAR	MAPLE
10134	9	SUGAR	MAPLE
10135	18	CEDAR	
10136	12	SUGAR	MAPLE
10141	4	OSTRAYA	
10142	5	ELM	
10143	12	SHAGBARK	HICKORY

10144	13	CEDAR	
10145	16	CHINQUAPIN	OAK
10146	19	RED	OAK
10147	6	CEDAR	
10148	22	RED	OAK
10149	18	CEDAR	
10150	5	CHINQUAPIN	OAK
10151	7	CEDAR	
10152	5	RED	OAK
10153	8	RED	OAK
10154	8	OSAGE	ORANGE
10155	10	SHAGBARK	HICKORY
10156	5	RED	OAK
10157	7	CHINQUAPIN	OAK
10158	7	CHINQUAPIN	OAK
10159	10	SHAGBARK	HICKORY
10160	10	SHAGBARK	HICKORY
10161	11	SHAGBARK	HICKORY
10162	9	SHAGBARK	HICKORY
10163	8	SHAGBARK	HICKORY
10164	4	OSTRAYA	
10165	5	CEDAR	
10166	4	CEDAR	
10167	5	CEDAR	
10168	5	CEDAR	
10169	4	CEDAR	
10170	11	CEDAR	
10171	8	CHINQUAPIN	OAK
10172	5	CHINQUAPIN	OAK
10173	5	CEDAR	
10174	4	ELM	
10175	4	CHINQUAPIN	OAK
10176	5	ELM	
10177	4	ASH	
10178	4	PERSIMMON	
10179	5	ASH	
10182	9	CHINQUAPIN	OAK
10183	17	CEDAR	
10185	5	SHAGBARK	HICKORY
10186	8	CEDAR	
10187	7	ELM	
10188	4	ASH	
10189	11	CHINQUAPIN	OAK
10190	9	SHAGBARK	HICKORY
10191	10	SHAGBARK	HICKORY
10192	15	SHAGBARK	HICKORY
10193	6	CEDAR	
10194	13	CEDAR	
10195	7	RED	OAK
10196	13	SHAGBARK	HICKORY
10197	10	CHINQUAPIN	OAK
10198	6	ELM	
10199	8	CEDAR	
10200	16	ASH	
10201	10	SHAGBARK	HICKORY
10202	13	SHAGBARK	HICKORY
10203	6	CEDAR	
10204	6	OSAGE	ORANGE
10205	11	CHINQUAPIN	OAK
10206	7	CEDAR	
10207	14	RED	OAK
10208	11	SUGAR	MAPLE
10209	14	ASH	
10210	5	CHINQUAPIN	OAK
10211	7	CHINQUAPIN	OAK
10212	25	RED	OAK
10213	22	RED	OAK
10214	10	SHAGBARK	HICKORY
10215	13	CEDAR	
10216	13	CEDAR	
10217	6	CEDAR	
10218	17	ASH	
10219	6	CEDAR	
10220	17	RED	OAK
10221	8	ASH	
10222	4	CEDAR	
10223	4	CEDAR	
10224	21	RED	OAK
10225	5	SUGAR	MAPLE
10226	4	ELM	
10227	12	SUGAR	MAPLE
10228	12	ASH	
10229	18	RED	OAK
10230	8	SUGAR	MAPLE
10231	14	RED	OAK
10232	9	SUGAR	MAPLE
10233	23	RED	OAK
10234	15	ASH	
10235	4	SUGAR	MAPLE
10236	12	SUGAR	MAPLE
10237	18	RED	OAK
10281	4	ASH	
10282	7	ASH	
10283	14	RED	OAK

10284	14	RED	OAK
10286	16	RED	OAK
10287	7	CHINQUAPIN	OAK
10288	10	CHINQUAPIN	OAK
10289	7	CEDAR	
10290	4	SUGAR	MAPLE
10291	14	CHINQUAPIN	OAK
10292	15	RED	OAK
10293	7	RED	OAK
10294	4	CEDAR	
10295	4	DOGWOOD	
10296	6	DOGWOOD	
10297	6	CEDAR	
10298	4	ELM	
10299	8	ASH	
10300	5	ELM	
10301	5	ELM	
10302	11	ASH	
10303	5	BLACK	LOCUST
10304	11	SUGAR	MAPLE
10305	18	ASH	
10306	9	CEDAR	
10307	7	DOGWOOD	
10308	7	ELM	
10309	5	BLACK	LOCUST
10310	11	CEDAR	
10311	20	ASH	
10312	6	SUGAR	MAPLE
10313	4	DOGWOOD	
10314	4	DOGWOOD	
10315	17	ASH	
10316	18	ASH	
10317	6	ASH	
10318	14	SUGAR	MAPLE
10319	5	SUGAR	MAPLE
10320	4	ELM	
10321	4	ELM	
10322	5	ASH	
10323	11	SASSAFRAS	
10324	8	SASSAFRAS	
10325	9	ASH	
10326	6	ASH	
10327	4	DOGWOOD	
10328	5	ASH	
10329	8	PERSIMMON	
10330	6	ASH	
10331	4	ELM	
10332	9	ASH	
10333	7	SASSAFRAS	
10661	7	CHINQUAPIN	OAK
10662	8	SHUMARD	OAK
10663	13	SHUMARD	OAK
10664	7	CHINQUAPIN	OAK
10665	4	ASH	
10666	7	CHINQUAPIN	OAK
10667	11	ASH	
10668	7	CHINQUAPIN	OAK
10669	16	SHUMARD	OAK
10670	11	ASH	
10671	14	CHINQUAPIN	OAK
10672	10	CHINQUAPIN	OAK
10673	5	CHINQUAPIN	OAK
10674	11	SHUMARD	OAK
10675	11	ASH	
10676	15	SHUMARD	OAK
10677	10	CHINQUAPIN	OAK
10678	7	SHUMARD	OAK
10679	9	SHUMARD	OAK
10680	29	SHAGBARK	HICKORY
10681	7	CEDAR	
10682	5	CEDAR	
10683	5	CEDAR	
10684	8	SHUMARD	OAK
10685	5	ASH	
10686	6	CEDAR	
10687	8	SHUMARD	OAK
10688	9	CEDAR	
10689	9	CEDAR	
10690	7	SHUMARD	OAK
10691	4	ASH	
10692	7	ASH	
10693	12	CEDAR	
10694	13	CEDAR	
10695	4	ASH	
10696	6	CEDAR	
10697	9	CHINQUAPIN	OAK
10698	9	SHUMARD	OAK
10699	6	CHINQUAPIN	OAK
10700	15	ASH	
10701	14	SHUMARD	OAK
10702	7	SHUMARD	OAK
10703	11	SHUMARD	OAK
10704	11	SHUMARD	OAK
10705	4	ASH	

10706	14	CHINQUAPIN	OAK
10707	9	ASH	
10708	6	ASH	
10709	12	SHUMARD	OAK
10710	7	CHINQUAPIN	OAK
10711	13	SHUMARD	OAK
10712	4	SHUMARD	OAK
10713	7	CEDAR	
10714	16	SHUMARD	OAK
10715	7	ASH	
10716	4	ASH	
10717	14	SHUMARD	OAK
10718	10	CHINQUAPIN	OAK
10719	8	ASH	
10720	10	CHINQUAPIN	OAK
10864	14	SUGAR	MAPLE
10865	5	DOGWOOD	
10866	8	PERSIMMON	
10867	5	DOGWOOD	
10868	6	DOGWOOD	
10869	15	CEDAR	
10870	13	ASH	
10871	12	CEDAR	
10872	4	ELM	
10873	9	SUGAR	MAPLE
10874	13	ELM	
10875	13	CEDAR	
10876	12	ASH	
10877	12	ASH	
10878	10	ASH	
10879	23	RED	OAK
10880	15	ASH	
10881	10	SASSAFRAS	
10882	11	SASSAFRAS	
10883	7	SASSAFRAS	
10884	5	ELM	
10885	7	ELM	
10886	6	ASH	
10887	8	ASH	
10888	4	ELM	
10889	5	DOGWOOD	
10890	6	ELM	
10891	9	ELM	
10892	6	ASH	
10893	12	ASH	
10894	17	WHITE	OAK
10895	10	ASH	
11189	13	RED	OAK
11190	4	CEDAR	
11191	6	HICKORY	
11192	24	RED	OAK
11193	4	ASH	
11194	6	CEDAR	
11195	13	RED	OAK
11196	6	CEDAR	
11197	7	ASH	
11198	7	CEDAR	
11199	8	CEDAR	
11200	7	CEDAR	
11201	4	ASH	
11202	5	ASH	
11203	6	ELM	
11204	13	RED	OAK
11205	4	RED	OAK
11206	8	RED	OAK
11207	7	ASH	
11208	4	ASH	
11209	5	ELM	
11210	5	ELM	
11211	8	WHITE	OAK
11212	9	CEDAR	
11213	7	ASH	
11214	7	ASH	
11215	9	ASH	
11216	4	RED	OAK
11217	10	CEDAR	
11218	9	ASH	
11219	14	RED	OAK
11220	9	CEDAR	
11221	4	ASH	
11222	8	CEDAR	
11223	8	CEDAR	
11224	10	CEDAR	
11225	7	CEDAR	
11226	9	CEDAR	
11227	8	RED	OAK
11228	9	CEDAR	
11229	4	ASH	
11230	5	WHITE	OAK
11231	10	WHITE	OAK
11232	5	WHITE	OAK
11233	6	HACKBERRY	
11234	15	RED	OAK
11235	12	WHITE	OAK

11236	8	ASH	
11237	8	CEDAR	
11238	7	WHITE	OAK
11239	17	RED	OAK
11240	4	HICKORY	
11241	6	CEDAR	
11242	8	HICKORY	
11243	5	WHITE	OAK
11244	13	RED	OAK
11245	5	SUGAR	MAPLE
11246	5	HICKORY	
11247	5	WHITE	OAK
11248	21	WHITE	OAK
11249	6	WHITE	OAK
11250	12	RED	OAK
11251	4	ASH	
11252	5	ASH	
11253	11	RED	OAK
11254	6	ASH	
11255	6	ASH	
11256	6	ASH	
11257	20	RED	OAK
11258	7	CEDAR	
11259	4	WHITE	OAK
11497	4	ELM	
11498	4	ELM	
11499	7	RED	OAK
11500	9	ASH	
11501	11	RED	OAK
11502	4	ELM	
11503	5	ASH	
11504	17	RED	OAK
11505	4	CHINQUAPIN	OAK
11506	10	CEDAR	
11507	11	RED	OAK
11508	17	RED	OAK
11509	4	CHINQUAPIN	OAK
11510	8	ASH	
11511	7	ASH	
11512	4	BLACK	LOCUST
11513	6	CHINQUAPIN	OAK
11514	9	ASH	
11515	11	CEDAR	
11516	11	CEDAR	
11517	4	ELM	
11518	6	HICKORY	
11519	5	ELM	
11520	7	ASH	
11521	8	CEDAR	
11522	9	ASH	
11523	5	ELM	
11524	4	ELM	
11525	6	ASH	
11526	7	ASH	
11527	5	ELM	
11528	4	ELM	
11529	5	ASH	
11539	12	CEDAR	
11540	6	ASH	
11541	6	HACKBERRY	
11542	4	ELM	
11543	4	ELM	
11544	5	ASH	
11545	16	CEDAR	
11546	10	CEDAR	
11547	7	CHINQUAPIN	OAK
11548	9	CEDAR	
11549	9	CEDAR	
11836	10	RED	OAK
11837	5	ASH	
11842	7	CEDAR	
11843	5	ASH	
11844	14	RED	OAK
11846	5	CEDAR	
11847	6	CEDAR	
11848	6	ASH	
11849	11	RED	OAK
11850	11	CHINQUAPIN	OAK
11851	8	RED	OAK
11852	7	ASH	
11853	8	ASH	
11854	8	CEDAR	
11855	9	ASH	
11856	4	ASH	
11857	5	CHINQUAPIN	OAK
11858	8	CEDAR	
11859	5	ASH	
11860	5	CEDAR	
11861	4	ASH	
11862	4	ASH	
11863	9	ASH	
11864	10	ASH	
11865	10	CEDAR	
11866	4	CEDAR	

11867	23	HICKORY	
11868	6	CEDAR	
11869	4	CEDAR	
11870	7	ASH	
11871	4	ASH	
11872	6	ASH	
11873	4	CEDAR	
11874	4	CEDAR	
11875	5	CEDAR	
11876	9	ASH	
11877	5	ASH	
11878	5	ASH	
11879	5	ASH	
11880	8	ASH	
11881	7	ASH	
11882	6	ASH	
11883	7	RED	OAK
11884	6	ASH	
11885	5	CEDAR	
11886	7	CEDAR	
11887	9	ASH	
11888	7	CEDAR	
11889	6	CEDAR	
11890	5	CEDAR	
11891	7	CEDAR	
11892	9	CEDAR	
11893	5	CEDAR	
11894	7	ASH	
11895	16	RED	OAK
11896	8	CEDAR	
11897	5	ASH	
11898	9	ASH	
11899	8	CEDAR	
11900	15	CHINQUAPIN	OAK
11901	15	RED	OAK
11902	11	RED	OAK
11903	22	RED	OAK
11904	4	ASH	
11905	4	CHINQUAPIN	OAK
11906	6	ASH	
11907	9	ASH	
11908	4	ASH	
11909	4	RED	OAK
11910	20	BLACK	WALNUT
11911	6	RED	OAK
11912	8	CEDAR	
11913	5	CEDAR	
11914	8	ASH	
11915	9	ASH	
11916	4	CEDAR	
11917	21	RED	OAK
11918	4	ASH	
11919	8	CEDAR	
11920	4	CEDAR	
11921	13	RED	OAK
11922	4	CHINQUAPIN	OAK
11923	11	CHINQUAPIN	OAK
11924	13	RED	OAK
11925	4	OSTRAYA	
11926	7	CHINQUAPIN	OAK
11927	10	RED	OAK
11928	13	ELM	
11929	5	ASH	
11931	9	ASH	
11932	10	CHINQUAPIN	OAK
11933	6	CHINQUAPIN	OAK
11934	9	ASH	
12095	5	CHINQUAPIN	OAK
12096	9	CHINQUAPIN	OAK
12097	8	CEDAR	
12098	18	ASH	
12099	7	CEDAR	
12100	7	CEDAR	
12101	10	ASH	
12102	4	CHINQUAPIN	OAK
12103	8	CEDAR	
12104	4	CHINQUAPIN	OAK
12105	15	ASH	
12106	14	ASH	
12107	5	HICKORY	
12108	7	CEDAR	
12109	12	ASH	
12110	6	CHINQUAPIN	OAK
12111	7	CHINQUAPIN	OAK
12112	8	HICKORY	
12113	10	CEDAR	
12114	16	RED	OAK
12115	5	CEDAR	
12116	5	CHINQUAPIN	OAK
12117	10	RED	OAK
12118	6	CHINQUAPIN	OAK
12119	5	ELM	
12120	14	RED	OAK
12300	10	RED	OAK

12301	8	CHINQUAPIN	OAK
12302	7	CHINQUAPIN	OAK
12303	4	CHINQUAPIN	OAK
12304	7	RED	OAK
12305	10	RED	OAK
12306	4	ASH	
12307	4	ASH	
12308	6	CHINQUAPIN	OAK
12309	6	CHINQUAPIN	OAK
12310	12	RED	OAK
12311	6	ASH	
12312	10	ASH	
12313	16	CHINQUAPIN	OAK
12314	6	CHINQUAPIN	OAK
12315	22	RED	OAK
12316	5	ASH	
12317	6	CHINQUAPIN	OAK
12318	4	CHINQUAPIN	OAK
12319	8	CHINQUAPIN	OAK
12320	5	CHINQUAPIN	OAK
12321	4	ASH	
12322	15	RED	OAK
12323	15	ASH	
12324	6	CEDAR	
12325	5	CEDAR	
12326	7	ASH	
12327	8	CHINQUAPIN	OAK
12328	10	CHINQUAPIN	OAK
12329	11	RED	OAK
12330	7	CEDAR	
12331	10	CEDAR	
12332	5	CEDAR	
12333	11	RED	OAK
12334	4	ASH	
12335	8	CEDAR	
12336	16	RED	OAK
12337	7	RED	OAK
12338	6	CEDAR	
12339	7	CEDAR	
12340	15	RED	OAK
12341	6	CEDAR	
12342	14	RED	OAK
12343	7	HICKORY	
12344	14	RED	OAK
12345	14	RED	OAK
12346	4	ASH	
12418	25	ASH	
12419	23	CHINQUAPIN	OAK
12420	32	RED	OAK
12421	13	SUGAR	MAPLE
12422	19	BLACK	WALNUT
12423	29	CHINQUAPIN	OAK
12424	17	SUGAR	MAPLE
12425	13	BLACK	WALNUT
12426	33	RED	OAK
12427	31	RED	OAK
12428	37	RED	OAK
12429	12	CEDAR	
12430	12	ASH	
12431	9	ASH	
12432	8	HACKBERRY	
12433	6	ASH	
12434	4	ASH	
12435	4	ASH	
12436	5	ASH	
12437	5	HACKBERRY	
12438	4	BLACK	WALNUT
12439	10	ASH	
12440	5	REDBUD	
12441	4	CEDAR	
12442	6	CEDAR	
12443	11	ASH	
12444	8	CEDAR	
12445	4	OSTRAYA	
12446	7	CEDAR	
12447	4	CEDAR	
12448	4	OSTRAYA	
12449	8	ASH	
12450	6	CEDAR	
12451	7	ELM	
12452	6	OSTRAYA	
12453	8	ELM	
12454	5	PERSIMMON	
12455	5	ELM	
12456	4	PERSIMMON	
12457	17	ASH	
12458	17	ASH	
12459	4	CHINQUAPIN	OAK
12460	4	ASH	
12461	5	ELM	
12462	5	SASSAFRAS	
12463	6	OSTRAYA	
12464	13	SASSAFRAS	
12465	6	CEDAR	

12466	9	ELM	
12467	8	HACKBERRY	
12468	6	ELM	
12469	5	OSTRAYA	
12470	12	ASH	
12471	5	OSTRAYA	
12472	4	OSTRAYA	
12473	38	RED	OAK
12474	8	RED	OAK
12475	30	RED	OAK
12476	4	CEDAR	
12477	4	CEDAR	
12478	6	CEDAR	
12479	5	CEDAR	
12480	26	RED	OAK
12481	6	ELM	
12482	7	ELM	
12483	7	OSAGE	ORANGE
12484	4	CEDAR	
12485	9	CEDAR	
12486	11	ASH	
12487	16	ASH	
12488	11	ASH	
12489	4	CEDAR	
12490	8	CEDAR	
12491	11	RED	OAK
12492	5	ELM	
12493	6	CEDAR	
12494	11	HACKBERRY	
12495	9	HICKORY	
12496	15	RED	OAK
12497	6	CHINQUAPIN	OAK
12498	17	CHINQUAPIN	OAK
12499	11	CHINQUAPIN	OAK
12500	14	RED	OAK
12501	14	RED	OAK
12502	10	ASH	
12503	7	CHINQUAPIN	OAK
12504	12	RED	OAK
12505	9	RED	OAK
12506	11	RED	OAK
12507	14	CHINQUAPIN	OAK
12508	4	SUGAR	MAPLE
12509	10	CEDAR	
12510	15	RED	OAK
12511	14	CHINQUAPIN	OAK
12512	5	SUGAR	MAPLE
12513	4	OSTRAYA	
12514	7	ASH	
12515	8	HICKORY	
12516	13	RED	OAK
12517	4	CHINQUAPIN	OAK
12518	11	HACKBERRY	
12519	14	CEDAR	
12520	12	BLACK	WALNUT
12521	10	BLACK	WALNUT
12522	10	HICKORY	
12523	5	CEDAR	
12524	14	RED	OAK
12525	8	ASH	
12526	11	SUGAR	MAPLE
12527	7	HACKBERRY	
12528	9	ASH	
12529	7	HACKBERRY	
12530	6	HACKBERRY	
12531	7	HACKBERRY	
12532	8	HACKBERRY	
12533	16	RED	OAK
12534	10	ELM	
12535	8	PERSIMMON	
12536	8	HACKBERRY	
12537	5	HACKBERRY	
12538	17	HICKORY	
12539	8	BLACK	WALNUT
12540	12	BLACK	WALNUT
12541	27	CHINQUAPIN	OAK
12542	6	ASH	
12543	12	ASH	
12544	12	CHINQUAPIN	OAK
12545	14	RED	OAK
12546	8	ASH	
12547	5	ASH	
12548	9	ASH	
12549	15	ASH	
12550	8	HACKBERRY	
12551	4	HACKBERRY	
12552	4	HACKBERRY	
12553	4	HACKBERRY	
12554	7	HACKBERRY	
12555	4	CEDAR	
12556	16	ASH	
12557	4	HICKORY	
12558	4	CEDAR	
12559	12	CHINQUAPIN	OAK

12560	6	HACKBERRY	
12561	4	ASH	
12562	11	ASH	
12563	9	HICKORY	
12564	10	HICKORY	
12565	5	HICKORY	
12566	7	ASH	
12567	13	RED	OAK
12568	9	ASH	
12569	9	CEDAR	
12570	7	CHINQUAPIN	OAK
12571	8	ASH	
12572	6	CHINQUAPIN	OAK
12573	8	CEDAR	
12574	15	CEDAR	
12575	11	CHINQUAPIN	OAK
12576	8	CHINQUAPIN	OAK
12577	8	ASH	
12578	10	ASH	
12579	7	ASH	
12580	10	CHINQUAPIN	OAK
12581	11	CHINQUAPIN	OAK
12582	8	CHINQUAPIN	OAK
12583	10	CEDAR	
12584	18	ASH	
12585	11	CHINQUAPIN	OAK
12701	17	RED	OAK
12702	4	ASH	
12703	10	ASH	
12704	7	ASH	
12705	7	CHINQUAPIN	OAK
12706	4	CHINQUAPIN	OAK
12707	4	CHINQUAPIN	OAK
12708	11	ASH	
12709	11	CHINQUAPIN	OAK
12710	12	ASH	
12711	14	ASH	
12712	11	CHINQUAPIN	OAK
12713	14	ASH	
12714	10	CHINQUAPIN	OAK
12715	6	ASH	
12716	11	SUGAR	MAPLE
12717	15	SUGAR	MAPLE
12718	6	RED	OAK
12719	16	CHINQUAPIN	OAK
12720	15	RED	OAK
12721	18	ASH	
12722	4	OSTRAYA	
12723	5	HICKORY	
12724	4	RED	OAK
12725	8	ASH	
12726	12	ASH	
12727	26	RED	OAK
12728	12	CEDAR	
12729	18	ASH	
12730	4	BLACK	WALNUT
12731	9	CEDAR	
12732	11	HICKORY	
12733	11	HICKORY	
12734	6	CHINQUAPIN	OAK
12735	9	RED	OAK
12736	6	BLACK	WALNUT
12737	12	ASH	
12738	5	HACKBERRY	
12739	8	RED	OAK
12740	5	HICKORY	
12741	4	HACKBERRY	
12742	5	ELM	
12743	14	ASH	
12744	17	RED	OAK
12745	14	ASH	
12746	7	ASH	
12747	6	CEDAR	
12748	6	RED	OAK
12749	5	CEDAR	
12750	4	ASH	
12751	4	ELM	
12752	15	RED	OAK
12753	10	HICKORY	
12754	9	CHINQUAPIN	OAK
12755	8	CEDAR	
12756	13	CHINQUAPIN	OAK
12925	17	RED	OAK
12926	7	CEDAR	
12927	10	CEDAR	
12928	7	CHINQUAPIN	OAK
12929	12	CEDAR	
12930	13	RED	OAK
12931	4	CHINQUAPIN	OAK
12932	13	RED	OAK
12933	8	CEDAR	
12934	8	RED	OAK
12999	24	RED	OAK
13000	40	RED	OAK

13001	20	RED	OAK
13002	10	CHINQUAPIN	OAK
13003	21	CHINQUAPIN	OAK
13006	41	ASH	
13007	7	CEDAR	
13008	4	HACKBERRY	
13009	33	ELM	
13010	4	CEDAR	
13011	7	ASH	
13012	6	ASH	
13013	7	ELM	
13014	4	ELM	
13015	8	ELM	
13016	5	HACKBERRY	
13017	5	HACKBERRY	
13018	4	BLACK	LOCUST
13019	4	ELM	
13020	6	HACKBERRY	
13021	11	SUGAR	MAPLE
13034	18	RED	OAK
13035	4	CHINQUAPIN	OAK
13036	16	RED	OAK
13037	9	CHINQUAPIN	OAK
13038	16	RED	OAK
13039	6	CHINQUAPIN	OAK
13040	8	RED	OAK
13041	7	CHINQUAPIN	OAK
13042	13	RED	OAK
13043	14	RED	OAK
13044	4	SUGAR	MAPLE
13045	4	ASH	
13046	7	ASH	
13047	4	ELM	
13048	6	ASH	
13049	4	ELM	
13050	7	RED	OAK
13051	14	ASH	
13052	4	ELM	
13053	22	CHINQUAPIN	OAK
13054	7	CEDAR	
13055	4	ASH	
13056	8	CHINQUAPIN	OAK
13057	10	RED	OAK
13058	6	ASH	
13059	8	SUGAR	MAPLE
13060	7	ASH	
13061	13	CEDAR	
13062	8	ASH	
13063	10	ELM	
13064	6	ASH	
13065	9	ELM	
13066	11	ASH	
13067	4	ELM	
13068	7	ASH	
13069	11	CHINQUAPIN	OAK
13070	5	ASH	
13071	7	REDBUD	
13072	5	RED	OAK
13073	8	ASH	
13074	14	ASH	
13075	6	ELM	
13076	10	ASH	
13077	7	ASH	
13078	11	ASH	
13079	8	RED	OAK
13080	5	ASH	
13081	16	ASH	
13082	4	ASH	
13083	4	ASH	
13084	9	ELM	
13085	12	CEDAR	
13086	14	ASH	
13087	9	CEDAR	
13088	7	ASH	
13089	9	ASH	
13090	9	ASH	
13091	7	CHINQUAPIN	OAK
13092	9	ASH	
13093	10	ASH	
13094	4	ASH	
13095	11	ASH	
13096	10	CEDAR	
13097	7	ASH	
13098	7	ASH	
13099	8	ASH	
13100	8	ASH	
13101	11	ASH	
13102	5	ASH	
13103	4	ASH	
13104	7	ASH	
13105	4	ASH	
13106	10	ASH	
13107	10	CEDAR	
13108	8	CEDAR	

13109	10	CEDAR	
13110	4	ASH	
13111	8	ASH	
13112	15	ASH	
13113	14	ASH	
13114	9	CEDAR	
13115	4	OSTRAYA	
13116	25	CHINQUAPIN	OAK
13117	10	CHINQUAPIN	OAK
13118	4	CHINQUAPIN	OAK
13119	4	ASH	
13120	12	CHINQUAPIN	OAK
13172	13	ELM	
13173	8	ELM	
13174	13	CHINQUAPIN	OAK
13175	11	CEDAR	
13176	9	CHINQUAPIN	OAK
13177	7	SASSAFRAS	
13178	23	RED	OAK
13179	9	CHINQUAPIN	OAK
13180	14	CHINQUAPIN	OAK
13181	18	RED	OAK
13182	19	RED	OAK
13183	9	ASH	
13184	7	RED	OAK
13185	12	RED	OAK
13186	5	HICKORY	
13187	10	RED	OAK
13188	8	RED	OAK
13189	11	RED	OAK
13190	14	RED	OAK
13191	18	RED	OAK
13192	10	ASH	
13193	4	HICKORY	
13194	16	CHINQUAPIN	OAK
13195	8	ELM	
13196	12	ASH	
13197	10	CHINQUAPIN	OAK
13229	7	CHINQUAPIN	OAK
13230	6	RED	OAK
13231	13	RED	OAK
13232	9	CHINQUAPIN	OAK
13233	12	RED	OAK
13236	7	RED	OAK
13237	4	CHINQUAPIN	OAK
13238	17	ASH	
13239	16	ASH	
13240	15	HICKORY	
13241	6	HICKORY	
13242	19	CHINQUAPIN	OAK
13243	4	RED	OAK
13244	10	RED	OAK
13245	14	BLACK	WALNUT
13246	17	CHINQUAPIN	OAK
13250	11	ELM	
13251	4	ELM	
13252	26	CHINQUAPIN	OAK
13253	6	HICKORY	
13254	8	CHINQUAPIN	OAK
13255	8	RED	OAK
13256	10	CHINQUAPIN	OAK
13257	14	CHINQUAPIN	OAK
13258	35	RED	OAK
13259	11	SUGAR	MAPLE
13260	7	SUGAR	MAPLE
13261	10	SUGAR	MAPLE
13262	7	BLACK	WALNUT
13263	13	ELM	
13264	6	CEDAR	
13265	5	OSTRAYA	
13266	6	CEDAR	
13267	5	CEDAR	
13268	7	CEDAR	
13269	5	CEDAR	
13270	4	CEDAR	
13271	6	CEDAR	
13272	9	ELM	
13273	10	ELM	
13274	5	ELM	
13275	6	ELM	
13276	13	ELM	
13277	10	CEDAR	
13278	4	CEDAR	
13279	5	CEDAR	
13280	4	OSTRAYA	
13281	5	CEDAR	
13282	6	ELM	
13283	4	CEDAR	
13397	6	SUGAR	MAPLE
13398	4	ELM	
13399	12	CEDAR	
13400	22	ASH	
13401	15	CEDAR	
13402	7	ASH	

13403	5	ELM	
13404	4	ELM	
13405	6	ELM	
13406	10	CEDAR	
13407	10	CEDAR	
13408	13	ELM	
13409	6	CEDAR	
13410	6	CEDAR	
13411	15	CEDAR	
13412	8	CEDAR	
13413	4	SUGAR	MAPLE
13414	9	CEDAR	
13415	4	ELM	
13416	9	CEDAR	
13417	7	CEDAR	
13418	14	ASH	
13419	17	ASH	
13420	7	CEDAR	
13421	5	CEDAR	
13422	7	HACKBERRY	
13423	14	CEDAR	
13424	5	ELM	
13425	8	ELM	
13426	5	CEDAR	
13427	5	CEDAR	
13428	6	CEDAR	
13429	6	CEDAR	
13430	12	CEDAR	
13431	7	ELM	
13432	14	ASH	
13433	8	CEDAR	
13434	4	CEDAR	
13435	7	ELM	
13436	7	CEDAR	
13437	9	CEDAR	
13438	7	CEDAR	
13439	4	CEDAR	
13440	5	CEDAR	
13441	6	CEDAR	
13442	11	CEDAR	
13443	7	CEDAR	
13444	6	CEDAR	
13445	16	CEDAR	
13446	4	ELM	
13447	12	CEDAR	
13448	6	CEDAR	
13449	5	ELM	
13450	9	ELM	
13451	5	HACKBERRY	
13452	7	PERSIMMON	
13453	4	CEDAR	
13454	5	CEDAR	
13455	11	CEDAR	
13456	16	CEDAR	
13457	15	CEDAR	
13458	16	CEDAR	
13459	4	CEDAR	
13460	9	HACKBERRY	
13461	25	ASH	
13462	16	ASH	
13463	13	CEDAR	
13464	4	OSTRAYA	
13465	15	CEDAR	
13466	6	CEDAR	
13467	7	CEDAR	
13468	4	ELM	
13469	11	ELM	
13470	16	CEDAR	
13471	12	CEDAR	
13472	16	CEDAR	
13473	7	CHINQUAPIN	OAK
13474	11	CEDAR	
13475	17	CEDAR	
13476	25	ASH	
13477	20	CEDAR	
13478	8	CEDAR	
13479	10	CEDAR	
13480	10	CEDAR	
13481	14	HACKBERRY	
13482	6	ELM	
13483	7	CEDAR	
13484	9	CEDAR	
13485	6	ELM	
13486	8	CEDAR	
13487	4	HACKBERRY	
13488	6	ELM	
13489	5	CEDAR	
13490	9	CEDAR	
13491	12	CEDAR	
13492	8	CEDAR	
13493	4	CEDAR	
13494	4	HACKBERRY	
13495	9	CEDAR	
13496	4	HACKBERRY	

13497	9	CEDAR	
13498	11	CEDAR	
13499	4	CEDAR	
13500	13	CEDAR	
13501	5	CEDAR	
13502	5	CEDAR	
13503	4	CEDAR	
13504	8	BLACK	WALNUT
13505	8	CEDAR	
13506	5	CEDAR	
13507	4	CEDAR	
13508	4	CEDAR	
13509	7	CEDAR	
13510	8	CEDAR	
13511	4	HACKBERRY	
13512	4	ELM	
13513	4	CEDAR	
13514	4	ELM	
13515	4	CEDAR	
13516	5	CEDAR	
13517	5	CEDAR	
13518	8	CEDAR	
13576	4	HACKBERRY	
13577	21	CEDAR	
13578	6	CEDAR	
13579	4	CEDAR	
13580	6	ELM	
13581	16	CEDAR	
13582	11	CEDAR	
13583	15	CEDAR	
13585	4	ELM	
13742	10	ASH	
13743	21	RED	OAK
13744	22	CHINQUAPIN	OAK
13745	8	SUGAR	MAPLE
13746	10	SUGAR	MAPLE
13747	12	SUGAR	MAPLE
13748	19	RED	OAK
13749	15	RED	OAK
13750	20	ASH	
13751	6	ASH	
13752	17	RED	OAK
13753	7	CHINQUAPIN	OAK
13754	8	CEDAR	
13755	7	CHINQUAPIN	OAK
13756	10	SUGAR	MAPLE
13757	27	BLACK	WALNUT
13758	7	SUGAR	MAPLE
13759	4	SUGAR	MAPLE
13793	15	ASH	
13794	4	ASH	
13795	11	CHINQUAPIN	OAK
13797	10	RED	OAK
13798	14	RED	OAK
13799	15	ASH	
13800	7	CEDAR	
13801	9	CEDAR	
13802	4	HICKORY	
13803	10	HICKORY	
13804	10	RED	OAK
13805	11	HICKORY	
13806	7	CEDAR	
13807	6	ELM	
13808	8	CEDAR	
13809	22	RED	OAK
13810	12	CEDAR	
13811	8	SUGAR	MAPLE
13812	7	CEDAR	
13813	13	CEDAR	
13814	14	CEDAR	
13815	4	CEDAR	
13816	12	CHINQUAPIN	OAK
13817	9	CHINQUAPIN	OAK
13818	16	ASH	
13819	10	CHINQUAPIN	OAK
13820	15	RED	OAK
13821	7	ELM	
13822	12	CEDAR	
13823	13	ASH	
13824	6	ELM	
13825	8	CEDAR	
13826	6	CEDAR	
13856	4	SUGAR	MAPLE
13857	7	CHINQUAPIN	OAK
13858	11	CEDAR	
13859	21	RED	OAK
13860	4	SUGAR	MAPLE
13861	6	CHINQUAPIN	OAK
13862	4	SUGAR	MAPLE
13863	6	SUGAR	MAPLE
13864	20	ASH	
13865	10	CEDAR	
13866	7	ELM	
13867	21	RED	OAK

13875	4	OSTRAYA	
13876	6	ELM	
13877	5	ELM	
13878	6	CHINQUAPIN	OAK
13879	12	ASH	
13880	9	RED	OAK
13954	9	ASH	
13955	10	CEDAR	
13956	17	CEDAR	
13957	5	CEDAR	
13958	8	CEDAR	
13959	20	ASH	
13960	11	CEDAR	
13961	12	CEDAR	
13962	8	ELM	
13963	16	CEDAR	
13964	9	CEDAR	
13965	11	CEDAR	
13966	10	CEDAR	
13967	15	CEDAR	
13968	17	CEDAR	
13969	10	CEDAR	
13970	4	CEDAR	
13971	18	ASH	
13972	7	ELM	
13973	9	CEDAR	
13974	5	CEDAR	
13975	10	CEDAR	
13976	7	CEDAR	
13977	6	CEDAR	
13978	5	CEDAR	
13979	4	CEDAR	
13980	10	PERSIMMON	
13981	10	CEDAR	
13982	5	CEDAR	
13983	4	CEDAR	
13984	5	ASH	
13985	10	CEDAR	
13986	12	ASH	
13987	16	ASH	
13993	17	CEDAR	
13994	13	CEDAR	
13995	6	CEDAR	
13996	14	CEDAR	
13997	15	CEDAR	
13998	6	ELM	
13999	15	ELM	
14000	13	CEDAR	
14001	8	CEDAR	
14002	16	CEDAR	
14003	13	CEDAR	
14004	13	ELM	
14005	16	CEDAR	
14006	5	OSAGE	ORANGE
14007	4	OSAGE	ORANGE
14008	14	CEDAR	
14009	4	CEDAR	
14010	4	CEDAR	
14011	4	CEDAR	
14012	4	CEDAR	
14013	4	CEDAR	
14014	4	CEDAR	
14015	4	CEDAR	
14016	6	CEDAR	
14017	4	CEDAR	
14018	4	CEDAR	
14019	4	CEDAR	
14020	4	CEDAR	
14039	4	HACKBERRY	
14040	4	ELM	
14073	5	OSTRAYA	
14074	4	OSTRAYA	
14075	15	CEDAR	
14076	13	CEDAR	
14077	14	CEDAR	
14078	20	CEDAR	
14094	13	CEDAR	
14185	9	ASH	
14187	5	ELM	
14188	9	ELM	
14189	4	OSTRAYA	
14190	4	CEDAR	
14191	16	RED	OAK
14192	13	RED	OAK
14193	16	ASH	
14194	14	RED	OAK
14195	7	CEDAR	
14196	16	RED	OAK
14197	10	SUGAR	MAPLE
14198	7	SUGAR	MAPLE
14199	19	ASH	
14200	7	CEDAR	
14201	5	ELM	
14202	7	CEDAR	

14203	5	CEDAR	
14204	11	HICKORY	
14205	6	SUGAR	MAPLE
14206	9	BLACK	WALNUT
14207	6	CEDAR	
14208	11	SUGAR	MAPLE
14209	7	CEDAR	
14210	9	ELM	
14211	4	CEDAR	
14212	8	SUGAR	MAPLE
14213	5	SUGAR	MAPLE
14214	4	CHINQUAPIN	OAK
14215	22	RED	OAK
14216	11	CHINQUAPIN	OAK
14217	12	RED	OAK
14449	7	ASH	
14450	9	CEDAR	
14451	14	CHINQUAPIN	OAK
14452	7	ASH	
14453	8	ASH	
14454	7	CEDAR	
14455	12	ASH	
14456	7	CEDAR	
14457	11	ASH	
14458	6	CEDAR	
14459	9	CEDAR	
14460	5	CEDAR	
14461	8	CEDAR	
14462	9	CEDAR	
14463	4	ASH	
14464	4	ASH	
14465	11	CEDAR	
14466	6	ASH	
14467	9	CEDAR	
14468	15	CEDAR	
14469	15	ASH	
14470	6	ASH	
14471	30	RED	OAK
14472	6	SUGAR	MAPLE
14473	9	SUGAR	MAPLE
14474	5	CEDAR	
14475	8	ASH	
14476	4	OSTRAYA	
14477	11	CEDAR	
14478	14	CEDAR	
14479	16	ASH	
14480	5	CEDAR	
14481	13	ASH	
14482	6	CEDAR	
14483	8	CEDAR	
14484	14	RED	OAK
14485	4	OSTRAYA	
14486	8	ASH	
14487	14	CEDAR	
14488	10	CEDAR	
14489	8	HICKORY	
14490	4	OSTRAYA	
14491	12	CEDAR	
14492	9	ASH	
14493	19	CEDAR	
14494	9	CEDAR	
14495	10	CEDAR	
14496	6	CHINQUAPIN	OAK
14497	7	CEDAR	
14498	21	ASH	
14499	8	CEDAR	
14500	6	ELM	
14501	8	ASH	
14502	8	ASH	
14503	4	SUGAR	MAPLE
14504	12	CHINQUAPIN	OAK
14505	17	RED	OAK
14506	10	CEDAR	
14507	4	SUGAR	MAPLE
14508	18	CHINQUAPIN	OAK
14509	4	OSAGE	ORANGE
14510	5	ELM	
14511	12	CHINQUAPIN	OAK
14512	7	CHINQUAPIN	OAK
14513	9	PERSIMMON	
14514	6	SUGAR	MAPLE
14515	10	SUGAR	MAPLE
14516	13	BLACK	WALNUT
14517	7	ASH	
14518	4	SUGAR	MAPLE
14519	6	CEDAR	
14520	11	CHINQUAPIN	OAK
14521	6	CHINQUAPIN	OAK
14522	11	ASH	
14523	9	CHINQUAPIN	OAK
14524	10	CEDAR	
14525	7	SUGAR	MAPLE
14526	11	ASH	
14527	7	SUGAR	MAPLE

14528	16	HICKORY	
14529	11	CHINQUAPIN	OAK
14530	6	SUGAR	MAPLE
14531	14	CHINQUAPIN	OAK
14532	13	CHINQUAPIN	OAK
14533	16	CHINQUAPIN	OAK
14534	7	CEDAR	
14535	7	CEDAR	
14536	13	CHINQUAPIN	OAK
14537	8	ASH	
14538	15	CHINQUAPIN	OAK
14540	8	HACKBERRY	
14642	4	CEDAR	
14643	4	CEDAR	
14644	8	CHINQUAPIN	OAK
14645	11	ELM	
14654	4	CEDAR	
14655	7	RED	OAK
14656	4	CHINQUAPIN	OAK
14657	6	CEDAR	
14658	6	HICKORY	
14659	12	ELM	
14660	4	CEDAR	
14661	4	RED	OAK
14662	4	CEDAR	
14663	4	CEDAR	
14664	4	HICKORY	
14665	20	HICKORY	
14666	6	CEDAR	
14667	8	CEDAR	
14668	11	ASH	
14669	6	RED	OAK
14670	5	CEDAR	
14671	13	CEDAR	
14672	5	CEDAR	
14673	19	CEDAR	
14674	4	ASH	
14675	6	CEDAR	
14676	9	HICKORY	
14677	11	HACKBERRY	
14678	7	ASH	
14679	6	ASH	
14680	4	CEDAR	
14681	4	CEDAR	
14682	18	RED	OAK
14683	20	RED	OAK
14684	4	CEDAR	
14685	4	ELM	
14686	5	ASH	
14687	6	CEDAR	
14688	8	CHINQUAPIN	OAK
14689	6	HICKORY	
14690	9	HICKORY	
14691	9	BLACK	WALNUT
14692	13	RED	OAK
14693	12	RED	OAK
14694	19	CEDAR	
14695	6	ASH	
14696	11	CEDAR	
14697	11	CHINQUAPIN	OAK
14698	9	CEDAR	
14699	6	ELM	
14700	4	CEDAR	
14701	7	HACKBERRY	
14702	7	ASH	
14703	9	CEDAR	
14704	4	ASH	
14705	11	ASH	
14706	9	ASH	
14707	6	CHINQUAPIN	OAK
14708	8	ASH	
14709	5	CHINQUAPIN	OAK
14710	4	CHINQUAPIN	OAK
14711	7	ELM	
14712	8	ASH	
14713	5	CHINQUAPIN	OAK
14714	6	CHINQUAPIN	OAK
14715	8	CEDAR	
14716	19	CEDAR	
14717	5	RED	OAK
14718	14	CEDAR	
14719	8	ASH	
14720	5	CEDAR	
14721	4	CEDAR	
14722	9	CHINQUAPIN	OAK
14723	16	ASH	
14724	4	OSTRAYA	
14725	4	OSTRAYA	
14726	10	CEDAR	
14727	11	ASH	
14728	9	CHINQUAPIN	OAK
14729	14	RED	OAK
14730	14	RED	OAK
14731	10	ASH	

14733	8	CEDAR	
14760	8	BLACK	WALNUT
14761	13	HICKORY	
14762	19	RED	OAK
14763	10	SUGAR	MAPLE
14764	15	RED	OAK
14765	15	ASH	
14766	11	RED	OAK
14767	16	RED	OAK
14768	14	ASH	
14769	21	RED	OAK
14770	14	RED	OAK
14771	9	SUGAR	MAPLE
14772	4	OSTRAYA	
14773	10	SUGAR	MAPLE
14774	19	CHINQUAPIN	OAK
14775	12	SUGAR	MAPLE
14776	10	ASH	
14777	6	CEDAR	
14778	4	CEDAR	
14779	10	CHINQUAPIN	OAK
14780	10	CHINQUAPIN	OAK
14781	27	RED	OAK
14782	7	ASH	
14783	4	OSTRAYA	
14784	18	ASH	
14785	6	CHINQUAPIN	OAK
14786	9	CHINQUAPIN	OAK
14787	12	CHINQUAPIN	OAK
14788	23	RED	OAK
14789	9	CEDAR	
14790	15	ASH	
14791	15	RED	OAK
14792	5	OSTRAYA	
14793	9	SUGAR	MAPLE
14794	22	RED	OAK
14795	13	CHINQUAPIN	OAK
14796	13	RED	OAK
14797	12	RED	OAK
14798	6	ASH	
14875	6	RED	OAK
14876	4	CEDAR	
14877	5	CEDAR	
14878	4	RED	OAK
14879	5	ASH	
14880	4	RED	OAK
14881	7	ASH	
14882	4	ASH	
14883	4	ASH	
14884	5	ASH	
14885	7	ELM	
14886	4	ELM	
14887	4	ELM	
14888	4	ELM	
14889	4	PERSIMMON	
14890	4	ASH	
14925	4	OSTRAYA	
14926	5	ELM	
14927	4	OSTRAYA	
14928	9	CEDAR	
14929	8	CEDAR	
14930	4	RED	OAK
14931	9	ELM	
14932	9	SUGAR	MAPLE
14933	5	OSTRAYA	
14934	4	OSTRAYA	
14935	5	RED	OAK
14936	4	OSTRAYA	
14937	14	CEDAR	
14938	8	RED	OAK
14939	5	RED	OAK
14940	4	RED	OAK
14941	5	CEDAR	
14942	4	ELM	
14943	13	CEDAR	
14944	11	SASSAFRAS	
14945	9	SASSAFRAS	
14946	6	CEDAR	
14947	15	CEDAR	
14948	4	CEDAR	
14949	11	SASSAFRAS	
14950	11	SASSAFRAS	
14951	12	SASSAFRAS	
14952	5	DOGWOOD	
14953	10	SASSAFRAS	
14954	10	CEDAR	
14955	5	ELM	
14956	16	CEDAR	
14957	16	SASSAFRAS	
14958	14	SASSAFRAS	
14959	7	ELM	
14960	12	CEDAR	
14961	6	ELM	
14962	9	CEDAR	

14963	10	CEDAR	
14964	16	CEDAR	
14965	11	CEDAR	
14966	4	CEDAR	
14967	4	ELM	
14968	4	CEDAR	
14969	4	CEDAR	
14970	6	CEDAR	
14971	4	CEDAR	
14972	5	CEDAR	
14973	8	CEDAR	
14974	6	CEDAR	
14975	8	CEDAR	
14976	5	CEDAR	
14977	13	CEDAR	
14978	12	CEDAR	
14979	5	CEDAR	
14980	4	CEDAR	
14981	4	ELM	
14982	11	CEDAR	
14983	9	CEDAR	
14984	14	CEDAR	
14985	4	CEDAR	
14986	4	CEDAR	
14987	5	CEDAR	
14988	10	CEDAR	
14989	12	ASH	
14990	9	CEDAR	
14991	6	CEDAR	
14992	16	CEDAR	
14993	10	SASSAFRAS	
14994	4	ELM	
14995	11	SASSAFRAS	
14996	7	CEDAR	
14997	18	CEDAR	
14998	4	CEDAR	
14999	4	CEDAR	
15000	4	CEDAR	
15001	4	SASSAFRAS	
15002	4	CEDAR	
15003	4	ELM	
15004	17	CEDAR	
15005	24	CEDAR	
15006	14	CEDAR	
15007	7	ELM	
15008	9	ELM	
15009	9	HACKBERRY	
15010	7	HACKBERRY	
15011	10	ELM	
15012	13	ELM	
15013	18	ASH	
15014	11	HACKBERRY	
15015	18	CEDAR	
15016	8	CEDAR	
15017	10	ELM	
15018	4	ELM	
15019	8	ELM	
15020	9	CEDAR	
15021	12	CEDAR	
15022	7	CEDAR	
15023	18	CEDAR	
15024	8	ELM	
15025	4	ELM	
15026	18	ASH	
15027	14	ELM	
15028	13	CEDAR	
15029	12	CEDAR	
15030	13	CEDAR	
15031	15	CEDAR	
15032	11	ELM	
15033	22	CEDAR	
15034	6	CEDAR	
15035	20	CEDAR	
15036	11	OSAGE	ORANGE
15037	4	CEDAR	
15038	14	BLACK	CHERRY
15039	6	BLACK	CHERRY
15040	4	CEDAR	
15041	4	CEDAR	
15042	4	CEDAR	
15043	4	CEDAR	
15044	4	CEDAR	
15045	4	CEDAR	
15046	4	CEDAR	
15047	4	CEDAR	
15048	5	CEDAR	
15049	4	CEDAR	
15050	5	CEDAR	
15051	5	CEDAR	
15052	5	CEDAR	
15053	5	CEDAR	
15054	4	CEDAR	
15055	4	CEDAR	
15056	4	CEDAR	

15057	6	CEDAR	
15058	5	CEDAR	
15059	5	CEDAR	
15060	4	CEDAR	
15061	4	CEDAR	
15062	13	CHINQUAPIN	OAK
15087	6	CEDAR	
15088	4	PERSIMMON	
15089	10	PERSIMMON	
15090	8	CEDAR	
15091	7	CEDAR	
15092	8	CEDAR	
15136	11	CEDAR	
15137	6	CEDAR	
15138	4	CEDAR	
15139	4	CEDAR	
15140	4	CEDAR	
15141	8	CEDAR	
15142	18	CEDAR	
15143	12	CEDAR	
15144	7	ASH	
15145	7	CEDAR	
15146	15	CEDAR	
15147	9	CEDAR	
15148	4	OSTRAYA	
15149	17	SUGAR	MAPLE
15150	20	RED	OAK
15151	9	CEDAR	
15152	4	OSTRAYA	
15153	9	RED	OAK
15154	5	CHINQUAPIN	OAK
15155	12	HICKORY	
15156	7	CEDAR	
15168	5	OSTRAYA	
15169	5	OSTRAYA	
15170	11	CEDAR	
15171	4	OSTRAYA	
15172	15	CEDAR	
15176	19	CEDAR	
15177	4	SUGAR	MAPLE
15178	14	CEDAR	
15179	9	CEDAR	
15180	6	CEDAR	
15181	9	CEDAR	
15182	4	CEDAR	
15183	9	CEDAR	
15307	10	ASH	
15308	9	ASH	
15309	7	ASH	
15310	7	CEDAR	
15311	8	CEDAR	
15312	13	HICKORY	
15313	11	ASH	
15314	15	ASH	
15315	7	CHINQUAPIN	OAK
15316	5	CHINQUAPIN	OAK
15317	8	CHINQUAPIN	OAK
15318	9	RED	OAK
15319	17	RED	OAK
15320	8	RED	OAK
15321	11	RED	OAK
15322	6	OSTRAYA	
15323	5	ELM	
15324	20	RED	OAK
15325	13	SUGAR	MAPLE
15326	18	RED	OAK
15327	18	ASH	
15328	9	RED	OAK
15329	23	RED	OAK
15330	18	ASH	
15331	10	SUGAR	MAPLE
15332	9	SUGAR	MAPLE
15333	12	CHINQUAPIN	OAK
15334	13	RED	OAK
15335	17	RED	OAK
15336	13	RED	OAK
15337	16	RED	OAK
15338	15	RED	OAK
15339	5	ELM	
15340	4	SUGAR	MAPLE
15341	23	RED	OAK
15342	7	ELM	
15343	5	ELM	
15344	14	RED	OAK
15345	20	RED	OAK
15347	7	ELM	
15348	7	CHINQUAPIN	OAK
15349	6	ASH	
15350	11	RED	OAK
15351	6	CHINQUAPIN	OAK
15596	4	ELM	
15597	9	ASH	
15598	8	CHINQUAPIN	OAK
15599	4	ELM	

15600	8	ELM	
15601	5	ELM	
15602	7	CEDAR	
15603	8	ELM	
15604	8	CEDAR	
15605	10	CEDAR	
15606	7	CEDAR	
15607	7	CEDAR	
15608	6	CEDAR	
15609	8	CEDAR	
15610	12	CEDAR	
15611	7	ELM	
15612	8	CEDAR	
15613	10	CEDAR	
15614	15	ASH	
15615	4	CEDAR	
15616	5	CEDAR	
15617	4	ELM	
15618	5	CEDAR	
15619	7	CEDAR	
15620	8	CEDAR	
15621	7	CEDAR	
15622	10	CEDAR	
15623	11	CHINQUAPIN	OAK
15624	7	CHINQUAPIN	OAK
15625	7	CHINQUAPIN	OAK
15626	7	CHINQUAPIN	OAK
15627	6	ELM	
15628	14	ASH	
15629	19	RED	OAK
15630	8	ASH	
15631	9	SUGAR	MAPLE
15632	11	CHINQUAPIN	OAK
15633	10	CEDAR	
15634	4	HICKORY	
15635	6	ELM	
15636	8	CHINQUAPIN	OAK
15637	4	ELM	
15638	4	OSTRAYA	
15639	9	ELM	
15640	12	CHINQUAPIN	OAK
15641	4	OSTRAYA	
15642	8	PERSIMMON	
15643	10	CHINQUAPIN	OAK
15644	7	HACKBERRY	
15645	10	CEDAR	
15646	12	CHINQUAPIN	OAK
15647	10	CHINQUAPIN	OAK
15648	8	CHINQUAPIN	OAK
15649	12	ASH	
15650	16	CEDAR	
15651	9	CHINQUAPIN	OAK
15652	12	CHINQUAPIN	OAK
15653	7	CHINQUAPIN	OAK
15654	6	CEDAR	
15655	8	CEDAR	
15656	11	CEDAR	
15657	12	ASH	
15658	14	ASH	
15659	13	CEDAR	
15660	10	CEDAR	
15662	7	CHINQUAPIN	OAK
15663	17	ASH	
15750	13	ELM	
15752	5	ASH	
15754	10	RED	OAK
15755	9	CHINQUAPIN	OAK
15756	12	ELM	
15757	13	CEDAR	
15759	13	CEDAR	
15760	10	CEDAR	
15761	13	CEDAR	
15762	5	CEDAR	
15763	5	CEDAR	
15764	4	ASH	
15765	9	CEDAR	
15766	12	CEDAR	
15767	4	SUGAR	MAPLE
15768	7	CEDAR	
15769	7	ASH	
15770	8	CEDAR	
15771	5	CEDAR	
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15774	5	CEDAR	
15775	7	CEDAR	
15776	5	HACKBERRY	
15777	8	CEDAR	
15778	5	ELM	
15779	7	CEDAR	
15780	10	CEDAR	
15781	7	CHINQUAPIN	OAK
15782	10	ASH	
15783	7	CEDAR	

15784	7	CEDAR	
15786	12	ASH	
15787	8	CEDAR	
15788	9	CEDAR	
15793	14	RED	OAK
15812	12	SUGAR	MAPLE
15813	5	SUGAR	MAPLE
15814	4	SUGAR	MAPLE
15815	4	SUGAR	MAPLE
15816	11	SUGAR	MAPLE
15817	12	SUGAR	MAPLE
15818	11	CEDAR	
15819	22	RED	OAK
15820	7	CEDAR	
15821	9	BLACK	WALNUT
15822	5	ELM	
15823	10	ASH	
15824	16	CEDAR	
15825	11	CEDAR	
15826	12	HICKORY	
15827	12	CEDAR	
15828	4	OSTRAYA	
15829	18	ASH	
15982	15	CEDAR	
15983	8	ELM	
15984	13	CEDAR	
15985	5	ASH	
15986	17	RED	OAK
15987	18	RED	OAK
15988	8	CEDAR	
15989	9	CEDAR	
15990	9	HICKORY	
15991	5	CEDAR	
15992	5	HICKORY	
15993	6	ELM	
15994	5	CEDAR	
15995	10	CEDAR	
15996	6	CEDAR	
15997	12	CEDAR	
15998	8	BLACK	WALNUT
15999	5	OSTRAYA	
16000	10	RED	OAK
16001	4	ELM	
16002	7	ASH	
16003	4	OSTRAYA	
16004	17	RED	OAK
16005	4	OSTRAYA	
16006	11	CHINQUAPIN	OAK
16007	9	ASH	
16008	7	CHINQUAPIN	OAK
16009	8	ASH	
16010	7	ASH	
16011	7	CHINQUAPIN	OAK
16012	15	WHITE	OAK
16013	15	WHITE	OAK
16014	9	WHITE	OAK
16015	13	ASH	
16016	7	CEDAR	
16017	10	WHITE	OAK
16018	5	OSTRAYA	
16019	12	ASH	
16020	14	ASH	
16021	9	ASH	
16022	5	ASH	
16023	7	ASH	
16024	4	OSTRAYA	
16025	4	WHITE	OAK
16026	14	CHINQUAPIN	OAK
16027	10	CHINQUAPIN	OAK
16028	12	ASH	
16029	19	RED	OAK
16030	14	ELM	
16031	10	CHINQUAPIN	OAK
16032	17	CHINQUAPIN	OAK
16033	10	CEDAR	
16034	7	CEDAR	
16035	13	CEDAR	
16036	9	CHINQUAPIN	OAK
16037	12	CHINQUAPIN	OAK
16039	10	SUGAR	MAPLE
16040	9	ASH	
16041	8	CEDAR	
16054	8	CEDAR	
16055	9	CEDAR	
16056	11	CEDAR	
16057	11	CHINQUAPIN	OAK
16059	10	CEDAR	
16060	5	ASH	
16161	13	SUGAR	MAPLE
16162	7	SUGAR	MAPLE
16163	7	ASH	
16164	12	ASH	
16165	17	CHINQUAPIN	OAK
16166	7	SUGAR	MAPLE

16167	7	SUGAR	MAPLE
16168	16	RED	OAK
16169	13	ASH	
16170	4	REDBUD	
16171	15	ASH	
16172	10	ASH	
16173	11	CEDAR	
16174	22	RED	OAK
16175	8	HACKBERRY	
16176	9	CHINQUAPIN	OAK
16177	6	CEDAR	
16178	11	CEDAR	
16179	14	RED	OAK
16180	9	CEDAR	
16181	4	REDBUD	
16182	10	CEDAR	
16183	14	CEDAR	
16184	11	ASH	
16185	12	CEDAR	
16186	9	CEDAR	
16187	8	CEDAR	
16286	15	ASH	
16287	14	CEDAR	
16288	6	ELM	
16289	9	CEDAR	
16290	15	CEDAR	
16291	4	ELM	
16292	14	CEDAR	
16293	8	CEDAR	
16294	19	CHINQUAPIN	OAK
16295	12	CHINQUAPIN	OAK
16296	5	CHINQUAPIN	OAK
16297	12	ASH	
16298	15	CEDAR	
16299	7	CEDAR	
16300	8	CEDAR	
16301	13	CHINQUAPIN	OAK
16302	14	RED	OAK
16303	19	CEDAR	
16304	4	ELM	
16305	4	ELM	
16306	14	ASH	
16307	10	CHINQUAPIN	OAK
16308	17	CEDAR	
16309	7	ASH	
16310	13	ASH	
16311	15	CHINQUAPIN	OAK
16312	12	SUGAR	MAPLE
16313	5	OSTRAYA	
16314	17	CHINQUAPIN	OAK
16315	5	ELM	
16316	9	CEDAR	
16317	4	SUGAR	MAPLE
16318	22	RED	OAK
16319	34	RED	OAK
16320	4	SUGAR	MAPLE
16321	10	SUGAR	MAPLE
16322	6	CEDAR	
16323	9	CEDAR	
16324	5	CEDAR	
16325	7	ELM	
16326	14	HICKORY	
16327	4	ASH	
16328	20	CHINQUAPIN	OAK
16329	4	ASH	
16330	5	HACKBERRY	
16331	11	ELM	
16332	12	CEDAR	
16333	5	CEDAR	
16334	12	HICKORY	
16335	7	CHINQUAPIN	OAK
16336	11	CHINQUAPIN	OAK
16337	11	CHINQUAPIN	OAK
16338	6	ASH	
16339	5	CEDAR	
16340	19	CHINQUAPIN	OAK
16341	5	HICKORY	
16342	4	HICKORY	
16343	11	ASH	
16344	13	CEDAR	
16345	8	HICKORY	
16346	9	CEDAR	
16347	10	HICKORY	
16348	6	ASH	
16349	4	HACKBERRY	
16350	5	CEDAR	
16351	6	CEDAR	
16352	12	CEDAR	
16353	4	CHINQUAPIN	OAK
16354	13	HICKORY	
16355	15	CHINQUAPIN	OAK
16356	16	CHINQUAPIN	OAK
16357	8	CEDAR	
16358	4	CEDAR	

16359	14	CEDAR	
16360	8	HICKORY	
16361	8	HICKORY	
16362	9	HICKORY	
16363	4	HICKORY	
16364	8	PERSIMMON	
16365	13	CEDAR	
16366	11	CEDAR	
16367	14	ASH	
16368	7	CEDAR	
16369	10	CEDAR	
16370	11	CEDAR	
16371	12	CEDAR	
16372	8	ASH	
16373	8	ELM	
16375	26	RED	OAK
16376	11	HICKORY	
16377	9	CEDAR	
16378	12	CEDAR	
16379	8	CEDAR	
16380	15	ASH	
16424	15	CEDAR	
16425	15	CHINQUAPIN	OAK
16426	9	ASH	
16427	15	ASH	
16428	7	CEDAR	
16429	14	CHINQUAPIN	OAK
16430	8	CEDAR	
16431	6	HICKORY	
16437	11	SUGAR	MAPLE
16438	11	HICKORY	
16439	23	RED	OAK
16440	10	SUGAR	MAPLE
16441	20	RED	OAK
16442	9	SUGAR	MAPLE
16443	6	CEDAR	
16444	8	SUGAR	MAPLE
16445	13	CEDAR	
16446	10	HICKORY	
16447	23	RED	OAK
16448	16	RED	OAK
16449	16	ASH	
16450	6	ASH	
16451	10	CEDAR	
16452	4	CEDAR	
16453	9	CHINQUAPIN	OAK
16454	10	CHINQUAPIN	OAK
16455	5	SUGAR	MAPLE
16456	26	RED	OAK
16457	12	ASH	
16458	8	CEDAR	
16459	17	RED	OAK
16460	17	ASH	
16461	12	CEDAR	
16462	8	ELM	
16463	14	ASH	
16464	7	ELM	
16465	13	CHINQUAPIN	OAK
16466	10	CEDAR	
16467	7	CEDAR	
16468	5	CHINQUAPIN	OAK
16469	7	SUGAR	MAPLE
16470	16	CHINQUAPIN	OAK
16471	17	CEDAR	
16472	8	CEDAR	
16473	12	CEDAR	
16474	6	CEDAR	
16475	7	CEDAR	
16476	10	CHINQUAPIN	OAK
16477	12	CEDAR	
16478	8	CEDAR	
16479	10	CEDAR	
16480	8	ELM	
16481	15	CEDAR	
16482	8	CEDAR	
16483	21	RED	OAK
16484	9	CEDAR	
16485	14	CEDAR	
16486	12	CHINQUAPIN	OAK
16487	12	CEDAR	
16488	9	CHINQUAPIN	OAK
16489	9	ELM	
16490	15	RED	OAK
16491	12	CEDAR	
16492	10	ASH	
16493	11	CEDAR	
16494	7	ELM	
16495	10	CEDAR	
16496	18	RED	OAK
16497	5	ELM	
16498	11	CEDAR	
16499	5	BLACK	WALNUT
16500	7	CEDAR	
16501	10	CEDAR	

16502	8	CEDAR	
16503	9	ASH	
16504	11	CEDAR	
16505	14	ASH	
16506	4	CEDAR	
16507	6	CEDAR	
16508	4	CEDAR	
16509	9	CEDAR	
16510	11	CEDAR	
16511	7	ASH	
16512	13	CEDAR	
16513	8	CEDAR	
16514	16	CHINQUAPIN	OAK
16515	12	CHINQUAPIN	OAK
16516	11	CHINQUAPIN	OAK
16517	8	CEDAR	
16518	8	ASH	
16519	10	RED	OAK
16520	21	CEDAR	
16521	6	ELM	
16522	9	HICKORY	
16523	5	HICKORY	
16524	10	HICKORY	
16525	11	CHINQUAPIN	OAK
16526	18	RED	OAK
16527	9	ELM	
16528	9	CEDAR	
16529	7	CEDAR	
16530	8	CEDAR	
16531	7	ELM	
16532	7	ELM	
16547	14	CEDAR	
16548	9	CEDAR	
16579	5	CEDAR	
16580	6	ASH	
16581	16	CEDAR	
16582	5	CEDAR	
16583	8	ASH	
16584	7	ELM	
16585	4	CEDAR	
16586	7	CEDAR	
16587	6	CEDAR	
16588	4	CEDAR	
16589	7	CEDAR	
16590	8	CEDAR	
16591	5	CEDAR	
16592	6	CEDAR	
16593	4	OSAGE	ORANGE
16594	4	OSAGE	ORANGE
16595	5	OSAGE	ORANGE
16596	7	CEDAR	
16597	7	ELM	
16598	6	CEDAR	
16599	7	CEDAR	
16600	5	CEDAR	
16633	6	ELM	
16641	8	CEDAR	
16642	6	CEDAR	
16643	5	CEDAR	
16705	7	SWEET	GUM
16706	4	SWEET	GUM
16707	4	SWEET	GUM
16708	12	CEDAR	
16709	16	CEDAR	
16710	8	CEDAR	
16711	10	CEDAR	
16712	15	CEDAR	
16713	4	CEDAR	
16714	14	CEDAR	
16715	4	SASSAFRAS	
16716	4	CEDAR	
16717	4	CEDAR	
16718	4	CEDAR	
16719	5	CEDAR	
16720	6	CEDAR	
16721	7	CEDAR	
16722	7	CEDAR	
16723	4	CEDAR	
16724	6	CEDAR	
16725	4	CEDAR	
16726	4	SWEET	GUM
16727	4	CEDAR	
16728	5	CEDAR	
16729	4	CEDAR	
16730	7	CEDAR	
16731	4	CEDAR	
16732	6	CEDAR	
16733	4	CEDAR	
16734	4	CEDAR	
16735	4	CEDAR	
16736	5	CEDAR	
16737	5	CEDAR	
16738	4	CEDAR	
16739	4	CEDAR	

16740	4	CEDAR	
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16742	4	CEDAR	
16743	4	CEDAR	
16744	6	CEDAR	
16745	7	CEDAR	
16746	5	CEDAR	
16747	4	SWEET	GUM
16748	4	CEDAR	
16749	5	CEDAR	
16750	4	CEDAR	
16751	6	WILLOW	OAK
16752	4	CEDAR	
16753	4	CEDAR	
16754	4	CEDAR	
16755	4	CEDAR	
16756	5	CEDAR	
16757	4	CEDAR	
16758	4	CEDAR	
16759	4	CEDAR	
16760	4	CEDAR	
16761	4	CEDAR	
16762	4	CEDAR	
16763	28	HICKORY	
16764	4	CEDAR	
16765	4	CEDAR	
16766	8	RED	OAK
16767	5	WHITE	OAK
16768	8	CEDAR	
16769	6	SWEET	GUM
16770	6	SWEET	GUM
16771	5	CEDAR	
16772	5	CEDAR	
16773	5	CEDAR	
16774	4	CEDAR	
16775	4	RED	OAK
16829	4	SWEET	GUM
16830	4	SWEET	GUM
16832	4	RED	OAK
16833	4	CEDAR	
16834	5	CEDAR	
16835	4	WILLOW	OAK
16836	5	CEDAR	
16837	7	CEDAR	
16838	4	CEDAR	
16839	6	HACKBERRY	
16840	4	CEDAR	
16841	9	ELM	
16842	13	RED	OAK
17032	5	CEDAR	
17033	11	ASH	
17034	4	CEDAR	
17035	5	CEDAR	
17036	4	ELM	
17037	7	CEDAR	
17038	7	CEDAR	
17039	7	CEDAR	
17040	13	ASH	
17041	11	CEDAR	
17042	12	CEDAR	
17043	14	CEDAR	
17044	12	CEDAR	
17045	20	CEDAR	
17046	6	CEDAR	
17047	9	CEDAR	
17048	22	ASH	
17049	6	CEDAR	
17050	7	CEDAR	
17051	11	CEDAR	
17052	6	CEDAR	
17053	6	CEDAR	
17054	7	CEDAR	
17055	7	CEDAR	
17056	8	CEDAR	
17057	11	ELM	
17058	5	HICKORY	
17059	4	OSTRAYA	
17060	9	ELM	
17061	21	CHINQUAPIN	OAK
17062	21	RED	OAK
17063	4	ELM	
17064	17	CHINQUAPIN	OAK
17065	4	OSTRAYA	
17066	7	CHINQUAPIN	OAK
17067	12	ASH	
17068	5	CHINQUAPIN	OAK
17069	11	CHINQUAPIN	OAK
17070	5	CHINQUAPIN	OAK
17071	6	ELM	
17072	19	CHINQUAPIN	OAK
17073	23	CHINQUAPIN	OAK
17074	11	CHINQUAPIN	OAK
17075	4	OSTRAYA	
17076	7	ASH	

17077	7	CHINQUAPIN	OAK
17078	8	OSAGE	ORANGE
17079	4	ELM	
17080	5	CEDAR	
17081	9	ASH	
17082	14	CHINQUAPIN	OAK
17090	4	OSTRAYA	
17215	14	CEDAR	
17217	6	CEDAR	
17218	18	ASH	
17219	10	CEDAR	
17220	7	CEDAR	
17221	4	CEDAR	
17222	9	ASH	
17223	11	ASH	
17260	14	SUGAR	MAPLE
17261	6	SUGAR	MAPLE
17262	9	SUGAR	MAPLE
17263	16	ASH	
17264	12	CEDAR	
17265	6	SUGAR	MAPLE
17266	25	RED	OAK
17267	9	SUGAR	MAPLE
17268	9	SUGAR	MAPLE
17269	19	RED	OAK
17270	10	BLACK	WALNUT
17271	10	CEDAR	
17272	6	HICKORY	
17273	4	RED	OAK
17274	4	ELM	
17275	10	ASH	
17276	8	CEDAR	
17277	6	CEDAR	
17278	11	CEDAR	
17279	11	CEDAR	
17280	8	CEDAR	
17281	9	CEDAR	
17282	8	HACKBERRY	
17283	14	ASH	
17284	19	CHINQUAPIN	OAK
17285	18	ASH	
17286	9	ASH	
17287	6	CEDAR	
17288	17	ASH	
17401	10	CEDAR	
17402	7	ELM	
17403	15	CEDAR	
17404	9	CEDAR	
17405	14	CEDAR	
17406	6	ASH	
17407	12	CHINQUAPIN	OAK
17408	12	CEDAR	
17409	8	ELM	
17410	6	CEDAR	
17411	12	CEDAR	
17412	18	RED	OAK
17413	9	ASH	
17414	12	CEDAR	
17415	9	HICKORY	
17416	10	RED	OAK
17417	11	HICKORY	
17418	7	CEDAR	
17419	6	ELM	
17420	7	ELM	
17421	6	CEDAR	
17422	10	CHINQUAPIN	OAK
17423	8	ASH	
17424	10	CHINQUAPIN	OAK
17425	11	HICKORY	
17426	4	SUGAR	MAPLE
17427	9	SUGAR	MAPLE
17428	8	CHINQUAPIN	OAK
17429	10	CHINQUAPIN	OAK
17430	6	SUGAR	MAPLE
17431	9	SUGAR	MAPLE
17432	8	ASH	
17433	11	CHINQUAPIN	OAK
17434	5	ASH	
17435	9	CHINQUAPIN	OAK
17436	8	CHINQUAPIN	OAK
17437	9	CHINQUAPIN	OAK
17438	11	SUGAR	MAPLE
17439	6	ELM	
17440	4	SUGAR	MAPLE
17441	12	SUGAR	MAPLE
17442	12	CHINQUAPIN	OAK
17443	6	CEDAR	
17444	12	ASH	
17445	8	CEDAR	
17446	8	ASH	
17447	9	ASH	
17448	13	SUGAR	MAPLE
17449	8	SUGAR	MAPLE
17450	4	SUGAR	MAPLE

17451	12	ASH	
17452	16	ASH	
17453	6	SUGAR	MAPLE
17454	14	CHINQUAPIN	OAK
17455	13	CHINQUAPIN	OAK
17456	8	SUGAR	MAPLE
17457	4	SUGAR	MAPLE
17458	4	ASH	
17459	10	ASH	
17460	7	RED	OAK
17461	9	ASH	
17462	11	CEDAR	
17463	7	CEDAR	
17464	11	CEDAR	
17465	4	OSTRAYA	
17466	19	CHINQUAPIN	OAK
17467	11	CEDAR	
17468	21	CEDAR	
17469	5	SUGAR	MAPLE
17470	9	CHINQUAPIN	OAK
17471	11	HICKORY	
17472	6	CEDAR	
17473	10	HICKORY	
17474	8	CEDAR	
17475	7	CEDAR	
17476	12	ASH	
17477	13	CEDAR	
17478	11	CEDAR	
17479	5	CEDAR	
17480	10	CEDAR	
17481	9	CEDAR	
17482	9	ASH	
17483	4	CEDAR	
17484	9	CEDAR	
17485	5	CEDAR	
17486	9	CEDAR	
17487	12	CEDAR	
17488	13	CEDAR	
17506	6	CEDAR	
17507	12	CHINQUAPIN	OAK
17508	12	CEDAR	
17509	12	CHINQUAPIN	OAK
17571	18	RED	OAK
17572	8	SUGAR	MAPLE
17573	10	SUGAR	MAPLE
17574	13	SUGAR	MAPLE
17575	5	SUGAR	MAPLE
17576	11	CEDAR	
17577	11	ELM	
17578	10	CEDAR	
17579	12	CEDAR	
17580	4	CEDAR	
17581	7	CEDAR	
17582	4	ELM	
17583	6	CEDAR	
17584	17	RED	OAK
17585	15	ASH	
17586	18	RED	OAK
17587	7	CEDAR	
17588	6	ASH	
17589	7	CEDAR	
17590	9	CEDAR	
17591	4	SUGAR	MAPLE
17592	14	ASH	
17593	9	SUGAR	MAPLE
17594	7	SUGAR	MAPLE
17595	10	CEDAR	
17596	21	RED	OAK
17597	12	CEDAR	
17598	9	CEDAR	
17599	14	CEDAR	
17600	12	CEDAR	
17601	10	CEDAR	
17602	11	RED	OAK
17603	17	ASH	
17604	12	CHINQUAPIN	OAK
17605	12	CEDAR	
17606	5	CEDAR	
17607	21	ASH	
17608	9	CEDAR	
17609	7	CEDAR	
17610	5	CEDAR	
17611	10	CHINQUAPIN	OAK
17612	10	CEDAR	
17618	5	CEDAR	
17621	7	ELM	
17622	9	ELM	
17700	11	ASH	
17701	7	ASH	
17702	4	ELM	
17703	4	CEDAR	
17704	7	CEDAR	
17705	10	ASH	
17706	19	CEDAR	

17707	5	CEDAR	
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17709	4	ELM	
17710	8	CEDAR	
17711	7	CEDAR	
17712	5	CEDAR	
17713	12	CEDAR	
17714	10	CEDAR	
17715	4	CEDAR	
17716	11	CEDAR	
17717	6	CEDAR	
17718	6	CEDAR	
17719	4	ASH	
17720	9	CEDAR	
17721	8	CEDAR	
17722	14	CEDAR	
17723	11	CEDAR	
17724	4	CEDAR	
17725	6	CEDAR	
17726	8	CEDAR	
17727	4	ASH	
17728	7	BLACK	WALNUT
17729	7	CEDAR	
17730	4	HICKORY	
17731	13	CEDAR	
17732	12	CEDAR	
17733	6	HACKBERRY	
17734	7	CEDAR	
17735	5	CEDAR	
17736	8	ASH	
17737	8	CEDAR	
17738	11	ASH	
17739	6	CEDAR	
17740	5	ASH	
17741	4	ASH	
17742	14	CEDAR	
17743	4	ASH	
17744	8	CEDAR	
17745	15	CEDAR	
17746	14	CEDAR	
17747	5	ELM	
17748	4	ASH	
17749	11	CEDAR	
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17751	9	CEDAR	
17753	12	ASH	
17754	8	ASH	
17790	10	ASH	
17791	7	ASH	
17792	4	CEDAR	
17793	4	HICKORY	
17794	5	CEDAR	
17795	19	CEDAR	
17796	4	WHITE	OAK
17797	4	ELM	
17798	4	ELM	
17799	4	CEDAR	
17800	9	CEDAR	
17801	6	CEDAR	
17802	6	OSAGE	ORANGE
17803	5	CEDAR	
17804	4	ELM	
17805	8	CEDAR	
17806	8	CEDAR	
17807	6	CEDAR	
17808	9	ELM	
17809	4	CEDAR	
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17811	7	ELM	
17812	7	ELM	
17813	7	ELM	
17814	5	CEDAR	
17815	7	CEDAR	
17816	11	PERSIMMON	
17817	8	CEDAR	
17818	6	HACKBERRY	
17819	5	ELM	
17820	14	PERSIMMON	
17821	6	CEDAR	
17822	4	CEDAR	
17823	13	PERSIMMON	
17824	11	PERSIMMON	
17825	4	CHINQUAPIN	OAK
17826	5	CEDAR	
17827	16	CEDAR	
17828	4	HACKBERRY	
17829	12	ASH	
17830	5	CEDAR	
17831	6	CEDAR	
17832	4	CEDAR	
17833	5	CEDAR	
17834	8	CEDAR	
17835	9	CEDAR	
17836	9	CEDAR	

17837	10	CEDAR	
17838	12	ELM	
17839	5	CEDAR	
17840	5	CEDAR	
17841	7	CEDAR	
17842	4	ELM	
17843	5	CEDAR	
17844	13	CEDAR	
17845	5	OSAGE	ORANGE
17846	5	OSAGE	ORANGE
17847	4	OSAGE	ORANGE
17848	4	OSAGE	ORANGE
17849	4	OSAGE	ORANGE
17850	4	HACKBERRY	
17851	6	ELM	
17852	23	CEDAR	
17853	6	CHINQUAPIN	OAK
17854	4	HACKBERRY	
17855	6	ELM	
17856	4	CEDAR	
17857	5	HACKBERRY	
17858	11	CEDAR	
17859	8	HACKBERRY	
17860	5	CEDAR	
17861	4	CEDAR	
17862	6	CEDAR	
17863	4	CEDAR	
17864	16	CHINQUAPIN	OAK
17865	9	CHINQUAPIN	OAK
17866	16	CHINQUAPIN	OAK
17867	11	CHINQUAPIN	OAK
17868	4	CEDAR	
17869	4	RED	OAK
17870	4	CEDAR	
17871	7	CHINQUAPIN	OAK
17872	5	CEDAR	
17873	10	HICKORY	
17874	6	RED	OAK
17875	10	CHINQUAPIN	OAK
17876	20	CEDAR	
17877	5	ELM	
17878	5	HACKBERRY	
17879	6	CEDAR	
17880	11	CEDAR	
17881	7	HACKBERRY	
17882	4	HACKBERRY	
17883	4	HACKBERRY	
17884	5	HACKBERRY	
17885	9	HACKBERRY	
17886	19	CEDAR	
17887	15	CEDAR	
17888	4	HACKBERRY	
17889	4	ELM	
17890	5	HACKBERRY	
17891	13	HACKBERRY	
17892	10	ELM	
17893	9	ELM	
17894	9	HACKBERRY	
17895	8	HACKBERRY	
17896	9	HICKORY	
17897	9	ELM	
17898	11	CEDAR	
17899	9	CEDAR	
17900	19	CHINQUAPIN	OAK
17901	8	ELM	
17902	6	HICKORY	
17903	14	ASH	
17904	9	ELM	
17905	6	ELM	
17906	8	CHINQUAPIN	OAK
17907	29	RED	OAK
17908	4	CEDAR	
17909	6	HICKORY	
17910	7	CHINQUAPIN	OAK
17911	5	HICKORY	
17912	5	HICKORY	
17913	7	HACKBERRY	
17914	6	HACKBERRY	
17915	6	HACKBERRY	
17916	11	HICKORY	
17917	5	HICKORY	
17918	16	CEDAR	
17919	10	HICKORY	
17920	5	HACKBERRY	
17921	7	ELM	
17922	11	CEDAR	
17923	5	HACKBERRY	
17924	5	CHINQUAPIN	OAK
17925	15	CHINQUAPIN	OAK
17926	5	OSAGE	ORANGE
17927	4	CEDAR	
17928	4	CEDAR	
17929	4	CEDAR	
17930	9	HICKORY	

17931	5	HICKORY	
17932	21	HICKORY	
17933	14	HICKORY	
17934	6	CHINQUAPIN	OAK
17935	12	CHINQUAPIN	OAK
17936	16	CHINQUAPIN	OAK
17937	11	ELM	
17938	7	HICKORY	
17939	7	CHINQUAPIN	OAK
17940	7	PERSIMMON	
17941	6	ELM	
17942	12	CHINQUAPIN	OAK
17943	5	CHINQUAPIN	OAK
17944	7	HICKORY	
17945	6	HICKORY	
17946	12	CHINQUAPIN	OAK
17947	9	CHINQUAPIN	OAK
17948	6	CHINQUAPIN	OAK
17949	10	PERSIMMON	
17950	4	ELM	
17951	9	ELM	
17952	14	ELM	
17953	15	PERSIMMON	
17954	11	CHINQUAPIN	OAK
17955	6	CHINQUAPIN	OAK
17956	11	HACKBERRY	
17957	6	ELM	
17958	10	CHINQUAPIN	OAK
17959	6	ELM	
17960	17	CHINQUAPIN	OAK
17961	5	CEDAR	
17962	14	CEDAR	
17963	11	CEDAR	
17964	14	CEDAR	
17965	10	ELM	
17966	9	HACKBERRY	
17967	5	CEDAR	
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17971	4	CEDAR	
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17974	4	CEDAR	
17975	6	ELM	
17976	6	ELM	
17977	5	ELM	
17978	4	OSAGE	ORANGE
17979	4	CEDAR	
17980	4	CEDAR	
17981	4	CEDAR	
17982	6	CEDAR	
17983	4	HONEY	LOCUST
17984	4	HONEY	LOCUST
17985	4	ASH	
17986	4	ELM	
17987	4	ASH	
17988	4	HACKBERRY	
17989	4	ASH	
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18037	4	CEDAR	
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18039	4	SWEET	GUM
18040	4	SWEET	GUM
18041	4	BLACK	WALNUT
18042	6	RED	OAK
18043	4	WILLOW	OAK
18044	5	CEDAR	
18045	5	CEDAR	
18078	4	CEDAR	
18079	11	OSAGE	ORANGE
18080	14	PERSIMMON	
18081	4	CEDAR	
18082	7	ELM	
18083	5	ELM	
18084	4	ELM	
18085	10	HICKORY	
18086	4	CEDAR	
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18128	6	CEDAR	
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18130	4	RED	OAK
18131	4	CEDAR	
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18133	11	CEDAR	
18134	8	ELM	
18135	4	HACKBERRY	
18136	8	HACKBERRY	
18137	17	CEDAR	
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18144	11	CEDAR	
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18146	8	HACKBERRY	
18147	5	ELM	
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18150	4	CEDAR	
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18157	5	CEDAR
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18162	5	CEDAR
18163	5	CEDAR
18164	6	CEDAR
18165	5	CEDAR
18166	6	CEDAR
18167	8	HACKBERRY
18168	8	CEDAR
18169	4	HACKBERRY
18170	4	CEDAR
67334	10	ELM
67335	26	OAK
67336	30	ASH
67337	4	CEDAR
67338	31	OAK
67339	11	OAK
67340	10	ELM
67341	26	OAK
67342	7	HACKBERRY
67343	10	HACKBERRY
67344	5	HACKBERRY
67345	8	CEDAR
67346	13	ELM
67347	5	ELM
67348	10	HACKBERRY
67349	6	CEDAR
67350	4	CEDAR
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67354	7	CEDAR
67355	4	CEDAR
67356	4	CEDAR
67357	4	CEDAR
67358	15	ASH
67359	5	CEDAR
67360	9	CEDAR
67361	4	CEDAR
67362	4	CEDAR
67363	4	CEDAR
67364	5	CEDAR
67365	10	HACKBERRY
67366	12	ASH
67367	16	OAK
67368	10	OAK
67369	13	OAK
67370	4	CEDAR
67371	14	WALNUT
67372	9	ELM
67373	11	CEDAR
67374	11	CEDAR
67375	8	BODDOCK
67376	11	HACKBERRY
67377	10	WALNUT
67378	5	CEDAR
67379	5	CEDAR
67380	31	OAK
67381	5	CEDAR
67382	7	CEDAR
67383	5	CEDAR
67384	10	WALNUT
67385	5	CEDAR
67386	13	PERSIMMON
67387	10	HACKBERRY
67388	10	DBLSHACKBERRY
67389	6	HACKBERRY
67390	9	WALNUT
67391	4	CEDAR
67392	12	CEDAR
67393	10	HACKBERRY
67394	9	CEDAR
67395	8	CEDAR
67396	8	ELM
67397	6	WALNUT
67398	24	OAK
67399	4	CEDAR
67400	5	CEDAR
67401	7	WALNUT
67402	4	ELM
67403	12	CEDAR
67404	16	CEDAR
67405	6	CEDAR
67406	6	CEDAR
67407	6	CEDAR
67408	7	CEDAR
67409	8	HACKBERRY

67410	16	DBL8HACKBERRY
67411	5	HACKBERRY
67412	5	HACKBERRY
67413	16	OAK
67414	6	CEDAR
67415	6	CEDAR
67416	4	CEDAR
67417	8	CEDAR
67418	8	CEDAR
67419	4	CEDAR
67420	4	CEDAR
67421	5	HACKBERRY
67422	4	HACKBERRY
67423	33	OAK
67424	5	CEDAR
67425	4	CEDAR
67426	4	CEDAR
67427	4	CEDAR
67428	6	HACKBERRY
67429	6	CEDAR
67430	5	CEDAR
67431	5	CEDAR
67432	10	CEDAR
67433	6	CEDAR
67434	15	CEDAR
67435	16	CEDAR
67436	8	WALNUT
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67448	10	CEDAR
67449	17	OAK
67450	16	CEDAR
67451	11	CEDAR
67452	13	OAK
67453	7	CEDAR
67454	4	CEDAR
67455	9	CEDAR
67456	8	CEDAR
67457	7	CEDAR
67458	7	CEDAR
67459	7	CEDAR
67460	10	CEDAR
67461	12	CEDAR
67462	13	HACKBERRY
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67464	12	CEDAR
67465	6	HACKBERRY
67466	4	CEDAR
67467	4	CEDAR
67468	18	BODDOCK
67469	15	CEDAR
67470	4	CEDAR
67471	6	CEDAR
67472	18	DBL9CEDAR
67473	4	CEDAR
67474	10	CEDAR
67475	4	CEDAR
67476	7	CEDAR
67477	9	CEDAR
67478	5	CEDAR
67479	7	CEDAR
67480	4	HACKBERRY
67481	5	HACKBERRY
67482	7	WALNUT
67483	7	ELM
67484	4	CEDAR
67485	8	HACKBERRY
67486	11	CEDAR
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67488	12	CEDAR
67489	4	ELM
67490	5	BODDOCK
67491	5	WALNUT
67492	10	LOCUST
67493	14	CEDAR
67494	6	CEDAR
67495	6	CEDAR
67496	5	CEDAR
67497	4	CEDAR
67498	8	CEDAR
67499	6	WALNUT
67503	5	CEDAR
67504	5	CEDAR
67505	10	DBLSAILANTHUS
67506	4	CEDAR

67507	5	CEDAR
67508	6	CEDAR
67509	4	BODDOCK
67510	4	WALNUT
67511	6	CEDAR
67512	5	CEDAR
67513	6	CEDAR
67514	4	CEDAR
67515	6	CEDAR
67516	5	BRADFORD
67584	6	LOCUST
67585	4	BODDOCK
67586	6	BODDOCK
67587	4	CEDAR
67588	4	BODDOCK
67589	4	BODDOCK
67590	6	BODDOCK
67591	4	BODDOCK
67592	4	PERSIMMON
67593	6	CEDAR
67594	4	ELM
67595	5	PERSIMMON
67596	4	ELM
67597	4	BODDOCK
67598	6	BODDOCK
67599	6	CEDAR
67600	5	BRADFORD
67601	5	BRADFORD
67602	5	CHERRY
67603	4	BOXELDER
67604	4	BODDOCK
67605	5	BODDOCK
67606	5	BODDOCK
67607	6	BODDOCK
67608	5	CEDAR
67609	6	LOCUST
67610	5	LOCUST
67611	4	BODDOCK
67612	4	BODDOCK
67613	5	BODDOCK
67614	5	CEDAR
67615	6	BODDOCK
67616	4	BODDOCK
67617	5	BODDOCK
67746	8	CEDAR
67747	8	CEDAR
67748	10	ASH
67749	5	OAK
67750	7	WALNUT
67751	11	CEDAR
67752	6	CEDAR
67753	5	CEDAR
67754	9	ELM
67755	10	OAK
67756	33	OAK
67757	8	CEDAR
67758	11	CEDAR
67759	4	CEDAR
67760	10	CEDAR
67761	6	ELM
67762	30	ASH
67763	5	ELM
67764	6	ELM
67765	20	DBL10HACKBERRY
67766	6	MAPLE
67767	5	CEDAR
67769	6	ELM
67770	12	ELM
67771	14	CEDAR
67772	14	CEDAR
67773	8	ELM
67774	11	ELM
67775	17	ELM
67776	5	CEDAR
67777	6	CEDAR
67778	4	HACKBERRY
67779	4	OAK
67780	18	ASH
67781	6	ELM
67782	12	CEDAR
67783	16	OAK
67784	9	ELM
67785	11	CEDAR
67786	8	OAK
67789	8	CEDAR
67790	8	ELM
67791	7	WALNUT
67792	5	CEDAR
67793	13	OAK
67794	36	DBL18ASH
67795	4	CEDAR
67796	10	ELM
67797	15	OAK
67798	5	CEDAR

67805	16	OAK
67806	6	OAK
67807	17	OAK
67808	10	ELM
67809	12	MAPLE
67814	10	CEDAR
67817	16	MAPLE
67818	12	OAK
67819	6	OAK
67820	4	OAK
67821	9	CEDAR
67822	28	ASH
67823	4	CEDAR
67824	32	OAK
67825	5	CEDAR
67826	10	OAK
67827	12	OAK
67828	17	ASH
67829	18	OAK
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67837	6	CEDAR
67838	10	CEDAR
67846	4	CEDAR
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67848	4	CEDAR
67849	4	HACKBERRYBERRY
67850	4	CEDAR
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67852	5	CEDAR
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67854	22	ASH
67855	5	CEDAR
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67857	4	CEDAR
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67859	4	CEDAR
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67865	5	CEDAR
67866	4	CEDAR
67867	12	SASSAFRAS
67868	4	HACKBERRY
67869	4	HACKBERRY
67870	6	BODDOCK
67871	4	CEDAR
67872	9	SASSAFRAS
67873	6	CEDAR
67874	6	CEDAR
67875	5	CEDAR
67876	5	CEDAR
67877	4	CEDAR
67878	6	CEDAR
67879	5	CEDAR
67880	27	ASH
67881	15	PERSIMMON
67882	5	CEDAR
67883	4	CEDAR
67884	4	CEDAR
67885	10	CEDAR
67886	4	CEDAR
67887	10	HACKBERRY
67888	9	HACKBERRY
67889	22	DBL11HACKBERRY
67890	10	HACKBERRY
67891	8	HACKBERRY
67892	7	CHERRY
67893	6	CEDAR
67894	4	CEDAR
67895	4	CEDAR
67896	4	BODDOCK
67897	4	CEDAR
67898	6	CEDAR
67899	5	BODDOCK
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67907	7	CEDAR
67908	8	CEDAR
67909	13	CEDAR
67914	5	CEDAR
67915	12	CEDAR
67916	4	SASSAFRAS
67940	4	ELM
67941	14	PERSIMMON
67942	6	CEDAR

67943	4	CEDAR
67944	11	PERSIMMON
67964	4	CEDAR
67965	4	CEDAR
67966	29	OAK
67967	18	OAK
68072	19	OAK
68073	10	MAPLE
68074	4	MAPLE
68075	18	ASH
68076	15	ASH
68077	4	ASH
68078	10	MAPLE
68079	30	OAK
68080	17	OAK
68081	7	MAPLE
68082	7	MAPLE
68083	18	ASH
68084	8	MAPLE
68085	10	MAPLE
68086	9	ELM
68087	6	MAPLE
68088	6	MAPLE
68089	4	MAPLE
68090	17	ASH
68093	5	CEDAR
68096	4	CEDAR
68098	6	PEAR
68099	7	ELM
68184	4	CEDAR
68185	6	ELM
68186	7	SASSAFRAS
68187	5	CEDAR
68188	10	OAK
68189	9	MAPLE
68190	4	ELM
68191	11	OAKBADCONDITION
68192	18	MAPLE
68193	10	MAPLE
68194	13	CEDAR
68195	22	ASH
68196	15	OAK
68197	5	CEDAR
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68200	4	ELM
68201	7	CEDAR
68202	7	CEDAR
68203	4	ELM
68204	4	ELM
68205	4	HACKBERRY
68206	13	CEDAR
68207	6	HACKBERRY
68208	11	OAK
68209	12	OAK
68210	4	CEDAR
68211	4	ELM
68212	4	ELM
68213	7	MAPLE
68214	10	MAPLE
68215	10	DBL5ELM
68216	4	HACKBERRY
68217	6	CEDAR
68218	4	HACKBERRY
68219	16	WALNUT
68220	24	DBL12HICKORY
68221	18	OAK
68222	5	CEDAR
68223	24	OAK
68224	5	CEDAR
68225	4	CEDAR
68226	4	CEDAR
68227	14	ASH
68228	8	OAK
68229	15	ASH
68230	4	CEDAR
68231	5	CEDAR
68232	4	CEDAR
68233	4	CEDAR
68234	5	CEDAR
68235	6	CEDAR
68236	6	CEDAR
68237	5	CEDAR
68238	9	CEDAR
68239	14	CEDAR
68240	29	ASH
68241	21	CEDAR
68242	19	MAPLE
68243	18	MAPLE
68244	14	ASH
68245	15	ASH
68246	20	ASH
68247	4	CEDAR
68248	5	CEDAR

68249	14	ASH
68250	4	MAPLE
68251	12	MAPLE
68252	30	DBL15ASH
68253	10	MAPLE
68254	8	MAPLE
68255	6	ELM
68256	19	ASH
68257	13	PERSIMMON
68258	4	CEDAR
68259	12	CEDAR
68260	18	MAPLE
68267	19	MAPLE
68305	4	ELM
68308	7	CEDAR
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68321	8	BODDOCK
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68394	10	ELM
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68398	11	CEDAR
68399	12	CEDAR
68400	5	LOCUST
68401	6	ELM
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68405	13	CEDAR
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68407	9	CEDAR
68408	15	LOCUST
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68443	4	CEDAR
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68445	15	CEDAR
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68451	4	CEDAR
68452	4	CEDAR
68453	5	CEDAR
68454	4	CEDAR
68455	4	CEDAR
68456	4	BRADFORD
68457	4	PERSIMMON
68458	4	CEDAR
68459	4	CEDAR
68460	5	CEDAR
68461	4	CEDAR
68462	4	CEDAR
68463	4	CEDAR
68464	4	CEDAR
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68466	4	CEDAR
68475	4	CEDAR
68476	4	CEDAR
68477	5	CEDAR
68478	4	CEDAR
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68480	6	CEDAR
68481	5	CEDAR
68482	21	CEDAR
68483	10	CEDAR
68484	10	CEDAR
68485	12	ELM
68486	12	ELM
68487	8	CEDAR
68488	8	CEDAR
68489	4	ELM
68490	7	ELM
68491	11	CEDAR
68492	4	DOGWOOD
68493	9	ASH
68494	4	PERSIMMON
68495	8	PERSIMMON
68496	5	PERSIMMON
68497	8	ELM
68498	5	HACKBERRY
68499	10	HACKBERRY
68500	4	DOGWOOD
68501	17	CEDAR
68502	4	CEDAR
68503	10	HACKBERRY
68504	6	DOGWOOD
68522	14	CEDAR
68523	7	CEDAR
68524	4	CEDAR
68525	24	DBL12SYCAMORE
68526	9	CEDAR
68527	10	CEDAR
68528	7	ELM
68529	4	CEDAR
68530	4	CEDAR
68531	18	CEDAR
68532	10	ELM
68533	8	ELM
68534	7	ELM
68535	7	ELM
68536	11	CEDAR
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68540	5	CEDAR
68541	6	CEDAR
68542	12	CEDAR
68543	6	CEDAR
68544	11	ELM
68545	16	MAPLE
68546	5	LOCUST
68547	4	LOCUST
68548	4	LOCUST
68573	9	CEDAR
68574	5	CEDAR
68575	17	WALNUT
68576	13	CEDAR
68577	22	OAK
68578	7	CEDAR
68579	7	ELM
68580	6	OAK
68581	8	OAK
68582	9	OAK
68599	13	CEDAR
68600	5	CEDAR
68601	9	CEDAR
68602	13	CEDAR
68603	6	CEDAR
68604	8	CEDAR
68605	12	CEDAR

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68618	4	CEDAR
68619	11	CEDAR
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72017	7	CEDAR
72018	7	CEDAR
72019	7	DOGWOOD
72023	4	CEDAR
72036	5	CEDAR
72037	4	CEDAR

64613	cal. to remain
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PETITION FOR ANNEXATION

We, the undersigned property owners, having sole interest in the below referenced property hereby request that our property, as identified below, be annexed into the corporate limits of the City of Brentwood.

Robert H. Adcock Marital Trust
Deborah Moskal, Trustee
Printed Name

Robert H. Adcock Marital Trust
Deborah Moskal, Trustee
Signature

Printed Name

Signature

Property address: Parcel #1 9829 Split Log Road, Brentwood, TN 37027

Parcel #2 Split Log Road, Brentwood, TN 37027

Tax map/parcel number: Parcel #1: 056 084.00 000

Parcel #2: 056 093.00 000

STATE OF TENNESSEE

COUNTY OF Knox

Personally appeared before me, Deborah Moskal with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence) and who executed the foregoing instrument, and acknowledged that he/she executed the same as his/her free act and deed.

Witness my hand, at office, this 5th day of January, 2022

Notary Public

My Commission Expires
October 4, 2025

My commission expires:



PETITION FOR ANNEXATION

We, the undersigned property owners, having sole interest in the below referenced property hereby request that our property, as identified below, be annexed into the corporate limits of the City of Brentwood.

MARGARET C. ALBRIGHT
Printed Name

Margaret C Albright
Signature

June M. Albright Crowell
Printed Name

June M Albright Crowell
Signature

Property address: 9810 Sam Donald Road
0 Sam Donald Road

Tax map/parcel number: 55/12.0 + 12.05

STATE OF TENNESSEE

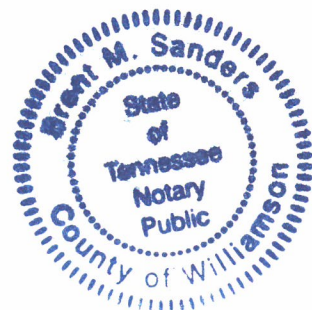
COUNTY OF Williamson

Personally appeared before me, Margaret C. Albright, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence) and who executed the foregoing instrument, and acknowledged that he/she executed the same as his/her free act and deed.

Witness my hand, at office, this 16 day of Dec., 2021

Brent M. Sanders
Notary Public

My commission expires: 11-16-22



STATE OF TENNESSEE

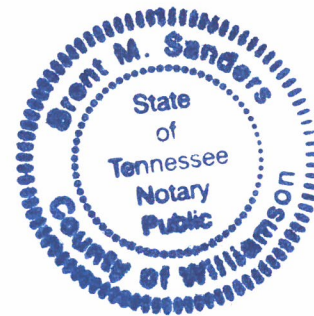
COUNTY OF Williamson

Personally appeared before me, Jane M. Albright Crowell with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence) and who executed the foregoing instrument, and acknowledged that he/she executed the same as his/her free act and deed.

Witness my hand, at office, this 16 day of Dec, 2021

Brent M. Sanders
Notary Public

My commission expires: 11-16-22



ROSEBROOKE ADDITION TRAFFIC IMPACT STUDY EXECUTIVE SUMMARY

INTRODUCTION

The Rosebrooke Addition will consist of two new areas adjacent to the main Rosebrooke neighborhood that is under construction along Sunset Road in the City of Brentwood, Tennessee. The Rosebrooke Addition includes Rosebrooke South which will be located south of the main Rosebrooke neighborhood and west of Split Log Road and Rosebrooke East which will be located south of the main Rosebrooke neighborhood and generally east of Split Log Road.

When completed, the Rosebrook Addition will consist of 124 single family detached homes with 50 homes in Rosebrooke South and 74 homes in Rosebrooke East. Access to the Rosebrooke Addition is proposed at two (2) locations on Split Log Road, one (1) location on Sam Donald Road, and will also be provided by connections to three (3) future street stubs in the main Rosebrooke neighborhood of the City of Brentwood.

BACKGROUND TRAFFIC

Based on discussions with City of Brentwood staff, the main Rosebrook neighborhood, Taube property development, and a new middle school adjacent to Jordan Elementary School have been included as specific, approved projects in the immediate vicinity that will contribute traffic to the study area within the project horizon.

The year 2027 is established as the horizon year for this study. In addition to the specific background traffic growth sources above, general background traffic growth was established by increasing existing traffic by **1 percent annually** for the period from 2021 to 2027.

SITE TRAFFIC

ROSEBROOKE ADDITION									
TRIP GENERATION ⁽¹⁾									
Proposed Development	ITE Land Use Code	Total Units	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Rosebrook South (50 Single Family Detached Homes)	210	50 Homes	550	10	30	40	33	19	52
Rosebrook East (74 Single Family Detached Homes)	210	74 Homes	788	14	43	57	48	28	76
⁽¹⁾ Trip Generation Manual, 10 th Edition published by the Institute of Transportation Engineers (ITE)									

TRANSPORTATION ANALYSIS

The following public intersections were analyzed for capacity deficiencies and improvement needs:

- Split Log Road at Ragsdale Road
- Split Log Road at Pleasant Hill Road/Jordan Elementary School Access
- Split Log Road at Sam Donald Road
- Sunset Road at Split Log Road
- Sunset Road at Waller Road
- Rosebrooke Addition Access Locations on Split Log Road at Sam Donald Road

CONCLUSIONS AND RECOMMENDATIONS

Split Log Road at Ragsdale Road

- No improvements are recommended at the intersection of Split Log Road and Ragsdale Road due to the Rosebrooke Addition.

Split Log Road at Pleasant Hill Road / Jordan Elementary School Driveway

- While there may be improvements necessary to accommodate the proposed middle school at this intersection, no improvements are recommended at the intersection of Split Log Road and Pleasant Hill Road / Jordan Elementary School Driveway due to the Rosebrooke Addition.

Split Log Road at Sam Donald Road

- A southbound left turn lane should be included as part of the Split Log Road realignment and improvements. If feasible within the available or proposed right-of-way, a separate right turn lane on Sam Donald Road with 100 feet of storage and 100 feet of taper would add efficiency to the two-way stop control at this intersection.
- No additional improvements are recommended at the intersection of Sunset Road and Split Log Road due to the Rosebrooke Addition.

Sunset Road at Split Log Road

- A northbound left turn lane on Split Log Road is a condition of approval of the Rosebrook project located in the southwest corner at the intersection of Sunset Road and Split Log Road.
- No additional improvements are recommended at the intersection of Sunset Road and Split Log Road due to the Rosebrooke Addition.

Sunset Road at Waller Road

- No improvements are recommended at the intersection of Sunset Road and Waller Road due to the Rosebrooke Addition.
- Based on the preliminary analysis presented in this study for the future configuration of this intersection, traffic signal control or a roundabout intersection appear to provide acceptable traffic operations. The City of Brentwood should continue to plan for the eventual realignment and extension of Split Log Road to this intersection and conduct additional, more detailed studies to determine the appropriate method of intersection control and satisfaction of appropriate warrants.

Split Log Road at Project Access #1

- The intersection is projected to operate at acceptable levels of service in total traffic conditions during the am. and p.m. peak hours.
- The project access should be constructed to allow a minimum of one ingress lane and two (2) egress lanes with a storage length of 75 feet.
- This proposed access will be near the location of an existing driveway on a generally straight section of Split Log Road and should provide acceptable intersection sight distance. Site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at this intersection.

Split Log Road at Project Access #2 & #3

- The intersection is projected to operate at acceptable levels of service in total traffic conditions during the am. and p.m. peak hours.
- The project access should be constructed to allow a minimum of one ingress lane and two (2) egress lanes with a storage length of 75 feet.

- These proposed access locations will intersect Split Log Road in between existing curves and should provide acceptable intersection sight distance. Site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at this intersection.

Sam Donald Road at Project Access #4

- The intersection is projected to operate at acceptable levels of service in total traffic conditions during the am. and p.m. peak hours.
- The project access should be constructed to allow a minimum of one ingress lane and two (2) egress lanes with a storage length of 75 feet.
- This proposed access will be near an existing driveway within a straight section of Sam Donald Road and should provide acceptable intersection sight distance. Site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at this intersection.

Split Log Road Extension

- If Split Log Road improvements are available from the City of Brentwood, site plans for the Rosebrooke Addition should consider locations where the future Split Log Road will be intersected to provide acceptable grades that are feasible with the overall Split Log Road design.
- If Split Log Road improvements are available from the City of Brentwood, site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at the future intersections with the Split Log Road extension.
- The Rosebrooke Addition should support the City of Brentwood with the eventual realignment and extension of Split Log Road by reserving an appropriate right-of-way through the project for Split Log Road.

Existing Split Log Road

Until the remaining section of the Split Log Road corridor can be improved to modern design practices, there are strategies and measures that can be implemented to influence driver behavior, address locations where there are concerns about safety, and help maintain efficient traffic flow. Any study or implementation of improvements or strategies on Split Log Road would be carried out or managed by the City of Brentwood Engineering Staff and other City officials. This study is not providing any specific recommendations and is not offering a comprehensive list of improvements or strategies that are applicable to Split Log Road. However, some specific strategies or measures that may be appropriate for consideration on Split Log Road between Pleasant Hill Road and Sunset Road are listed below.

- Oversize and/or duplicate regulatory and advisory signage
- Enhanced pavement markings including high reflectivity and/or wider lines
- Advisory signage when approaching sharp curves and chevron signs around curves where appropriate
- Guardrail with additional reflectors for high visibility
- Roadside clearing to remove obstructions and improve sight lines
- Rumble strips on roadway edges or along the centerline to address roadway or lane departure events
- Installation of speed limit driver feedback signs

As previously discussed, these are not specific recommendations, and this is not a comprehensive list of improvements or strategies that could be applicable to Split Log Road. Any study or implementation of improvements or strategies on Split Log Road would be carried out or managed by the City of Brentwood Engineering Staff and other City officials.

TRAFFIC IMPACT STUDY

for

ROSEBROOKE ADDITION

City of Brentwood, Tennessee

March 14, 2022

Prepared for:

**CPS Land, LLC
213 Overlook Ct.
Brentwood, Tennessee 37027**

Prepared by:



**RAGAN-SMITH ASSOCIATES, INC.
315 Woodland Street, P.O. Box 60070
Nashville, Tennessee 37206-0070
(615) 244-8591**

21-0337

**ROSEBROOKE ADDITION
TRAFFIC IMPACT STUDY**

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**ROSEBROOKE ADDITION
TRAFFIC IMPACT STUDY**

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ROSEBROOKE ADDITION TRAFFIC IMPACT STUDY EXECUTIVE SUMMARY

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ROSEBROOKE ADDITION									
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				Enter	Exit	Total	Enter	Exit	Total
Rosebrook South (50 Single Family Detached Homes)	210	50 Homes	550	10	30	40	33	19	52
Rosebrook East (74 Single Family Detached Homes)	210	74 Homes	788	14	43	57	48	28	76
⁽¹⁾ Trip Generation Manual, 10 th Edition published by the Institute of Transportation Engineers (ITE)									

TRANSPORTATION ANALYSIS

The following public intersections were analyzed for capacity deficiencies and improvement needs:

- Split Log Road at Ragsdale Road
- Split Log Road at Pleasant Hill Road/Jordan Elementary School Access
- Split Log Road at Sam Donald Road
- Sunset Road at Split Log Road
- Sunset Road at Waller Road
- Rosebrooke Addition Access Locations on Split Log Road at Sam Donald Road

CONCLUSIONS AND RECOMMENDATIONS

Split Log Road at Ragsdale Road

- No improvements are recommended at the intersection of Split Log Road and Ragsdale Road due to the Rosebrooke Addition.

Split Log Road at Pleasant Hill Road / Jordan Elementary School Driveway

- While there may be improvements necessary to accommodate the proposed middle school at this intersection, no improvements are recommended at the intersection of Split Log Road and Pleasant Hill Road / Jordan Elementary School Driveway due to the Rosebrooke Addition.

Split Log Road at Sam Donald Road

- A southbound left turn lane should be included as part of the Split Log Road realignment and improvements. If feasible within the available or proposed right-of-way, a separate right turn lane on Sam Donald Road with 100 feet of storage and 100 feet of taper would add efficiency to the two-way stop control at this intersection.
- No additional improvements are recommended at the intersection of Sunset Road and Split Log Road due to the Rosebrooke Addition.

Sunset Road at Split Log Road

- A northbound left turn lane on Split Log Road is a condition of approval of the Rosebrook project located in the southwest corner at the intersection of Sunset Road and Split Log Road.
- No additional improvements are recommended at the intersection of Sunset Road and Split Log Road due to the Rosebrooke Addition.

Sunset Road at Waller Road

- No improvements are recommended at the intersection of Sunset Road and Waller Road due to the Rosebrooke Addition.
- Based on the preliminary analysis presented in this study for the future configuration of this intersection, traffic signal control or a roundabout intersection appear to provide acceptable traffic operations. The City of Brentwood should continue to plan for the eventual realignment and extension of Split Log Road to this intersection and conduct additional, more detailed studies to determine the appropriate method of intersection control and satisfaction of appropriate warrants.

Split Log Road at Project Access #1

- The intersection is projected to operate at acceptable levels of service in total traffic conditions during the am. and p.m. peak hours.
- The project access should be constructed to allow a minimum of one ingress lane and two (2) egress lanes with a storage length of 75 feet.
- This proposed access will be near the location of an existing driveway on a generally straight section of Split Log Road and should provide acceptable intersection sight distance. Site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at this intersection.

Split Log Road at Project Access #2 & #3

- The intersection is projected to operate at acceptable levels of service in total traffic conditions during the am. and p.m. peak hours.
- The project access should be constructed to allow a minimum of one ingress lane and two (2) egress lanes with a storage length of 75 feet.

- These proposed access locations will intersect Split Log Road in between existing curves and should provide acceptable intersection sight distance. Site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at this intersection.

Sam Donald Road at Project Access #4

- The intersection is projected to operate at acceptable levels of service in total traffic conditions during the am. and p.m. peak hours.
- The project access should be constructed to allow a minimum of one ingress lane and two (2) egress lanes with a storage length of 75 feet.
- This proposed access will be near an existing driveway within a straight section of Sam Donald Road and should provide acceptable intersection sight distance. Site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at this intersection.

Split Log Road Extension

- If Split Log Road improvements are available from the City of Brentwood, site plans for the Rosebrooke Addition should consider locations where the future Split Log Road will be intersected to provide acceptable grades that are feasible with the overall Split Log Road design.
- If Split Log Road improvements are available from the City of Brentwood, site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at the future intersections with the Split Log Road extension.
- The Rosebrooke Addition should support the City of Brentwood with the eventual realignment and extension of Split Log Road by reserving an appropriate right-of-way through the project for Split Log Road.

Existing Split Log Road

Until the remaining section of the Split Log Road corridor can be improved to modern design practices, there are strategies and measures that can be implemented to influence driver behavior, address locations where there are concerns about safety, and help maintain efficient traffic flow. Any study or implementation of improvements or strategies on Split Log Road would be carried out or managed by the City of Brentwood Engineering Staff and other City officials. This study is not providing any specific recommendations and is not offering a comprehensive list of improvements or strategies that are applicable to Split Log Road. However, some specific strategies or measures that may be appropriate for consideration on Split Log Road between Pleasant Hill Road and Sunset Road are listed below.

- Oversize and/or duplicate regulatory and advisory signage
- Enhanced pavement markings including high reflectivity and/or wider lines
- Advisory signage when approaching sharp curves and chevron signs around curves where appropriate
- Guardrail with additional reflectors for high visibility
- Roadside clearing to remove obstructions and improve sight lines
- Rumble strips on roadway edges or along the centerline to address roadway or lane departure events
- Installation of speed limit driver feedback signs

As previously discussed, these are not specific recommendations, and this is not a comprehensive list of improvements or strategies that could be applicable to Split Log Road. Any study or implementation of improvements or strategies on Split Log Road would be carried out or managed by the City of Brentwood Engineering Staff and other City officials.

I. INTRODUCTION

The purpose of this study is to analyze the transportation-related impacts due to the proposed Rosebrooke Addition located in the City of Brentwood, Tennessee. This report has been requested by the City of Brentwood planning and engineering staff to address transportation impacts and mitigating measures.

In order to evaluate and quantify the impacts of this development, an inventory of the existing roadway was carried out, along with an assessment of its adequacy. Based on the project schedule, a design year was established and system-wide growth rates were applied to existing traffic volumes. Site traffic was generated, distributed, and assigned to the roadway to quantify the site impact. Transportation analyses were performed in order to assess any site or non-site related impacts on the roadway. Finally, recommendations for roadway improvements and/or transportation system improvements were offered.

II. **PROPOSED DEVELOPMENT**

A. **Project Description**

As shown in Figure 1, the Rosebrooke Addition site is located along Split Log Road generally south of Sunset Road and north of Sam Donald Road in the City of Brentwood, Tennessee. The Rosebrooke Addition will include the two (2) developments described below.

- Rosebrooke South contains parcels 14.00 and 14.01 shown on Williamson County Map 55 and contains approximately 69 acres. The proposed development for Rosebrooke South includes 50 single family homes.
- Rosebrooke East contains parcel 12.00 shown on Williamson County Map 55 and parcels 84.00 and 93.00 shown on Williamson County Map 56. Rosebrooke East contains approximately 122 acres. The proposed development for Rosebrooke East includes 74 single family homes.

The proposed zoning for the Rosebrooke Addition is R-2 and OSRD (Open Space Residential Development). The Overall Site Plan for Rosebrooke South is shown in Figure 2A. The Overall Site Plan for Rosebrooke East is shown in Figure 2B.

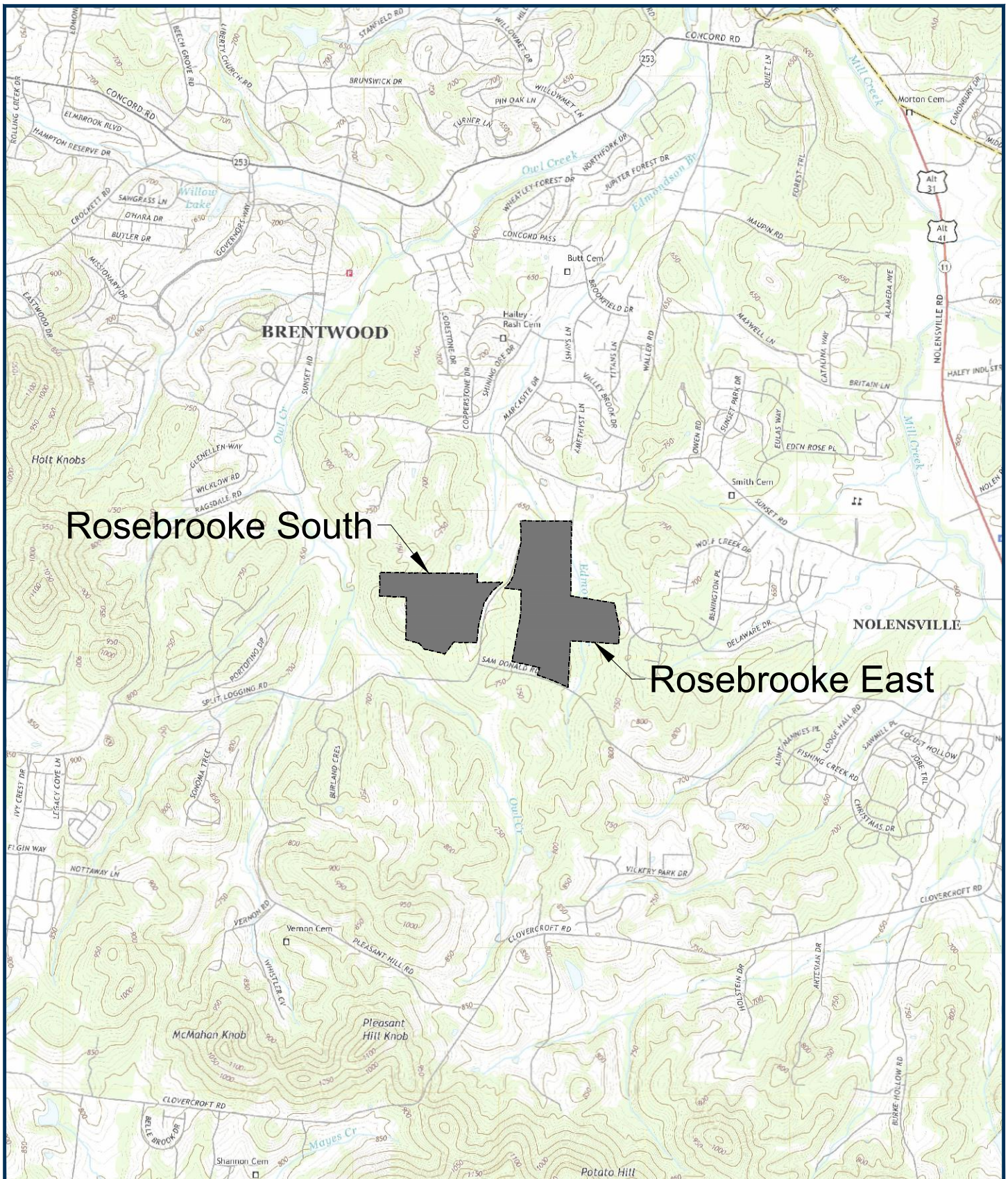
B. **Site Access**

Access to the Rosebrooke Addition is proposed at the locations described below.

- **Rosebrooke South**
 - One (1) new access location will be provided on Split Log Road approximately 600 feet north of Sam Donald Road. This proposed access will be near the location of an existing driveway on a generally straight section of Split Log Road and should provide acceptable intersection sight distance.
 - Two (2) connections will be made to future street stubs in the main Rosebrooke neighborhood.
- **Rosebrooke East**
 - Two (2) new access locations will be provided on Split Log Road and will align approximately 3,550 feet north of Sam Donald Road and 1,750 feet south of Sunset Road. These proposed access locations will intersect Split Log Road in between existing curves and should provide acceptable intersection sight distance.
 - One (1) new access location will be provided on Sam Donald Road approximately 1,275 feet east of Split Log Road. This proposed access will be near an existing driveway within a straight section of Sam Donald Road and should provide acceptable intersection sight distance.
 - One (1) connection will be made to a future street stub in the main Rosebrooke neighborhood.

C. **Phasing and Timing**

The Rosebrooke Addition is anticipated to be built out over a period of 5 to 6 years. For the analysis of this report, the horizon year of 2027 will be used to analyze the full build-out of the Rosebrooke Addition.





Y

ROSEBROOKE SOUTH

FOR

CPS LAND, LLC

SPRUIT | OG ROAD BRENTWOOD TENNESSEE 37027 16TH CIVIL DISTRICT OF WILLIAMSON COUNTY

Date: JANUARY 5, 2022

Approved By: JFV

Revisions:

1 2022.03.14 REVISED LANDSCAPE PLANS

Drawing Title:

OVERALL SITE PLAN

Drawing No.

3

Project No.
21-0337



K:\21-0337\1-CIVIL ENGINEERING\ORD PLAN\PLAN SHEETS\SOUTH\0337 SOUTH CSRD.DWG

GENERAL NOTES

1. SEE SHEET 2 FOR GENERAL NOTES, SITE DATA, AREA TABLES, AND OSRD CALCULATIONS.

TRANSITIONAL LOT NOTE:

LOTS DESIGNATED WITH  HAVE NATURAL SLOPES OF GREATER THAN 15%. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR A RESIDENTIAL LOT WITH A SLOPE OF 15% OR GREATER, A SITE DEVELOPMENT PLAN SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL BY THE ENGINEERING DEPARTMENT SHOWING EXISTING TOPOGRAPHIC INFORMATION FROM FIELD RUN SURVEY DATA; BOUNDARY AND SETBACK LINES, PUBLIC UTILITY AND DRAINAGE EASEMENTS, PROPOSED CITY-OWNED UTILITIES; EXISTING AND PROPOSED DRAINAGE PIPES, SURFACE DRAINAGE FEATURES SUCH AS DITCHES AND SWALES TO BE CONNECTED TO PUBLIC DRAINAGE LINES AND/OR TO DIRECT OR REDIRECT STORMWATER RUN-OFF; LOCATION OF RETAINING WALLS; THE PROPOSED BUILDING FOOTPRINT AND THE DRIVEWAY PLAN, INCLUDING FINISHED FLOOR ELEVATIONS AND FINISHED GRADES OF PAVEMENT AND GROUND LINES; IDENTIFICATION OF EXISTING TREES IN EXCESS OF FOUR-INCH CALIPER AND TREES TO BE PRESERVED; AND THE LOCATION AND TIMING OF INSTALLATION OF EROSION CONTROL FEATURES. NO CLEAR CUTTING OF TREES OR GRADING OF THE LOT SHALL BE PERMITTED UNTIL APPROVAL OF THE SITE PLAN BY THE ENGINEERING DEPARTMENT.



RaganSmith

Nashville - Murfreesboro - Chattanooga
ragansmith.com

ROSEBROOKE EAST
FOR
CPS LAND, LLC

Scale: 1"=200'

Date: JANUARY 7, 2022

Approved By: JFV

Revisions:

1	2022.03.14	REVISED LANDSCAPE PLANS
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Drawing Title:

OVERALL SITE PLAN

Drawing No.

3

Project No.

21-0337

III. EXISTING CONDITIONS

A. Transportation System

The existing transportation system in the area is made up of arterial and local roadways which will provide regional and local access to the site. The following roadways will comprise the study area for consideration of the traffic impact of the Rosebrooke Addition.

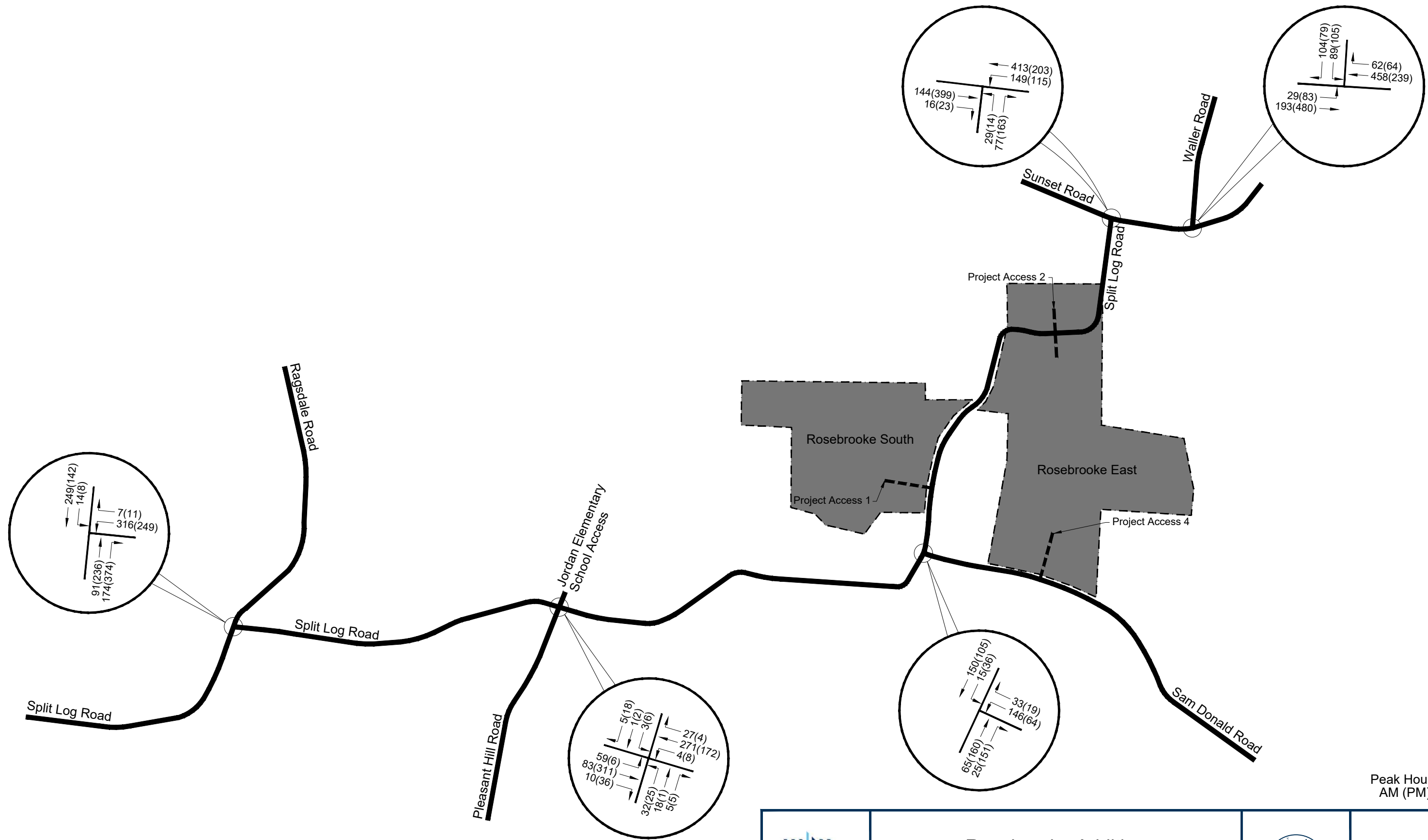
- **Sunset Road** is designated as an arterial roadway in the City of Brentwood's Municipal Code and is designated as a minor arterial in the Town of Nolensville Major Thoroughfare Plan. Sunset Road is generally oriented in an east-west direction and provides a connection from Concord Road in the City of Brentwood to Nolensville Pike in the Town of Nolensville. The posted speed limit on the roadway in the study area is 40 mph.
- **Split Log Road** is designated as an arterial roadway in the City of Brentwood's Municipal Code. Split Log Road connects Sunset Road to Ragsdale Road and Wilson Pike and the posted speed limit on Split Log Road is 40 mph. The City of Brentwood plans to realign the eastern section of Split Log Road, including along the frontage of the Rosebrooke Addition, to improve the horizontal and vertical alignment of the roadway. East of the Rosebrooke Addition, the realigned Split Log Road will intersect Sunset Road and align with Waller Road to the north.
- **Ragsdale Road** is designated as an arterial roadway in the City of Brentwood's Municipal Code that is generally oriented in a north-south direction between Split Log Road and Sunset Road. One travel lane is provided in each direction and the posted speed limit on Ragsdale Road is 30 mph.
- **Pleasant Hill Road** is considered to be a local road because it is not designated as an arterial or collector roadway in the City of Brentwood's Municipal Code. Pleasant Hill Road connects to Clovercroft Road and the posted speed limit is 40 mph.
- **Sam Donald Road** is considered to be a local road because it is not designated as an arterial or collector roadway in the City of Brentwood's Municipal Code. Sam Donald Road extends into the Town of Nolensville and the posted speed limit is 40 mph.
- **Waller Road** is designated as an arterial roadway in the City of Brentwood's Municipal Code that is generally oriented in a north-south direction near the City's eastern boundary with the Town of Nolensville. The posted speed limit on Waller Road is 40 mph. The City of Brentwood plans to realign Split Log Road to intersect Sunset Road at a location that will align with Waller Road.

B. Traffic Volumes

The peak hour of the adjacent street traffic was used to determine the impact of the Rosebrooke Addition on the existing transportation system. Based on hourly traffic data collected in October 2021, the peak hours for analysis are 7:30 to 8:30 a.m. and 5:00 to 6:00 p.m. Turning movement traffic counts were collected at the following intersections:

- Split Log Road at Ragsdale Road
- Split Log Road at Pleasant Hill Road/Jordan Elementary School Driveway
- Split Log Road at Sam Donald Road
- Sunset Road at Split Log Road
- Sunset Road at Waller Road

Existing peak hour traffic volumes are shown in Figure 3.



Rosebrooke Addition 2021 Existing Traffic Volumes



IV. FORECASTED BACKGROUND TRAFFIC

A. Introduction

Before any impacts to the study area could be addressed, some estimate of background traffic volumes for the horizon year had to be established. Background traffic volumes were established by segregating potential growth into two categories:

- Specific development traffic growth within the immediate study area
- Growth due to small scale development and/or general population growth

B. Specific Development Growth

Based on discussions with City of Brentwood staff related to the scope of this traffic impact study, there are three approved but not yet completed developments in the study area that should be included as specific contributors of new traffic to the system prior to the completion of the Rosebrooke Addition. Trip generation for the specific background developments is shown in Table 1, and the trip distributions are provided in the appendix of this report.

TABLE 1								
TRIP GENERATION: BACKGROUND SPECIFIC DEVELOPMENTS								
Land Use	Total Units	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
			Enter	Exit	Total	Enter	Exit	Total
Rosebrooke (Main Section)	126 homes	1,286	24	70	94	80	47	127
Taube Property	71 homes	759	14	41	55	46	27	73
Proposed Split Log Middle School	1,350 students	-	366	299	665	94	102	196

The specific background growth shown in Table 1 results in a growth rate on Split Log Road at the Rosebrooke Addition frontage of 8.3% per year during the a.m. peak hour and 3.3% per year during the p.m. peak hour.

C. Annual Growth

To establish background traffic volumes, TDOT historical traffic was obtained for Sunset Road and Ragsdale Road in the study area. Based on linear regression analysis of the historical traffic data, a growth rate of approximately 3 percent per year has been observed in the study area. Due to the specific background growth shown in Table 1 that exceeds the observed historical growth rate, a **1.0 percent annual growth rate** will be used as the general growth rate for the base traffic volumes.

D. Background Traffic Summary

Background traffic for the future traffic forecasts was compiled based on the following:

- 2021 traffic count data
- Specific background developments: Rosebrooke (main), Taube Property, Proposed Split Log Middle School
- 1% per year increase of traffic volumes for the period from 2021 to 2027

Background traffic volumes on the study area roadways, representing existing traffic volumes plus background growth, for the year 2027 are shown in Figure 4.



V. PROPOSED SITE TRAFFIC

A. Site Trip Generation

In order to quantify site-related impacts within the study area, some estimates of site trip generation and traffic assignment had to be established. Trip generation rates for the development were established using information for the weekday a.m. and p.m. peak hour of the adjacent street as shown in the ITE *Trip Generation Manual, 10th Edition*.

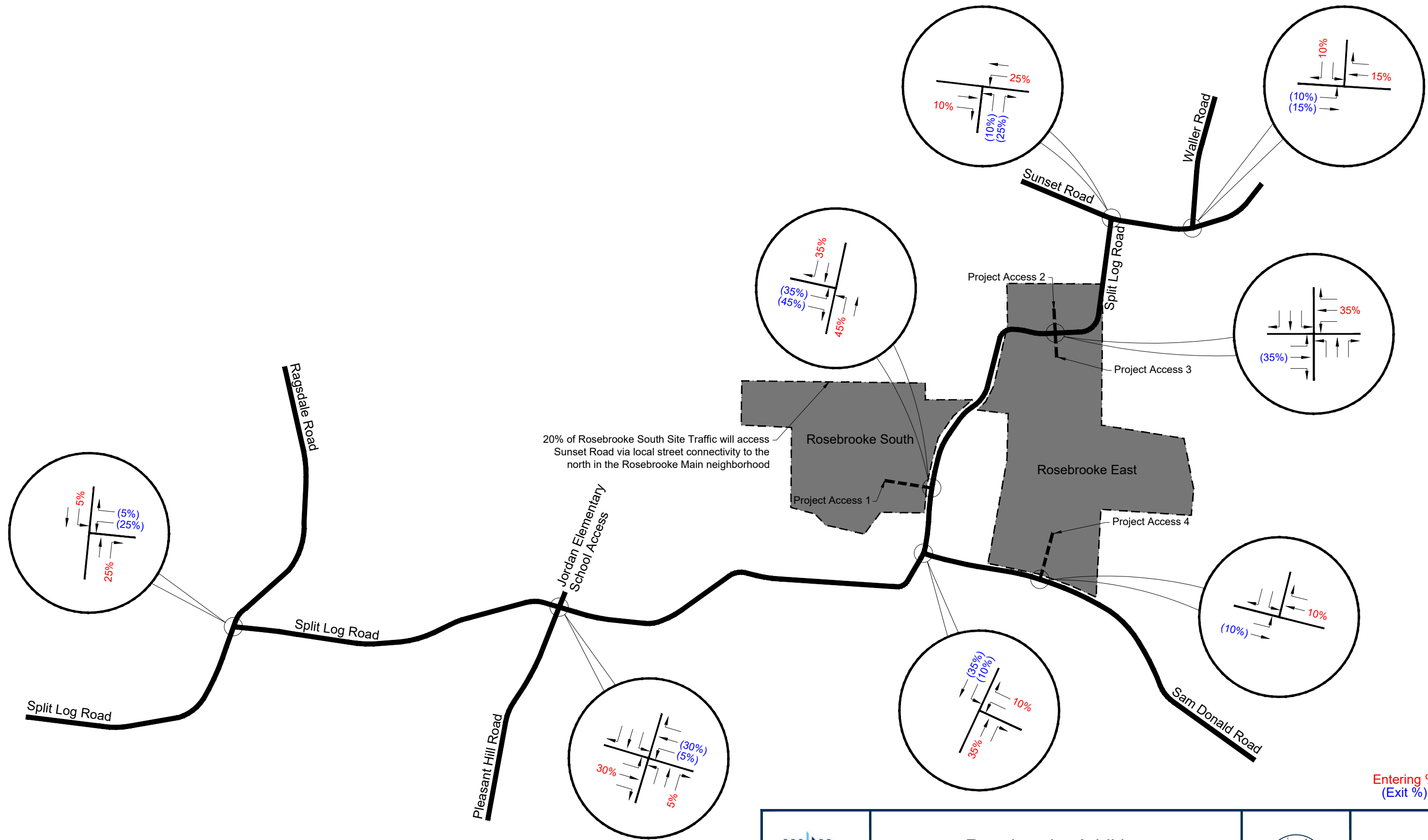
The trip generation for the Rosebrooke Addition is shown in Table 2.

TABLE 2							
TRIP GENERATION: ROSEBROOKE ADDITION							
Proposed Development	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Rosebrooke South (50 Single Family Detached Homes)	550	10	30	40	33	19	52
Rosebrooke East (74 Single Family Detached Homes)	788	14	43	57	48	28	76

B. Site Trip Distribution and Assignment

Site trips were distributed based primarily upon the prevalent commuter traffic patterns in the area and the proximity and routes to major transportation facilities. Figure 5 shows the distribution of residential site trips for the Rosebrooke Addition.

Site traffic volumes generated by the Rosebrooke Addition in the horizon year 2027 are shown in Figure 6. The accumulation of existing, background growth, and site-generated traffic for the horizon year 2027 is shown in Figure 7.



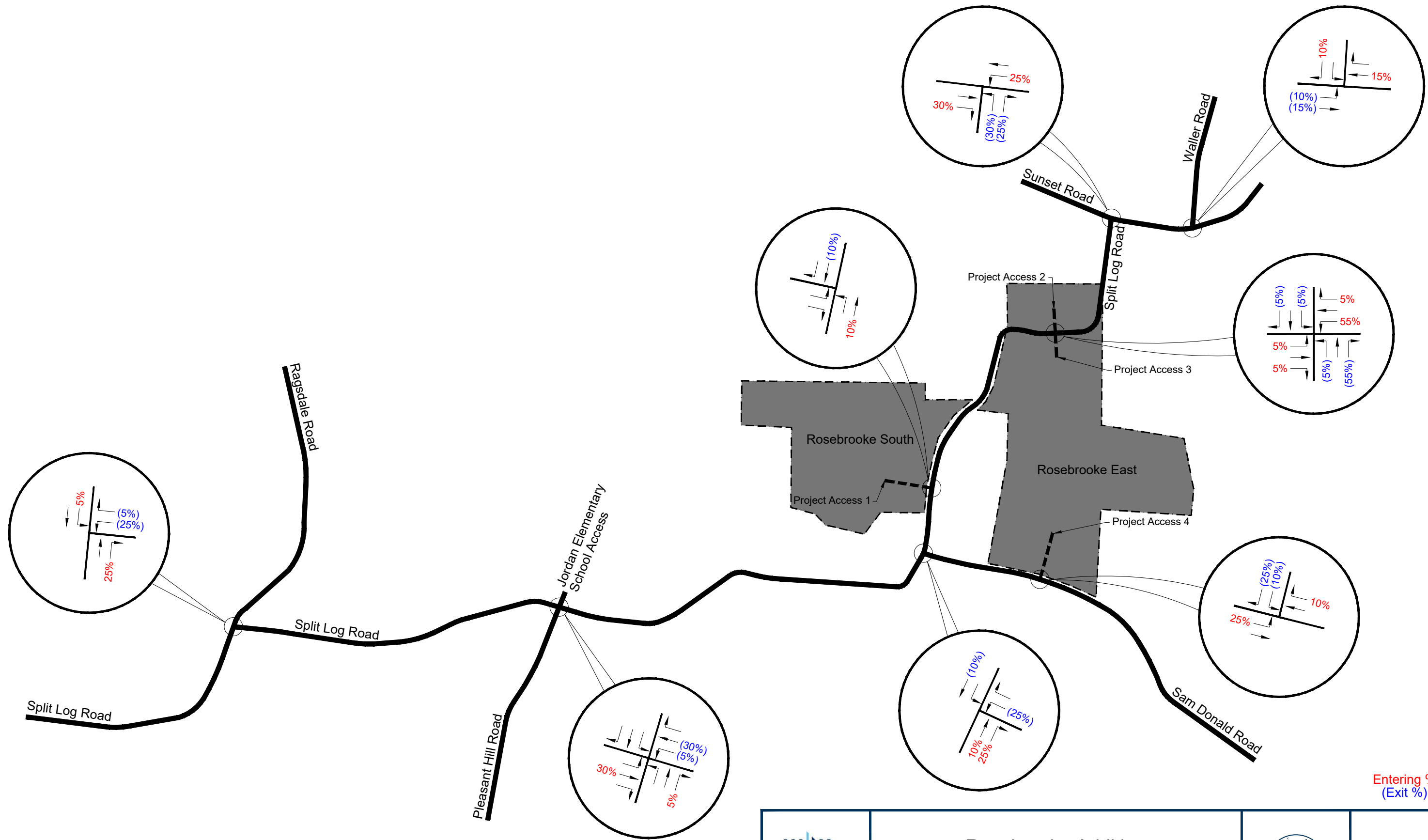
Entering %
(Exit %)



Rosebrooke Addition Rosebrooke South Trip Distribution



Figure
5A



Entering %
(Exit %)

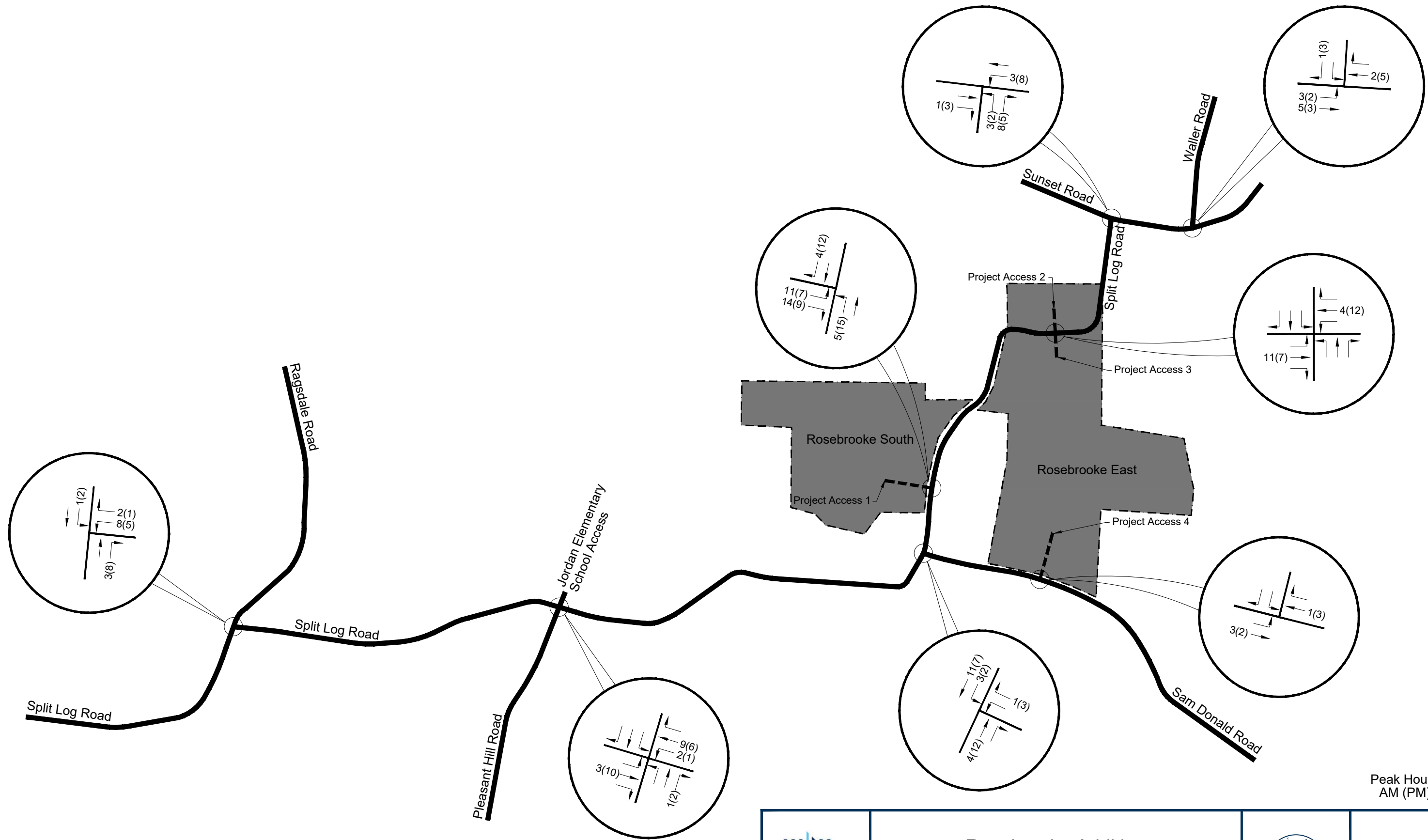


Rosebrooke Addition

Rosebrooke East Trip Distribution



Figure
5B

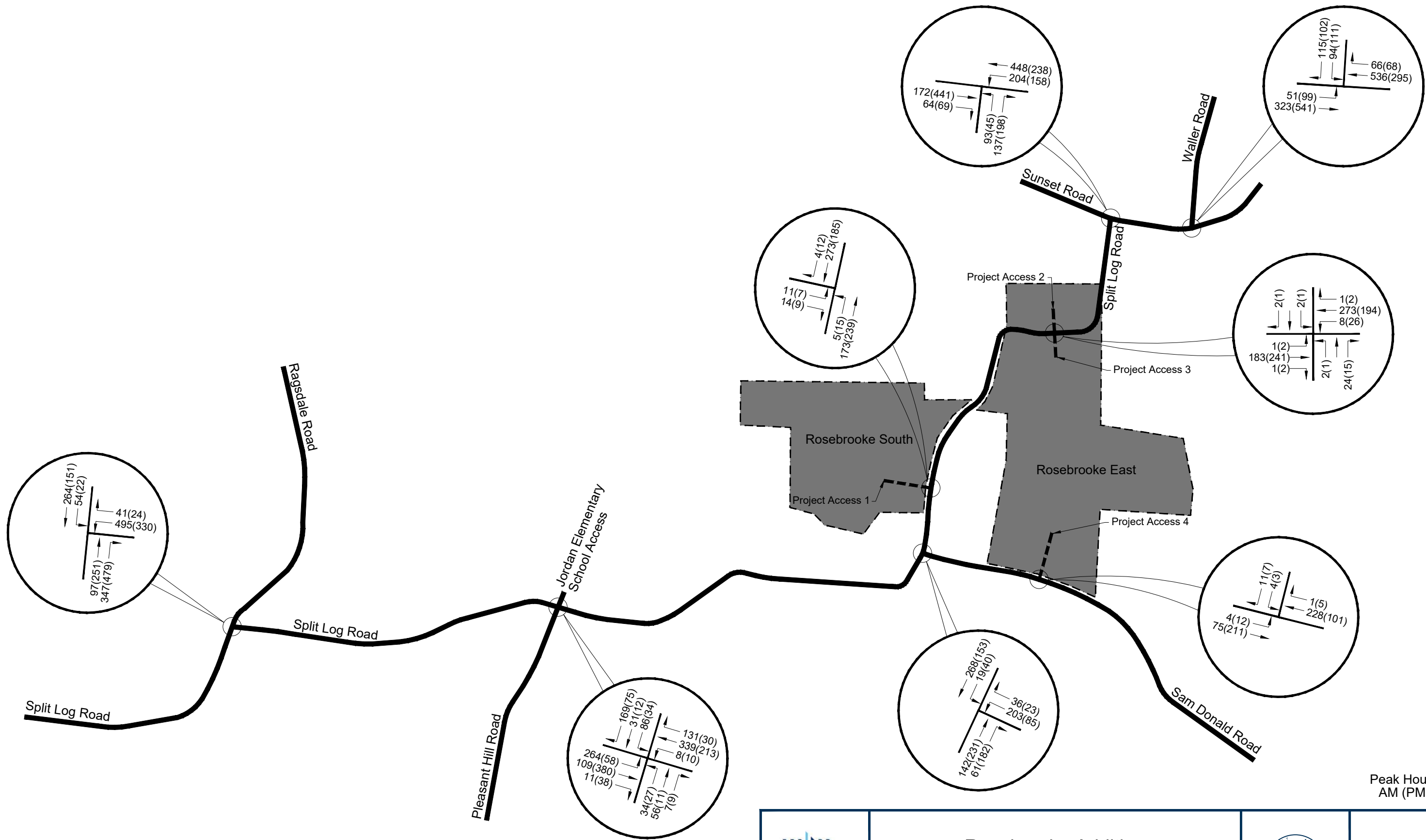


Rosebrooke Addition
Rosebrooke South
Site Traffic Volumes



Peak Hours
AM (PM)

Figure
6A



Peak Hours
AM (PM)



Rosebrooke Addition 2027 Total Traffic Volumes



VI. TRANSPORTATION ANALYSIS

A. Intersection Capacity Analysis

In order to gauge the site impact and identify capacity deficiencies, intersection capacity analyses were conducted at the Rosebrooke Addition study area intersections. Capacity analyses were conducted according to the methodology and procedures outlined in the *Highway Capacity Manual, 6th Edition*, published by Transportation Research Board. Intersections were analyzed for capacity deficiencies and geometric improvement needs during the a.m. and p.m. peak hours for base, background and total traffic conditions. Capacity analysis results for the a.m. peak hour are shown in Table 3.

TABLE 3				
INTERSECTION CAPACITY RESULTS – A.M. PEAK HOUR				
Intersection	Condition ⁽¹⁾	Level of Service (avg. delay/vehicle – sec.)		
		2021 Existing	2027 Background	2027 Total
Split Log Road at Ragsdale Road	Traffic Signal	A (8.3)	A (9.2)	A (9.4)
Split Log Road at Pleasant Hill Road / Jordan Elementary School	Traffic Signal	A (9.2)	B (12.8)	B (12.9)
Split Log Road at Sam Donald Road	SB Left	A (7.4)	A (7.7)	A (7.7)
	TWSC WB	B (11.6)	C (16.3)	C (17.7)
Sunset Road at Split Log Road	WB Left	A (7.9)	A (8.3)	A (8.3)
	TWSC NB	B (13.9)	D (32.9)	E (47.7)
Sunset Road at Waller Road	EB Left	A (8.7)	A (9.0)	A (9.1)
	TWSC SB	C (21.4)	D (31.3)	D (33.9)
Split Log Road at Project Access #1	NB Left	-	-	A (7.9)
	TWSC EB	-	-	B (11.0)
Split Log Road at Project Access #2 & #3	EB Left	-	-	A (7.9)
	WB Left	-	-	A (7.6)
	TWSC NB	-	-	A (9.7)
	TWSC SB	-	-	B (11.5)
Sam Donald Road at Project Access #4	EB Left	-	-	A (7.7)
	TWSC SB	-	-	A (9.8)
⁽¹⁾ TWSC = Two-way Stop Control				

Capacity analysis results for the p.m. peak hour are shown in Table 4.

TABLE 4				
INTERSECTION CAPACITY RESULTS – P.M. PEAK HOUR				
Intersection	Condition ⁽¹⁾	Level of Service (avg. delay/vehicle – sec.)		
		2021 Existing	2027 Background	2027 Total
Split Log Road at Ragsdale Road	Traffic Signal	A (7.0)	A (7.5)	A (7.6)
Split Log Road at Pleasant Hill Road / Jordan Elementary School	Traffic Signal	A (6.6)	A (8.8)	A (8.9)
Split Log Road at Sam Donald Road	SB Left	A (8.0)	A (8.3)	A (8.4)
	TWSC WB	B (12.2)	B (14.1)	B (14.9)
Sunset Road at Split Log Road	WB Left	A (8.7)	A (9.1)	A (9.3)
	TWSC NB	B (14.9)	C (22.5)	D (29.1)
Sunset Road at Waller Road	EB Left	A (8.2)	A (8.4)	A (8.4)
	TWSC SB	D (29.3)	E (47.3)	F (54.9)
Split Log Road at Project Access #1	NB Left	-	-	A (7.7)
	TWSC EB	-	-	B (10.6)
Split Log Road at Project Access #2 & #3	EB Left	-	-	A (7.7)
	WB Left	-	-	A (7.8)
	TWSC NB	-	-	A (9.9)
	TWSC SB	-	-	B (11.4)
Sam Donald Road at Project Access #4	EB Left	-	-	A (7.5)
	TWSC SB	-	-	A (9.5)
⁽¹⁾ TWSC = Two-way Stop Control				

Level of service (LOS) criteria for unsignalized intersections is shown in Table 5 below.

TABLE 5		
LEVEL OF SERVICE DESCRIPTIONS FOR UNSIGNALIZED INTERSECTIONS		
Level of Service	Description	Control Delay (sec. /veh.)
A	Usually no conflicting traffic	0 - 10
B	Occasionally some delay due to conflicting traffic	> 10 - 15
C	Delay is noticeable but not inconveniencing	> 15 - 25
D	Delay is noticeable and irritating, increased risk taking	> 25 - 35
E	Delay approaches tolerance level, risk taking likely	> 35 - 50
F	Delay exceeds tolerance level, high likelihood of risk taking	> 50
<i>Source: Highway Capacity Manual, 6th Edition</i>		

Level of service (LOS) criteria for unsignalized intersections is shown in Table 6 below.

TABLE 6		
LEVEL OF SERVICE DESCRIPTIONS FOR SIGNALIZED INTERSECTIONS		
Level of Service	Description	Control Delay (sec. /veh.)
A	Free Flow	≤10
B	Stable Flow (slight delays)	> 10 - 20
C	Stable Flow (acceptable delays)	> 20 - 35
D	Approaching unstable flow (tolerable delay)	> 35 - 55
E	Unstable flow (intolerable delay)	> 55 - 80
F	Forced flow (congested and queues fail to clear)	> 80
<i>Source: Highway Capacity Manual, 6th Edition</i>		

B. Future Split Log Road Realignment

The future realignment and extension of Split Log Road will create a fourth intersection approach at the existing intersection of Sunset Road at Waller Road. This new intersection will consolidate the existing intersections of arterial streets with a spacing approximately 970 feet into one intersection.

The total traffic volumes shown in Figure 7 for the intersections of Sunset Road at Split Log Road and Sunset Road at Waller Road were redistributed based on the turning movement percentages to provide the total traffic forecast shown to the right for the future intersection of Sunset Road at Split Log Road/Waller Road.

For preliminary and informational purposes, the total traffic forecast was evaluated for multiple types of intersection control to assist the City of Brentwood with preliminary consideration and discussion of the future Split Road realignment and extension. The results the intersection control evaluation showed that traffic signal control or a roundabout intersection appear to provide better traffic operations than two-way stop control or all-way stop control. Due to the heavy right turn volumes on the Split Log Road and Waller Road approaches, a specific signal warrant evaluation study should be conducted to assess the need for a traffic signal and impacts that right turn on red movements would have at the intersection.

VII. CONCLUSIONS AND RECOMMENDATIONS

A. Split Log Road at Ragsdale Road

The City of Brentwood has improved Split Log Road in the area of this intersection, including the installation of a traffic signal at this intersection. The recommendation below is based on the results of the capacity analysis completed for this report.

- No improvements are recommended at the intersection of Split Log Road and Ragsdale Road due to the Rosebrooke Addition.

B. Split Log Road at Pleasant Hill Road / Jordan Elementary School Driveway

The City of Brentwood has improved Split Log Road in the area of this intersection, including the installation of a traffic signal at this intersection. Additionally, Williamson County Schools are currently planning a new middle school that would access this intersection. Traffic forecasts for the new middle school have been included in the analysis of this report. The recommendation below is based on the results of the capacity analysis completed for this report.

- While there may be improvements necessary to accommodate the proposed middle school at this intersection, no improvements are recommended at the intersection of Split Log Road and Pleasant Hill Road / Jordan Elementary School Driveway due to the Rosebrooke Addition.

C. Split Log Road at Sam Donald Road

The City of Brentwood is planning to realign Split Log Road in the area of this intersection to improve the roadway geometry and to add capacity with left turn lanes at intersections. The recommendations below are based on the results of the capacity analysis completed for this report.

- A southbound left turn lane should be included as part of the Split Log Road realignment and improvements. If feasible within the available or proposed right-of-way, a separate right turn lane on Sam Donald Road with 100 feet of storage and 100 feet of taper would add efficiency to the two-way stop control at this intersection.
- No additional improvements are recommended at the intersection of Sunset Road and Split Log Road due to the Rosebrooke Addition.

D. Sunset Road at Split Log Road

The City of Brentwood is planning to realign and extend Split Log Road to intersect Sunset Road at a location that will align with Waller Road. The realignment will route Split Log Road approximately 1,000 feet to the east of the existing Split Log Road and Sunset Road intersection. The existing Split Log Road intersection will remain in place after the realignment and extension of Split Log Road is complete to provide local access to the main Rosebrooke project and other adjoining properties.

- A northbound left turn lane on Split Log Road is a condition of approval of the Rosebrook project located in the southwest corner at the intersection of Sunset Road and Split Log Road.
- No additional improvements are recommended at the intersection of Sunset Road and Split Log Road due to the Rosebrooke Addition.

E. Sunset Road at Waller Road

The intersection of Sunset Road at Waller Road is currently characterized by undesirable levels of service on the minor street approach of Waller Road. This is an expected condition at intersections with arterial streets with high volumes of left turns from the minor street and high volumes of through traffic on the major street. The City of Brentwood's plan to extend Split Log Road to align with Waller Road at this intersection will provide a four-leg intersection and an opportunity for additional laneage and traffic control modifications.

- No improvements are recommended at the intersection of Sunset Road and Waller Road due to the Rosebrooke Addition.
- Based on the preliminary analysis presented in this study for the future configuration of this intersection, traffic signal control or a roundabout intersection appear to provide acceptable traffic operations. The City of Brentwood should continue to plan for the eventual realignment and extension of Split Log Road to this intersection and conduct additional, more detailed studies to determine the appropriate method of intersection control and satisfaction of appropriate warrants.

F. Split Log Road at Project Access #1

The following recommendations are offered for the intersection of Split Log Road at Project Access #1:

- The intersection is projected to operate at acceptable levels of service in total traffic conditions during the am. and p.m. peak hours.
- The project access should be constructed to allow a minimum of one ingress lane and two (2) egress lanes with a storage length of 75 feet.
- This proposed access will be near the location of an existing driveway on a generally straight section of Split Log Road and should provide acceptable intersection sight distance. Site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at this intersection.

G. Split Log Road at Project Access #2 & #3

The following recommendations are offered for the intersection of Split Log Road at Project Access #2 & #3:

- The intersection is projected to operate at acceptable levels of service in total traffic conditions during the am. and p.m. peak hours.
- The project access should be constructed to allow a minimum of one ingress lane and two (2) egress lanes with a storage length of 75 feet.
- These proposed access locations will intersect Split Log Road in between existing curves and should provide acceptable intersection sight distance. Site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at this intersection.

H. Sam Donald Road at Project Access #4

The following recommendations are offered for the intersection of Split Log Road at Project Access #4:

- ### I. Split Log Road Extension

- ## J. Existing Split Log Road

- 19 -

behavior, address locations where there are concerns about safety, and help maintain efficient traffic flow. The City of Brentwood Engineering Staff is very experienced and very capable of studying and implementing appropriate strategies and measures on Split Log Road and all other city streets.

Any study or implementation of improvements or strategies on Split Log Road would be carried out or managed by the City of Brentwood Engineering Staff and other City officials. This study is not providing any specific recommendations and is not offering a comprehensive list of improvements or strategies that are applicable to Split Log Road. However, some specific strategies or measures that may be appropriate for consideration on Split Log Road between Pleasant Hill Road and Sunset Road are listed below.

- Oversize and/or duplicate regulatory and advisory signage
- Enhanced pavement markings including high reflectivity and/or wider lines
- Advisory signage when approaching sharp curves and chevron signs around curves where appropriate
- Guardrail with additional reflectors for high visibility
- Roadside clearing to remove obstructions and improve sight lines
- Rumble strips on roadway edges or along the centerline to address roadway or lane departure events
- Installation of speed limit driver feedback signs

As previously discussed, these are not specific recommendations, and this is not a comprehensive list of improvements or strategies that could be applicable to Split Log Road. Any study or implementation of improvements or strategies on Split Log Road would be carried out or managed by the City of Brentwood Engineering Staff and other City officials.

APPENDIX

- A. TRAFFIC COUNT DATA**
- B. TRIP GENERATION & FUTURE TRAFFIC
DERIVATION**
- C. 2021 EXISTING CONDITIONS CAPACITY
ANALYSIS WORKSHEETS**
- D. 2027 BACKGROUND CONDITIONS
CAPACITY ANALYSIS WORKSHEETS**
- E. 2027 TOTAL CONDITIONS
CAPACITY ANALYSIS WORKSHEETS**

APPENDIX A

TRAFFIC COUNT DATA

Classified Turn Movement Count || All vehicles

Brentwood, TN



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Site 1 of 5

Waller Rd
Sunset Rd (West)
Sunset Rd (East)

Date

Tuesday, October 26, 2021

Lat/Long

36.965327°, -86.702941°

Weather

Fair
54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

All vehicles

TIME	Southbound				Eastbound				Westbound				Int Total
	Waller Rd				Sunset Rd (West)				Sunset Rd (East)				
	Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total	
0600 - 0615	3	4	0	7	3	4	0	7	36	1	0	37	51
0615 - 0630	1	9	0	10	1	7	0	8	47	3	0	50	68
0630 - 0645	2	11	0	13	2	22	0	24	86	9	0	95	132
0645 - 0700	10	24	0	34	9	31	0	40	94	3	0	97	171
Hourly Total	16	48	0	64	15	64	0	79	263	16	0	279	422
0700 - 0715	15	25	0	40	4	32	0	36	91	9	0	100	176
0715 - 0730	14	27	0	41	8	67	0	75	74	18	0	92	208
0730 - 0745	23	32	0	55	9	80	0	89	143	26	0	169	313
0745 - 0800	12	30	0	42	5	39	0	44	121	22	0	143	229
Hourly Total	64	114	0	178	26	218	0	244	429	75	0	504	926
0800 - 0815	17	22	0	39	8	31	0	39	102	5	0	107	185
0815 - 0830	37	20	0	57	7	43	0	50	93	9	0	102	209
0830 - 0845	39	29	0	68	5	31	0	36	109	39	0	148	252
0845 - 0900	14	12	0	26	19	61	0	80	84	37	0	121	227
Hourly Total	107	83	0	190	39	166	0	205	388	90	0	478	873
0900 - 0915	11	16	0	27	14	36	0	50	59	14	0	73	150
0915 - 0930	15	13	0	28	9	31	0	40	82	12	0	94	162
0930 - 0945	8	15	0	23	14	34	0	48	92	14	0	106	177
0945 - 1000	11	8	0	19	13	44	0	57	53	13	0	66	142
Hourly Total	45	52	0	97	50	145	0	195	286	53	0	339	631
1000 - 1015	9	14	0	23	3	41	0	44	44	13	0	57	124
1015 - 1030	11	7	0	18	5	28	0	33	44	11	0	55	106
1030 - 1045	8	15	0	23	8	42	0	50	59	9	0	68	141
1045 - 1100	11	6	0	17	4	33	0	37	49	9	0	58	112
Hourly Total	39	42	0	81	20	144	0	164	196	42	0	238	483
1100 - 1115	8	11	0	19	7	56	0	63	49	9	0	58	140
1115 - 1130	15	5	0	20	8	51	0	59	40	8	0	48	127
1130 - 1145	12	12	0	24	12	55	0	67	44	15	0	59	150
1145 - 1200	15	15	0	30	11	56	0	67	50	18	0	68	165
Hourly Total	50	43	0	93	38	218	0	256	183	50	0	233	582
1200 - 1215	10	18	0	28	12	49	0	61	62	12	0	74	163
1215 - 1230	16	8	0	24	5	50	0	55	50	9	0	59	138
1230 - 1245	9	8	0	17	16	49	0	65	67	5	0	72	154
1245 - 1300	10	9	0	19	16	46	0	62	42	11	0	53	134
Hourly Total	45	43	0	88	49	194	0	243	221	37	0	258	589
1300 - 1315	13	22	0	35	19	60	0	79	41	8	0	49	163
1315 - 1330	10	11	0	21	8	58	0	66	31	13	0	44	131
1330 - 1345	18	21	0	39	12	57	0	69	42	15	0	57	165
1345 - 1400	19	8	0	27	10	50	0	60	56	11	0	67	154
Hourly Total	60	62	0	122	49	225	0	274	170	47	0	217	613
1400 - 1415	8	10	0	18	10	54	0	64	46	15	0	61	143
1415 - 1430	8	16	0	24	11	82	0	93	45	11	0	56	173
1430 - 1445	26	19	0	45	13	83	0	96	46	11	0	57	198
1445 - 1500	20	12	0	32	12	90	0	102	48	6	0	54	188
Hourly Total	62	57	0	119	46	309	0	355	185	43	0	228	702
1500 - 1515	15	7	0	22	17	85	0	102	97	20	0	117	241
1515 - 1530	21	18	0	39	8	83	0	91	79	13	0	92	222
1530 - 1545	17	24	0	41	18	109	0	127	67	12	0	79	247
1545 - 1600	25	18	0	43	20	127	0	147	51	33	0	84	274
Hourly Total	78	67	0	145	63	404	0	467	294	78	0	372	984
1600 - 1615	19	15	0	34	22	126	0	148	93	38	0	131	313
1615 - 1630	26	9	0	35	25	124	0	149	60	12	0	72	256
1630 - 1645	47	17	0	64	21	134	0	155	64	23	0	87	306
1645 - 1700	30	19	0	49	25	107	0	132	67	47	0	114	295
Hourly Total	122	60	0	182	93	491	0	584	284	120	0	404	1170
1700 - 1715	33	26	0	59	26	141	0	167	62	15	0	77	303
1715 - 1730	24	15	0	39	27	130	0	157	78	21	0	99	295
1730 - 1745	26	17	0	43	14	102	0	116	60	16	0	76	235
1745 - 1800	22	21	0	43	16	107	0	123	39	12	0	51	217
Hourly Total	105	79	0	184	83	480	0	563	239	64	0	303	1050
1800 - 1815	28	18	0	46	18	101	0	119	78	21	0	99	264
1815 - 1830	18	15	0	33	23	105	0	128	47	6	0	53	214
1830 - 1845	11	8	0	19	19	77	0	96	48	7	0	55	170
1845 - 1900	10	3	0	13	13	64	0	77	55	11	0	66	156
Hourly Total	67	44	0	111	73	347	0	420	228	45	0	273	804
Grand Total	860	794	0	1654	644	3405	0	4049	3366	760	0	4126	9829
Approach %	52.00	48.00	0.00	-	15.91	84.09	0.00	-	81.58	18.42	0.00	-	
Intersection %	8.75	8.08	0.00	16.83	6.55	34.64	0.00	41.19	34.25	7.73	0.00	41.98	
PHF	0.71	0.74	0.00	0.82	0.92	0.91	0.00	0.91	0.87	0.56	0.00	0.83	0.98

Classified Turn Movement Count || Bikes

Brentwood, TN



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Site 1 of 5

Waller Rd
Sunset Rd (West)
Sunset Rd (East)

Date

Tuesday, October 26, 2021

Lat/Long

36.965327°, -86.702941°

Weather

Fair
54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Bikes

TIME	Southbound				Eastbound				Westbound				
	Waller Rd				Sunset Rd (West)				Sunset Rd (East)				
	Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0	0	0
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0	0	0
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	1	0	0	1	0	0	0	0	1
Hourly Total	0	0	0	0	1	0	0	1	0	0	0	0	1
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	2	0	2	2
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	2	0	2	2
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0
1815 - 1830	0	0	0	0	0	0	0	0	0	0	0	0	0
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	1	0	0	1	1	2	0	3	4
Approach %	0.00	0.00	0.00	-	100.00	0.00	0.00	-	33.33	66.67	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	25.00	0.00	0.00	25.00	25.00	50.00	0.00	75.00	

Classified Turn Movement Count || Passenger Vehicles (1-3)

Brentwood, TN



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Site 1 of 5

Waller Rd
Sunset Rd (West)
Sunset Rd (East)

Date

Tuesday, October 26, 2021

Lat/Long

36.965327°, -86.702941°

Weather

Fair
54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Passenger Vehicles (1-3)

TIME	Southbound				Eastbound				Westbound				
	Waller Rd				Sunset Rd (West)				Sunset Rd (East)				
	Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0600 - 0615	2	4	0	6	3	4	0	7	36	1	0	37	50
0615 - 0630	1	9	0	10	1	7	0	8	44	3	0	47	65
0630 - 0645	2	11	0	13	2	18	0	20	83	9	0	92	125
0645 - 0700	10	22	0	32	9	30	0	39	91	3	0	94	165
Hourly Total	15	46	0	61	15	59	0	74	254	16	0	270	405
0700 - 0715	15	24	0	39	4	32	0	36	90	9	0	99	174
0715 - 0730	13	26	0	39	8	62	0	70	71	17	0	88	197
0730 - 0745	22	32	0	54	9	75	0	84	141	26	0	167	305
0745 - 0800	11	28	0	39	5	38	0	43	115	21	0	136	218
Hourly Total	61	110	0	171	26	207	0	233	417	73	0	490	894
0800 - 0815	17	22	0	39	8	28	0	36	101	5	0	106	181
0815 - 0830	36	19	0	55	6	43	0	49	88	9	0	97	201
0830 - 0845	38	29	0	67	5	27	0	32	108	39	0	147	246
0845 - 0900	13	12	0	25	17	54	0	71	81	35	0	116	212
Hourly Total	104	82	0	186	36	152	0	188	378	88	0	466	840
0900 - 0915	11	15	0	26	11	32	0	43	57	14	0	71	140
0915 - 0930	14	12	0	26	8	29	0	37	78	11	0	89	152
0930 - 0945	8	11	0	19	13	33	0	46	87	14	0	101	166
0945 - 1000	10	7	0	17	13	42	0	55	50	13	0	63	135
Hourly Total	43	45	0	88	45	136	0	181	272	52	0	324	593
1000 - 1015	8	14	0	22	3	41	0	44	43	11	0	54	120
1015 - 1030	11	6	0	17	5	28	0	33	44	11	0	55	105
1030 - 1045	8	15	0	23	8	38	0	46	58	8	0	66	135
1045 - 1100	11	6	0	17	4	32	0	36	48	9	0	57	110
Hourly Total	38	41	0	79	20	139	0	159	193	39	0	232	470
1100 - 1115	7	11	0	18	6	56	0	62	48	9	0	57	137
1115 - 1130	15	5	0	20	8	49	0	57	40	8	0	48	125
1130 - 1145	12	12	0	24	12	50	0	62	44	15	0	59	145
1145 - 1200	15	15	0	30	11	53	0	64	47	18	0	65	159
Hourly Total	49	43	0	92	37	208	0	245	179	50	0	229	566
1200 - 1215	10	16	0	26	12	48	0	60	61	11	0	72	158
1215 - 1230	16	8	0	24	5	46	0	51	49	9	0	58	133
1230 - 1245	9	8	0	17	16	47	0	63	66	5	0	71	151
1245 - 1300	10	9	0	19	14	42	0	56	41	11	0	52	127
Hourly Total	45	41	0	86	47	183	0	230	217	36	0	253	569
1300 - 1315	13	22	0	35	19	60	0	79	38	7	0	45	159
1315 - 1330	10	11	0	21	8	52	0	60	28	13	0	41	122
1330 - 1345	18	20	0	38	12	55	0	67	40	14	0	54	159
1345 - 1400	18	7	0	25	9	48	0	57	55	10	0	65	147
Hourly Total	59	60	0	119	48	215	0	263	161	44	0	205	587
1400 - 1415	7	9	0	16	10	52	0	62	46	15	0	61	139
1415 - 1430	8	15	0	23	11	78	0	89	43	11	0	54	166
1430 - 1445	25	18	0	43	12	81	0	93	45	10	0	55	191
1445 - 1500	20	11	0	31	10	87	0	97	46	4	0	50	178
Hourly Total	60	53	0	113	43	298	0	341	180	40	0	220	674
1500 - 1515	14	6	0	20	16	83	0	99	93	20	0	113	232
1515 - 1530	21	15	0	36	8	82	0	90	76	13	0	89	215
1530 - 1545	17	23	0	40	18	105	0	123	65	11	0	76	239
1545 - 1600	25	18	0	43	20	124	0	144	50	32	0	82	269
Hourly Total	77	62	0	139	62	394	0	456	284	76	0	360	955
1600 - 1615	17	14	0	31	22	125	0	147	93	35	0	128	306
1615 - 1630	23	9	0	32	25	122	0	147	58	10	0	68	247
1630 - 1645	47	15	0	62	20	130	0	150	62	22	0	84	296
1645 - 1700	30	19	0	49	24	103	0	127	66	47	0	113	289
Hourly Total	117	57	0	174	91	480	0	571	279	114	0	393	1138
1700 - 1715	31	25	0	56	24	139	0	163	62	14	0	76	295
1715 - 1730	23	15	0	38	27	125	0	152	78	21	0	99	289
1730 - 1745	26	17	0	43	14	100	0	114	59	16	0	75	232
1745 - 1800	21	21	0	42	16	103	0	119	38	11	0	49	210
Hourly Total	101	78	0	179	81	467	0	548	237	62	0	299	1026
1800 - 1815	27	18	0	45	18	98	0	116	77	21	0	98	259
1815 - 1830	18	15	0	33	23	103	0	126	47	6	0	53	212
1830 - 1845	11	8	0	19	19	77	0	96	48	7	0	55	170
1845 - 1900	10	3	0	13	13	64	0	77	55	11	0	66	156
Hourly Total	66	44	0	110	73	342	0	415	227	45	0	272	797
Grand Total	835	762	0	1597	624	3280	0	3904	3278	735	0	4013	9514
Approach %	52.29	47.71	0.00	-	15.98	84.02	0.00	-	81.68	18.32	0.00	-	
Intersection %	8.78	8.01	0.00	16.79	6.56	34.48	0.00	41.03	34.45	7.73	0.00	42.18	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Brentwood, TN



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Site 1 of 5

Waller Rd
Sunset Rd (West)
Sunset Rd (East)

Date

Tuesday, October 26, 2021

Lat/Long

36.965327°, -86.702941°

Weather

Fair
54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Single Unit Trucks (4-7)

TIME	Southbound				Eastbound				Westbound					Int Total
	Waller Rd				Sunset Rd (West)				Sunset Rd (East)					
	Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total		
0600 - 0615	1	0	0	1	0	0	0	0	0	0	0	0	1	
0615 - 0630	0	0	0	0	0	0	0	0	3	0	0	3	3	
0630 - 0645	0	0	0	0	0	4	0	4	3	0	0	3	7	
0645 - 0700	0	2	0	2	0	0	0	0	3	0	0	3	5	
Hourly Total	1	2	0	3	0	4	0	4	9	0	0	9	16	
0700 - 0715	0	1	0	1	0	0	0	0	1	0	0	1	2	
0715 - 0730	1	1	0	2	0	5	0	5	2	1	0	3	10	
0730 - 0745	1	0	0	1	0	4	0	4	1	0	0	1	6	
0745 - 0800	0	2	0	2	0	1	0	1	5	1	0	6	9	
Hourly Total	2	4	0	6	0	10	0	10	9	2	0	11	27	
0800 - 0815	0	0	0	0	0	3	0	3	1	0	0	1	4	
0815 - 0830	1	0	0	1	1	0	0	1	3	0	0	3	5	
0830 - 0845	1	0	0	1	0	3	0	3	1	0	0	1	5	
0845 - 0900	1	0	0	1	2	4	0	6	3	2	0	5	12	
Hourly Total	3	0	0	3	3	10	0	13	8	2	0	10	26	
0900 - 0915	0	1	0	1	2	4	0	6	2	0	0	2	9	
0915 - 0930	1	1	0	2	1	1	0	2	4	1	0	5	9	
0930 - 0945	0	3	0	3	0	1	0	1	4	0	0	4	8	
0945 - 1000	1	1	0	2	0	2	0	2	3	0	0	3	7	
Hourly Total	2	6	0	8	3	8	0	11	13	1	0	14	33	
1000 - 1015	1	0	0	1	0	0	0	0	1	2	0	3	4	
1015 - 1030	0	1	0	1	0	0	0	0	0	0	0	0	1	
1030 - 1045	0	0	0	0	0	4	0	4	1	1	0	2	6	
1045 - 1100	0	0	0	0	0	1	0	1	1	0	0	1	2	
Hourly Total	1	1	0	2	0	5	0	5	3	3	0	6	13	
1100 - 1115	1	0	0	1	1	0	0	1	1	0	0	1	3	
1115 - 1130	0	0	0	0	0	2	0	2	0	0	0	0	2	
1130 - 1145	0	0	0	0	0	4	0	4	0	0	0	0	4	
1145 - 1200	0	0	0	0	0	3	0	3	3	0	0	3	6	
Hourly Total	1	0	0	1	1	9	0	10	4	0	0	4	15	
1200 - 1215	0	1	0	1	0	1	0	1	1	0	0	1	3	
1215 - 1230	0	0	0	0	0	3	0	3	1	0	0	1	4	
1230 - 1245	0	0	0	0	0	2	0	2	1	0	0	1	3	
1245 - 1300	0	0	0	0	1	2	0	3	1	0	0	1	4	
Hourly Total	0	1	0	1	1	8	0	9	4	0	0	4	14	
1300 - 1315	0	0	0	0	0	0	0	0	3	1	0	4	4	
1315 - 1330	0	0	0	0	0	4	0	4	3	0	0	3	7	
1330 - 1345	0	1	0	1	0	2	0	2	2	1	0	3	6	
1345 - 1400	1	0	0	1	0	2	0	2	1	1	0	2	5	
Hourly Total	1	1	0	2	0	8	0	8	9	3	0	12	22	
1400 - 1415	0	0	0	0	0	2	0	2	0	0	0	0	2	
1415 - 1430	0	0	0	0	0	4	0	4	2	0	0	2	6	
1430 - 1445	1	1	0	2	1	1	0	2	1	1	0	2	6	
1445 - 1500	0	1	0	1	1	2	0	3	2	2	0	4	8	
Hourly Total	1	2	0	3	2	9	0	11	5	3	0	8	22	
1500 - 1515	1	1	0	2	1	2	0	3	4	0	0	4	9	
1515 - 1530	0	2	0	2	0	1	0	1	2	0	0	2	5	
1530 - 1545	0	1	0	1	0	4	0	4	2	1	0	3	8	
1545 - 1600	0	0	0	0	0	3	0	3	1	1	0	2	5	
Hourly Total	1	4	0	5	1	10	0	11	9	2	0	11	27	
1600 - 1615	1	1	0	2	0	1	0	1	0	3	0	3	6	
1615 - 1630	3	0	0	3	0	2	0	2	2	0	0	2	7	
1630 - 1645	0	1	0	1	1	3	0	4	2	1	0	3	8	
1645 - 1700	0	0	0	0	1	3	0	4	1	0	0	1	5	
Hourly Total	4	2	0	6	2	9	0	11	5	4	0	9	26	
1700 - 1715	2	1	0	3	2	2	0	4	0	1	0	1	8	
1715 - 1730	0	0	0	0	0	4	0	4	0	0	0	0	4	
1730 - 1745	0	0	0	0	0	2	0	2	1	0	0	1	3	
1745 - 1800	1	0	0	1	0	4	0	4	1	1	0	2	7	
Hourly Total	3	1	0	4	2	12	0	14	2	2	0	4	22	
1800 - 1815	1	0	0	1	0	3	0	3	1	0	0	1	5	
1815 - 1830	0	0	0	0	0	2	0	2	0	0	0	0	2	
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0	
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	1	0	0	1	0	5	0	5	1	0	0	1	7	
Grand Total	21	24	0	45	15	107	0	122	81	22	0	103	270	
Approach %	46.67	53.33	0.00	-	12.30	87.70	0.00	-	78.64	21.36	0.00	-		
Intersection %	7.78	8.89	0.00	16.67	5.56	39.63	0.00	45.19	30.00	8.15	0.00	38.15		

Classified Turn Movement Count || Combination Trucks (8-13)

Brentwood, TN



Marr Traffic
DATA COLLECTION

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Site 1 of 5

Waller Rd
Sunset Rd (West)
Sunset Rd (East)

Date

Tuesday, October 26, 2021

Lat/Long

36.965327°, -86.702941°

Weather

Fair
54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Combination Trucks (8-13)

TIME	Southbound				Eastbound				Westbound					Int Total
	Waller Rd				Sunset Rd (West)				Sunset Rd (East)					
	Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total		
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0	
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0	
0645 - 0700	0	0	0	0	0	1	0	1	0	0	0	0	1	
Hourly Total	0	0	0	0	0	1	0	1	0	0	0	0	1	
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	
0715 - 0730	0	0	0	0	0	0	0	0	1	0	0	1	1	
0730 - 0745	0	0	0	0	0	1	0	1	1	0	0	1	2	
0745 - 0800	1	0	0	1	0	0	0	0	0	0	0	0	1	
Hourly Total	1	0	0	1	0	1	0	1	2	0	0	2	4	
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	
0815 - 0830	0	1	0	1	0	0	0	0	2	0	0	2	3	
0830 - 0845	0	0	0	0	0	1	0	1	0	0	0	0	1	
0845 - 0900	0	0	0	0	0	3	0	3	0	0	0	0	3	
Hourly Total	0	1	0	1	0	4	0	4	2	0	0	2	7	
0900 - 0915	0	0	0	0	1	0	0	1	0	0	0	0	1	
0915 - 0930	0	0	0	0	0	1	0	1	0	0	0	0	1	
0930 - 0945	0	1	0	1	1	0	0	1	1	0	0	1	3	
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	1	0	1	2	1	0	3	1	0	0	1	5	
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0	0	0	
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0	0	0	
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0	
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0	
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0	
1130 - 1145	0	0	0	0	0	1	0	1	0	0	0	0	1	
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	1	0	1	0	0	0	0	1	
1200 - 1215	0	1	0	1	0	0	0	0	0	1	0	1	2	
1215 - 1230	0	0	0	0	0	1	0	1	0	0	0	0	1	
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0	
1245 - 1300	0	0	0	0	0	2	0	2	0	0	0	0	2	
Hourly Total	0	1	0	1	0	3	0	3	0	1	0	1	5	
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0	
1315 - 1330	0	0	0	0	0	2	0	2	0	0	0	0	2	
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	0	0	
1345 - 1400	0	1	0	1	1	0	0	1	0	0	0	0	2	
Hourly Total	0	1	0	1	1	2	0	3	0	0	0	0	4	
1400 - 1415	1	1	0	2	0	0	0	0	0	0	0	0	2	
1415 - 1430	0	1	0	1	0	0	0	0	0	0	0	0	1	
1430 - 1445	0	0	0	0	0	1	0	1	0	0	0	0	1	
1445 - 1500	0	0	0	0	1	1	0	2	0	0	0	0	2	
Hourly Total	1	2	0	3	1	2	0	3	0	0	0	0	6	
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0	
1515 - 1530	0	1	0	1	0	0	0	0	1	0	0	1	2	
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0	
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	1	0	1	0	0	0	0	1	0	0	1	2	
1600 - 1615	1	0	0	1	0	0	0	0	0	0	0	0	1	
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	
1630 - 1645	0	1	0	1	0	1	0	1	0	0	0	0	2	
1645 - 1700	0	0	0	0	0	1	0	1	0	0	0	0	1	
Hourly Total	1	1	0	2	0	2	0	2	0	0	0	0	4	
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	
1715 - 1730	1	0	0	1	0	1	0	1	0	0	0	0	2	
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0	
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	1	0	0	1	0	1	0	1	0	0	0	0	2	
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0	
1815 - 1830	0	0	0	0	0	0	0	0	0	0	0	0	0	
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0	
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	4	8	0	12	4	18	0	22	6	1	0	7	41	
Approach %	33.33	66.67	0.00	-	18.18	81.82	0.00	-	85.71	14.29	0.00	-		
Intersection %	9.76	19.51	0.00	29.27	9.76	43.90	0.00	53.66	14.63	2.44	0.00	17.07		

Marr Traffic
DATA COLLECTION

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Weather
Fair
54°F

Lat/Long
36.965327°, -86.702941°

0600 - 1900 (Weekday 13h Session) (10-26-2021)
Pedestrians

TIME	Southbound				Eastbound				Westbound			
	Waller Rd		App Total	Sunset Rd (West)		App Total	Sunset Rd (East)		App Total	Int Total		
	EB 1c	WB 1d		NB 1e	SB 1f		NB 1g	SB 1h				
0600 - 0615	0	0	0	0	0	0	0	0	0	0		
0615 - 0630	0	0	0	0	0	0	0	0	0	0		
0630 - 0645	0	0	0	0	0	0	0	0	0	0		
0645 - 0700	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
0700 - 0715	0	0	0	0	0	0	0	0	0	0		
0715 - 0730	0	0	0	0	0	0	0	0	0	0		
0730 - 0745	0	0	0	0	0	0	0	0	0	0		
0745 - 0800	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
0800 - 0815	0	0	0	0	0	0	0	0	0	0		
0815 - 0830	0	0	0	0	0	0	0	0	0	0		
0830 - 0845	0	0	0	0	0	0	0	0	0	0		
0845 - 0900	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
0900 - 0915	0	0	0	0	0	0	0	0	0	0		
0915 - 0930	0	0	0	0	0	0	0	0	0	0		
0930 - 0945	0	0	0	0	0	0	0	0	0	0		
0945 - 1000	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
1000 - 1015	0	0	0	0	0	0	0	0	0	0		
1015 - 1030	0	0	0	0	0	0	0	0	0	0		
1030 - 1045	0	0	0	0	0	0	0	0	0	0		
1045 - 1100	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
1100 - 1115	0	0	0	0	0	0	0	0	0	0		
1115 - 1130	0	0	0	0	0	0	0	0	0	0		
1130 - 1145	0	0	0	0	0	0	0	0	0	0		
1145 - 1200	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
1200 - 1215	0	0	0	0	0	0	0	0	0	0		
1215 - 1230	0	0	0	0	0	0	0	0	0	0		
1230 - 1245	0	0	0	0	0	0	0	0	0	0		
1245 - 1300	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
1300 - 1315	0	0	0	0	0	0	0	0	0	0		
1315 - 1330	0	0	0	0	0	0	0	0	0	0		
1330 - 1345	0	0	0	0	0	0	0	0	0	0		
1345 - 1400	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
1400 - 1415	0	0	0	0	0	0	0	0	0	0		
1415 - 1430	0	0	0	0	0	0	0	0	0	0		
1430 - 1445	0	0	0	0	0	0	0	0	0	0		
1445 - 1500	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
1500 - 1515	0	0	0	0	0	0	0	0	0	0		
1515 - 1530	0	0	0	0	0	0	0	0	0	0		
1530 - 1545	0	0	0	0	0	0	0	0	0	0		
1545 - 1600	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
1600 - 1615	0	0	0	0	0	0	0	0	0	0		
1615 - 1630	0	0	0	0	0	0	0	0	0	0		
1630 - 1645	0	0	0	0	0	0	0	0	0	0		
1645 - 1700	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
1700 - 1715	0	0	0	0	0	0	0	0	0	0		
1715 - 1730	0	0	0	0	0	0	0	0	0	0		
1730 - 1745	0	0	0	0	0	0	0	0	0	0		
1745 - 1800	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
1800 - 1815	0	0	0	0	0	0	0	0	0	0		
1815 - 1830	0	0	0	0	0	0	0	0	0	0		
1830 - 1845	0	0	0	0	0	0	0	0	0	0		
1845 - 1900	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0		
Grand Total	0	0	0	0	0	0	0	0	0	0		
Approach %	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-			
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

Classified Turn Movement Count || All vehicles

Brentwood, TN



Marr Traffic
DATA COLLECTION

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Site 2 of 5

Split Log Rd

Sunset Rd (West)
Sunset Rd (East)

Date

Tuesday, October 26, 2021

Lat/Long

35.965581°, -86.706224°

Weather

Fair
54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

All vehicles

TIME	Northbound			
	Split Log Rd			
	Left 2.1	Right 2.2	U-Turn 2.3	App Total
0600 - 0615	4	2	0	6
0615 - 0630	4	3	0	7
0630 - 0645	7	9	0	16
0645 - 0700	7	8	0	15
Hourly Total	22	22	0	44
0700 - 0715	8	10	0	18
0715 - 0730	10	27	0	37
0730 - 0745	10	34	0	44
0745 - 0800	6	21	0	27
Hourly Total	34	92	0	126
0800 - 0815	7	9	0	16
0815 - 0830	6	13	0	19
0830 - 0845	14	9	0	23
0845 - 0900	8	32	0	40
Hourly Total	35	63	0	98
0900 - 0915	10	19	0	29
0915 - 0930	5	15	0	20
0930 - 0945	7	22	0	29
0945 - 1000	5	17	0	22
Hourly Total	27	73	0	100
1000 - 1015	1	14	0	15
1015 - 1030	4	12	0	16
1030 - 1045	8	21	0	29
1045 - 1100	2	11	0	13
Hourly Total	15	58	0	73
1100 - 1115	5	14	0	19
1115 - 1130	2	14	0	16
1130 - 1145	5	18	0	23
1145 - 1200	5	28	0	33
Hourly Total	17	74	0	91
1200 - 1215	2	19	0	21
1215 - 1230	4	19	0	23
1230 - 1245	3	26	0	29
1245 - 1300	2	21	0	23
Hourly Total	11	85	0	96
1300 - 1315	6	33	0	39
1315 - 1330	3	18	0	21
1330 - 1345	3	28	0	31
1345 - 1400	5	13	0	18
Hourly Total	17	92	0	109
1400 - 1415	5	28	0	33
1415 - 1430	5	27	0	32
1430 - 1445	6	32	0	38
1445 - 1500	1	28	0	29
Hourly Total	17	115	0	132
1500 - 1515	2	34	0	36
1515 - 1530	6	26	0	32
1530 - 1545	5	28	0	33
1545 - 1600	5	51	0	56
Hourly Total	18	139	0	157
1600 - 1615	11	49	0	60
1615 - 1630	2	48	0	50
1630 - 1645	5	45	0	50
1645 - 1700	1	38	0	39
Hourly Total	19	180	0	199
1700 - 1715	1	49	0	50
1715 - 1730	6	46	0	52
1730 - 1745	4	31	0	35
1745 - 1800	3	37	0	40
Hourly Total	14	163	0	177
1800 - 1815	5	42	0	47
1815 - 1830	3	30	1	34
1830 - 1845	3	27	0	30
1845 - 1900	5	17	0	22
Hourly Total	16	116	1	133
Grand Total	262	1272	1	1535
Approach %	17.07	82.87	0.07	-
Intersection %	3.03	14.69	0.01	17.73
PHF	0.54	0.91	0.00	0.92

Eastbound				Westbound			
Sunset Rd (West)				Sunset Rd (East)			
Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total
4	1	0	5	4	36	0	40
5	1	0	6	10	46	0	56
15	0	0	15	15	81	0	96
31	4	0	35	20	95	0	115
55	6	0	61	49	258	0	307
26	1	0	27	26	92	0	118
52	4	0	56	26	75	0	101
51	3	0	54	49	124	0	173
25	2	0	27	44	109	0	153
154	10	0	164	145	400	0	545
29	6	0	35	29	96	0	125
39	5	0	44	27	85	0	112
28	4	0	32	37	102	0	139
48	5	0	53	25	75	0	100
144	20	0	164	118	358	0	476
30	0	0	30	20	57	0	77
25	2	0	27	23	68	0	91
28	0	0	28	27	81	0	108
39	1	0	40	14	50	0	64
122	3	0	125	84	256	0	340
30	3	0	33	18	40	0	58
21	0	0	21	17	33	0	50
28	2	0	30	23	51	0	74
28	1	0	29	18	38	0	56
107	6	0	113	76	162	0	238
48	3	0	51	11	49	0	60
45	7	0	52	12	32	0	44
53	5	0	58	22	34	0	56
34	3	0	37	19	46	0	65
180	18	0	198	64	161	0	225
43	4	0	47	24	53	0	77
37	5	0	42	15	43	0	58
38	3	0	41	27	47	0	74
43	3	0	46	16	36	0	52
161	15	0	176	82	179	0	261
41	7	0	48	12	45	0	57
45	3	0	48	14	24	0	38
40	1	0	41	24	41	0	65
48	2	0	50	17	50	0	67
174	13	0	187	67	160	0	227
38	4	0	42	13	44	0	57
68	3	0	71	23	41	0	64
61	4	0	65	17	46	0	63
74	6	0	80	17	41	0	58
241	17	0	258	70	172	0	242
67	7	0	74	34	72	0	106
72	3	0	75	35	59	0	94
91	6	0	97	42	49	0	91
103	8	0	111	22	48	0	70
333	24	0	357	133	228	0	361
101	5	0	106	36	72	0	108
101	3	0	104	17	50	0	67
110	4	0	114	21	61	0	82
92	1	0	93	20	64	0	84
404	13	0	417	94	247	0	341
113	4	0	117	33	52	0	85
116	7	0	123	32	64	0	96
84	8	0	92	26	51	0	77
86	4	0	90	24	36	0	60
399	23	0	422	115	203	0	318
78	6	0	84	24	71	0	95
96	6	0	102	19	51	0	70
68	3	0	71	18	34	0	52
59	7	0	66	20	39	0	59
301	22	0	323	81	195	0	276
2775	190	0	2965	1178	2979	0	4157
93.59	6.41	0.00	-	28.34	71.66	0.00	-
32.05	2.19	0.00	34.25	13.61	34.41	0.00	48.02
0.93	0.57	0.00	0.91	0.80	0.94	0.00	0.90

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[illegible]

Classified Turn Movement Count || Passenger Vehicles (1-3)

Brentwood, TN



Marr Traffic
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Site 2 of 5

Split Log Rd

Sunset Rd (West)
Sunset Rd (East)

Date

Tuesday, October 26, 2021

Lat/Long

35.965581°, -86.706224°

Weather

Fair
54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Passenger Vehicles (1-3)

TIME	Northbound			
	Split Log Rd			
	Left 2.1	Right 2.2	U-Turn 2.3	App Total
0600 - 0615	4	2	0	6
0615 - 0630	4	3	0	7
0630 - 0645	7	7	0	14
0645 - 0700	7	8	0	15
Hourly Total	22	20	0	42
0700 - 0715	8	10	0	18
0715 - 0730	10	24	0	34
0730 - 0745	10	34	0	44
0745 - 0800	6	20	0	26
Hourly Total	34	88	0	122
0800 - 0815	7	9	0	16
0815 - 0830	6	12	0	18
0830 - 0845	13	9	0	22
0845 - 0900	8	30	0	38
Hourly Total	34	60	0	94
0900 - 0915	9	18	0	27
0915 - 0930	5	14	0	19
0930 - 0945	7	22	0	29
0945 - 1000	5	17	0	22
Hourly Total	26	71	0	97
1000 - 1015	1	13	0	14
1015 - 1030	4	12	0	16
1030 - 1045	8	20	0	28
1045 - 1100	2	11	0	13
Hourly Total	15	56	0	71
1100 - 1115	5	13	0	18
1115 - 1130	2	14	0	16
1130 - 1145	4	18	0	22
1145 - 1200	4	26	0	30
Hourly Total	15	71	0	86
1200 - 1215	2	19	0	21
1215 - 1230	3	18	0	21
1230 - 1245	3	25	0	28
1245 - 1300	2	19	0	21
Hourly Total	10	81	0	91
1300 - 1315	6	33	0	39
1315 - 1330	3	18	0	21
1330 - 1345	3	26	0	29
1345 - 1400	5	12	0	17
Hourly Total	17	89	0	106
1400 - 1415	5	26	0	31
1415 - 1430	5	25	0	30
1430 - 1445	6	30	0	36
1445 - 1500	1	26	0	27
Hourly Total	17	107	0	124
1500 - 1515	2	33	0	35
1515 - 1530	6	25	0	31
1530 - 1545	3	27	0	30
1545 - 1600	5	50	0	55
Hourly Total	16	135	0	151
1600 - 1615	10	49	0	59
1615 - 1630	2	48	0	50
1630 - 1645	5	44	0	49
1645 - 1700	1	36	0	37
Hourly Total	18	177	0	195
1700 - 1715	1	47	0	48
1715 - 1730	6	46	0	52
1730 - 1745	4	31	0	35
1745 - 1800	3	35	0	38
Hourly Total	14	159	0	173
1800 - 1815	5	41	0	46
1815 - 1830	3	30	1	34
1830 - 1845	3	27	0	30
1845 - 1900	5	17	0	22
Hourly Total	16	115	1	132
Grand Total	254	1229	1	1484
Approach %	17.12	82.82	0.07	-
Intersection %	3.03	14.67	0.01	17.72

Eastbound				Westbound			
Sunset Rd (West)				Sunset Rd (East)			
Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total
4	1	0	5	4	36	0	40
5	1	0	6	10	43	0	53
13	0	0	13	15	78	0	93
30	3	0	33	18	92	0	110
52	5	0	57	47	249	0	296
25	1	0	26	25	91	0	116
48	4	0	52	26	72	0	98
50	3	0	53	49	121	0	170
24	2	0	26	43	102	0	145
147	10	0	157	143	386	0	529
26	5	0	31	29	93	0	122
37	5	0	42	26	81	0	107
25	4	0	29	36	102	0	138
42	3	0	45	24	74	0	98
130	17	0	147	115	350	0	465
24	0	0	24	18	55	0	73
24	2	0	26	21	65	0	86
26	0	0	26	25	76	0	101
36	1	0	37	14	45	0	59
110	3	0	113	78	241	0	319
30	3	0	33	18	39	0	57
20	0	0	20	16	33	0	49
27	2	0	29	22	51	0	73
27	1	0	28	18	37	0	55
104	6	0	110	74	160	0	234
47	3	0	50	11	49	0	60
43	6	0	49	12	32	0	44
50	4	0	54	22	33	0	55
32	3	0	35	18	44	0	62
172	16	0	188	63	158	0	221
41	4	0	45	22	52	0	74
33	5	0	38	14	42	0	56
36	1	0	37	26	47	0	73
42	3	0	45	16	36	0	52
152	13	0	165	78	177	0	255
41	7	0	48	12	42	0	54
40	3	0	43	13	23	0	36
39	1	0	40	22	39	0	61
46	2	0	48	16	49	0	65
166	13	0	179	63	153	0	216
37	4	0	41	12	43	0	55
65	3	0	68	23	38	0	61
60	4	0	64	16	45	0	61
73	6	0	79	16	40	0	56
235	17	0	252	67	166	0	233
65	7	0	72	34	67	0	101
71	2	0	73	33	55	0	88
89	6	0	95	41	47	0	88
101	8	0	109	22	47	0	69
326	23	0	349	130	216	0	346
100	5	0	105	35	72	0	107
99	3	0	102	17	47	0	64
106	4	0	110	21	58	0	79
89	1	0	90	20	63	0	83
394	13	0	407	93	240	0	333
109	4	0	113	33	51	0	84
114	7	0	121	32	64	0	96
82	8	0	90	26	50	0	76
83	4	0	87	24	35	0	59
388	23	0	411	115	200	0	315
76	6	0	82	23	71	0	94
94	6	0	100	19	51	0	70
68	3	0	71	18	34	0	52
59	7	0	66	20	39	0	59
297	22	0	319	80	195	0	275
2673	181	0	2854	1146	2891	0	4037
93.66	6.34	0.00	-	28.39	71.61	0.00	-
31.92	2.16	0.00	34.08	13.68	34.52	0.00	48.20

Classified Turn Movement Count || Single Unit Trucks (4-7)

Brentwood, TN



Marr Traffic
DATA COLLECTION

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Site 2 of 5

Split Log Rd

Sunset Rd (West)

Sunset Rd (East)

Date

Tuesday, October 26, 2021

Lat/Long

35.965581°, -86.706224°

Weather

Fair

54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Single Unit Trucks (4-7)

TIME	Northbound			
	Split Log Rd			
	Left 2.1	Right 2.2	U-Turn 2.3	App Total
0600 - 0615	0	0	0	0
0615 - 0630	0	0	0	0
0630 - 0645	0	2	0	2
0645 - 0700	0	0	0	0
Hourly Total	0	2	0	2
0700 - 0715	0	0	0	0
0715 - 0730	0	3	0	3
0730 - 0745	0	0	0	0
0745 - 0800	0	1	0	1
Hourly Total	0	4	0	4
0800 - 0815	0	0	0	0
0815 - 0830	0	1	0	1
0830 - 0845	0	0	0	0
0845 - 0900	0	1	0	1
Hourly Total	0	2	0	2
0900 - 0915	1	0	0	1
0915 - 0930	0	1	0	1
0930 - 0945	0	0	0	0
0945 - 1000	0	0	0	0
Hourly Total	1	1	0	2
1000 - 1015	0	1	0	1
1015 - 1030	0	0	0	0
1030 - 1045	0	1	0	1
1045 - 1100	0	0	0	0
Hourly Total	0	2	0	2
1100 - 1115	0	1	0	1
1115 - 1130	0	0	0	0
1130 - 1145	1	0	0	1
1145 - 1200	1	2	0	3
Hourly Total	2	3	0	5
1200 - 1215	0	0	0	0
1215 - 1230	1	0	0	1
1230 - 1245	0	1	0	1
1245 - 1300	0	1	0	1
Hourly Total	1	2	0	3
1300 - 1315	0	0	0	0
1315 - 1330	0	0	0	0
1330 - 1345	0	2	0	2
1345 - 1400	0	1	0	1
Hourly Total	0	3	0	3
1400 - 1415	0	2	0	2
1415 - 1430	0	2	0	2
1430 - 1445	0	2	0	2
1445 - 1500	0	1	0	1
Hourly Total	0	7	0	7
1500 - 1515	0	1	0	1
1515 - 1530	0	1	0	1
1530 - 1545	2	1	0	3
1545 - 1600	0	1	0	1
Hourly Total	2	4	0	6
1600 - 1615	1	0	0	1
1615 - 1630	0	0	0	0
1630 - 1645	0	1	0	1
1645 - 1700	0	1	0	1
Hourly Total	1	2	0	3
1700 - 1715	0	1	0	1
1715 - 1730	0	0	0	0
1730 - 1745	0	0	0	0
1745 - 1800	0	2	0	2
Hourly Total	0	3	0	3
1800 - 1815	0	1	0	1
1815 - 1830	0	0	0	0
1830 - 1845	0	0	0	0
1845 - 1900	0	0	0	0
Hourly Total	0	1	0	1
Grand Total	7	36	0	43
Approach %	16.28	83.72	0.00	-
Intersection %	2.88	14.81	0.00	17.70

Eastbound				Westbound			
Sunset Rd (West)				Sunset Rd (East)			
Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total
0	0	0	0	0	0	0	0
0	0	0	0	0	3	0	3
2	0	0	2	0	3	0	3
0	1	0	1	2	3	0	5
2	1	0	3	2	9	0	11
1	0	0	1	1	1	0	2
4	0	0	4	0	3	0	3
1	0	0	1	0	2	0	2
0	0	0	0	1	5	0	6
6	0	0	6	2	11	0	13
3	1	0	4	0	2	0	2
1	0	0	1	0	3	0	3
2	0	0	2	1	0	0	1
5	2	0	7	1	1	0	2
11	3	0	14	2	6	0	8
6	0	0	6	2	2	0	4
1	0	0	1	2	3	0	5
1	0	0	1	2	4	0	6
2	0	0	2	0	4	0	4
10	0	0	10	6	13	0	19
0	0	0	0	0	1	0	1
1	0	0	1	1	0	0	1
1	0	0	1	1	0	0	1
1	0	0	1	0	1	0	1
3	0	0	3	2	2	0	4
1	0	0	1	0	0	0	0
2	1	0	3	0	0	0	0
2	1	0	3	0	1	0	1
2	0	0	2	1	2	0	3
7	2	0	9	1	3	0	4
1	0	0	1	2	0	0	2
4	0	0	4	1	1	0	2
2	2	0	4	1	0	0	1
0	0	0	0	0	0	0	0
7	2	0	9	4	1	0	5
0	0	0	0	0	3	0	3
4	0	0	4	1	1	0	2
0	0	0	0	2	2	0	4
1	0	0	1	0	1	0	1
5	0	0	5	3	7	0	10
0	0	0	0	0	1	0	1
3	0	0	3	0	2	0	2
1	0	0	1	1	1	0	2
0	0	0	0	1	1	0	2
4	0	0	4	2	5	0	7
2	0	0	2	0	5	0	5
1	1	0	2	2	2	0	4
2	0	0	2	1	2	0	3
2	0	0	2	0	1	0	1
7	1	0	8	3	10	0	13
1	0	0	1	1	0	0	1
2	0	0	2	0	2	0	2
3	0	0	3	0	3	0	3
3	0	0	3	0	1	0	1
9	0	0	9	1	6	0	7
4	0	0	4	0	1	0	1
2	0	0	2	0	0	0	0
2	0	0	2	0	1	0	1
3	0	0	3	0	1	0	1
11	0	0	11	0	3	0	3
2	0	0	2	1	0	0	1
2	0	0	2	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
4	0	0	4	1	0	0	1
86	9	0	95	29	76	0	105
90.53	9.47	0.00	-	27.62	72.38	0.00	-
35.39	3.70	0.00	39.09	11.93	31.28	0.00	43.21

Marr Traffic
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Weather

Fair

35.965581°, -86.706224°

Combination Trucks (8-13)

[illegible]

Marr Traffic
DATA COLLECTION

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Weather

Fair

35.965581°, -86.706224°

Pedestrians

[illegible]

Classified Turn Movement Count || All vehicles



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Brentwood, TN

Site 3 of 5

Split Log Rd (South)
Split Log Rd (North)

Sam Donald Rd

Date

Tuesday, October 26, 2021

Lat/Long

35.954559°, -86.713677°

Weather

Fair
54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

All vehicles

TIME	Northbound				Southbound			
	Split Log Rd (South)				Split Log Rd (North)			
	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total
0600 - 0615	2	1	0	3	0	5	0	5
0615 - 0630	3	2	0	5	0	11	0	11
0630 - 0645	8	3	0	11	0	13	0	13
0645 - 0700	6	5	0	11	2	17	0	19
Hourly Total	19	11	0	30	2	46	0	48
0700 - 0715	9	5	0	14	4	27	0	31
0715 - 0730	24	4	0	28	3	25	0	28
0730 - 0745	31	5	0	36	5	45	0	50
0745 - 0800	17	6	0	23	2	47	0	49
Hourly Total	81	20	0	101	14	144	0	158
0800 - 0815	5	6	0	11	6	30	0	36
0815 - 0830	12	8	0	20	2	28	0	30
0830 - 0845	8	10	0	18	0	37	0	37
0845 - 0900	28	14	0	42	5	26	0	31
Hourly Total	53	38	0	91	13	121	0	134
0900 - 0915	17	6	0	23	3	22	0	25
0915 - 0930	11	7	0	18	4	20	0	24
0930 - 0945	21	7	0	28	2	24	0	26
0945 - 1000	15	4	0	19	0	17	0	17
Hourly Total	64	24	0	88	9	83	0	92
1000 - 1015	11	12	0	23	4	15	0	19
1015 - 1030	11	2	0	13	2	18	0	20
1030 - 1045	18	7	0	25	4	17	0	21
1045 - 1100	14	9	0	23	5	17	0	22
Hourly Total	54	30	0	84	15	67	0	82
1100 - 1115	12	14	0	26	4	10	0	14
1115 - 1130	13	13	0	26	5	12	0	17
1130 - 1145	14	10	0	24	5	21	0	26
1145 - 1200	26	13	0	39	5	16	0	21
Hourly Total	65	50	0	115	19	59	0	78
1200 - 1215	16	18	0	34	7	19	0	26
1215 - 1230	17	15	0	32	3	13	0	16
1230 - 1245	20	11	0	31	3	27	0	30
1245 - 1300	18	19	0	37	4	14	0	18
Hourly Total	71	63	0	134	17	73	0	90
1300 - 1315	31	12	0	43	6	15	0	21
1315 - 1330	23	16	0	39	8	10	0	18
1330 - 1345	21	13	0	34	1	22	0	23
1345 - 1400	18	12	0	30	5	11	0	16
Hourly Total	93	53	0	146	20	58	0	78
1400 - 1415	19	12	0	31	6	17	0	23
1415 - 1430	26	20	1	47	9	13	0	22
1430 - 1445	29	24	0	53	4	16	0	20
1445 - 1500	29	12	0	41	8	17	0	25
Hourly Total	103	68	1	172	27	63	0	90
1500 - 1515	25	15	0	40	7	30	0	37
1515 - 1530	23	19	0	42	4	33	0	37
1530 - 1545	24	28	0	52	5	40	1	46
1545 - 1600	49	34	0	83	8	21	0	29
Hourly Total	121	96	0	217	24	124	1	149
1600 - 1615	53	40	0	93	11	29	0	40
1615 - 1630	42	33	0	75	7	21	0	28
1630 - 1645	34	32	0	66	6	18	0	24
1645 - 1700	38	44	0	82	7	11	0	18
Hourly Total	167	149	0	316	31	79	0	110
1700 - 1715	45	37	0	82	9	28	0	37
1715 - 1730	48	26	0	74	9	27	0	36
1730 - 1745	31	32	0	63	10	27	0	37
1745 - 1800	38	56	0	94	8	23	0	31
Hourly Total	162	151	0	313	36	105	0	141
1800 - 1815	38	31	0	69	9	17	0	26
1815 - 1830	24	40	0	64	13	16	0	29
1830 - 1845	21	22	0	43	5	15	0	20
1845 - 1900	17	26	0	43	7	22	0	29
Hourly Total	100	119	0	219	34	70	0	104
Grand Total	1153	872	1	2026	261	1092	1	1354
Approach %	56.91	43.04	0.05	-	19.28	80.65	0.07	-
Intersection %	24.99	18.90	0.02	43.91	5.66	23.67	0.02	29.35
PHF	0.79	0.84	0.00	0.81	0.70	0.69	0.25	0.78

Westbound				
Sam Donald Rd				
Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
5	3	0	8	16
19	3	0	22	38
25	12	0	37	61
28	8	0	36	66
77	26	0	103	181
35	11	0	46	91
22	14	1	37	93
36	11	0	47	133
28	7	0	35	107
121	43	1	165	424
37	8	0	45	92
45	7	0	52	102
45	15	0	60	115
32	13	0	45	118
159	43	0	202	427
20	13	0	33	81
20	6	0	26	68
14	10	0	24	78
14	5	0	19	55
68	34	0	102	282
12	3	0	15	57
7	9	0	16	49
16	7	0	23	69
11	2	0	13	58
46	21	0	67	233
14	6	0	20	60
6	5	0	11	54
17	5	0	22	72
13	2	0	15	75
50	18	0	68	261
14	4	0	18	78
9	6	0	15	63
17	5	0	22	83
13	6	0	19	74
53	21	0	74	298
9	8	0	17	81
9	1	0	10	67
7	6	0	13	70
12	5	0	17	63
37	20	0	57	281
12	10	0	22	76
14	6	0	20	89
13	7	0	20	93
4	2	0	6	72
43	25	0	68	330
13	6	0	19	96
19	9	0	28	107
23	8	0	31	129
19	7	0	26	138
74	30	0	104	470
16	8	0	24	157
20	4	0	24	127
13	12	0	25	115
16	2	0	18	118
65	26	0	91	517
14	3	0	17	136
19	7	0	26	136
20	3	0	23	123
11	6	0	17	142
64	19	0	83	537
15	7	0	22	117
3	6	0	9	102
5	8	0	13	76
3	3	0	6	78
26	24	0	50	373
883	350	1	1234	4614
71.56	28.36	0.08	-	
19.14	7.59	0.02	26.74	
0.85	0.84	0.00	0.85	0.88

Marr Traffic
DATA COLLECTION

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Weather

Fair
54°F

Lat/Long
35.954559°, -86.713677°

Bikes

TIME	Northbound				Southbound				Westbound				
	Split Log Rd (South)				Split Log Rd (North)				Sam Donald Rd				
	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0	0	0
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0	0	0
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	2	0	2	0	0	0	0	2
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	2	0	2	0	0	0	0	2
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	2	0	0	2	0	0	0	0	0	0	0	2	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	2	0	0	2	0	0	0	0	0	0	0	2	0
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0
1815 - 1830	0	0	0	0	0	0	0	0	0	0	0	0	0
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	2	0	0	2	0	2	0	2	0	0	0	0	4
Approach %	100.00	0.00	0.00	-	0.00	100.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	50.00	0.00	0.00	50.00	0.00	50.00	0.00	50.00	0.00	0.00	0.00	0.00	

Classified Turn Movement Count || Passenger Vehicles (1-3)

Brentwood, TN



Marr Traffic
DATA COLLECTION

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Site 3 of 5

Split Log Rd (South)
Split Log Rd (North)

Date

Tuesday, October 26, 2021

Weather

Fair
54°F

Lat/Long

35.954559°, -86.713677°

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Passenger Vehicles (1-3)

TIME	Northbound				Southbound			
	Split Log Rd (South)				Split Log Rd (North)			
	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total
0600 - 0615	2	1	0	3	0	5	0	5
0615 - 0630	3	2	0	5	0	11	0	11
0630 - 0645	7	3	0	10	0	13	0	13
0645 - 0700	6	5	0	11	1	15	0	16
Hourly Total	18	11	0	29	1	44	0	45
0700 - 0715	8	4	0	12	4	26	0	30
0715 - 0730	23	4	0	27	3	25	0	28
0730 - 0745	30	4	0	34	5	45	0	50
0745 - 0800	16	6	0	22	2	46	0	48
Hourly Total	77	18	0	95	14	142	0	156
0800 - 0815	5	6	0	11	5	30	0	35
0815 - 0830	10	8	0	18	2	27	0	29
0830 - 0845	8	10	0	18	0	34	0	34
0845 - 0900	26	13	0	39	4	26	0	30
Hourly Total	49	37	0	86	11	117	0	128
0900 - 0915	16	5	0	21	1	21	0	22
0915 - 0930	10	7	0	17	4	19	0	23
0930 - 0945	21	7	0	28	2	23	0	25
0945 - 1000	15	4	0	19	0	16	0	16
Hourly Total	62	23	0	85	7	79	0	86
1000 - 1015	10	12	0	22	4	15	0	19
1015 - 1030	11	2	0	13	2	17	0	19
1030 - 1045	17	7	0	24	4	16	0	20
1045 - 1100	14	9	0	23	5	17	0	22
Hourly Total	52	30	0	82	15	65	0	80
1100 - 1115	11	14	0	25	4	10	0	14
1115 - 1130	13	13	0	26	5	12	0	17
1130 - 1145	13	9	0	22	5	19	0	24
1145 - 1200	24	13	0	37	5	15	0	20
Hourly Total	61	49	0	110	19	56	0	75
1200 - 1215	16	18	0	34	7	18	0	25
1215 - 1230	17	14	0	31	3	12	0	15
1230 - 1245	19	11	0	30	3	24	0	27
1245 - 1300	17	19	0	36	4	13	0	17
Hourly Total	69	62	0	131	17	67	0	84
1300 - 1315	31	12	0	43	6	15	0	21
1315 - 1330	23	15	0	38	8	10	0	18
1330 - 1345	20	13	0	33	1	19	0	20
1345 - 1400	17	11	0	28	5	10	0	15
Hourly Total	91	51	0	142	20	54	0	74
1400 - 1415	17	12	0	29	5	17	0	22
1415 - 1430	24	18	1	43	9	13	0	22
1430 - 1445	28	23	0	51	4	15	0	19
1445 - 1500	26	12	0	38	8	16	0	24
Hourly Total	95	65	1	161	26	61	0	87
1500 - 1515	24	14	0	38	7	30	0	37
1515 - 1530	22	19	0	41	4	31	0	35
1530 - 1545	24	28	0	52	5	39	0	44
1545 - 1600	48	33	0	81	8	21	0	29
Hourly Total	118	94	0	212	24	121	0	145
1600 - 1615	52	40	0	92	11	28	0	39
1615 - 1630	42	33	0	75	7	19	0	26
1630 - 1645	34	31	0	65	6	18	0	24
1645 - 1700	37	44	0	81	7	11	0	18
Hourly Total	165	148	0	313	31	76	0	107
1700 - 1715	43	37	0	80	9	28	0	37
1715 - 1730	48	26	0	74	9	27	0	36
1730 - 1745	29	32	0	61	10	27	0	37
1745 - 1800	37	54	0	91	8	23	0	31
Hourly Total	157	149	0	306	36	105	0	141
1800 - 1815	37	31	0	68	9	16	0	25
1815 - 1830	24	39	0	63	13	16	0	29
1830 - 1845	21	22	0	43	5	15	0	20
1845 - 1900	17	26	0	43	7	22	0	29
Hourly Total	99	118	0	217	34	69	0	103
Grand Total	1113	855	1	1969	255	1056	0	1311
Approach %	56.53	43.42	0.05	-	19.45	80.55	0.00	-
Intersection %	24.82	19.06	0.02	43.90	5.69	23.55	0.00	29.23

Westbound				
Sam Donald Rd				
Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
5	3	0	8	16
18	3	0	21	37
25	12	0	37	60
28	7	0	35	62
76	25	0	101	175
35	11	0	46	88
21	14	1	36	91
36	11	0	47	131
28	7	0	35	105
120	43	1	164	415
37	8	0	45	91
42	7	0	49	96
42	15	0	57	109
30	13	0	43	112
151	43	0	194	408
20	12	0	32	75
20	6	0	26	66
14	10	0	24	77
14	5	0	19	54
68	33	0	101	272
12	3	0	15	56
7	9	0	16	48
15	7	0	22	66
11	2	0	13	58
45	21	0	66	228
14	6	0	20	59
6	5	0	11	54
17	5	0	22	68
13	1	0	14	71
50	17	0	67	252
14	4	0	18	77
9	4	0	13	59
17	5	0	22	79
12	6	0	18	71
52	19	0	71	286
9	8	0	17	81
9	1	0	10	66
7	5	0	12	65
12	5	0	17	60
37	19	0	56	272
12	10	0	22	73
13	6	0	19	84
12	7	0	19	89
4	2	0	6	68
41	25	0	66	314
13	6	0	19	94
18	9	0	27	103
22	7	0	29	125
19	6	0	25	135
72	28	0	100	457
16	7	0	23	154
20	4	0	24	125
12	11	0	23	112
16	2	0	18	117
64	24	0	88	508
14	2	0	16	133
18	7	0	25	135
20	3	0	23	121
11	6	0	17	139
63	18	0	81	528
15	7	0	22	115
3	6	0	9	101
5	8	0	13	76
3	3	0	6	78
26	24	0	50	370
865	339	1	1205	4485
71.78	28.13	0.08	-	
19.29	7.56	0.02	26.87	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Brentwood, TN



Marr Traffic
DATA COLLECTION

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Site 3 of 5

Split Log Rd (South)
Split Log Rd (North)

Date

Tuesday, October 26, 2021

Weather

Fair
54°F

Lat/Long

35.954559°, -86.713677°

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Single Unit Trucks (4-7)

TIME	Northbound				Southbound			
	Split Log Rd (South)				Split Log Rd (North)			
	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total
0600 - 0615	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0
0630 - 0645	1	0	0	1	0	0	0	0
0645 - 0700	0	0	0	0	1	2	0	3
Hourly Total	1	0	0	1	1	2	0	3
0700 - 0715	1	1	0	2	0	1	0	1
0715 - 0730	1	0	0	1	0	0	0	0
0730 - 0745	1	1	0	2	0	0	0	0
0745 - 0800	1	0	0	1	0	1	0	1
Hourly Total	4	2	0	6	0	2	0	2
0800 - 0815	0	0	0	0	1	0	0	1
0815 - 0830	1	0	0	1	0	0	0	0
0830 - 0845	0	0	0	0	0	3	0	3
0845 - 0900	1	1	0	2	1	0	0	1
Hourly Total	2	1	0	3	2	3	0	5
0900 - 0915	0	1	0	1	2	1	0	3
0915 - 0930	1	0	0	1	0	1	0	1
0930 - 0945	0	0	0	0	0	1	0	1
0945 - 1000	0	0	0	0	0	1	0	1
Hourly Total	1	1	0	2	2	4	0	6
1000 - 1015	1	0	0	1	0	0	0	0
1015 - 1030	0	0	0	0	0	1	0	1
1030 - 1045	1	0	0	1	0	1	0	1
1045 - 1100	0	0	0	0	0	0	0	0
Hourly Total	2	0	0	2	0	2	0	2
1100 - 1115	1	0	0	1	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0
1130 - 1145	1	1	0	2	0	2	0	2
1145 - 1200	2	0	0	2	0	1	0	1
Hourly Total	4	1	0	5	0	3	0	3
1200 - 1215	0	0	0	0	0	1	0	1
1215 - 1230	0	1	0	1	0	1	0	1
1230 - 1245	1	0	0	1	0	3	0	3
1245 - 1300	1	0	0	1	0	1	0	1
Hourly Total	2	1	0	3	0	6	0	6
1300 - 1315	0	0	0	0	0	0	0	0
1315 - 1330	0	1	0	1	0	0	0	0
1330 - 1345	1	0	0	1	0	2	0	2
1345 - 1400	1	1	0	2	0	1	0	1
Hourly Total	2	2	0	4	0	3	0	3
1400 - 1415	2	0	0	2	0	0	0	0
1415 - 1430	2	2	0	4	0	0	0	0
1430 - 1445	1	1	0	2	0	1	0	1
1445 - 1500	2	0	0	2	0	1	0	1
Hourly Total	7	3	0	10	0	2	0	2
1500 - 1515	1	1	0	2	0	0	0	0
1515 - 1530	1	0	0	1	0	2	0	2
1530 - 1545	0	0	0	0	0	1	1	2
1545 - 1600	1	1	0	2	0	0	0	0
Hourly Total	3	2	0	5	0	3	1	4
1600 - 1615	0	0	0	0	0	1	0	1
1615 - 1630	0	0	0	0	0	0	0	0
1630 - 1645	0	1	0	1	0	0	0	0
1645 - 1700	1	0	0	1	0	0	0	0
Hourly Total	1	1	0	2	0	1	0	1
1700 - 1715	1	0	0	1	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0
1745 - 1800	1	2	0	3	0	0	0	0
Hourly Total	2	2	0	4	0	0	0	0
1800 - 1815	1	0	0	1	0	1	0	1
1815 - 1830	0	1	0	1	0	0	0	0
1830 - 1845	0	0	0	0	0	0	0	0
1845 - 1900	0	0	0	0	0	0	0	0
Hourly Total	1	1	0	2	0	1	0	1
Grand Total	32	17	0	49	5	32	1	38
Approach %	65.31	34.69	0.00	-	13.16	84.21	2.63	-
Intersection %	28.83	15.32	0.00	44.14	4.50	28.83	0.90	34.23

Westbound				
Sam Donald Rd				
Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
0	0	0	0	0
1	0	0	1	1
0	0	0	0	1
0	1	0	1	4
1	1	0	2	6
0	0	0	0	3
0	0	0	0	1
0	0	0	0	2
0	0	0	0	2
0	0	0	0	8
0	0	0	0	1
1	0	0	1	2
2	0	0	2	5
2	0	0	2	5
5	0	0	5	13
0	1	0	1	5
0	0	0	0	2
0	0	0	0	1
0	0	0	0	1
0	1	0	1	9
0	0	0	0	1
0	0	0	0	1
1	0	0	1	3
0	0	0	0	0
1	0	0	1	5
0	0	0	0	1
0	0	0	0	0
0	0	0	0	4
0	1	0	1	4
0	1	0	1	9
0	0	0	0	1
0	1	0	1	3
0	0	0	0	4
1	0	0	1	3
1	1	0	2	11
0	0	0	0	0
0	0	0	0	1
0	1	0	1	4
0	0	0	0	3
0	1	0	1	8
0	0	0	0	2
1	0	0	1	5
1	0	0	1	4
0	0	0	0	3
2	0	0	2	14
0	0	0	0	2
1	1	0	2	3
0	0	0	0	1
1	2	0	3	6
0	1	0	1	2
1	0	0	1	1
0	0	0	0	0
0	0	0	0	3
1	1	0	2	6
0	0	0	0	2
0	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	3
14	10	0	24	111
58.33	41.67	0.00	-	
12.61	9.01	0.00	21.62	

Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Weather

Fair
54°F

Lat/Long
35.954559°, -86.713677°

Combination Trucks (8-13)

TIME	Northbound				Southbound				Westbound					
	Split Log Rd (South)				Split Log Rd (North)				Sam Donald Rd					
	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total	
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0	
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0	
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	
0715 - 0730	0	0	0	0	0	0	0	0	1	0	0	1	1	
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	1	0	0	1	1	
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	
0815 - 0830	1	0	0	1	0	1	0	1	2	0	0	2	4	
0830 - 0845	0	0	0	0	0	0	0	0	1	0	0	1	1	
0845 - 0900	1	0	0	1	0	0	0	0	0	0	0	0	1	
Hourly Total	2	0	0	2	0	1	0	1	3	0	0	3	6	
0900 - 0915	1	0	0	1	0	0	0	0	0	0	0	0	1	
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0	0	0	
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0	
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	1	0	0	1	0	0	0	0	0	0	0	0	1	
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0	0	0	
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0	0	0	
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0	
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0	
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0	
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0	
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0	0	0	
1215 - 1230	0	0	0	0	0	0	0	0	0	1	0	1	1	
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0	
1245 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	1	0	1	1	
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0	
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	0	
1330 - 1345	0	0	0	0	0	1	0	1	0	0	0	0	1	
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	1	0	1	0	0	0	0	1	
1400 - 1415	0	0	0	0	1	0	0	1	0	0	0	0	1	
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0	
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0	
1445 - 1500	1	0	0	1	0	0	0	0	0	0	0	0	1	
Hourly Total	1	0	0	1	1	0	0	1	0	0	0	0	2	
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0	
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0	
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0	
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
1600 - 1615	1	0	0	1	0	0	0	0	0	0	0	0	1	
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0	
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	1	0	0	1	0	0	0	0	0	0	0	0	1	
1700 - 1715	1	0	0	1	0	0	0	0	0	0	0	0	1	
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0	
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	1	0	0	1	0	0	0	0	0	0	0	0	1	
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0	
1815 - 1830	0	0	0	0	0	0	0	0	0	0	0	0	0	
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0	
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	6	0	0	6	1	2	0	3	4	1	0	5	14	
Approach %	100.00	0.00	0.00	-	33.33	66.67	0.00	-	80.00	20.00	0.00	-		
Intersection %	42.86	0.00	0.00	42.86	7.14	14.29	0.00	21.43	28.57	7.14	0.00	35.71		

Marr Traffic
DATA COLLECTION

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Weather

Fair
54°F

Lat/Long
35.954559°, -86.713677°

Pedestrians

	Northbound			Southbound		
	Split Log Rd (South)		App Total	Split Log Rd (North)		App Total
TIME	EB 3a	WB 3b		EB 3c	WB 3d	
0600 - 0615	0	0	0	0	0	
0615 - 0630	0	0	0	0	0	
0630 - 0645	0	0	0	0	0	
0645 - 0700	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
0700 - 0715	0	0	0	0	0	
0715 - 0730	0	0	0	0	0	
0730 - 0745	0	0	0	0	0	
0745 - 0800	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
0800 - 0815	0	0	0	0	0	
0815 - 0830	0	0	0	0	0	
0830 - 0845	0	0	0	0	0	
0845 - 0900	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
0900 - 0915	0	0	0	0	0	
0915 - 0930	0	0	0	0	0	
0930 - 0945	0	0	0	0	0	
0945 - 1000	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
1000 - 1015	0	0	0	0	0	
1015 - 1030	0	0	0	0	0	
1030 - 1045	0	0	0	0	0	
1045 - 1100	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
1100 - 1115	0	0	0	0	0	
1115 - 1130	0	0	0	0	0	
1130 - 1145	0	0	0	0	0	
1145 - 1200	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
1200 - 1215	0	0	0	0	0	
1215 - 1230	0	0	0	0	0	
1230 - 1245	0	0	0	0	0	
1245 - 1300	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
1300 - 1315	0	0	0	0	0	
1315 - 1330	0	0	0	0	0	
1330 - 1345	0	0	0	0	0	
1345 - 1400	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
1400 - 1415	0	0	0	0	0	
1415 - 1430	0	0	0	0	0	
1430 - 1445	0	0	0	0	0	
1445 - 1500	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
1500 - 1515	0	0	0	0	0	
1515 - 1530	0	0	0	0	0	
1530 - 1545	0	0	0	0	0	
1545 - 1600	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
1600 - 1615	0	0	0	0	0	
1615 - 1630	0	0	0	0	0	
1630 - 1645	0	0	0	0	0	
1645 - 1700	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
1700 - 1715	0	0	0	0	0	
1715 - 1730	0	0	0	0	0	
1730 - 1745	0	0	0	0	0	
1745 - 1800	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
1800 - 1815	0	0	0	0	0	
1815 - 1830	0	0	0	0	0	
1830 - 1845	0	0	0	0	0	
1845 - 1900	0	0	0	0	0	
Hourly Total	0	0	0	0	0	
Grand Total	0	0	0	0	0	
Approach %	0.00	0.00	-	0.00	0.00	
Intersection %	0.00	0.00	0.00	0.00	0.00	

[illegible]

Classified Turn Movement Count || All vehicles

Brentwood, TN



Marr Traffic
DATA COLLECTION

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Site 4 of 5

Pleasant Hill Rd
Driveway
Split Log Rd (West)
Split Log Rd (East)

Date

Tuesday, October 26, 2021

Lat/Long

35.952759°, -86.728374°

Weather

Fair
54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Pleasant Hill Rd					Driveway					Split Log Rd (West)					Split Log Rd (East)					
	Left 4.1	Thru 4.2	Right 4.3	U-Turn 4.4	App Total	Left 4.5	Thru 4.6	Right 4.7	U-Turn 4.8	App Total	Left 4.9	Thru 4.10	Right 4.11	U-Turn 4.12	App Total	Left 4.13	Thru 4.14	Right 4.15	U-Turn 4.16	App Total	
0600 - 0615	2	0	1	0	3	0	0	0	0	0	0	2	0	0	2	0	13	1	0	14	19
0615 - 0630	5	0	1	0	6	0	0	0	0	0	0	4	1	0	5	0	26	1	0	27	38
0630 - 0645	7	0	0	0	7	0	0	0	0	0	0	10	3	0	13	0	35	0	0	35	55
0645 - 0700	5	0	2	0	7	0	0	0	0	0	2	7	0	0	9	1	53	1	0	55	71
Hourly Total	19	0	4	0	23	0	0	0	0	0	2	23	4	0	29	1	127	3	0	131	183
0700 - 0715	10	1	1	0	12	0	0	1	0	1	1	15	0	0	16	2	62	1	0	65	94
0715 - 0730	6	1	2	0	9	0	0	2	0	2	2	24	3	0	29	2	47	0	0	49	89
0730 - 0745	7	1	0	0	8	0	1	1	0	2	8	33	2	0	43	2	73	5	0	80	133
0745 - 0800	10	1	3	0	14	1	0	1	0	2	10	22	2	0	34	2	74	4	0	80	130
Hourly Total	33	4	6	0	43	1	1	5	0	7	21	94	7	0	122	8	256	10	0	274	446
0800 - 0815	9	2	0	0	11	1	0	2	0	3	8	11	2	0	21	0	59	7	0	66	101
0815 - 0830	6	14	2	0	22	1	0	1	0	2	33	17	4	0	54	0	65	11	0	76	154
0830 - 0845	9	15	0	0	24	11	10	55	0	76	56	11	4	0	71	0	49	31	0	80	251
0845 - 0900	12	5	0	0	17	20	6	39	0	65	12	26	3	0	41	1	57	7	0	65	188
Hourly Total	36	36	2	0	74	33	16	97	0	146	109	65	13	0	187	1	230	56	0	287	694
0900 - 0915	9	1	0	0	10	3	1	9	0	13	4	18	1	0	23	1	48	3	0	52	98
0915 - 0930	5	1	4	0	10	0	0	4	0	4	3	17	3	0	23	0	35	1	0	36	73
0930 - 0945	8	1	4	0	13	2	1	1	0	4	5	20	2	0	27	1	37	2	0	40	84
0945 - 1000	5	1	2	0	8	1	0	3	0	4	1	19	3	0	23	1	33	2	0	36	71
Hourly Total	27	4	10	0	41	6	2	17	0	25	13	74	9	0	96	3	153	8	0	164	326
1000 - 1015	2	0	2	0	4	1	0	1	0	2	0	22	2	0	24	2	29	0	0	31	61
1015 - 1030	6	0	1	0	7	0	1	1	0	2	0	12	6	0	18	1	26	1	0	28	55
1030 - 1045	5	0	2	0	7	0	2	4	0	6	4	24	5	0	33	2	35	0	0	37	83
1045 - 1100	4	5	2	0	11	1	0	0	0	1	22	24	3	0	49	2	30	2	0	34	95
Hourly Total	17	5	7	0	29	2	3	6	0	11	26	82	16	0	124	7	120	3	0	130	294
1100 - 1115	1	2	1	0	4	0	1	1	0	2	3	22	4	0	29	0	30	0	0	30	65
1115 - 1130	6	3	0	0	9	3	3	16	0	22	3	25	2	0	30	3	16	1	0	20	81
1130 - 1145	7	6	2	0	15	3	1	2	0	6	12	23	8	0	43	2	26	8	0	36	100
1145 - 1200	4	4	3	0	11	13	6	9	0	28	5	22	2	0	29	3	26	2	0	31	99
Hourly Total	18	15	6	0	39	19	11	28	0	58	23	92	16	0	131	8	98	11	0	117	345
1200 - 1215	6	4	0	0	10	1	1	1	0	3	9	38	5	0	52	2	19	3	0	24	89
1215 - 1230	1	1	4	0	6	0	2	12	0	14	6	31	2	0	39	3	30	3	0	36	95
1230 - 1245	1	6	3	0	10	1	0	3	0	4	6	27	4	0	37	0	26	15	0	41	92
1245 - 1300	4	4	0	0	8	19	6	17	0	42	17	38	8	0	63	0	21	11	0	32	145
Hourly Total	12	15	7	0	34	21	9	33	0	63	38	134	19	0	191	5	96	32	0	133	421
1300 - 1315	2	4	2	0	8	2	2	4	0	8	5	35	2	0	42	2	26	3	1	32	90
1315 - 1330	0	2	0	0	2	2	1	11	0	14	17	41	4	0	62	0	17	1	0	18	96
1330 - 1345	2	0	0	0	2	3	5	15	0	23	1	35	1	0	37	0	26	4	0	30	92
1345 - 1400	3	1	1	0	5	1	4	9	0	14	10	31	8	0	49	2	24	2	0	28	96
Hourly Total	7	7	3	0	17	8	12	39	0	59	33	142	15	0	190	4	93	10	1	108	374
1400 - 1415	2	3	1	0	6	3	2	4	0	9	4	36	6	0	46	2	27	3	0	32	93
1415 - 1430	2	1	1	0	4	0	2	6	0	8	10	53	8	0	71	1	31	1	0	33	116
1430 - 1445	7	0	1	0	8	13	7	21	0	41	1	34	7	0	42	0	24	1	0	25	116
1445 - 1500	3	0	0	0	3	2	2	1	0	5	0	43	6	0	49	0	25	1	0	26	83
Hourly Total	14	4	3	0	21	18	13	32	0	63	15	166	27	0	208	3	107	6	0	116	408
1500 - 1515	9	1	4	0	14	0	0	1	0	1	12	37	9	0	58	2	40	4	0	46	119
1515 - 1530	8	6	1	0	15	1	2	1	0	4	29	40	11	0	80	0	45	5	0	50	149
1530 - 1545	5	8	1	0	14	1	1	1	0	3	17	50	12	0	79	1	39	19	0	59	155
1545 - 1600	9	10	22	0	41	2	15	44	0	61	14	66	8	0	88	2	37	15	0	54	244
Hourly Total	31	25	28	0	84	4	18	47	0	69	72	193	40	0	305	5	161	43	0	209	667
1600 - 1615	7	0	24	0	31	4	14	47	0	65	3	63	7	0	73	1	44	0	0	45	214
1615 - 1630	5	0	2	0	7	6	1	8	0	15	0	71	5	0	76	9	36	0	0	45	143
1630 - 1645	5	1	2	0	8	3	1	4	0	8	1	70	7	0	78	3	33	1	0	37	131
1645 - 1700	3	0	4	0	7	2	1	3	0	6	2	75	5	0	82	3	29	0	0	32	127
Hourly Total	20	1	32	0	53	15	17	62	0	94	6	279	24	0	309	16	142	1	0	159	615
1700 - 1715	7	0	3	0	10	3	0	4	0	7	1	76	12	0	89	1	35	2	0	38	144
1715 - 1730	5	0	0	0	5	1	0	4	0	5	1	68	10	0	79	3	54	1	0	58	147
1730 - 1745	6	1	1	0	8	0	0	2	0	2	1	72	11	0	84	2	50	1	0	53	147
1745 - 1800	7	0	1	0	8	2	2	8	0	12	3	97	3	0	103	2	33	0	0	35	158
Hourly Total	25	1	5	0	31	6	2	18	0	26	6	313	36	0	355	8	172	4	0	184	596
1800 - 1815	2	0	0	0	2	4	0	1	0	5	0	62	11	0	73	0	31	0	0	31	111
1815 - 1830	4	0	1	0	5	0	0	1	0	1	0	72	4	0	76	2	24	0	0	26	108
1830 - 1845	3	0	0	0	3	0	0	0	0	0	0	46	3	0	49	0	17	0	0	17	69
1845 - 1900	3	0	0	0	3	0	0	0	0	0	0	42	5	0	47	1	30	0	0	31	81
Hourly Total	12	0	1	0	13	4	0	2	0	6	0	222	23	0	245	3	102	0	0	105	369
Grand Total	271	117	114	0	502	137	104	386	0	627	364	1879	249	0	2492	72	1857	187	1	2117	5738
Approach %	53.98	23.31	22.71	0.00	-	21.85	16.59	61.56	0.00	-	14.61	75.40	9.99	0.00	-	3.40	87.72	8.83	0.05	-	-
Intersection %	4.72	2.04	1.99	0.00	8.75	2.39	1.81	6.73	0.00	10.93	6.34	32.75	4.34	0.00	43.43	1.25	32.36	3.26	0.02	36.89	-
PHF	0.81	0.60	0.50	0.00	0.62	0.50	0.53	0.49	0.00	0.51	0.54	0.83	0.79	0.00	0.91	0.50	0.92	0.51	0.00	0.88	0.78

Classified Turn Movement Count || Bikes

Brentwood, TN



Marr Traffic
DATA COLLECTION

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Site 4 of 5

Pleasant Hill Rd
Driveway
Split Log Rd (West)
Split Log Rd (East)

Date

Tuesday, October 26, 2021

Weather

Fair
54°F

Lat/Long

35.952759°, -86.728374°

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Bikes

	Northbound					Southbound					Eastbound					Westbound					Int Total
	Pleasant Hill Rd					Driveway					Split Log Rd (West)					Split Log Rd (East)					
TIME	Left 4.1	Thru 4.2	Right 4.3	U-Turn 4.4	App Total	Left 4.5	Thru 4.6	Right 4.7	U-Turn 4.8	App Total	Left 4.9	Thru 4.10	Right 4.11	U-Turn 4.12	App Total	Left 4.13	Thru 4.14	Right 4.15	U-Turn 4.16	App Total	
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1245 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2	
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2	
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1815 - 1830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0	0	0	2	
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	100.00	0.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00	50.00	0.00	0.00	0.00	50.00	

Classified Turn Movement Count || Passenger Vehicles (1-3)

Brentwood, TN



Marr Traffic
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Site 4 of 5

Pleasant Hill Rd
Driveway
Split Log Rd (West)
Split Log Rd (East)

Date

Tuesday, October 26, 2021

Lat/Long

35.952759°, -86.728374°

Weather

Fair
54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound					Westbound					Int Total
	Pleasant Hill Rd					Driveway					Split Log Rd (West)					Split Log Rd (East)					
TIME	Left 4.1	Thru 4.2	Right 4.3	U-Turn 4.4	App Total	Left 4.5	Thru 4.6	Right 4.7	U-Turn 4.8	App Total	Left 4.9	Thru 4.10	Right 4.11	U-Turn 4.12	App Total	Left 4.13	Thru 4.14	Right 4.15	U-Turn 4.16	App Total	
0600 - 0615	2	0	1	0	3	0	0	0	0	0	0	2	0	0	2	0	11	1	0	12	17
0615 - 0630	5	0	1	0	6	0	0	0	0	0	0	4	1	0	5	0	26	1	0	27	38
0630 - 0645	7	0	0	0	7	0	0	0	0	0	0	9	2	0	11	0	35	0	0	35	53
0645 - 0700	5	0	2	0	7	0	0	0	0	0	2	7	0	0	9	1	52	1	0	54	70
Hourly Total	19	0	4	0	23	0	0	0	0	0	2	22	3	0	27	1	124	3	0	128	178
0700 - 0715	8	1	1	0	10	0	0	1	0	1	1	13	0	0	14	1	61	1	0	63	88
0715 - 0730	6	1	2	0	9	0	0	2	0	2	2	23	3	0	28	2	47	0	0	49	88
0730 - 0745	6	1	0	0	7	0	1	1	0	2	8	32	0	0	40	2	73	5	0	80	129
0745 - 0800	10	1	3	0	14	1	0	1	0	2	10	20	2	0	32	2	73	4	0	79	127
Hourly Total	30	4	6	0	40	1	1	5	0	7	21	88	5	0	114	7	254	10	0	271	432
0800 - 0815	9	2	0	0	11	1	0	2	0	3	8	10	2	0	20	0	59	7	0	66	100
0815 - 0830	6	14	2	0	22	1	0	1	0	2	33	16	3	0	52	0	60	11	0	71	147
0830 - 0845	6	15	0	0	21	11	10	55	0	76	56	11	4	0	71	0	46	31	0	77	245
0845 - 0900	12	5	0	0	17	20	6	39	0	65	12	23	2	0	37	1	53	7	0	61	180
Hourly Total	33	36	2	0	71	33	16	97	0	146	109	60	11	0	180	1	218	56	0	275	672
0900 - 0915	8	1	0	0	9	3	1	9	0	13	4	16	1	0	21	1	47	3	0	51	94
0915 - 0930	5	1	4	0	10	0	0	4	0	4	3	17	3	0	23	0	35	1	0	36	73
0930 - 0945	8	1	4	0	13	2	1	1	0	4	5	20	2	0	27	1	36	2	0	39	83
0945 - 1000	4	1	1	0	6	1	0	3	0	4	1	19	3	0	23	1	32	1	0	34	67
Hourly Total	25	4	9	0	38	6	2	17	0	25	13	72	9	0	94	3	150	7	0	160	317
1000 - 1015	2	0	2	0	4	1	0	0	0	1	0	21	2	0	23	2	29	0	0	31	59
1015 - 1030	5	0	1	0	6	0	1	1	0	2	0	12	6	0	18	1	25	1	0	27	53
1030 - 1045	5	0	2	0	7	0	2	4	0	6	4	23	4	0	31	2	34	0	0	36	80
1045 - 1100	4	5	2	0	11	1	0	0	0	1	22	24	3	0	49	2	29	2	0	33	94
Hourly Total	16	5	7	0	28	2	3	5	0	10	26	80	15	0	121	7	117	3	0	127	286
1100 - 1115	1	2	1	0	4	0	1	1	0	2	3	20	4	0	27	0	30	0	0	30	63
1115 - 1130	6	3	0	0	9	3	3	16	0	22	3	25	2	0	30	3	15	1	0	19	80
1130 - 1145	7	5	2	0	14	3	1	1	0	5	12	22	8	0	42	2	26	8	0	36	97
1145 - 1200	4	4	3	0	11	13	6	9	0	28	5	20	1	0	26	3	24	2	0	29	94
Hourly Total	18	14	6	0	38	19	11	27	0	57	23	87	15	0	125	8	95	11	0	114	334
1200 - 1215	5	4	0	0	9	1	1	1	0	3	9	37	5	0	51	2	17	3	0	22	85
1215 - 1230	1	1	4	0	6	0	2	12	0	14	6	30	1	0	37	3	28	3	0	34	91
1230 - 1245	1	6	2	0	9	1	0	3	0	4	6	27	4	0	37	0	25	15	0	40	90
1245 - 1300	3	4	0	0	7	19	6	17	0	42	17	37	7	0	61	0	19	11	0	30	140
Hourly Total	10	15	6	0	31	21	9	33	0	63	38	131	17	0	186	5	89	32	0	126	406
1300 - 1315	1	4	2	0	7	2	2	4	0	8	5	34	0	0	39	2	25	3	1	31	85
1315 - 1330	0	2	0	0	2	2	1	11	0	14	17	41	0	0	58	0	16	1	0	17	91
1330 - 1345	2	0	0	0	2	3	5	15	0	23	1	34	0	0	35	0	24	4	0	28	88
1345 - 1400	3	1	1	0	5	1	4	9	0	14	10	29	5	0	44	2	24	2	0	28	91
Hourly Total	6	7	3	0	16	8	12	39	0	59	33	138	5	0	176	4	89	10	1	104	355
1400 - 1415	2	3	1	0	6	3	2	4	0	9	4	34	4	0	42	2	26	3	0	31	88
1415 - 1430	2	1	1	0	4	0	2	6	0	8	10	49	7	0	66	1	30	1	0	32	110
1430 - 1445	7	0	1	0	8	13	7	21	0	41	1	33	6	0	40	0	23	1	0	24	113
1445 - 1500	3	0	0	0	3	2	2	1	0	5	0	39	6	0	45	0	24	1	0	25	78
Hourly Total	14	4	3	0	21	18	13	32	0	63	15	155	23	0	193	3	103	6	0	112	389
1500 - 1515	9	1	4	0	14	0	0	1	0	1	12	35	9	0	56	2	40	4	0	46	117
1515 - 1530	8	6	1	0	15	1	2	1	0	4	29	40	9	0	78	0	44	5	0	49	146
1530 - 1545	4	8	1	0	13	1	1	1	0	3	17	49	12	0	78	1	37	19	0	57	151
1545 - 1600	8	10	22	0	40	2	15	44	0	61	14	64	5	0	83	2	35	15	0	52	236
Hourly Total	29	25	28	0	82	4	18	47	0	69	72	188	35	0	295	5	156	43	0	204	650
1600 - 1615	6	0	24	0	30	4	14	47	0	65	3	62	5	0	70	1	44	0	0	45	210
1615 - 1630	4	0	2	0	6	6	1	8	0	15	0	70	5	0	75	7	35	0	0	42	138
1630 - 1645	4	1	2	0	7	3	1	4	0	8	1	70	7	0	78	3	32	1	0	36	129
1645 - 1700	3	0	4	0	7	2	1	3	0	6	2	74	5	0	81	3	29	0	0	32	126
Hourly Total	17	1	32	0	50	15	17	62	0	94	6	276	22	0	304	14	140	1	0	155	603
1700 - 1715	7	0	3	0	10	3	0	4	0	7	1	75	12	0	88	1	35	2	0	38	143
1715 - 1730	5	0	0	0	5	1	0	4	0	5	1	68	10	0	79	3	53	1	0	57	146
1730 - 1745	6	1	1	0	8	0	0	2	0	2	1	69	11	0	81	2	50	1	0	53	144
1745 - 1800	7	0	1	0	8	2	2	8	0	12	3	94	3	0	100	2	33	0	0	35	155
Hourly Total	25	1	5	0	31	6	2	18	0	26	6	306	36	0	348	8	171	4	0	183	588
1800 - 1815	2	0	0	0	2	4	0	1	0	5	0	62	11	0	73	0	30	0	0	30	110
1815 - 1830	4	0	1	0	5	0	0	1	0	1	0	71	3	0	74	2	24	0	0	26	106
1830 - 1845	3	0	0	0	3	0	0	0	0	0	0	45	3	0	48	0	17	0	0	17	68
1845 - 1900	3	0	0	0	3	0	0	0	0	0	0	42	5	0	47	1	30	0	0	31	81
Hourly Total	12	0	1	0	13	4	0	2	0	6	0	220	22	0	242	3	101	0	0	104	365
Grand Total	254	116	112	0	482	137	104	384	0	625	364	1823	218	0	2405	69	1807	186	1	2063	5575
Approach %	52.70	24.07	23.24	0.00	-	21.92	16.64	61.44	0.00	-	15.14	75.80	9.06	0.00	-	3.34	87.59	9.02	0.05	-	
Intersection %	4.56	2.08	2.01	0.00	8.65	2.46	1.87	6.89	0.00	11.21	6.53	32.70	3.91	0.00	43.14	1.24	32.41	3.34	0.02	37.00	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Brentwood, TN



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Site 4 of 5

Pleasant Hill Rd
Driveway
Split Log Rd (West)
Split Log Rd (East)

Date

Tuesday, October 26, 2021

Weather

Fair
54°F

Lat/Long

35.952759°, -86.728374°

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Single Unit Trucks (4-7)

	Northbound					Southbound					Eastbound					Westbound					Int Total
	Pleasant Hill Rd					Driveway					Split Log Rd (West)					Split Log Rd (East)					
TIME	Left 4.1	Thru 4.2	Right 4.3	U-Turn 4.4	App Total	Left 4.5	Thru 4.6	Right 4.7	U-Turn 4.8	App Total	Left 4.9	Thru 4.10	Right 4.11	U-Turn 4.12	App Total	Left 4.13	Thru 4.14	Right 4.15	U-Turn 4.16	App Total	
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	3	0	0	3	5
0700 - 0715	2	0	0	0	2	0	0	0	0	0	0	2	0	0	2	1	1	0	0	2	6
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
0730 - 0745	1	0	0	0	1	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	4
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Hourly Total	3	0	0	0	3	0	0	0	0	0	0	6	2	0	8	1	1	0	0	2	13
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2	0	0	2	4
0830 - 0845	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	4	0	0	4	5
Hourly Total	3	0	0	0	3	0	0	0	0	0	0	3	1	0	4	0	8	0	0	8	15
0900 - 0915	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	3
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
0945 - 1000	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	3
Hourly Total	1	0	1	0	2	0	0	0	0	0	0	1	0	0	1	0	3	1	0	4	7
1000 - 1015	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	3
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Hourly Total	0	0	0	0	0	0	0	1	0	1	0	2	1	0	3	0	3	0	0	3	7
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
1130 - 1145	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	3
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	2	0	0	2	5
Hourly Total	0	1	0	0	1	0	0	1	0	1	0	5	1	0	6	0	3	0	0	3	11
1200 - 1215	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	4
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2	0	0	2	4
1230 - 1245	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
1245 - 1300	1	0	0	0	1	0	0	0	0	0	0	1	1	0	2	0	2	0	0	2	5
Hourly Total	2	0	1	0	3	0	0	0	0	0	0	3	2	0	5	0	7	0	0	7	15
1300 - 1315	1	0	0	0	1	0	0	0	0	0	0	1	2	0	3	0	1	0	0	1	5
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	1	0	0	1	5
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	3
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5	0	0	0	0	0	5
Hourly Total	1	0	0	0	1	0	0	0	0	0	0	4	10	0	14	0	3	0	0	3	18
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	0	1	0	0	1	5
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	4	1	0	5	0	1	0	0	1	6
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	3
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	4
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	10	4	0	14	0	4	0	0	4	18
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2
1530 - 1545	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	4
1545 - 1600	1	0	0	0	1	0	0	0	0	0	0	2	3	0	5	0	2	0	0	2	8
Hourly Total	2	0	0	0	2	0	0	0	0	0	0	5	4	0	9	0	5	0	0	5	16
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
1615 - 1630	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	3
1630 - 1645	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Hourly Total	2	0	0	0	2	0	0	0	0	0	0	2	2	0	4	0	2	0	0	2	8
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	5
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
1815 - 1830	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	3
Grand Total	14	1	2	0	17	0	0	2	0	2	0	48	28	0	76	1	44	1	0	46	141
Approach %	82.35	5.88	11.76	0.00	-	0.00	0.00	100.00	0.00	-	0.00	63.16	36.84	0.00	-	2.17	95.65	2.17	0.00	-	
Intersection %	9.93	0.71	1.42	0.00	12.06	0.00	0.00	1.42	0.00	1.42	0.00	34.04	19.86	0.00	53.90	0.71	31.21	0.71	0.00	32.62	

Classified Turn Movement Count || Combination Trucks (8-13)

Brentwood, TN



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Site 4 of 5

Pleasant Hill Rd
Driveway
Split Log Rd (West)
Split Log Rd (East)

Date

Tuesday, October 26, 2021

Weather

Fair
54°F

Lat/Long

35.952759°, -86.728374°

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound					Westbound					Int Total
	Pleasant Hill Rd					Driveway					Split Log Rd (West)					Split Log Rd (East)					
TIME	Left 4.1	Thru 4.2	Right 4.3	U-Turn 4.4	App Total	Left 4.5	Thru 4.6	Right 4.7	U-Turn 4.8	App Total	Left 4.9	Thru 4.10	Right 4.11	U-Turn 4.12	App Total	Left 4.13	Thru 4.14	Right 4.15	U-Turn 4.16	App Total	
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	4	0	0	4	
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0945 - 1000	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1015 - 1030	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1245 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	
1600 - 1615	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1815 - 1830	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	
Grand Total	3	0	0	0	3	0	0	0	0	0	0	6	3	0	9	0	6	0	0	6	
Approach %	100.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	66.67	33.33	0.00	-	0.00	100.00	0.00	0.00	-	
Intersection %	16.67	0.00	0.00	0.00	16.67	0.00	0.00	0.00	0.00	0.00	0.00	33.33	16.67	0.00	50.00	0.00	33.33	0.00	0.00	33.33	

Pedestrian Count || All vehicles

Brentwood, TN



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Site 4 of 5

Pleasant Hill Rd
Driveway
Split Log Rd (West)
Split Log Rd (East)

Date

Tuesday, October 26, 2021

Weather

Fair
54°F

Lat/Long

35.952759°, -86.728374°

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Pedestrians

	Northbound			Southbound			Eastbound			Westbound				
	Pleasant Hill Rd			Driveway			Split Log Rd (West)			Split Log Rd (East)				
TIME	EB 4a	WB 4b	App Total	EB 4c	WB 4d	App Total	NB 4e	SB 4f	App Total	NB 4g	SB 4h	App Total	Int Total	
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0	
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0	
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0	
0730 - 0745	0	1	1	0	0	0	0	1	0	1	0	0	2	
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	1	1	0	0	0	0	1	0	1	0	0	2	
0800 - 0815	0	2	2	0	0	0	0	0	0	0	0	0	2	
0815 - 0830	0	0	0	0	0	0	0	0	1	1	0	0	1	
0830 - 0845	0	0	0	0	0	0	0	10	2	12	0	0	12	
0845 - 0900	2	3	5	0	0	0	0	2	2	4	0	0	9	
Hourly Total	2	5	7	0	0	0	0	12	5	17	0	0	24	
0900 - 0915	1	0	1	0	0	0	0	0	0	0	0	0	1	
0915 - 0930	0	1	1	0	0	0	0	1	0	1	0	0	2	
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0	
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	1	1	2	0	0	0	0	1	0	1	0	0	3	
1000 - 1015	1	0	1	0	0	0	0	0	0	0	0	0	1	
1015 - 1030	0	1	1	0	0	0	0	0	0	0	0	0	1	
1030 - 1045	1	0	1	0	0	0	0	0	0	0	0	0	1	
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	2	1	3	0	0	0	0	0	0	0	0	0	3	
1100 - 1115	0	0	0	0	0	0	0	1	0	1	0	0	1	
1115 - 1130	0	0	0	0	0	0	0	0	1	1	0	0	1	
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0	
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	1	1	2	0	0	2	
1200 - 1215	0	2	2	0	0	0	0	2	0	2	0	0	4	
1215 - 1230	1	0	1	0	0	0	0	0	2	2	0	0	3	
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0	
1245 - 1300	3	2	5	0	0	0	0	1	2	3	0	0	8	
Hourly Total	4	4	8	0	0	0	0	3	4	7	0	0	15	
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0	
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	0	
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	0	0	
1345 - 1400	1	2	3	0	0	0	0	2	0	2	0	0	5	
Hourly Total	1	2	3	0	0	0	0	2	0	2	0	0	5	
1400 - 1415	0	1	1	0	0	0	0	0	0	0	0	0	1	
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0	
1430 - 1445	2	0	2	0	0	0	0	0	2	2	0	0	4	
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	2	1	3	0	0	0	0	0	2	2	0	0	5	
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0	
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0	
1530 - 1545	0	1	1	0	0	0	0	3	0	3	0	0	4	
1545 - 1600	7	0	7	0	0	0	0	2	19	21	0	0	28	
Hourly Total	7	1	8	0	0	0	0	5	19	24	0	0	32	
1600 - 1615	1	0	1	0	0	0	0	0	1	1	0	0	2	
1615 - 1630	2	0	2	0	0	0	0	0	2	2	0	0	4	
1630 - 1645	0	3	3	1	0	0	1	0	0	0	0	0	4	
1645 - 1700	0	0	0	0	1	1	1	0	0	0	0	0	1	
Hourly Total	3	3	6	1	1	2	2	0	3	3	0	0	11	
1700 - 1715	0	0	0	0	1	1	1	0	0	0	0	0	1	
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	
1730 - 1745	0	1	1	0	0	0	0	0	0	0	0	0	1	
1745 - 1800	1	0	1	0	0	0	0	2	0	2	0	0	3	
Hourly Total	1	1	2	1	0	1	1	2	0	2	0	0	5	
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0	
1815 - 1830	0	0	0	0	0	0	0	0	2	2	0	0	2	
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0	
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	2	2	0	0	2	
Grand Total	23	20	43	2	1	3	27	36	63	0	0	0	109	
Approach %	53.49	46.51	-	66.67	33.33	-	42.86	57.14	-	0.00	0.00	0.00	-	
Intersection %	21.10	18.35	39.45	1.83	0.92	2.75	24.77	33.03	57.80	0.00	0.00	0.00	0.00	

Classified Turn Movement Count || All vehicles

Brentwood, TN



Marr Traffic
DATA COLLECTION

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Site 5 of 5

Split Log Rd (South)
Ragsdale Rd

Date

Tuesday, October 26, 2021

Weather

Fair
54°F

Lat/Long

35.951984°, -86.741507°

0600 - 1900 (Weekday 13h Session) (10-26-2021)

All vehicles

TIME	Northbound				Southbound				Westbound				
	Split Log Rd (South)				Ragsdale Rd				Split Log Rd (East)				
	Thru 5.1	Right 5.2	U-Turn 5.3	App Total	Left 5.4	Thru 5.5	U-Turn 5.6	App Total	Left 5.7	Right 5.8	U-Turn 5.9	App Total	Int Total
0600 - 0615	4	3	0	7	1	3	0	4	17	0	0	17	28
0615 - 0630	7	5	0	12	1	4	0	5	40	0	0	40	57
0630 - 0645	6	7	0	13	0	18	0	18	42	1	0	43	74
0645 - 0700	11	10	0	21	3	17	0	20	70	0	0	70	111
Hourly Total	28	25	0	53	5	42	0	47	169	1	0	170	270
0700 - 0715	16	29	0	45	1	71	0	72	97	3	0	100	217
0715 - 0730	24	41	0	65	0	89	0	89	75	3	0	78	232
0730 - 0745	29	49	0	78	3	69	0	72	81	1	0	82	232
0745 - 0800	13	39	0	52	5	74	0	79	84	3	0	87	218
Hourly Total	82	158	0	240	9	303	0	312	337	10	0	347	899
0800 - 0815	21	26	0	47	0	59	0	59	79	1	0	80	186
0815 - 0830	28	60	0	88	6	47	0	53	72	2	0	74	215
0830 - 0845	21	53	0	74	14	48	0	62	115	6	0	121	257
0845 - 0900	12	32	0	44	3	60	0	63	120	9	0	129	236
Hourly Total	82	171	0	253	23	214	0	237	386	18	0	404	894
0900 - 0915	15	20	0	35	2	38	0	40	71	2	0	73	148
0915 - 0930	9	32	0	41	3	31	0	34	55	1	0	56	131
0930 - 0945	7	27	0	34	2	28	0	30	54	2	0	56	120
0945 - 1000	19	29	0	48	3	32	0	35	43	4	0	47	130
Hourly Total	50	108	0	158	10	129	0	139	223	9	0	232	529
1000 - 1015	17	25	0	42	1	26	0	27	41	1	0	42	111
1015 - 1030	15	26	0	41	2	24	0	26	34	1	0	35	102
1030 - 1045	8	38	0	46	3	28	0	31	55	5	0	60	137
1045 - 1100	11	50	0	61	6	23	0	29	44	1	0	45	135
Hourly Total	51	139	0	190	12	101	0	113	174	8	0	182	485
1100 - 1115	17	26	0	43	0	30	0	30	40	0	0	40	113
1115 - 1130	25	38	0	63	1	20	0	21	42	4	0	46	130
1130 - 1145	23	43	0	66	2	33	0	35	42	1	0	43	144
1145 - 1200	28	39	0	67	4	35	0	39	34	4	0	38	144
Hourly Total	93	146	0	239	7	118	0	125	158	9	0	167	531
1200 - 1215	19	64	1	84	3	24	0	27	37	1	0	38	149
1215 - 1230	16	36	0	52	4	22	0	26	51	3	0	54	132
1230 - 1245	31	56	0	87	3	30	0	33	37	4	0	41	161
1245 - 1300	17	66	0	83	2	25	0	27	46	2	0	48	158
Hourly Total	83	222	1	306	12	101	0	113	171	10	0	181	600
1300 - 1315	28	55	0	83	3	15	0	18	33	2	0	35	136
1315 - 1330	21	58	0	79	4	13	0	17	36	2	0	38	134
1330 - 1345	25	47	0	72	1	26	0	27	52	1	0	53	152
1345 - 1400	26	58	0	84	1	22	0	23	44	2	0	46	153
Hourly Total	100	218	0	318	9	76	0	85	165	7	0	172	575
1400 - 1415	25	46	0	71	4	22	0	26	37	2	0	39	136
1415 - 1430	23	65	0	88	3	23	0	26	50	2	0	52	166
1430 - 1445	30	53	0	83	2	37	0	39	58	5	0	63	185
1445 - 1500	31	64	0	95	4	35	0	39	39	4	0	43	177
Hourly Total	109	228	0	337	13	117	0	130	184	13	0	197	664
1500 - 1515	44	63	0	107	6	26	0	32	49	4	0	53	192
1515 - 1530	39	91	0	130	8	36	0	44	57	3	0	60	234
1530 - 1545	48	77	0	125	8	27	0	35	52	3	0	55	215
1545 - 1600	44	73	0	117	6	28	0	34	72	4	0	76	227
Hourly Total	175	304	0	479	28	117	0	145	230	14	0	244	868
1600 - 1615	61	84	0	145	2	35	0	37	88	18	0	106	288
1615 - 1630	48	79	0	127	3	36	0	39	57	3	0	60	226
1630 - 1645	60	91	0	151	3	28	0	31	50	2	0	52	234
1645 - 1700	45	90	0	135	3	37	0	40	58	2	0	60	235
Hourly Total	214	344	0	558	11	136	0	147	253	25	0	278	983
1700 - 1715	55	101	0	156	2	42	0	44	49	3	0	52	252
1715 - 1730	67	92	0	159	3	38	0	41	74	2	0	76	276
1730 - 1745	58	89	0	147	0	36	0	36	70	1	0	71	254
1745 - 1800	56	94	0	150	3	26	0	29	56	5	0	61	240
Hourly Total	236	376	0	612	8	142	0	150	249	11	0	260	1022
1800 - 1815	47	89	0	136	1	28	0	29	37	2	0	39	204
1815 - 1830	56	85	0	141	1	28	0	29	36	6	0	42	212
1830 - 1845	43	62	0	105	4	9	0	13	25	0	0	25	143
1845 - 1900	31	58	0	89	0	14	0	14	37	0	0	37	140
Hourly Total	177	294	0	471	6	79	0	85	135	8	0	143	699
Grand Total	1480	2733	1	4214	153	1675	0	1828	2834	143	0	2977	9019
Approach %	35.12	64.86	0.02	-	8.37	91.63	0.00	-	95.20	4.80	0.00	-	
Intersection %	16.41	30.30	0.01	46.72	1.70	18.57	0.00	20.27	31.42	1.59	0.00	33.01	
PHF	0.88	0.93	0.00	0.96	0.67	0.85	0.00	0.85	0.84	0.55	0.00	0.86	0.93

Marr Traffic
DATA COLLECTION

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Weather

Fair
54°F

Lat/Long
35.951984°, -86.741507°

Bikes

TIME	Northbound				Southbound				Westbound				
	Split Log Rd (South)				Ragsdale Rd				Split Log Rd (East)				
	Thru 5.1	Right 5.2	U-Turn 5.3	App Total	Left 5.4	Thru 5.5	U-Turn 5.6	App Total	Left 5.7	Right 5.8	U-Turn 5.9	App Total	Int Total
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0	0	0
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0	0	0
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	1	0	1	0	0	0	0	1
Hourly Total	0	0	0	0	0	1	0	1	0	0	0	0	1
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	2	0	2	0	0	0	0	0	0	0	0	2
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	2	0	2	0	0	0	0	0	0	0	0	2
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0
1815 - 1830	0	0	0	0	0	0	0	0	0	0	0	0	0
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	0	2	0	1	0	1	0	0	0	0	3
Approach %	0.00	100.00	0.00	-	0.00	100.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	0.00	66.67	0.00	66.67	0.00	33.33	0.00	33.33	0.00	0.00	0.00		

Classified Turn Movement Count || Passenger Vehicles (1-3)



Marr Traffic
DATA COLLECTION

Brentwood, TN

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Site 5 of 5

Split Log Rd (South)
Ragsdale Rd

Date

Tuesday, October 26, 2021

Weather

Fair
54°F

Lat/Long

35.951984°, -86.741507°

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Passenger Vehicles (1-3)

TIME	Northbound				Southbound			
	Split Log Rd (South)				Ragsdale Rd			
	Thru 5.1	Right 5.2	U-Turn 5.3	App Total	Left 5.4	Thru 5.5	U-Turn 5.6	App Total
0600 - 0615	4	3	0	7	1	3	0	4
0615 - 0630	7	5	0	12	1	4	0	5
0630 - 0645	5	7	0	12	0	16	0	16
0645 - 0700	11	9	0	20	2	17	0	19
Hourly Total	27	24	0	51	4	40	0	44
0700 - 0715	14	27	0	41	1	70	0	71
0715 - 0730	24	38	0	62	0	89	0	89
0730 - 0745	29	45	0	74	3	68	0	71
0745 - 0800	12	39	0	51	5	72	0	77
Hourly Total	79	149	0	228	9	299	0	308
0800 - 0815	19	24	0	43	0	58	0	58
0815 - 0830	25	59	0	84	6	44	0	50
0830 - 0845	20	52	0	72	13	48	0	61
0845 - 0900	11	30	0	41	3	58	0	61
Hourly Total	75	165	0	240	22	208	0	230
0900 - 0915	15	19	0	34	2	36	0	38
0915 - 0930	9	31	0	40	3	29	0	32
0930 - 0945	7	27	0	34	2	27	0	29
0945 - 1000	18	29	0	47	3	31	0	34
Hourly Total	49	106	0	155	10	123	0	133
1000 - 1015	15	24	0	39	1	26	0	27
1015 - 1030	14	25	0	39	2	24	0	26
1030 - 1045	8	38	0	46	2	28	0	30
1045 - 1100	11	49	0	60	6	22	0	28
Hourly Total	48	136	0	184	11	100	0	111
1100 - 1115	17	25	0	42	0	28	0	28
1115 - 1130	25	37	0	62	1	20	0	21
1130 - 1145	21	40	0	61	2	33	0	35
1145 - 1200	28	38	0	66	4	34	0	38
Hourly Total	91	140	0	231	7	115	0	122
1200 - 1215	19	62	1	82	3	24	0	27
1215 - 1230	16	35	0	51	4	21	0	25
1230 - 1245	29	54	0	83	3	30	0	33
1245 - 1300	17	65	0	82	2	24	0	26
Hourly Total	81	216	1	298	12	99	0	111
1300 - 1315	27	50	0	77	3	15	0	18
1315 - 1330	19	55	0	74	4	13	0	17
1330 - 1345	24	45	0	69	1	26	0	27
1345 - 1400	26	53	0	79	1	21	0	22
Hourly Total	96	203	0	299	9	75	0	84
1400 - 1415	24	44	0	68	4	21	0	25
1415 - 1430	23	61	0	84	2	22	0	24
1430 - 1445	30	47	0	77	2	37	0	39
1445 - 1500	30	62	0	92	3	35	0	38
Hourly Total	107	214	0	321	11	115	0	126
1500 - 1515	43	61	0	104	6	25	0	31
1515 - 1530	39	88	0	127	7	35	0	42
1530 - 1545	46	74	0	120	8	25	0	33
1545 - 1600	44	71	0	115	6	28	0	34
Hourly Total	172	294	0	466	27	113	0	140
1600 - 1615	61	83	0	144	2	32	0	34
1615 - 1630	47	79	0	126	3	36	0	39
1630 - 1645	60	88	0	148	3	27	0	30
1645 - 1700	44	89	0	133	2	35	0	37
Hourly Total	212	339	0	551	10	130	0	140
1700 - 1715	55	100	0	155	2	40	0	42
1715 - 1730	67	91	0	158	3	38	0	41
1730 - 1745	56	87	0	143	0	36	0	36
1745 - 1800	56	90	0	146	3	26	0	29
Hourly Total	234	368	0	602	8	140	0	148
1800 - 1815	47	89	0	136	1	28	0	29
1815 - 1830	56	83	0	139	1	28	0	29
1830 - 1845	43	60	0	103	4	9	0	13
1845 - 1900	31	58	0	89	0	14	0	14
Hourly Total	177	290	0	467	6	79	0	85
Grand Total	1448	2644	1	4093	146	1636	0	1782
Approach %	35.38	64.60	0.02	-	8.19	91.81	0.00	-
Intersection %	16.51	30.14	0.01	46.65	1.66	18.65	0.00	20.31

Westbound				
Split Log Rd (East)				
Left 5.7	Right 5.8	U-Turn 5.9	App Total	Int Total
17	0	0	17	28
40	0	0	40	57
41	1	0	42	70
68	0	0	68	107
166	1	0	167	262
94	3	0	97	209
75	3	0	78	229
79	1	0	80	225
83	3	0	86	214
331	10	0	341	877
77	1	0	78	179
67	2	0	69	203
110	4	0	114	247
118	9	0	127	229
372	16	0	388	858
70	2	0	72	144
53	1	0	54	126
53	2	0	55	118
41	4	0	45	126
217	9	0	226	514
40	1	0	41	107
33	1	0	34	99
54	4	0	58	134
42	1	0	43	131
169	7	0	176	471
40	0	0	40	110
39	4	0	43	126
41	1	0	42	138
34	4	0	38	142
154	9	0	163	516
34	1	0	35	144
49	3	0	52	128
35	3	0	38	154
44	2	0	46	154
162	9	0	171	580
32	2	0	34	129
35	2	0	37	128
50	1	0	51	147
42	2	0	44	145
159	7	0	166	549
36	2	0	38	131
48	2	0	50	158
57	5	0	62	178
38	4	0	42	172
179	13	0	192	639
49	4	0	53	188
56	3	0	59	228
49	2	0	51	204
70	4	0	74	223
224	13	0	237	843
87	17	0	104	282
56	2	0	58	223
49	1	0	50	228
58	2	0	60	230
250	22	0	272	963
48	3	0	51	248
74	2	0	76	275
70	1	0	71	250
55	5	0	60	235
247	11	0	258	1008
37	2	0	39	204
34	6	0	40	208
25	0	0	25	141
37	0	0	37	140
133	8	0	141	693
2763	135	0	2898	8773
95.34	4.66	0.00	-	
31.49	1.54	0.00	33.03	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Brentwood, TN



Marr Traffic
DATA COLLECTION

www.marrtraffic.com

Site 5 of 5

Split Log Rd (South)
Ragsdale Rd

Date

Tuesday, October 26, 2021

Weather

Fair
54°F

Lat/Long

35.951984°, -86.741507°

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Single Unit Trucks (4-7)

TIME	Northbound				Southbound				Westbound				
	Split Log Rd (South)				Ragsdale Rd				Split Log Rd (East)				
	Thru 5.1	Right 5.2	U-Turn 5.3	App Total	Left 5.4	Thru 5.5	U-Turn 5.6	App Total	Left 5.7	Right 5.8	U-Turn 5.9	App Total	Int Total
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	1	0	0	1	0	2	0	2	1	0	0	1	4
0645 - 0700	0	1	0	1	1	0	0	1	2	0	0	2	4
Hourly Total	1	1	0	2	1	2	0	3	3	0	0	3	8
0700 - 0715	2	2	0	4	0	1	0	1	2	0	0	2	7
0715 - 0730	0	3	0	3	0	0	0	0	0	0	0	0	3
0730 - 0745	0	4	0	4	0	1	0	1	2	0	0	2	7
0745 - 0800	1	0	0	1	0	1	0	1	1	0	0	1	3
Hourly Total	3	9	0	12	0	3	0	3	5	0	0	5	20
0800 - 0815	1	2	0	3	0	1	0	1	2	0	0	2	6
0815 - 0830	1	0	0	1	0	1	0	1	2	0	0	2	4
0830 - 0845	0	1	0	1	1	0	0	1	4	2	0	6	8
0845 - 0900	1	0	0	1	0	2	0	2	2	0	0	2	5
Hourly Total	3	3	0	6	1	4	0	5	10	2	0	12	23
0900 - 0915	0	0	0	0	0	2	0	2	1	0	0	1	3
0915 - 0930	0	1	0	1	0	1	0	1	2	0	0	2	4
0930 - 0945	0	0	0	0	0	1	0	1	1	0	0	1	2
0945 - 1000	0	0	0	0	0	1	0	1	1	0	0	1	2
Hourly Total	0	1	0	1	0	5	0	5	5	0	0	5	11
1000 - 1015	2	1	0	3	0	0	0	0	1	0	0	1	4
1015 - 1030	1	1	0	2	0	0	0	0	0	0	0	0	2
1030 - 1045	0	0	0	0	1	0	0	1	1	1	0	2	3
1045 - 1100	0	1	0	1	0	0	0	0	2	0	0	2	3
Hourly Total	3	3	0	6	1	0	0	1	4	1	0	5	12
1100 - 1115	0	1	0	1	0	2	0	2	0	0	0	0	3
1115 - 1130	0	1	0	1	0	0	0	0	3	0	0	3	4
1130 - 1145	2	3	0	5	0	0	0	0	1	0	0	1	6
1145 - 1200	0	1	0	1	0	1	0	1	0	0	0	0	2
Hourly Total	2	6	0	8	0	3	0	3	4	0	0	4	15
1200 - 1215	0	2	0	2	0	0	0	0	3	0	0	3	5
1215 - 1230	0	1	0	1	0	1	0	1	2	0	0	2	4
1230 - 1245	2	2	0	4	0	0	0	0	2	1	0	3	7
1245 - 1300	0	1	0	1	0	1	0	1	2	0	0	2	4
Hourly Total	2	6	0	8	0	2	0	2	9	1	0	10	20
1300 - 1315	0	5	0	5	0	0	0	0	1	0	0	1	6
1315 - 1330	2	3	0	5	0	0	0	0	1	0	0	1	6
1330 - 1345	0	2	0	2	0	0	0	0	1	0	0	1	3
1345 - 1400	0	5	0	5	0	0	0	0	2	0	0	2	7
Hourly Total	2	15	0	17	0	0	0	0	5	0	0	5	22
1400 - 1415	1	2	0	3	0	1	0	1	1	0	0	1	5
1415 - 1430	0	3	0	3	1	1	0	2	2	0	0	2	7
1430 - 1445	0	6	0	6	0	0	0	0	1	0	0	1	7
1445 - 1500	1	2	0	3	1	0	0	1	1	0	0	1	5
Hourly Total	2	13	0	15	2	2	0	4	5	0	0	5	24
1500 - 1515	0	2	0	2	0	1	0	1	0	0	0	0	3
1515 - 1530	0	2	0	2	1	1	0	2	1	0	0	1	5
1530 - 1545	1	3	0	4	0	2	0	2	3	1	0	4	10
1545 - 1600	0	2	0	2	0	0	0	0	2	0	0	2	4
Hourly Total	1	9	0	10	1	4	0	5	6	1	0	7	22
1600 - 1615	0	1	0	1	0	2	0	2	1	1	0	2	5
1615 - 1630	1	0	0	1	0	0	0	0	1	0	0	1	2
1630 - 1645	0	3	0	3	0	0	0	0	1	1	0	2	5
1645 - 1700	1	1	0	2	0	1	0	1	0	0	0	0	3
Hourly Total	2	5	0	7	0	3	0	3	3	2	0	5	15
1700 - 1715	0	1	0	1	0	1	0	1	1	0	0	1	3
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	2	0	0	2	0	0	0	0	0	0	0	0	2
1745 - 1800	0	4	0	4	0	0	0	0	1	0	0	1	5
Hourly Total	2	5	0	7	0	1	0	1	2	0	0	2	10
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0
1815 - 1830	0	1	0	1	0	0	0	0	2	0	0	2	3
1830 - 1845	0	2	0	2	0	0	0	0	0	0	0	0	2
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	3	0	3	0	0	0	0	2	0	0	2	5
Grand Total	23	79	0	102	6	29	0	35	63	7	0	70	207
Approach %	22.55	77.45	0.00	-	17.14	82.86	0.00	-	90.00	10.00	0.00	-	
Intersection %	11.11	38.16	0.00	49.28	2.90	14.01	0.00	16.91	30.43	3.38	0.00	33.82	

Classified Turn Movement Count || Combination Trucks (8-13)

Brentwood, TN



Marr Traffic
DATA COLLECTION

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Site 5 of 5

Split Log Rd (South)
Ragsdale Rd

Split Log Rd (East)

Date

Tuesday, October 26, 2021

Lat/Long

35.951984°, -86.741507°

Weather

Fair
54°F

0600 - 1900 (Weekday 13h Session) (10-26-2021)

Combination Trucks (8-13)

TIME	Northbound				Southbound				Westbound				
	Split Log Rd (South)				Ragsdale Rd				Split Log Rd (East)				
	Thru 5.1	Right 5.2	U-Turn 5.3	App Total	Left 5.4	Thru 5.5	U-Turn 5.6	App Total	Left 5.7	Right 5.8	U-Turn 5.9	App Total	Int Total
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0700 - 0715	0	0	0	0	0	0	0	0	1	0	0	1	1
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	1	0	1	0	0	0	0	1
Hourly Total	0	0	0	0	0	1	0	1	1	0	0	1	2
0800 - 0815	1	0	0	1	0	0	0	0	0	0	0	0	1
0815 - 0830	2	1	0	3	0	2	0	2	3	0	0	3	8
0830 - 0845	1	0	0	1	0	0	0	0	1	0	0	1	2
0845 - 0900	0	2	0	2	0	0	0	0	0	0	0	0	2
Hourly Total	4	3	0	7	0	2	0	2	4	0	0	4	13
0900 - 0915	0	1	0	1	0	0	0	0	0	0	0	0	1
0915 - 0930	0	0	0	0	0	1	0	1	0	0	0	0	1
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0
0945 - 1000	1	0	0	1	0	0	0	0	1	0	0	1	2
Hourly Total	1	1	0	2	0	1	0	1	1	0	0	1	4
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0	0	0
1015 - 1030	0	0	0	0	0	0	0	0	1	0	0	1	1
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	1	0	1	0	0	0	0	1
Hourly Total	0	0	0	0	0	1	0	1	1	0	0	1	2
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1300 - 1315	1	0	0	1	0	0	0	0	0	0	0	0	1
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	0
1330 - 1345	1	0	0	1	0	0	0	0	1	0	0	1	2
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	2	0	0	2	0	0	0	0	1	0	0	1	3
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	1	0	1	0	0	0	0	0	0	0	0	1
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	1	0	0	0	0	0	0	0	0	1
1500 - 1515	1	0	0	1	0	0	0	0	0	0	0	0	1
1515 - 1530	0	1	0	1	0	0	0	0	0	0	0	0	1
1530 - 1545	1	0	0	1	0	0	0	0	0	0	0	0	1
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	2	1	0	3	0	0	0	0	0	0	0	0	3
1600 - 1615	0	0	0	0	0	1	0	1	0	0	0	0	1
1615 - 1630	0	0	0	0	0	0	0	0	0	1	0	1	1
1630 - 1645	0	0	0	0	0	1	0	1	0	0	0	0	1
1645 - 1700	0	0	0	0	1	1	0	2	0	0	0	0	2
Hourly Total	0	0	0	0	1	3	0	4	0	1	0	1	5
1700 - 1715	0	0	0	0	0	1	0	1	0	0	0	0	1
1715 - 1730	0	1	0	1	0	0	0	0	0	0	0	0	1
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	1	0	1	0	1	0	0	0	0	2
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0
1815 - 1830	0	1	0	1	0	0	0	0	0	0	0	0	1
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	9	8	0	17	1	9	0	10	8	1	0	9	36
Approach %	52.94	47.06	0.00	-	10.00	90.00	0.00	-	88.89	11.11	0.00	-	
Intersection %	25.00	22.22	0.00	47.22	2.78	25.00	0.00	27.78	22.22	2.78	0.00	25.00	

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Weather

Fair
54°F

Lat/Long
35.951984°, -86.741507°

Pedestrians

	Northbound			Southbound		
	Split Log Rd (South)			Ragsdale Rd		
	EB	WB		EB	WB	
TIME	5a	5b		5c	5d	
0600 - 0615	0	0		0	0	0
0615 - 0630	0	0		0	0	0
0630 - 0645	0	0		0	0	0
0645 - 0700	0	0		0	0	0
Hourly Total	0	0		0	0	0
0700 - 0715	0	0		0	0	0
0715 - 0730	0	0		0	0	0
0730 - 0745	0	0		0	0	0
0745 - 0800	0	0		0	0	0
Hourly Total	0	0		0	0	0
0800 - 0815	0	0		0	0	0
0815 - 0830	0	0		0	0	0
0830 - 0845	0	0		0	0	0
0845 - 0900	0	0		0	0	0
Hourly Total	0	0		0	0	0
0900 - 0915	0	0		0	0	0
0915 - 0930	0	0		0	0	0
0930 - 0945	0	0		0	0	0
0945 - 1000	0	0		0	0	0
Hourly Total	0	0		0	0	0
1000 - 1015	0	0		0	0	0
1015 - 1030	0	0		0	0	0
1030 - 1045	0	0		0	0	0
1045 - 1100	0	0		0	0	0
Hourly Total	0	0		0	0	0
1100 - 1115	0	0		0	0	0
1115 - 1130	0	0		0	0	0
1130 - 1145	0	0		0	0	0
1145 - 1200	0	0		0	0	0
Hourly Total	0	0		0	0	0
1200 - 1215	0	0		0	0	0
1215 - 1230	0	0		0	0	0
1230 - 1245	0	0		0	0	0
1245 - 1300	0	0		0	0	0
Hourly Total	0	0		0	0	0
1300 - 1315	0	0		0	0	0
1315 - 1330	0	0		0	0	0
1330 - 1345	0	0		0	0	0
1345 - 1400	0	0		0	0	0
Hourly Total	0	0		0	0	0
1400 - 1415	0	0		0	0	0
1415 - 1430	0	0		0	0	0
1430 - 1445	0	0		0	0	0
1445 - 1500	0	0		0	0	0
Hourly Total	0	0		0	0	0
1500 - 1515	0	0		0	0	0
1515 - 1530	0	0		0	0	0
1530 - 1545	0	0		0	0	0
1545 - 1600	0	0		0	0	0
Hourly Total	0	0		0	0	0
1600 - 1615	0	0		0	0	0
1615 - 1630	0	0		0	0	0
1630 - 1645	0	0		0	0	0
1645 - 1700	0	0		0	0	0
Hourly Total	0	0		0	0	0
1700 - 1715	0	0		0	0	0
1715 - 1730	0	0		0	0	0
1730 - 1745	0	0		0	0	0
1745 - 1800	0	0		0	0	0
Hourly Total	0	0		0	0	0
1800 - 1815	0	0		0	0	0
1815 - 1830	0	0		0	0	0
1830 - 1845	0	0		0	0	0
1845 - 1900	0	0		0	0	0
Hourly Total	0	0		0	0	0
Grand Total	0	0		0	0	0
Approach %	0.00	0.00		-	0.00	0.00
Intersection %	0.00	0.00		0.00	0.00	0.00

[illegible]

APPENDIX B

TRIP GENERATION & FUTURE TRAFFIC DERIVATION

ROSEBROOKE SOUTH
TRIP GENERATION (10th Edition)

Single-Family Detached Housing - 50 Dwelling Units

Use ITE Land Use Code 210 (Single-Family Detached Housing) and associated trip generation rates for 24-hour total trips and peak hour trips.

Average Daily Traffic

$$\begin{aligned}\ln(T) &= 0.92 \ln(X) + 2.71 \\ \ln(T) &= 0.92 \ln(50) + 2.71 \\ T &= 550\end{aligned}$$

A.M. Peak Hour of Adjacent Street Traffic

$$\begin{aligned}T &= 0.71(X) + 4.80 \\ T &= 0.71(50) + 4.80 \\ T &= 40\end{aligned}$$

$$\begin{aligned}\text{Enter} &= 0.25(40) = 10 \\ \text{Exit} &= 0.75(40) = 30\end{aligned}$$

P.M. Peak Hour of Adjacent Street Traffic

$$\begin{aligned}\ln(T) &= 0.96 \ln(X) + 0.20 \\ \ln(T) &= 0.96 \ln(50) + 0.20 \\ T &= 52\end{aligned}$$

$$\begin{aligned}\text{Enter} &= 0.63(52) = 33 \\ \text{Exit} &= 0.37(52) = 19\end{aligned}$$

ROSEBROOKE EAST
TRIP GENERATION (10th Edition)

Single-Family Detached Housing - 74 Dwelling Units

Use ITE Land Use Code 210 (Single-Family Detached Housing) and associated trip generation rates for 24-hour total trips and peak hour trips.

Average Daily Traffic

$$\begin{aligned}\ln(T) &= 0.92 \ln(X) + 2.71 \\ \ln(T) &= 0.92 \ln(74) + 2.71 \\ T &= 788\end{aligned}$$

A.M. Peak Hour of Adjacent Street Traffic

$$\begin{aligned}T &= 0.71(X) + 4.80 \\ T &= 0.71(74) + 4.80 \\ T &= 57\end{aligned}$$

$$\begin{aligned}\text{Enter} &= 0.25(57) = 14 \\ \text{Exit} &= 0.75(57) = 43\end{aligned}$$

P.M. Peak Hour of Adjacent Street Traffic

$$\begin{aligned}\ln(T) &= 0.96 \ln(X) + 0.20 \\ \ln(T) &= 0.96 \ln(74) + 0.20 \\ T &= 76\end{aligned}$$

$$\begin{aligned}\text{Enter} &= 0.63(76) = 48 \\ \text{Exit} &= 0.37(76) = 28\end{aligned}$$

**TRAFFIC VOLUME WORKSHEET
SPECIFIC NON-SITE TRIP GENERATION &
PROPOSED DEVELOPMENT TRIP GENERATION**



SPECIFIC NON-SITE DEVELOPMENT TRIP GENERATION							
Development	Daily	A.M. Peak Hour			P.M. Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Rosebrooke Main (126 single family homes)	1,286	24	70	94	80	47	127
Taube Property (71 homes)	759	14	41	55	46	27	73
Split Log Middle School (1,050 students)	-	329	280	609	87	91	178
Jordan Elementary School (300 additional students)	-	37	19	56	7	11	18
TOTAL	2,045	404	410	814	220	176	396

2027 HORIZON YEAR							
Development	Daily	A.M. Peak Hour			P.M. Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Rosebrooke South (50 single family homes)	550	10	30	40	33	19	52
Rosebrooke East (74 single family homes)	788	14	43	57	48	28	76
TOTAL	1,338	24	73	97	81	47	128

TRAFFIC VOLUME WORKSHEET
SPLIT LOG ROAD AT RAGSDALE ROAD
A.M. PEAK HOUR



Description	Northbound Split Log Road			Southbound Ragsdale Road			Eastbound			Westbound Split Log Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS		91	174	14	249					316		7
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)		1.0	1.0	1.0	1.0					1.0		1.0
Growth Factor	1.00	1.06	1.06	1.06	1.06	1.00	1.00	1.00	1.00	1.06	1.00	1.06
Annual Background Growth Trips	0	6	11	1	15	0	0	0	0	19	0	0
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips		15							15		
		0	0	4	0	0	0	0	0	11	0	0
Taube Property (71 homes)	% In % Out Trips		25							25		
		0	0	4	0	0	0	0	0	10	0	0
Split Log Middle School (1,050 students)	% In % Out Trips		40	10						40		10
		0	0	132	33	0	0	0	0	112	0	28
Jordan Elementary School (300 additional students)	% In % Out Trips		40	10						40		10
		0	0	15	4	0	0	0	0	8	0	2
Specific Development Background Growth Trips		0	0	155	37	0	0	0	0	141	0	30
2027 Background Traffic Volumes		0	97	340	52	264	0	0	0	476	0	37
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips		25	5						25		5
		0	0	3	1	0	0	0	0	8	0	2
Rosebrooke East (74 single family homes)	% In % Out Trips		25	5						25		5
		0	0	4	1	0	0	0	0	11	0	2
2027 Site Traffic Volumes		0	0	7	2	0	0	0	0	19	0	4
2027 TOTAL TRAFFIC VOLUMES		0	97	347	54	264	0	0	0	495	0	41

TRAFFIC VOLUME WORKSHEET
SPLIT LOG ROAD AT RAGSDALE ROAD
P.M. PEAK HOUR



Description	Northbound Split Log Road			Southbound Ragsdale Road			Eastbound			Westbound Split Log Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS		236	374	8	142					249		11
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)		1.0	1.0	1.0	1.0					1.0		1.0
Growth Factor	1.00	1.06	1.06	1.06	1.06	1.00	1.00	1.00	1.00	1.06	1.00	1.06
Annual Background Growth Trips	0	15	23	0	9	0	0	0	0	15	0	1
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips		15							15		
		0	0	12	0	0	0	0	0	7	0	0
Taube Property (71 homes)	% In % Out Trips		25							25		
		0	0	12	0	0	0	0	0	7	0	0
Split Log Middle School (1,050 students)	% In % Out Trips		40	10						40		10
		0	0	35	9	0	0	0	0	36	0	9
Jordan Elementary School (300 additional students)	% In % Out Trips		40	10						40		10
		0	0	3	1	0	0	0	0	4	0	1
Specific Development Background Growth Trips		0	0	62	10	0	0	0	0	54	0	10
2027 Background Traffic Volumes		0	251	459	18	151	0	0	0	318	0	22
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips		25	5						25		5
		0	0	8	2	0	0	0	0	5	0	1
Rosebrooke East (74 single family homes)	% In % Out Trips		25	5						25		5
		0	0	12	2	0	0	0	0	7	0	1
2027 Site Traffic Volumes		0	0	20	4	0	0	0	0	12	0	2
2027 TOTAL TRAFFIC VOLUMES		0	251	479	22	151	0	0	0	330	0	24

TRAFFIC VOLUME WORKSHEET
SPLIT LOG ROAD AT PLEASANT HILL ROAD / JORDAN ELEMENTARY SCHOOL
A.M. PEAK HOUR



Description	Northbound Pleasant Hill Road			Southbound Jordan Elem. School			Eastbound Split Log Road			Westbound Split Log Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS	32	18	5	3	1	5	59	83	10	4	271	27
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Background Growth Trips	2	1	0	0	0	0	4	5	1	0	17	2
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips							15				
		0	0	0	0	0	0	4	0	0	15 11	0
Taube Property (71 homes)	% In % Out Trips							25				
		0	0	0	0	0	0	4	0	0	25 10	0
Split Log Middle School (1,050 students)	% In % Out Trips	10						55			2	
		0	33	0	28 78	10 28	55 154	181	2 6	0	0	7 92
Jordan Elementary School (300 additional students)	% In % Out Trips	10						55			2	
		0	4	0	28 5	10 2	55 10	20	2 0	0	0	1 10
Specific Development Background Growth Trips		0	37	0	83	30	164	201	14	0	0	29 102
2027 Background Traffic Volumes		34	56	5	86	31	169	264	102	11	4	317 131
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips	5						30				
		0	0	1	0	0	0	0	3	0	5 2	30 9 0
Rosebrooke East (74 single family homes)	% In % Out Trips	5						30				
		0	0	1	0	0	0	0	4	0	5 2	30 13 0
2027 Site Traffic Volumes		0	0	2	0	0	0	0	7	0	4	22 0
2027 TOTAL TRAFFIC VOLUMES		34	56	7	86	31	169	264	109	11	8	339 131

TRAFFIC VOLUME WORKSHEET
SPLIT LOG ROAD AT PLEASANT HILL ROAD / JORDAN ELEMENTARY SCHOOL
P.M. PEAK HOUR



Description	Northbound Pleasant Hill Road			Southbound Jordan Elem. School			Eastbound Split Log Road			Westbound Split Log Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS	25	1	5	6	2	18	6	311	36	8	172	4
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Background Growth Trips	2	0	0	0	0	1	0	19	2	0	11	0
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips							15				
		0	0	0	0	0	0	12	0	0	15 7	0
Taube Property (71 homes)	% In % Out Trips							25				
		0	0	0	0	0	0	12	0	0	25 7	0
Split Log Middle School (1,050 students)	% In % Out Trips	10						55			2	
		0	9	0	28	10	55	2		0	2	28
					25	9	50	48	2	0	0	24
Jordan Elementary School (300 additional students)	% In % Out Trips	10						55			2	
		0	1	0	28	10	55	2		0	0	28
					3	1	6	4	0	0	0	2
Specific Development Background Growth Trips		0	10	0	28	10	56	52	26	0	0	16
2027 Background Traffic Volumes		27	11	5	34	12	75	58	356	38	8	199
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips	5						30				
		0	0	2	0	0	0	0	10	0	5 1	30 6
Rosebrooke East (74 single family homes)	% In % Out Trips	5						30				
		0	0	2	0	0	0	0	14	0	5 1	30 8
2027 Site Traffic Volumes		0	0	4	0	0	0	0	24	0	2	14
2027 TOTAL TRAFFIC VOLUMES		27	11	9	34	12	75	58	380	38	10	213

TRAFFIC VOLUME WORKSHEET
SPLIT LOG ROAD AT SAM DONALD ROAD
A.M. PEAK HOUR



Description	Northbound Split Log Road			Southbound Split Log Road			Eastbound			Westbound Sam Donald Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS		65	25	15	150					146		33
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)		1.0	1.0	1.0	1.0					1.0		1.0
Growth Factor	1.00	1.06	1.06	1.06	1.06	1.00	1.00	1.00	1.00	1.06	1.00	1.06
Annual Background Growth Trips	0	4	2	1	9	0	0	0	0	9	0	2
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips	15			15							
		0	4	0	0	11	0	0	0	0	0	0
Taube Property (71 homes)	% In % Out Trips	25			25							
		0	4	0	0	10	0	0	0	0	0	0
Split Log Middle School (1,050 students)	% In % Out Trips		20	10	20					10		
		0	56	28	0	66	0	0	0	33	0	0
Jordan Elementary School (300 additional students)	% In % Out Trips		20	10	20					10		
		0	4	2	0	7	0	0	0	4	0	0
Specific Development Background Growth Trips		0	68	30	0	94	0	0	0	37	0	0
2027 Background Traffic Volumes		0	137	57	16	253	0	0	0	192	0	35
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips	35			10	35						10
		0	4	0	3	11	0	0	0	0	0	1
Rosebrooke East (74 single family homes)	% In % Out Trips	10	25		10					25		
		0	1	4	0	4	0	0	0	11	0	0
2027 Site Traffic Volumes		0	5	4	3	15	0	0	0	11	0	1
2027 TOTAL TRAFFIC VOLUMES		0	142	61	19	268	0	0	0	203	0	36

TRAFFIC VOLUME WORKSHEET
SPLIT LOG ROAD AT SAM DONALD ROAD
P.M. PEAK HOUR



Description	Northbound Split Log Road			Southbound Split Log Road			Eastbound			Westbound Sam Donald Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS		160	151	36	105					64		19
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)		1.0	1.0	1.0	1.0					1.0		1.0
Growth Factor	1.00	1.06	1.06	1.06	1.06	1.00	1.00	1.00	1.00	1.06	1.00	1.06
Annual Background Growth Trips	0	10	9	2	6	0	0	0	0	4	0	1
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips	15			15							
		0	12	0	0	7	0	0	0	0	0	0
Taube Property (71 homes)	% In % Out Trips	25			25							
		0	12	0	0	7	0	0	0	0	0	0
Split Log Middle School (1,050 students)	% In % Out Trips		20	10	20					10		
		0	18	9	0	17	0	0	0	9	0	0
Jordan Elementary School (300 additional students)	% In % Out Trips		20	10	20					10		
		0	2	1	0	1	0	0	0	1	0	0
Specific Development Background Growth Trips		0	44	10	0	32	0	0	0	10	0	0
2027 Background Traffic Volumes		0	214	170	38	143	0	0	0	78	0	20
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips		35		10	35						10
		0	12	0	2	7	0	0	0	0	0	3
Rosebrooke East (74 single family homes)	% In % Out Trips		10	25		10				25		
		0	5	12	0	3	0	0	0	7	0	0
2027 Site Traffic Volumes		0	17	12	2	10	0	0	0	7	0	3
2027 TOTAL TRAFFIC VOLUMES		0	231	182	40	153	0	0	0	85	0	23

TRAFFIC VOLUME WORKSHEET
SUNSET ROAD AT SPLIT LOG ROAD
A.M. PEAK HOUR



Description	Northbound Split Log Road			Southbound			Eastbound Sunset Road			Westbound Sunset Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS	29		77				144	16		149	413	
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)	1.0		1.0				1.0	1.0		1.0	1.0	
Growth Factor	1.06	1.00	1.06	1.00	1.00	1.00	1.00	1.06	1.06	1.06	1.06	1.00
Annual Background Growth Trips	2	0	5	0	0	0	0	9	1	9	25	0
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips								5	5	25	
	5 4	0	5 4	0	0	0	0	25 18	1	1	6	0
Taube Property (71 homes)	% In % Out Trips							10	30	5	10	
	30 12	0	5 2	0	0	0	0	1	4	1	4	0
Split Log Middle School (1,050 students)	% In % Out Trips								10	10		
	10 28	0	10 28	0	0	0	0	0	33	33	0	0
Jordan Elementary School (300 additional students)	% In % Out Trips								10	10		
	10 2	0	10 2	0	0	0	0	0	4	4	0	0
Specific Development Background Growth Trips	46	0	36	0	0	0	0	19	42	39	10	0
2027 Background Traffic Volumes	77	0	118	0	0	0	0	172	59	197	448	0
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips								10	25		
	10 3	0	25 8	0	0	0	0	0	1	3	0	0
Rosebrooke East (74 single family homes)	% In % Out Trips								30	25		
	30 13	0	25 11	0	0	0	0	0	4	4	0	0
2027 Site Traffic Volumes	16	0	19	0	0	0	0	0	5	7	0	0
2027 TOTAL TRAFFIC VOLUMES	93	0	137	0	0	0	0	172	64	204	448	0

TRAFFIC VOLUME WORKSHEET
SUNSET ROAD AT SPLIT LOG ROAD
P.M. PEAK HOUR



Description	Northbound Split Log Road			Southbound			Eastbound Sunset Road			Westbound Sunset Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS	14		163				399	23		115	203	
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)	1.0		1.0				1.0	1.0		1.0	1.0	
Growth Factor	1.06	1.00	1.06	1.00	1.00	1.00	1.00	1.06	1.06	1.06	1.06	1.00
Annual Background Growth Trips	1	0	10	0	0	0	0	25	1	7	12	0
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips	5 2	0 0 2	5 2	0 0 0	0 0 0	0 0 0	25 12 4	5 4	5 4	25 20 0	
Taube Property (71 homes)	% In % Out Trips	30 8	0 0 1	5 1	0 0 0	0 0 0	0 0 0	10 5 14	30 14	5 2	10 3 0	
Split Log Middle School (1,050 students)	% In % Out Trips	10 9	0 0 9	10 9	0 0 0	0 0 0	0 0 0	0 0 9	10 9	10 9	0 0 0	
Jordan Elementary School (300 additional students)	% In % Out Trips	10 1	0 0 1	10 1	0 0 0	0 0 0	0 0 0	0 0 1	10 1	10 1	0 0 0	
Specific Development Background Growth Trips		20	0	13	0	0	0	17	28	16	23	0
2027 Background Traffic Volumes		35	0	186	0	0	0	441	52	138	238	0
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips	10 2	0 0 5	25 5	0 0 0	0 0 0	0 0 0	0 0 3	10 3	25 8	0 0 0	
Rosebrooke East (74 single family homes)	% In % Out Trips	30 8	0 0 7	25 7	0 0 0	0 0 0	0 0 0	0 0 14	30 14	25 12	0 0 0	
2027 Site Traffic Volumes		10	0	12	0	0	0	0	17	20	0	0
2027 TOTAL TRAFFIC VOLUMES		45	0	198	0	0	0	441	69	158	238	0

TRAFFIC VOLUME WORKSHEET
SUNSET ROAD AT WALLER ROAD
A.M. PEAK HOUR



Description	Northbound			Southbound Waller Road			Eastbound Sunset Road			Westbound Sunset Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS				89		104	29	193		458		62
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)				1.0		1.0	1.0	1.0		1.0		1.0
Growth Factor	1.00	1.00	1.00	1.06	1.00	1.06	1.06	1.06	1.00	1.00	1.06	1.06
Annual Background Growth Trips	0	0	0	5	0	6	2	12	0	0	28	4
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips					10				20		
	0	0	0	0	0	2	10 7	20 14	0	0	5	0
Taube Property (71 homes)	% In % Out Trips					5		10				
	0	0	0	0	0	1	5 2	10 1	0	0	10 4	0
Split Log Middle School (1,050 students)	% In % Out Trips							10		10		
	0	0	0	0	0	0	0	28	0	0	33	0
Jordan Elementary School (300 additional students)	% In % Out Trips							10		10		
	0	0	0	0	0	0	0	2	0	0	4	0
Specific Development Background Growth Trips	0	0	0	0	0	3	9	45	0	0	46	0
2027 Background Traffic Volumes	0	0	0	94	0	113	40	250	0	0	532	66
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips					10				15		
	0	0	0	0	0	1	10 3	15 5	0	0	2	0
Rosebrooke East (74 single family homes)	% In % Out Trips					10				15		
	0	0	0	0	0	1	10 4	15 6	0	0	2	0
2027 Site Traffic Volumes	0	0	0	0	0	2	7	11	0	0	4	0
2027 TOTAL TRAFFIC VOLUMES	0	0	0	94	0	115	47	261	0	0	536	66

TRAFFIC VOLUME WORKSHEET
SUNSET ROAD AT WALLER ROAD
P.M. PEAK HOUR



Description	Northbound			Southbound Waller Road			Eastbound Sunset Road			Westbound Sunset Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS				105		79	83	480		239		64
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)				1.0		1.0	1.0	1.0		1.0		1.0
Growth Factor	1.00	1.00	1.00	1.06	1.00	1.06	1.06	1.06	1.00	1.00	1.06	1.06
Annual Background Growth Trips	0	0	0	6	0	5	5	30	0	0	15	4
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips					10				20		
	0	0	0	0	0	8	10	20		0	16	0
							5	9	0			
Taube Property (71 homes)	% In % Out Trips					5		10			10	
	0	0	0	0	0	2	5			0	3	0
							1	5	0			
Split Log Middle School (1,050 students)	% In % Out Trips							10			10	
	0	0	0	0	0	0	0	9	0	0	9	0
Jordan Elementary School (300 additional students)	% In % Out Trips							10			10	
	0	0	0	0	0	0	0	1	0	0	1	0
Specific Development Background Growth Trips	0	0	0	0	0	10	6	24	0	0	29	0
2027 Background Traffic Volumes	0	0	0	111	0	94	94	534	0	0	283	68
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips					10					15	
	0	0	0	0	0	3	10	15		0	5	0
							2	3	0			
Rosebrooke East (74 single family homes)	% In % Out Trips					10					15	
	0	0	0	0	0	5	10	15		0	7	0
							3	4	0			
2027 Site Traffic Volumes	0	0	0	0	0	8	5	7	0	0	12	0
2027 TOTAL TRAFFIC VOLUMES	0	0	0	111	0	102	99	541	0	0	295	68

TRAFFIC VOLUME WORKSHEET
SPLIT LOG ROAD AT ROSEBROOKE SOUTH ACCESS
A.M. PEAK HOUR



Description	Northbound Split Log Road			Southbound Split Log Road			Eastbound Rosebrooke South Access			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS	98			165								
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)	1.0			1.0								
Growth Factor	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Background Growth Trips	0	6	0	0	10	0	0	0	0	0	0	0
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In	15										
	% Out			15								
	Trips	0	4	0	0	11	0	0	0	0	0	0
Taube Property (71 homes)	% In	25										
	% Out			25								
	Trips	0	4	0	0	10	0	0	0	0	0	0
Split Log Middle School (1,050 students)	% In			20								
	% Out	20										
	Trips	0	56	0	0	66	0	0	0	0	0	0
Jordan Elementary School (300 additional students)	% In			20								
	% Out	20										
	Trips	0	4	0	0	7	0	0	0	0	0	0
Specific Development Background Growth Trips		0	68	0	0	94	0	0	0	0	0	0
2027 Background Traffic Volumes		0	172	0	0	269	0	0	0	0	0	0
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In	45		35								
	% Out						35			45		
	Trips	5	0	0	0	0	4	11	0	14	0	0
Rosebrooke East (74 single family homes)	% In	10										
	% Out			10								
	Trips	0	1	0	0	4	0	0	0	0	0	0
2027 Site Traffic Volumes		5	1	0	0	4	4	11	0	14	0	0
2027 TOTAL TRAFFIC VOLUMES		5	173	0	0	273	4	11	0	14	0	0

TRAFFIC VOLUME WORKSHEET
SPLIT LOG ROAD AT ROSEBROOKE SOUTH ACCESS
P.M. PEAK HOUR



Description	Northbound Split Log Road			Southbound Split Log Road			Eastbound Rosebrooke South Access			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS	179			141								
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)	1.0			1.0								
Growth Factor	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Background Growth Trips	0	11	0	0	9	0	0	0	0	0	0	0
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In	15										
	% Out			15								
	Trips	0	12	0	0	7	0	0	0	0	0	0
Taube Property (71 homes)	% In	25										
	% Out			25								
	Trips	0	12	0	0	7	0	0	0	0	0	0
Split Log Middle School (1,050 students)	% In			20								
	% Out	20										
	Trips	0	18	0	0	17	0	0	0	0	0	0
Jordan Elementary School (300 additional students)	% In			20								
	% Out	20										
	Trips	0	2	0	0	1	0	0	0	0	0	0
Specific Development Background Growth Trips	0	44	0	0	32	0	0	0	0	0	0	0
2027 Background Traffic Volumes	0	234	0	0	182	0	0	0	0	0	0	0
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In	45		35								
	% Out						35			45		
	Trips	15	0	0	0	12	7	0	9	0	0	0
Rosebrooke East (74 single family homes)	% In	10										
	% Out			10								
	Trips	0	5	0	0	3	0	0	0	0	0	0
2027 Site Traffic Volumes	15	5	0	0	3	12	7	0	9	0	0	0
2027 TOTAL TRAFFIC VOLUMES	15	239	0	0	185	12	7	0	9	0	0	0

TRAFFIC VOLUME WORKSHEET
SPLIT LOG ROAD AT ROSEBROOKE SOUTH & EAST ACCESS
A.M. PEAK HOUR



Description	Northbound Rosebrooke East Access			Southbound Rosebrooke South Access			Eastbound Split Log Road			Westbound Split Log Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS							98			165		
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)							1.0			1.0		
Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Annual Background Growth Trips	0	0	0	0	0	0	0	6	0	0	10	0
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips						15			15		
	0	0	0	0	0	0	0	4	0	0	11	0
Taube Property (71 homes)	% In % Out Trips						25			25		
	0	0	0	0	0	0	0	4	0	0	10	0
Split Log Middle School (1,050 students)	% In % Out Trips						20			20		
	0	0	0	0	0	0	0	56	0	0	66	0
Jordan Elementary School (300 additional students)	% In % Out Trips						20			20		
	0	0	0	0	0	0	0	4	0	0	7	0
Specific Development Background Growth Trips	0	0	0	0	0	0	0	68	0	0	94	0
2027 Background Traffic Volumes	0	0	0	0	0	0	0	172	0	0	269	0
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips						35			35		
	0	0	0	0	0	0	0	11	0	0	4	0
Rosebrooke East (74 single family homes)	% In % Out Trips						5		5	55		5
	5 2	0	55 24	5 2	0	5 2	1	0	1	8	0	1
2027 Site Traffic Volumes	2	0	24	2	0	2	1	11	1	8	4	1
2027 TOTAL TRAFFIC VOLUMES	2	0	24	2	0	2	1	183	1	8	273	1

TRAFFIC VOLUME WORKSHEET
SPLIT LOG ROAD AT ROSEBROOKE SOUTH & EAST ACCESS
P.M. PEAK HOUR



Description	Northbound Rosebrooke East Access			Southbound Rosebrooke South Access			Eastbound Split Log Road			Westbound Split Log Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2021 TRAFFIC COUNTS							179			141			
2027 BACKGROUND TRAFFIC VOLUMES													
Annual Background Growth													
Growth Rate (%/year)								1.0			1.0		
Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.06	1.00	1.00	1.06	1.00	
Annual Background Growth Trips	0	0	0	0	0	0	0	11	0	0	9	0	
Specific Development Background Growth													
Rosebrooke Main (126 single family homes)	% In % Out Trips						15			15			
		0	0	0	0	0	0	12	0	0	7	0	
Taube Property (71 homes)	% In % Out Trips						25			25			
		0	0	0	0	0	0	12	0	0	7	0	
Split Log Middle School (1,050 students)	% In % Out Trips						20			20			
		0	0	0	0	0	0	18	0	0	17	0	
Jordan Elementary School (300 additional students)	% In % Out Trips						20			20			
		0	0	0	0	0	0	2	0	0	1	0	
Specific Development Background Growth Trips		0	0	0	0	0	0	44	0	0	32	0	
2027 Background Traffic Volumes		0	0	0	0	0	0	234	0	0	182	0	
2027 SITE TRAFFIC VOLUMES													
Rosebrooke South (50 single family homes)	% In % Out Trips						35			35			
		0	0	0	0	0	0	7	0	0	12	0	
Rosebrooke East (74 single family homes)	% In % Out Trips	5 1		55 15	5 1	5 1	5 2		5 2	55 26		5 2	
		1	0	15	1	0	1	2	7	2	26	12	2
2027 Site Traffic Volumes		1	0	15	1	0	1	2	7	2	26	12	2
2027 TOTAL TRAFFIC VOLUMES		1	0	15	1	0	1	2	241	2	26	194	2

TRAFFIC VOLUME WORKSHEET
SAM DONALD ROAD AT ROSEBROOKE EAST ACCESS
A.M. PEAK HOUR



Description	Northbound			Southbound Rosebrooke East Access			Eastbound Sam Donald Road			Westbound Sam Donald Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS							40			179		
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)							1.0			1.0		
Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Annual Background Growth Trips	0	0	0	0	0	0	0	2	0	0	11	0
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips											
	0	0	0	0	0	0	0	0	0	0	0	0
Taube Property (71 homes)	% In % Out Trips											
	0	0	0	0	0	0	0	0	0	0	0	0
Split Log Middle School (1,050 students)	% In % Out Trips							10		10		
	0	0	0	0	0	0	0	28	0	0	33	0
Jordan Elementary School (300 additional students)	% In % Out Trips							10		10		
	0	0	0	0	0	0	0	2	0	0	4	0
Specific Development Background Growth Trips	0	0	0	0	0	0	0	30	0	0	37	0
2027 Background Traffic Volumes	0	0	0	0	0	0	0	72	0	0	227	0
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips							10		10		
	0	0	0	0	0	0	0	3	0	0	1	0
Rosebrooke East (74 single family homes)	% In % Out Trips						25					10
	0	0	0	10 4	0	25 11	4	0	0	0	0	1
2027 Site Traffic Volumes	0	0	0	4	0	11	4	3	0	0	1	1
2027 TOTAL TRAFFIC VOLUMES	0	0	0	4	0	11	4	75	0	0	228	1

TRAFFIC VOLUME WORKSHEET
SAM DONALD ROAD AT ROSEBROOKE EAST ACCESS
P.M. PEAK HOUR



Description	Northbound			Southbound Rosebrooke East Access			Eastbound Sam Donald Road			Westbound Sam Donald Road		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2021 TRAFFIC COUNTS							187			83		
2027 BACKGROUND TRAFFIC VOLUMES												
Annual Background Growth												
Growth Rate (%/year)							1.0			1.0		
Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Annual Background Growth Trips	0	0	0	0	0	0	0	12	0	0	5	0
Specific Development Background Growth												
Rosebrooke Main (126 single family homes)	% In % Out Trips											
	0	0	0	0	0	0	0	0	0	0	0	0
Taube Property (71 homes)	% In % Out Trips											
	0	0	0	0	0	0	0	0	0	0	0	0
Split Log Middle School (1,050 students)	% In % Out Trips							10		10		
	0	0	0	0	0	0	0	9	0	0	9	0
Jordan Elementary School (300 additional students)	% In % Out Trips							10		10		
	0	0	0	0	0	0	0	1	0	0	1	0
Specific Development Background Growth Trips	0	0	0	0	0	0	0	10	0	0	10	0
2027 Background Traffic Volumes	0	0	0	0	0	0	0	209	0	0	98	0
2027 SITE TRAFFIC VOLUMES												
Rosebrooke South (50 single family homes)	% In % Out Trips							10		10		
	0	0	0	0	0	0	0	2	0	0	3	0
Rosebrooke East (74 single family homes)	% In % Out Trips						25					10
	0	0	0	10 3	0	25 7	12	0	0	0	0	5
2027 Site Traffic Volumes	0	0	0	3	0	7	12	2	0	0	3	5
2027 TOTAL TRAFFIC VOLUMES	0	0	0	3	0	7	12	211	0	0	101	5

APPENDIX C

2021 EXISTING CONDITIONS CAPACITY ANALYSIS WORKSHEETS

HCM 6th Signalized Intersection Summary

1: Split Log Rd & Ragsdale Rd

Rosebrooke Addition
2021 Existing Traffic - AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	316	7	91	174	14	249
Future Volume (veh/h)	316	7	91	174	14	249
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	343	8	99	189	15	271
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	539	479	593	982	133	572
Arrive On Green	0.30	0.30	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	1585	1870	1585	39	1803
Grp Volume(v), veh/h	343	8	99	189	286	0
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1842	0
Q Serve(g_s), s	5.2	0.1	1.2	1.6	0.0	0.0
Cycle Q Clear(g_c), s	5.2	0.1	1.2	1.6	3.9	0.0
Prop In Lane	1.00	1.00		1.00	0.05	
Lane Grp Cap(c), veh/h	539	479	593	982	704	0
V/C Ratio(X)	0.64	0.02	0.17	0.19	0.41	0.00
Avail Cap(c_a), veh/h	2485	2211	2609	2691	2648	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.5	7.7	7.8	2.6	8.7	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.1	0.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.3	0.6	1.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.8	7.7	7.9	2.7	9.1	0.0
LnGrp LOS	B	A	A	A	A	A
Approach Vol, veh/h	351		288			286
Approach Delay, s/veh	10.7		4.5			9.1
Approach LOS	B		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	16.0		16.0		15.5	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	44.0		44.0		44.0	
Max Q Clear Time (g_c+I1), s	3.6		5.9		7.2	
Green Ext Time (p_c), s	1.2		1.9		1.1	
Intersection Summary						
HCM 6th Ctrl Delay			8.3			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary

2: Pleasant Hill Rd/Jordan Elem. School & Split Log Rd

Rosebrooke Addition
2021 Existing Traffic - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	83	10	4	271	27	32	18	5	3	1	5
Future Volume (veh/h)	59	83	10	4	271	27	32	18	5	3	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	90	11	4	295	29	35	20	5	3	1	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	509	889	109	600	557	472	255	57	13	282	65	263
Arrive On Green	0.07	0.54	0.54	0.30	0.30	0.30	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	1635	200	1294	1870	1585	858	578	131	953	656	1585
Grp Volume(v), veh/h	64	0	101	4	295	29	60	0	0	4	0	5
Grp Sat Flow(s),veh/h/ln	1781	0	1834	1294	1870	1585	1566	0	0	1608	0	1585
Q Serve(g_s), s	0.7	0.0	0.9	0.1	4.4	0.4	1.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.7	0.0	0.9	0.1	4.4	0.4	1.2	0.0	0.0	0.1	0.0	0.1
Prop In Lane	1.00		0.11	1.00		1.00	0.58		0.08	0.75		1.00
Lane Grp Cap(c), veh/h	509	0	997	600	557	472	325	0	0	347	0	263
V/C Ratio(X)	0.13	0.00	0.10	0.01	0.53	0.06	0.18	0.00	0.00	0.01	0.00	0.02
Avail Cap(c_a), veh/h	1133	0	3497	1910	2452	2078	1281	0	0	1260	0	1239
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.4	0.0	3.7	8.3	9.8	8.4	14.1	0.0	0.0	13.7	0.0	11.7
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.8	0.1	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	0.0	1.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.5	0.0	3.7	8.3	10.6	8.5	14.4	0.0	0.0	13.7	0.0	11.7
LnGrp LOS	A	A	A	A	B	A	B	A	A	B	A	B
Approach Vol, veh/h	165					328		60		9		
Approach Delay, s/veh	4.8					10.4		14.4		12.6		
Approach LOS	A					B		B		B		
Timer - Assigned Phs	2		4		5	6	8					
Phs Duration (G+Y+Rc), s	24.2		9.3		8.2	16.0	9.3					
Change Period (Y+Rc), s	6.0		6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	64.0		24.0		14.0	44.0	24.0					
Max Q Clear Time (g_c+I1), s	2.9		2.1		2.7	6.4	3.2					
Green Ext Time (p_c), s	0.6		0.0		0.1	1.8	0.2					
Intersection Summary												
HCM 6th Ctrl Delay	9.2											
HCM 6th LOS	A											

HCM 6th TWSC
3: Split Log Rd & Sam Donald Rd

Rosebrooke Addition
2021 Existing Traffic - AM Peak Hour

Intersection						
Int Delay, s/veh	5.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	146	33	65	25	15	150
Future Vol, veh/h	146	33	65	25	15	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	159	36	71	27	16	163
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	280	85	0	0	98	0
Stage 1	85	-	-	-	-	-
Stage 2	195	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	710	974	-	-	1495	-
Stage 1	938	-	-	-	-	-
Stage 2	838	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	701	974	-	-	1495	-
Mov Cap-2 Maneuver	701	-	-	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.6	0		0.7		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	739	1495	-	
HCM Lane V/C Ratio	-	-	0.263	0.011	-	
HCM Control Delay (s)	-	-	11.6	7.4	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	1.1	0	-	

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	144	16	149	413	29	77
Future Vol, veh/h	144	16	149	413	29	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	157	17	162	449	32	84
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	174	0	939	166
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	773	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1403	-	293	878
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	455	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1403	-	248	878
Mov Cap-2 Maneuver	-	-	-	-	248	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	385	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	2.1		13.9		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	518	-	-	1403	-	
HCM Lane V/C Ratio	0.222	-	-	0.115	-	
HCM Control Delay (s)	13.9	-	-	7.9	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.8	-	-	0.4	-	

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	193	458	62	89	104
Future Vol, veh/h	29	193	458	62	89	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	210	498	67	97	113
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	565	0	-	0	806	532
Stage 1	-	-	-	-	532	-
Stage 2	-	-	-	-	274	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1007	-	-	-	351	547
Stage 1	-	-	-	-	589	-
Stage 2	-	-	-	-	772	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1007	-	-	-	338	547
Mov Cap-2 Maneuver	-	-	-	-	338	-
Stage 1	-	-	-	-	568	-
Stage 2	-	-	-	-	772	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.1	0		21.4		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1007	-	-	-	426	
HCM Lane V/C Ratio	0.031	-	-	-	0.492	
HCM Control Delay (s)	8.7	0	-	-	21.4	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0.1	-	-	-	2.7	

HCM 6th Signalized Intersection Summary

1: Split Log Rd & Ragsdale Rd

Rosebrooke Addition
2021 Existing Traffic - PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	249	11	236	374	8	142
Future Volume (veh/h)	249	11	236	374	8	142
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	271	12	257	407	9	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	523	465	601	974	133	574
Arrive On Green	0.29	0.29	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	1585	1870	1585	34	1787
Grp Volume(v), veh/h	271	12	257	407	163	0
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1821	0
Q Serve(g_s), s	3.9	0.2	3.4	4.1	0.0	0.0
Cycle Q Clear(g_c), s	3.9	0.2	3.4	4.1	2.0	0.0
Prop In Lane	1.00	1.00		1.00	0.06	
Lane Grp Cap(c), veh/h	523	465	601	974	707	0
V/C Ratio(X)	0.52	0.03	0.43	0.42	0.23	0.00
Avail Cap(c_a), veh/h	2517	2240	2643	2705	2601	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.2	7.8	8.3	3.1	7.9	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.5	0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.8	1.5	0.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.0	7.9	8.8	3.4	8.0	0.0
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	283		664			163
Approach Delay, s/veh	9.9		5.5			8.0
Approach LOS	A		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	16.0		16.0		15.1	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	44.0		44.0		44.0	
Max Q Clear Time (g_c+I1), s	6.1		4.0		5.9	
Green Ext Time (p_c), s	3.0		1.0		0.8	
Intersection Summary						
HCM 6th Ctrl Delay			7.0			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary

2: Pleasant Hill Rd/Jordan Elem. School & Split Log Rd

Rosebrooke Addition
2021 Existing Traffic - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	311	36	8	172	4	25	1	5	6	2	18
Future Volume (veh/h)	6	311	36	8	172	4	25	1	5	6	2	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	338	39	9	187	4	27	1	5	7	2	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	540	860	99	553	599	508	314	7	20	296	56	163
Arrive On Green	0.01	0.52	0.52	0.32	0.32	0.32	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1781	1646	190	1006	1870	1585	1113	74	212	976	605	1585
Grp Volume(v), veh/h	7	0	377	9	187	4	33	0	0	9	0	20
Grp Sat Flow(s),veh/h/ln	1781	0	1836	1006	1870	1585	1399	0	0	1581	0	1585
Q Serve(g_s), s	0.1	0.0	3.9	0.2	2.4	0.1	0.6	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	0.1	0.0	3.9	0.2	2.4	0.1	0.7	0.0	0.0	0.1	0.0	0.4
Prop In Lane	1.00		0.10	1.00		1.00	0.82		0.15	0.78		1.00
Lane Grp Cap(c), veh/h	540	0	959	553	599	508	340	0	0	353	0	163
V/C Ratio(X)	0.01	0.00	0.39	0.02	0.31	0.01	0.10	0.00	0.00	0.03	0.00	0.12
Avail Cap(c_a), veh/h	1322	0	3766	1649	2637	2235	1305	0	0	1361	0	1234
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.1	0.0	4.5	7.3	8.0	7.2	13.2	0.0	0.0	12.9	0.0	12.7
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.1	0.0	4.7	7.3	8.3	7.2	13.3	0.0	0.0	12.9	0.0	13.1
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	B
Approach Vol, veh/h	384					200		33		29		
Approach Delay, s/veh	4.8					8.2		13.3		13.0		
Approach LOS	A					A		B		B		
Timer - Assigned Phs	2		4		5	6	8					
Phs Duration (G+Y+Rc), s	22.3		8.9		6.3	16.0	8.9					
Change Period (Y+Rc), s	6.0		6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	64.0		24.0		14.0	44.0	24.0					
Max Q Clear Time (g_c+I1), s	5.9		2.4		2.1	4.4	2.7					
Green Ext Time (p_c), s	2.4		0.1		0.0	1.1	0.1					
Intersection Summary												
HCM 6th Ctrl Delay	6.6											
HCM 6th LOS	A											

Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	64	19	160	151	36	105
Future Vol, veh/h	64	19	160	151	36	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	21	174	164	39	114
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	448	256	0	0	338	0
Stage 1	256	-	-	-	-	-
Stage 2	192	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	568	783	-	-	1221	-
Stage 1	787	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	549	783	-	-	1221	-
Mov Cap-2 Maneuver	549	-	-	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12.2	0	2.1			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	589	1221	-	
HCM Lane V/C Ratio	-	-	0.153	0.032	-	
HCM Control Delay (s)	-	-	12.2	8	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-	

HCM 6th TWSC
4: Split Log Rd & Sunset Rd

Rosebrooke Addition
2021 Existing Traffic - PM Peak Hour

Intersection						
Int Delay, s/veh	4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	399	23	115	203	14	163
Future Vol, veh/h	399	23	115	203	14	163
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	434	25	125	221	15	177
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	459	0	918	447
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	471	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1102	-	302	612
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1102	-	263	612
Mov Cap-2 Maneuver	-	-	-	-	263	-
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	547	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.1		14.9	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	554	-	-	1102	-	
HCM Lane V/C Ratio	0.347	-	-	0.113	-	
HCM Control Delay (s)	14.9	-	-	8.7	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	1.5	-	-	0.4	-	

Intersection						
Int Delay, s/veh	5.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	480	239	64	105	79
Future Vol, veh/h	83	480	239	64	105	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	90	522	260	70	114	86
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	330	0	-	0	997	295
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	702	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1229	-	-	-	271	744
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	491	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1229	-	-	-	243	744
Mov Cap-2 Maneuver	-	-	-	-	243	-
Stage 1	-	-	-	-	677	-
Stage 2	-	-	-	-	491	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.2	0		29.3		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1229	-	-	-	342	
HCM Lane V/C Ratio	0.073	-	-	-	0.585	
HCM Control Delay (s)	8.2	0	-	-	29.3	
HCM Lane LOS	A	A	-	-	D	
HCM 95th %tile Q(veh)	0.2	-	-	-	3.5	

APPENDIX D

2027 BACKGROUND CONDITIONS CAPACITY ANALYSIS WORKSHEETS

HCM 6th Signalized Intersection Summary

1: Split Log Rd & Ragsdale Rd

Rosebrooke Addition
2027 Background Traffic - AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	476	37	97	340	52	264
Future Volume (veh/h)	476	37	97	340	52	264
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	517	40	105	370	57	287
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	651	579	554	1049	169	452
Arrive On Green	0.37	0.37	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	1585	1870	1585	169	1526
Grp Volume(v), veh/h	517	40	105	370	344	0
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1695	0
Q Serve(g_s), s	9.2	0.6	1.5	3.7	2.3	0.0
Cycle Q Clear(g_c), s	9.2	0.6	1.5	3.7	6.0	0.0
Prop In Lane	1.00	1.00		1.00	0.17	
Lane Grp Cap(c), veh/h	651	579	554	1049	621	0
V/C Ratio(X)	0.79	0.07	0.19	0.35	0.55	0.00
Avail Cap(c_a), veh/h	2209	1966	2320	2545	2128	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.1	7.3	9.3	2.6	10.8	0.0
Incr Delay (d2), s/veh	2.3	0.0	0.2	0.2	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.1	0.4	1.8	1.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.3	7.4	9.5	2.8	11.6	0.0
LnGrp LOS	B	A	A	A	B	A
Approach Vol, veh/h	557		475			344
Approach Delay, s/veh	12.0		4.3			11.6
Approach LOS	B		A			B
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	16.5		16.5		19.0	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	44.0		44.0		44.0	
Max Q Clear Time (g_c+I1), s	5.7		8.0		11.2	
Green Ext Time (p_c), s	1.9		2.5		1.8	
Intersection Summary						
HCM 6th Ctrl Delay			9.2			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary

2: Pleasant Hill Rd/Jordan Elem. School & Split Log Rd

Rosebrooke Addition
2027 Background Traffic - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	102	11	4	317	131	34	56	5	86	31	169
Future Volume (veh/h)	264	102	11	4	317	131	34	56	5	86	31	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	287	111	12	4	345	142	37	61	5	93	34	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	535	931	101	507	504	427	168	182	12	311	92	504
Arrive On Green	0.15	0.56	0.56	0.27	0.27	0.27	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	1659	179	1268	1870	1585	338	1112	74	1027	565	1585
Grp Volume(v), veh/h	287	0	123	4	345	142	103	0	0	127	0	184
Grp Sat Flow(s),veh/h/ln	1781	0	1838	1268	1870	1585	1524	0	0	1592	0	1585
Q Serve(g_s), s	4.4	0.0	1.4	0.1	7.2	3.1	0.0	0.0	0.0	0.0	0.0	3.9
Cycle Q Clear(g_c), s	4.4	0.0	1.4	0.1	7.2	3.1	2.8	0.0	0.0	2.7	0.0	3.9
Prop In Lane	1.00		0.10	1.00		1.00	0.36		0.05	0.73		1.00
Lane Grp Cap(c), veh/h	535	0	1031	507	504	427	362	0	0	404	0	504
V/C Ratio(X)	0.54	0.00	0.12	0.01	0.69	0.33	0.28	0.00	0.00	0.31	0.00	0.37
Avail Cap(c_a), veh/h	831	0	2698	1445	1887	1599	951	0	0	963	0	1117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	0.0	4.5	11.7	14.3	12.8	16.2	0.0	0.0	16.4	0.0	11.5
Incr Delay (d2), s/veh	0.8	0.0	0.1	0.0	1.7	0.5	0.4	0.0	0.0	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.3	0.0	2.6	0.9	0.8	0.0	0.0	1.1	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.6	0.0	4.6	11.7	15.9	13.2	16.6	0.0	0.0	16.8	0.0	11.9
LnGrp LOS	A	A	A	B	B	B	B	A	A	B	A	B
Approach Vol, veh/h	410					491		103		311		
Approach Delay, s/veh	8.1					15.1		16.6		13.9		
Approach LOS	A					B		B		B		
Timer - Assigned Phs	2		4		5	6	8					
Phs Duration (G+Y+Rc), s	30.5		13.1		12.7	17.7	13.1					
Change Period (Y+Rc), s	6.0		6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	64.0		24.0		14.0	44.0	24.0					
Max Q Clear Time (g_c+I1), s	3.4		5.9		6.4	9.2	4.8					
Green Ext Time (p_c), s	0.7		1.3		0.5	2.5	0.4					
Intersection Summary												
HCM 6th Ctrl Delay	12.8											
HCM 6th LOS	B											

HCM 6th TWSC
3: Split Log Rd & Sam Donald Rd

Rosebrooke Addition
2027 Background Traffic - AM Peak Hour

Intersection						
Int Delay, s/veh	5.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	192	35	137	57	16	253
Future Vol, veh/h	192	35	137	57	16	253
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	209	38	149	62	17	275
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	489	180	0	0	211	0
Stage 1	180	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	538	863	-	-	1360	-
Stage 1	851	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	530	863	-	-	1360	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	16.3	0		0.5		
HCM LOS	C					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	-	564	1360	-
HCM Lane V/C Ratio		-	-	0.437	0.013	-
HCM Control Delay (s)		-	-	16.3	7.7	0
HCM Lane LOS		-	-	C	A	A
HCM 95th %tile Q(veh)		-	-	2.2	0	-

HCM 6th TWSC
4: Split Log Rd & Sunset Rd

Rosebrooke Addition
2027 Background Traffic - AM Peak Hour

Intersection						
Int Delay, s/veh	7.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	172	59	197	448	77	118
Future Vol, veh/h	172	59	197	448	77	118
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	187	64	214	487	84	128
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	251	0	1134	219
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	915	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1314	-	224	821
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	390	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1314	-	174	821
Mov Cap-2 Maneuver	-	-	-	-	174	-
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	303	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.5		32.9	
HCM LOS	D					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	333	-	-	1314	-	
HCM Lane V/C Ratio	0.637	-	-	0.163	-	
HCM Control Delay (s)	32.9	-	-	8.3	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	4.1	-	-	0.6	-	

Intersection						
Int Delay, s/veh	6.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	250	532	66	94	113
Future Vol, veh/h	40	250	532	66	94	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	272	578	72	102	123
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	650	0	-	0	972	614
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	358	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	936	-	-	-	280	492
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	936	-	-	-	265	492
Mov Cap-2 Maneuver	-	-	-	-	265	-
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	707	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.2	0		31.3		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	936	-	-	-	354	
HCM Lane V/C Ratio	0.046	-	-	-	0.636	
HCM Control Delay (s)	9	0	-	-	31.3	
HCM Lane LOS	A	A	-	-	D	
HCM 95th %tile Q(veh)	0.1	-	-	-	4.2	

HCM 6th Signalized Intersection Summary

1: Split Log Rd & Ragsdale Rd

Rosebrooke Addition
2027 Background Traffic - PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	318	22	251	459	18	151
Future Volume (veh/h)	318	22	251	459	18	151
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	346	24	273	499	20	164
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	525	467	634	1004	147	566
Arrive On Green	0.29	0.29	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1781	1585	1870	1585	75	1670
Grp Volume(v), veh/h	346	24	273	499	184	0
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1745	0
Q Serve(g_s), s	5.6	0.4	3.7	5.5	0.0	0.0
Cycle Q Clear(g_c), s	5.6	0.4	3.7	5.5	2.4	0.0
Prop In Lane	1.00	1.00		1.00	0.11	
Lane Grp Cap(c), veh/h	525	467	634	1004	713	0
V/C Ratio(X)	0.66	0.05	0.43	0.50	0.26	0.00
Avail Cap(c_a), veh/h	2393	2129	2513	2597	2302	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.1	8.3	8.4	3.2	7.9	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.5	0.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.1	0.9	2.0	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.5	8.3	8.8	3.6	8.1	0.0
LnGrp LOS	B	A	A	A	A	A
Approach Vol, veh/h	370		772			184
Approach Delay, s/veh	11.3		5.4			8.1
Approach LOS	B		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	17.1		17.1		15.7	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	44.0		44.0		44.0	
Max Q Clear Time (g_c+I1), s	7.5		4.4		7.6	
Green Ext Time (p_c), s	3.6		1.2		1.1	
Intersection Summary						
HCM 6th Ctrl Delay			7.5			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary

2: Pleasant Hill Rd/Jordan Elem. School & Split Log Rd

Rosebrooke Addition
2027 Background Traffic - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	356	38	8	199	30	27	11	5	34	12	75
Future Volume (veh/h)	58	356	38	8	199	30	27	11	5	34	12	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	387	41	9	216	33	29	12	5	37	13	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	520	843	89	464	517	438	281	99	27	331	91	358
Arrive On Green	0.06	0.51	0.51	0.28	0.28	0.28	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	1663	176	960	1870	1585	737	616	165	979	565	1585
Grp Volume(v), veh/h	63	0	428	9	216	33	46	0	0	50	0	82
Grp Sat Flow(s),veh/h/ln	1781	0	1839	960	1870	1585	1518	0	0	1544	0	1585
Q Serve(g_s), s	0.8	0.0	5.4	0.2	3.4	0.6	0.0	0.0	0.0	0.1	0.0	1.5
Cycle Q Clear(g_c), s	0.8	0.0	5.4	0.2	3.4	0.6	0.8	0.0	0.0	0.9	0.0	1.5
Prop In Lane	1.00		0.10	1.00		1.00	0.63		0.11	0.74		1.00
Lane Grp Cap(c), veh/h	520	0	932	464	517	438	407	0	0	422	0	358
V/C Ratio(X)	0.12	0.00	0.46	0.02	0.42	0.08	0.11	0.00	0.00	0.12	0.00	0.23
Avail Cap(c_a), veh/h	1094	0	3253	1366	2275	1928	1132	0	0	1173	0	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.3	0.0	5.7	9.6	10.7	9.7	13.1	0.0	0.0	13.1	0.0	11.4
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.0	0.5	0.1	0.1	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.0	0.0	1.0	0.1	0.3	0.0	0.0	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	0.0	6.1	9.6	11.2	9.7	13.2	0.0	0.0	13.2	0.0	11.7
LnGrp LOS	A	A	A	A	B	A	B	A	A	B	A	B
Approach Vol, veh/h	491				258				46			
Approach Delay, s/veh	6.2				11.0				13.2			
Approach LOS	A				B				B			
Timer - Assigned Phs	2		4		5	6	8					
Phs Duration (G+Y+Rc), s	24.3		11.8		8.3	16.0	11.8					
Change Period (Y+Rc), s	6.0		6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	64.0		24.0		14.0	44.0	24.0					
Max Q Clear Time (g_c+I1), s	7.4		3.5		2.8	5.4	2.8					
Green Ext Time (p_c), s	2.8		0.5		0.1	1.4	0.1					
Intersection Summary												
HCM 6th Ctrl Delay	8.8											
HCM 6th LOS	A											

HCM 6th TWSC
3: Split Log Rd & Sam Donald Rd

Rosebrooke Addition
2027 Background Traffic - PM Peak Hour

Intersection						
Int Delay, s/veh	2.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	78	20	214	170	38	143
Future Vol, veh/h	78	20	214	170	38	143
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	22	233	185	41	155
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	563	326	0	0	418	0
Stage 1	326	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	487	715	-	-	1141	-
Stage 1	731	-	-	-	-	-
Stage 2	802	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	468	715	-	-	1141	-
Mov Cap-2 Maneuver	468	-	-	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.1	0		1.7		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 503		1141	-	
HCM Lane V/C Ratio	-	- 0.212		0.036	-	
HCM Control Delay (s)	-	- 14.1		8.3	0	
HCM Lane LOS	-	- B		A	A	
HCM 95th %tile Q(veh)	-	- 0.8		0.1	-	

HCM 6th TWSC
4: Split Log Rd & Sunset Rd

Rosebrooke Addition
2027 Background Traffic - PM Peak Hour

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	441	52	138	238	35	186
Future Vol, veh/h	441	52	138	238	35	186
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	479	57	150	259	38	202
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	536	0	1067	508
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	559	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1032	-	246	565
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	572	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1032	-	204	565
Mov Cap-2 Maneuver	-	-	-	-	204	-
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	475	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.3		22.5	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	441	-	-	1032	-	
HCM Lane V/C Ratio	0.545	-	-	0.145	-	
HCM Control Delay (s)	22.5	-	-	9.1	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	3.2	-	-	0.5	-	

Intersection						
Int Delay, s/veh	8.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	94	534	283	68	111	94
Future Vol, veh/h	94	534	283	68	111	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	580	308	74	121	102
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	382	0	-	0	1129	345
Stage 1	-	-	-	-	345	-
Stage 2	-	-	-	-	784	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1176	-	-	-	226	698
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	450	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1176	-	-	-	197	698
Mov Cap-2 Maneuver	-	-	-	-	197	-
Stage 1	-	-	-	-	625	-
Stage 2	-	-	-	-	450	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.3	0		47.3		
HCM LOS				E		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1176	-	-	-	294	
HCM Lane V/C Ratio	0.087	-	-	-	0.758	
HCM Control Delay (s)	8.4	0	-	-	47.3	
HCM Lane LOS	A	A	-	-	E	
HCM 95th %tile Q(veh)	0.3	-	-	-	5.7	

APPENDIX E

2027 TOTAL CONDITIONS CAPACITY ANALYSIS WORKSHEETS

HCM 6th Signalized Intersection Summary

1: Split Log Rd & Ragsdale Rd

Rosebrooke Addition
2027 Total Traffic - AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	495	41	97	347	54	264
Future Volume (veh/h)	495	41	97	347	54	264
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	538	45	105	377	59	287
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	670	596	553	1065	167	447
Arrive On Green	0.38	0.38	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	1585	1870	1585	176	1511
Grp Volume(v), veh/h	538	45	105	377	346	0
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1686	0
Q Serve(g_s), s	9.9	0.7	1.5	3.7	2.5	0.0
Cycle Q Clear(g_c), s	9.9	0.7	1.5	3.7	6.3	0.0
Prop In Lane	1.00	1.00		1.00	0.17	
Lane Grp Cap(c), veh/h	670	596	553	1065	614	0
V/C Ratio(X)	0.80	0.08	0.19	0.35	0.56	0.00
Avail Cap(c_a), veh/h	2143	1907	2250	2503	2054	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.2	7.3	9.6	2.6	11.2	0.0
Incr Delay (d2), s/veh	2.3	0.1	0.2	0.2	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.1	0.5	2.0	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.5	7.4	9.8	2.8	12.0	0.0
LnGrp LOS	B	A	A	A	B	A
Approach Vol, veh/h	583		482			346
Approach Delay, s/veh	12.1		4.3			12.0
Approach LOS	B		A			B
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	16.8		16.8		19.8	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	44.0		44.0		44.0	
Max Q Clear Time (g_c+I1), s	5.7		8.3		11.9	
Green Ext Time (p_c), s	1.9		2.5		1.9	
Intersection Summary						
HCM 6th Ctrl Delay			9.4			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary

2: Pleasant Hill Rd/Jordan Elem. School & Split Log Rd

Rosebrooke Addition
2027 Total Traffic - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	109	11	8	339	131	34	56	7	86	31	169
Future Volume (veh/h)	264	109	11	8	339	131	34	56	7	86	31	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	287	118	12	9	368	142	37	61	8	93	34	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	526	949	96	516	527	446	162	175	19	307	92	498
Arrive On Green	0.15	0.57	0.57	0.28	0.28	0.28	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	1670	170	1260	1870	1585	327	1076	115	1028	563	1585
Grp Volume(v), veh/h	287	0	130	9	368	142	106	0	0	127	0	184
Grp Sat Flow(s),veh/h/ln	1781	0	1840	1260	1870	1585	1518	0	0	1591	0	1585
Q Serve(g_s), s	4.5	0.0	1.5	0.2	7.8	3.2	0.0	0.0	0.0	0.0	0.0	4.0
Cycle Q Clear(g_c), s	4.5	0.0	1.5	0.2	7.8	3.2	2.8	0.0	0.0	2.8	0.0	4.0
Prop In Lane	1.00		0.09	1.00		1.00	0.35		0.08	0.73		1.00
Lane Grp Cap(c), veh/h	526	0	1045	516	527	446	356	0	0	399	0	498
V/C Ratio(X)	0.55	0.00	0.12	0.02	0.70	0.32	0.30	0.00	0.00	0.32	0.00	0.37
Avail Cap(c_a), veh/h	815	0	2642	1406	1847	1565	929	0	0	941	0	1094
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.8	0.0	4.5	11.6	14.3	12.6	16.6	0.0	0.0	16.8	0.0	11.8
Incr Delay (d2), s/veh	0.9	0.0	0.1	0.0	1.7	0.4	0.5	0.0	0.0	0.5	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.3	0.1	2.8	0.9	0.8	0.0	0.0	1.1	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.7	0.0	4.5	11.6	16.0	13.0	17.0	0.0	0.0	17.2	0.0	12.3
LnGrp LOS	A	A	A	B	B	B	B	A	A	B	A	B
Approach Vol, veh/h	417		519			106			311			
Approach Delay, s/veh	8.1		15.1			17.0			14.3			
Approach LOS	A		B			B			B			
Timer - Assigned Phs	2		4		5	6	8					
Phs Duration (G+Y+Rc), s	31.3		13.2		12.8	18.6	13.2					
Change Period (Y+Rc), s	6.0		6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	64.0		24.0		14.0	44.0	24.0					
Max Q Clear Time (g_c+I1), s	3.5		6.0		6.5	9.8	4.8					
Green Ext Time (p_c), s	0.7		1.3		0.5	2.7	0.4					
Intersection Summary												
HCM 6th Ctrl Delay	12.9											
HCM 6th LOS	B											

HCM 6th TWSC
3: Split Log Rd & Sam Donald Rd

Rosebrooke Addition
2027 Total Traffic - AM Peak Hour

Intersection						
Int Delay, s/veh	6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	203	36	142	61	19	268
Future Vol, veh/h	203	36	142	61	19	268
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	221	39	154	66	21	291
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	520	187	0	0	220	0
Stage 1	187	-	-	-	-	-
Stage 2	333	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	516	855	-	-	1349	-
Stage 1	845	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	506	855	-	-	1349	-
Mov Cap-2 Maneuver	506	-	-	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	17.7	0		0.5		
HCM LOS	C					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	-	539	1349	-
HCM Lane V/C Ratio		-	-	0.482	0.015	-
HCM Control Delay (s)		-	-	17.7	7.7	0
HCM Lane LOS		-	-	C	A	A
HCM 95th %tile Q(veh)		-	-	2.6	0	-

HCM 6th TWSC
4: Split Log Rd & Sunset Rd

Rosebrooke Addition
2027 Total Traffic - AM Peak Hour

Intersection						
Int Delay, s/veh	11.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	172	64	204	448	93	137
Future Vol, veh/h	172	64	204	448	93	137
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	187	70	222	487	101	149
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	257	0	1153	222
Stage 1	-	-	-	-	222	-
Stage 2	-	-	-	-	931	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1308	-	218	818
Stage 1	-	-	-	-	815	-
Stage 2	-	-	-	-	384	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1308	-	167	818
Mov Cap-2 Maneuver	-	-	-	-	167	-
Stage 1	-	-	-	-	815	-
Stage 2	-	-	-	-	295	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	2.6	47.7			
HCM LOS	E					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	318	-	-	1308	-	
HCM Lane V/C Ratio	0.786	-	-	0.17	-	
HCM Control Delay (s)	47.7	-	-	8.3	0	
HCM Lane LOS	E	-	-	A	A	
HCM 95th %tile Q(veh)	6.3	-	-	0.6	-	

Intersection						
Int Delay, s/veh	6.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	47	261	536	66	94	115
Future Vol, veh/h	47	261	536	66	94	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	284	583	72	102	125
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	655	0	-	0	1005	619
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	386	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	932	-	-	-	268	489
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	687	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	932	-	-	-	251	489
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	687	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.4	0		33.9		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	932	-	-	-	343	
HCM Lane V/C Ratio	0.055	-	-	-	0.662	
HCM Control Delay (s)	9.1	0	-	-	33.9	
HCM Lane LOS	A	A	-	-	D	
HCM 95th %tile Q(veh)	0.2	-	-	-	4.5	

HCM 6th TWSC
6: Split Log Rd & Project Access #1

Rosebrooke Addition
2027 Total Traffic - AM Peak Hour

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	14	5	173	273	4
Future Vol, veh/h	11	14	5	173	273	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	15	5	188	297	4
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	497	299	301	0	-	0
Stage 1	299	-	-	-	-	-
Stage 2	198	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	532	741	1260	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	530	741	1260	-	-	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11	0.2		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1260	-	631	-	-	
HCM Lane V/C Ratio	0.004	-	0.043	-	-	
HCM Control Delay (s)	7.9	0	11	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

HCM 6th TWSC
7: Project Access #3/Project Access #2 & Split Log Rd

Rosebrooke Addition
2027 Total Traffic - AM Peak Hour

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Traffic Vol, veh/h	1	183	1	8	273	1	2	0	24	2	0	2
Future Vol, veh/h	1	183	1	8	273	1	2	0	24	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	75	-	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	199	1	9	297	1	2	0	26	2	0	2
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	298	0	0	200	0	0	519	518	200	531	518	298
Stage 1	-	-	-	-	-	-	202	202	-	316	316	-
Stage 2	-	-	-	-	-	-	317	316	-	215	202	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1263	-	-	1372	-	-	467	462	841	459	462	741
Stage 1	-	-	-	-	-	-	800	734	-	695	655	-
Stage 2	-	-	-	-	-	-	694	655	-	787	734	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1263	-	-	1372	-	-	462	458	841	442	458	741
Mov Cap-2 Maneuver	-	-	-	-	-	-	462	458	-	442	458	-
Stage 1	-	-	-	-	-	-	799	733	-	694	650	-
Stage 2	-	-	-	-	-	-	686	650	-	762	733	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			9.7			11.5		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	462	841	1263	-	-	1372	-	-	442	741		
HCM Lane V/C Ratio	0.005	0.031	0.001	-	-	0.006	-	-	0.005	0.003		
HCM Control Delay (s)	12.8	9.4	7.9	0	-	7.6	0	-	13.2	9.9		
HCM Lane LOS	B	A	A	A	-	A	A	-	B	A		
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0	-	-	0	0		

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	75	228	1	4	11
Future Vol, veh/h	4	75	228	1	4	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	75
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	82	248	1	4	12
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	249	0	-	0	339	249
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	90	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1317	-	-	-	657	790
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	934	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1317	-	-	-	655	790
Mov Cap-2 Maneuver	-	-	-	-	655	-
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	934	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.4	0		9.8		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1317	-	-	-	655	790
HCM Lane V/C Ratio	0.003	-	-	-	0.007	0.015
HCM Control Delay (s)	7.7	0	-	-	10.5	9.6
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0

HCM 6th Signalized Intersection Summary

1: Split Log Rd & Ragsdale Rd

Rosebrooke Addition
2027 Total Traffic - PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	330	24	251	479	22	151
Future Volume (veh/h)	330	24	251	479	22	151
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	359	26	273	521	24	164
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	520	463	650	1014	153	565
Arrive On Green	0.29	0.29	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1781	1585	1870	1585	89	1626
Grp Volume(v), veh/h	359	26	273	521	188	0
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1715	0
Q Serve(g_s), s	6.0	0.4	3.7	5.9	0.0	0.0
Cycle Q Clear(g_c), s	6.0	0.4	3.7	5.9	2.4	0.0
Prop In Lane	1.00	1.00		1.00	0.13	
Lane Grp Cap(c), veh/h	520	463	650	1014	718	0
V/C Ratio(X)	0.69	0.06	0.42	0.51	0.26	0.00
Avail Cap(c_a), veh/h	2354	2095	2472	2558	2210	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.5	8.5	8.3	3.2	7.9	0.0
Incr Delay (d2), s/veh	1.6	0.1	0.4	0.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.1	0.9	2.2	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.1	8.5	8.7	3.6	8.1	0.0
LnGrp LOS	B	A	A	A	A	A
Approach Vol, veh/h	385		794			188
Approach Delay, s/veh	11.9		5.4			8.1
Approach LOS	B		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	17.6		17.6		15.7	
Change Period (Y+Rc), s	6.0		6.0		6.0	
Max Green Setting (Gmax), s	44.0		44.0		44.0	
Max Q Clear Time (g_c+l1), s	7.9		4.4		8.0	
Green Ext Time (p_c), s	3.7		1.3		1.2	
Intersection Summary						
HCM 6th Ctrl Delay			7.6			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary

2: Pleasant Hill Rd/Jordan Elem. School & Split Log Rd

Rosebrooke Addition
2027 Total Traffic - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	380	38	10	213	30	27	11	9	34	12	75
Future Volume (veh/h)	58	380	38	10	213	30	27	11	9	34	12	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	413	41	11	232	33	29	12	10	37	13	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	507	848	84	457	516	437	259	98	49	332	92	360
Arrive On Green	0.06	0.51	0.51	0.28	0.28	0.28	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	1674	166	937	1870	1585	633	604	302	981	563	1585
Grp Volume(v), veh/h	63	0	454	11	232	33	51	0	0	50	0	82
Grp Sat Flow(s),veh/h/ln	1781	0	1840	937	1870	1585	1539	0	0	1544	0	1585
Q Serve(g_s), s	0.8	0.0	5.9	0.3	3.7	0.6	0.0	0.0	0.0	0.0	0.0	1.5
Cycle Q Clear(g_c), s	0.8	0.0	5.9	0.3	3.7	0.6	0.9	0.0	0.0	0.8	0.0	1.5
Prop In Lane	1.00		0.09	1.00		1.00	0.57		0.20	0.74		1.00
Lane Grp Cap(c), veh/h	507	0	932	457	516	437	406	0	0	424	0	360
V/C Ratio(X)	0.12	0.00	0.49	0.02	0.45	0.08	0.13	0.00	0.00	0.12	0.00	0.23
Avail Cap(c_a), veh/h	1080	0	3250	1336	2271	1925	1134	0	0	1168	0	1152
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.3	0.0	5.9	9.6	10.8	9.7	13.1	0.0	0.0	13.1	0.0	11.4
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.0	0.6	0.1	0.1	0.0	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.1	0.0	1.1	0.1	0.3	0.0	0.0	0.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	0.0	6.3	9.6	11.5	9.8	13.2	0.0	0.0	13.2	0.0	11.7
LnGrp LOS	A	A	A	A	B	A	B	A	A	B	A	B
Approach Vol, veh/h	517		276			51			132			
Approach Delay, s/veh	6.4		11.2			13.2			12.3			
Approach LOS	A		B			B			B			
Timer - Assigned Phs	2		4		5	6	8					
Phs Duration (G+Y+Rc), s	24.3		11.9		8.3	16.0	11.9					
Change Period (Y+Rc), s	6.0		6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	64.0		24.0		14.0	44.0	24.0					
Max Q Clear Time (g_c+I1), s	7.9		3.5		2.8	5.7	2.9					
Green Ext Time (p_c), s	3.0		0.5		0.1	1.5	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			8.9									
HCM 6th LOS			A									

HCM 6th TWSC
3: Split Log Rd & Sam Donald Rd

Rosebrooke Addition
2027 Total Traffic - PM Peak Hour

Intersection

Int Delay, s/veh 2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	85	23	231	182	40	153
Future Vol, veh/h	85	23	231	182	40	153
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	25	251	198	43	166

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	602	350	0
Stage 1	350	-	-
Stage 2	252	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	463	693	-
Stage 1	713	-	-
Stage 2	790	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	443	693	-
Mov Cap-2 Maneuver	443	-	-
Stage 1	713	-	-
Stage 2	756	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	480	1111
HCM Lane V/C Ratio	-	-	0.245	0.039
HCM Control Delay (s)	-	-	14.9	8.4
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1	0.1

HCM 6th TWSC
4: Split Log Rd & Sunset Rd

Rosebrooke Addition
2027 Total Traffic - PM Peak Hour

Intersection						
Int Delay, s/veh	7.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	441	69	158	238	45	198
Future Vol, veh/h	441	69	158	238	45	198
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	479	75	172	259	49	215
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	554	0	1120	517
Stage 1	-	-	-	-	517	-
Stage 2	-	-	-	-	603	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1016	-	228	558
Stage 1	-	-	-	-	598	-
Stage 2	-	-	-	-	546	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1016	-	183	558
Mov Cap-2 Maneuver	-	-	-	-	183	-
Stage 1	-	-	-	-	598	-
Stage 2	-	-	-	-	438	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.7		29.1	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	405	-	-	1016	-	
HCM Lane V/C Ratio	0.652	-	-	0.169	-	
HCM Control Delay (s)	29.1	-	-	9.3	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	4.5	-	-	0.6	-	

Intersection						
Int Delay, s/veh	10.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	99	541	295	68	111	102
Future Vol, veh/h	99	541	295	68	111	102
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	588	321	74	121	111
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	395	0	-	0	1162	358
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	804	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1164	-	-	-	216	686
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	440	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1164	-	-	-	186	686
Mov Cap-2 Maneuver	-	-	-	-	186	-
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	440	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.3	0		54.9		
HCM LOS				F		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1164	-	-	-	286	
HCM Lane V/C Ratio	0.092	-	-	-	0.81	
HCM Control Delay (s)	8.4	0	-	-	54.9	
HCM Lane LOS	A	A	-	-	F	
HCM 95th %tile Q(veh)	0.3	-	-	-	6.5	

HCM 6th TWSC
6: Split Log Rd & Project Access #1

Rosebrooke Addition
2027 Total Traffic - PM Peak Hour

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	9	15	239	185	12
Future Vol, veh/h	7	9	15	239	185	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	16	260	201	13

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	500	208	214	0	-	0
Stage 1	208	-	-	-	-	-
Stage 2	292	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	530	832	1356	-	-	-
Stage 1	827	-	-	-	-	-
Stage 2	758	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	523	832	1356	-	-	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	758	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1356	-	661	-	-
HCM Lane V/C Ratio	0.012	-	0.026	-	-
HCM Control Delay (s)	7.7	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC
7: Project Access #3/Project Access #2 & Split Log Rd

Rosebrooke Addition
2027 Total Traffic - PM Peak Hour

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Traffic Vol, veh/h	2	241	2	26	194	2	1	0	15	1	0	1
Future Vol, veh/h	2	241	2	26	194	2	1	0	15	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	75	-	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	262	2	28	211	2	1	0	16	1	0	1
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	213	0	0	264	0	0	536	536	263	543	536	212
Stage 1	-	-	-	-	-	-	267	267	-	268	268	-
Stage 2	-	-	-	-	-	-	269	269	-	275	268	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1357	-	-	1300	-	-	455	451	776	451	451	828
Stage 1	-	-	-	-	-	-	738	688	-	738	687	-
Stage 2	-	-	-	-	-	-	737	687	-	731	687	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1357	-	-	1300	-	-	445	439	776	433	439	828
Mov Cap-2 Maneuver	-	-	-	-	-	-	445	439	-	433	439	-
Stage 1	-	-	-	-	-	-	737	687	-	737	671	-
Stage 2	-	-	-	-	-	-	718	671	-	714	686	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.9			9.9			11.4		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	445	776	1357	-	-	1300	-	-	433	828		
HCM Lane V/C Ratio	0.002	0.021	0.002	-	-	0.022	-	-	0.003	0.001		
HCM Control Delay (s)	13.1	9.7	7.7	0	-	7.8	0	-	13.3	9.4		
HCM Lane LOS	B	A	A	A	-	A	A	-	B	A		
HCM 95th %tile Q(veh)	0	0.1	0	-	-	0.1	-	-	0	0		

HCM 6th TWSC
8: Sam Donald Rd & Project Access #4

Rosebrooke Addition
2027 Total Traffic - PM Peak Hour

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	211	101	5	3	7
Future Vol, veh/h	12	211	101	5	3	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	75
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	229	110	5	3	8
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	115	0	-	0	368	113
Stage 1	-	-	-	-	113	-
Stage 2	-	-	-	-	255	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1474	-	-	-	632	940
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	788	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1474	-	-	-	626	940
Mov Cap-2 Maneuver	-	-	-	-	626	-
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	788	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.4	0		9.5		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1474	-	-	-	626	940
HCM Lane V/C Ratio	0.009	-	-	-	0.005	0.008
HCM Control Delay (s)	7.5	0	-	-	10.8	8.9
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0



**SPLIT LOG ROAD
ALTERNATE A**
AS PREPARED FOR
THE CITY OF BRENTWOOD
OCTOBER 15, 2014



SULLIVAN ENGINEERING, INC.
P.O. BOX 1708
BRENTWOOD, TENNESSEE 37024

RESOLUTION 2022-33

A RESOLUTION TO ANNEX CERTAIN TERRITORY UPON WRITTEN CONSENT OF THE OWNERS AND TO INCORPORATE THE SAME WITHIN THE BOUNDARIES OF THE CITY OF BRENTWOOD, TENNESSEE, SAID TERRITORY BEING LOCATED ON THE NORTH AND EAST SIDE OF SPLIT LOG ROAD AND NORTH OF SAM DONALD ROAD TO INCLUDE THE ADJOINING PORTIONS OF SPLIT LOG ROAD ADJACENT TO THE EXISTING CITY LIMITS

WHEREAS, the City of Brentwood, having been petitioned by interested persons, proposes the extension of its corporate limits by the annexation of certain territory adjoining its existing boundaries and within its urban growth area; and

WHEREAS, the owners of the property within the territory proposed for annexation have given their written consent by notarized petition so that a referendum is not required; and

WHEREAS, a copy of this Resolution, describing the territory proposed for annexation, was promptly sent by the City of Brentwood to the last known address listed in the office of the Williamson County Property Assessor for each property owner of record within the territory proposed for annexation, with such being sent by first class mail and mailed no later than fourteen (14) calendar days prior to the scheduled date of the hearing on the proposed annexation by owner consent; and

WHEREAS, this Resolution was also published by posting copies of it in at least three (3) public places in the City of Brentwood (it being noted that there are no “public places” in the territory proposed for annexation) and by publishing notice of the Resolution at or about the same time in the “Williamson” section of *The Tennessean*, a newspaper of general circulation in such territory and the City of Brentwood; and

WHEREAS, a Plan of Services for the area proposed for annexation is attached as *Exhibit A* hereto, which Plan of Services addresses the same services and timing of services as required in *Tennessee Code Annotated* § 6-51-102; and

WHEREAS, the proposed annexation and Plan of Services were submitted to the Brentwood Planning Commission for study, and the Planning Commission has recommended the same; and

WHEREAS, notice of the time, place and purpose of a public hearing on the proposed annexation and the Plan of Services was published in the “Williamson” section of *The Tennessean*, a newspaper of general circulation in the City of Brentwood, not less than fifteen (15) days before the hearing, which notice included the locations of a minimum of three (3) copies of the Plan of Services for public inspection during all business hours from the date of notice until the public hearing; and

WHEREAS, a public hearing on the proposed Plan of Services was held by the governing body on March 28, 2022.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF BRENTWOOD, TENNESSEE AS FOLLOWS:

SECTION 1. That the following territory is hereby annexed and incorporated into boundaries of the City of Brentwood, to be effective as of May 23, 2022, to wit:

**LANDS LYING WITHIN WILLIAMSON COUNTY, TENNESSEE
SPLIT LOG / SAM DONALD ROAD
ANNEXATION DESCRIPTION**

**JOHN AND MARGARET ALBRIGHT PROPERTY
MAP 055, PARCEL 012.00
SAM DONALD ROAD
WILLIAMSON COUNTY
ANNEXATION DESCRIPTION**

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County, Tennessee. Being bounded on the north by the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 3), Register's Office for Williamson County, Tennessee (R.O.W.C.T.); at the northeast by the Paula K. Taube property of record in Book 3204, Page 941, R.O.W.C.T.; on the east by the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540, R.O.W.C.T. and the Clark A. Presley and Tamara C. Presley property of record in Book 1250, Page 463, R.O.W.C.T.; on the south by Sam Donald Road (right-of-way width varies); on the west by the June M. Albright property of record in Book 1070, Page 679, R.O.W.C.T., the Eric S. Simon and wife, Anca R. Simon property of record in Book 5196, Page 93, R.O.W.C.T. and the Magdalena Samuchin and Michael G. Samuchin, wife and husband property of record in Book 1876, Page 634, R.O.W.C.T.; at the southwest by the Joe Ann Wilburn Griggs, Trustee property of record in Book 7694, Page 563, R.O.W.C.T; and being more particularly described as follows:

Commencing at the centerline intersection of Sunset Road (right-of-way width varies) with said Split Log Road (right-of-way width varies), said intersection being the northeast corner of the Sunset Road Development, LLC property of record in Book 8670, Page 432, R.O.W.C.T.;

Thence, leaving said Sunset Road, with the centerline of said Split Log Road the following three (3) calls:

1. With a curve to the left having a radius of 1500.00 feet, an arc length of 183.29 feet, a delta angle of 07 degrees 00 minutes 05 seconds, a tangent of 91.76 feet and a chord bearing and distance of South 10 degrees 37 minutes 11 seconds West, 183.18 feet;
2. South 07 degrees 07 minutes 09 seconds West, 520.57 feet to the northeast corner of the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 2), R.O.W.C.T.;
3. South 06 degrees 19 minutes 07 seconds West, 570.11 feet;

Thence, leaving the centerline of said Split Log Road with the common line of said Taube property and said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 3), South 06 degrees 24 minutes 03 seconds West, 1232.68 feet to a 1/2-inch iron rod (old) at the northwest corner of said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 1), R.O.W.C.T.;

Thence, with the west line of said property, South 06 degrees 38 minutes 30 seconds West, 1004.24 feet to a 1/2-inch iron rod (old) with no cap at the northwest corner of said Presley property;

Thence, with the west line of said property the following three (3) calls:

1. South 06 degrees 26 minutes 01 seconds West, 443.50 feet to a 1/2-inch iron rod (old) with no cap;
2. South 05 degrees 57 minutes 23 seconds West, 203.67 feet to a 1/2-inch iron rod (old) with no cap;
3. South 07 degrees 33 minutes 18 seconds West, 278.45 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" in the north right-of-way line of said Sam Donald Road and the **Point of Beginning** of herein described tract;

Thence, with the north right-of-way line of said Sam Donald Road the following three (3) calls:

1. North 71 degrees 32 minutes 38 seconds West, 314.20 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
2. Along a curve to the left, having an arc length of 384.43 feet, a radius of 2601.20 feet, a delta angle of 08 degrees 28 minutes 04 seconds and a chord bearing and distance of North 75 degrees 46 minutes 40 seconds West, 384.08 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
3. North 80 degrees 00 minutes 42 seconds West, 119.40 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" at the southeast corner of said June M. Albright property;

Thence leaving said north right-of-way line of Sam Donald Road with the east and north lines of said property the following three (3) calls:

1. North 11 degrees 24 minutes 50 seconds East, 604.15 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
2. North 14 degrees 51 minutes 48 seconds East, 438.66 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
3. North 80 degrees 01 minutes 06 seconds West, 268.19 feet to a 1/2-inch iron rod (old) with no cap at the northeast corner of said Griggs, Trustee property and the southeast corner of said Simon property;

Thence, with the east line of Simon, North 16 degrees 39 minutes 01 seconds East, 285.85 feet to a 1/2-inch iron rod (old) with no cap at the southeast corner of said Samuchin property;

Thence, with the east line of said Samuchin property, North 10 degrees 13 minutes 28 seconds East, 522.05 feet to a nail (old) in the south line of said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 3);

Thence, with the south line of said Adcock Marital Trust property property, South 80 degrees 19 minutes 58 seconds East, 881.52 feet to a 1/2-inch iron rod (old) with no cap at the southwest corner of said Taube property and the northwest corner of the said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 1);

Thence, with the west line of said Adcock Marital Trust property property, South 06 degrees 38 minutes 30 seconds West, 1004.24 feet to a 1/2-inch iron rod (old) with no cap at the northeast corner of said Presley property;

Thence, with the west line of said Presley property, the following three (3) calls:

1. South 06 degrees 26 minutes 01 seconds West, 443.50 feet to a 1/2-inch iron rod (old) with no cap;
2. South 05 degrees 57 minutes 23 seconds West, 203.67 feet to a 1/2-inch iron rod (old) with no cap;
3. South 07 degrees 33 minutes 18 seconds West, 278.45 feet to the **Point of Beginning** containing 1,550,145 square feet or 35.59 acres, more or less.

Being the same property conveyed to John J. Albright and wife, Margaret C. Albright by Quitclaim Deed of record in Book 1256, page 429, Register's Office for Williamson County, Tennessee.

JUNE M. ALBRIGHT PROPERTY

MAP 055, PARCEL 012.05

SAM DONALD ROAD

WILLIAMSON COUNTY

ANNEXATION DESCRIPTION

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County, Tennessee. Being bounded on the north and east by the John J. Albright and wife, Margaret C. Albright property of record in Book 1256, Page 429, Register's Office for Williamson County, Tennessee (R.O.W.C.T.); on the south by Sam Donald Road (right-of-way width varies); on the west by the Joe Ann Wilburn Griggs property of record in Book 7694, Page 994, R.O.W.C.T. and the Joe Ann Wilburn Griggs, Trustee property of record in Book 7694, Page 563, R.O.W.C.T; at the northwest by the Eric S. Simon and wife, Anca R. Simon property of record in Book 5196, Page 93, R.O.W.C.T. and being more particularly described as follows:

Beginning on a 1/2-inch iron rod (old) in the north right-of-way line of said Sam Donald Road and at the southeast corner of said Griggs property of record in Book 7694, Page 994, R.O.W.C.T.

Thence, leaving said north right-of-way line with the east line of said Griggs property and the Griggs property of record in Book 7694, Page 563, R.O.W.C.T., North 20 degrees 41 minutes 27 seconds East, 1059.44 feet to a 1/2-inch iron rod (old) with no cap at the southeast corner of said Simon property and at a southwest corner of said Albright property;

Thence, with the south and west line of Albright the following three (3) calls:

1. South 80 degrees 01 minutes 06 seconds East, 268.19 feet to a 1/2-inch iron rod (old) with no cap;
2. South 14 degrees 51 minutes 48 seconds West, 438.66 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
3. South 11 degrees 24 minutes 50 seconds West, 604.15 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" in the north right-of-way line of Sam Donald Road;

Thence, with said right-of-way line, North 80 degrees 00 minutes 42 seconds West, 412.63 feet to the **Point of Beginning** containing 346,398 square feet or 7.95 acres, more or less.

Being the same property conveyed to June M. Albright by Quitclaim Deed of record in Book 1070, page 679, Register's Office for Williamson County, Tennessee.

**ROBERT H. ADCOCK PROPERTY
MAP 056, PARCEL 084.00
SPLIT LOG ROAD
WILLIAMSON COUNTY
ANNEXATION DESCRIPTION**

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County, Tennessee. Being bounded on the north and west by the Sunset Road Development, LLC property of record in Book 8670, Page 432, Register's Office for Williamson County, Tennessee (R.O.W.C.T.); on the east by the Paula K. Taube property of record in Book 3204, Page 941, R.O.W.C.T. and the Paula K. Taube property of record in Book 2189, Page 725, R.O.W.C.T.; at the southeast by the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 1), R.O.W.C.T. on the south by: the John J. Albright and wife, Margaret C. Albright property of record in Book 1256, Page 429, R.O.W.C.T., the Magdalena Samuchin and Michael G. Samuchin, wife and husband property of record in Book 1876, Page 634, R.O.W.C.T., the Magdalena Samuchin and Michael G. Samuchin, wife and husband property of record in Book 971, Page 129, R.O.W.C.T.; on the west by: Split Log Road (right-of-way width varies), the Michael D. Culbreth and Lynette Culbreth property of record in Book 6010, Page 611, R.O.W.C.T. and the John A. McArthur and wife, Norma D. McArthur property of record in Book 220, Page 602, R.O.W.C.T. and being more particularly described as follows:

Commencing at the centerline intersection of Sunset Road (right-of-way width varies) with said Split Log Road (right-of-way width varies), said intersection being the northeast corner of said Sunset Road Development, LLC property;

Thence, leaving said Sunset Road, with the centerline of said Split Log Road the following two (2) calls:

1. With a curve to the left having a radius of 1500.00 feet, an arc length of 183.29 feet, a delta angle of 07 degrees 00 minutes 05 seconds, a tangent of 91.76 feet and a chord bearing and distance of South 10 degrees 37 minutes 11 seconds West, 183.18 feet;
2. South 07 degrees 07 minutes 09 seconds West, 520.57 feet to the northeast corner of the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 2), R.O.W.C.T. and the **Point of Beginning** of herein described tract;

Thence, continuing with the centerline of Split Log Road, South 06 degrees 19 minutes 07 seconds West, 570.11 feet to the northwest corner of the Taube property of record in Book 3204, Page 941, R.O.W.C.T. and the southwest corner of the Taube property of record in Book 2189, Page 725, R.O.W.C.T.;

Thence, leaving said centerline with the west line of Taube, South 06 degrees 24 minutes 03 seconds West, 1232.68 feet to a 1/2 inch iron rod (old) at the northwest corner of said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 1) and the northeast corner of said Albright property;

Thence, with the north line of Albright, North 80 degrees 19 minutes 58 seconds West, 881.52 feet to a nail (old) at the northeast corner of said Samuchin property of record in Book 1876, Page 634, R.O.W.C.T.;

Thence, with the north line of said property, North 79 degrees 45 minutes 24 seconds West, 256.67 feet to a metal fence post at the northeast corner of the Samuchin property of record in Book 971, Page 129, R.O.W.C.T.;

Thence, with said north line the following two (2) calls:

1. North 77 degrees 36 minutes 15 seconds West, 161.26 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
2. North 28 degrees 31 minutes 37 seconds West, 62.19 feet to the centerline of Split Log Road;

Thence, with said centerline the following five (5) calls:

1. Along a curve to the left, having an arc length of 290.36 feet, a radius of 489.76 feet, a delta angle of 33 degrees 58 minutes 06 seconds and a chord bearing and distance of North 29 degrees 28 minutes 53 seconds East, 286.13 feet;
2. North 12 degrees 29 minutes 50 seconds East, 306.63 feet;
3. North 16 degrees 05 minutes 12 seconds East, 246.86 feet;
4. Along a curve to the right, having an arc length of 133.22 feet, a radius of 128.43 feet, a delta angle of 59 degrees 25 minutes 53 second sand a chord bearing and distance of North 45 degrees 48 minutes 08 seconds East, 127.32 feet;
5. Along a curve to the right, having an arc length of 60.18 feet, a radius of 327.13 feet, a delta angle of 10 degrees 32 minutes 27 seconds and a chord bearing and distance of North 80 degrees 47 minutes 18 seconds East, 60.10 feet;

Thence, leaving said centerline with the north line of said McArthur property, North 72 degrees 18 minutes 48 seconds West, 257.60 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" in the east line of said Sunset Road Development, LLC property;

Thence, with the east and south lines of said property the following two (2) calls:

1. North 06 degrees 11 minutes 12 seconds East, 702.90 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
2. South 83 degrees 03 minutes 48 seconds East, 1261.68 feet the **Point of Beginning**, containing 2,172,582 square feet, or 49.88 acres, more or less.

Being a portion of the same property conveyed to Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust by Trustee's Quitclaim Deed of record in Book 5792, Page 540 (Tracts 2 and 3), R.O.W.C.T, Register's Office for Williamson County, Tennessee.

**ROBERT H. ADCOCK PROPERTY
MAP 056, PARCEL 093.00
EAST OF SPLIT LOG ROAD
NORTH OF SAM DONALD ROAD
WILLIAMSON COUNTY
ANNEXATION DESCRIPTION**

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County. Being bounded on the north by the Paula K. Taube property of record in Book 3204, Page 941, Register's Office for Williamson County, Tennessee (R.O.W.C.T.); on the east by Open Space 1 as shown on plan entitled "Bennington, Section 10" of record in Plat Book P65, Page 97, R.O.W.C.T.; on the south by the Annette Thompson Parkes property of record in Book 4188, Page 283, R.O.W.C.T. and the Daniel R. Vasta and Victoria L. Vasta, husband and wife property of record in Book 7552, Page 3, R.O.W.C.T. and the Clark A. Presley and Tamara C. Presley property of record in Book 1250, Page 463, R.O.W.C.T.; on the west by the John J. Albright and wife, Margaret C. Albright property of record in Book 1256, Page 429, R.O.W.C.T.; at the northwest by the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 3) R.O.W.C.T., and being more particularly described as follows:

Commencing at the centerline intersection of Sunset Road (right-of-way width varies) with said Split Log Road (right-of-way width varies), said intersection being the northeast corner of Sunset Road Development, LLC property of record in Book 8670, Page 432, R.O.W.C.T.;

Thence, leaving said Sunset Road, with the centerline of said Split Log Road the following three (3) calls:

1. With a curve to the left having a radius of 1500.00 feet, an arc length of 183.29 feet, a delta angle of 07 degrees 00 minutes 05 seconds, a tangent of 91.76 feet and a chord bearing and distance of South 10 degrees 37 minutes 11 seconds West, 183.18 feet;
2. South 07 degrees 07 minutes 09 seconds West, 520.57 feet to the northeast corner of the Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property of record in Book 5792, Page 540 (Tract 2), R.O.W.C.T.;
3. South 06 degrees 19 minutes 07 seconds West, 570.11 feet;

Thence, leaving the centerline of said Split Log Road with the common line of said Taube property and said Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust property (Tract 3), South 06 degrees 24 minutes 03 seconds West, 1232.68 feet to a 1/2-inch iron rod (old) at the northeast corner of said Albright property and the **Point of Beginning** of herein described tract;

Thence, with the south line of Taube, South 79 degrees 44 minutes 16 seconds East, 1179.27 feet to a 1/2-inch iron rod (old) in the west line of said Open Space 1 as shown on "Bennington, Section 10";

Thence, with said west line, South 06 degrees 30 minutes 27 seconds West, 977.34 feet to a 1/2-inch iron rod (old) with no cap at the northwest corner of said Parkes property and the northeast corner of said Parkes property;

Thence, with the north line of Parkes, North 81 degrees 43 minutes 58 seconds West, 231.62 feet to a 1/2-inch iron rod (old) with no cap at the northeast corner of said Vasta property;

Thence, with the north line of Vasta, North 82 degrees 36 minutes 15 seconds West, 1167.82 feet to a 1/2-inch iron rod (old) with no cap;

Thence, North 06 degrees 38 minutes 30 seconds East, 1004.24 feet to the **Point of Beginning** containing 1,252,288 square feet or 28.75 acres, more less.

Being a portion of the same property conveyed to Deborah Moskal, Trustee of the Robert H. Adcock Marital Trust by Trustee's Quitclaim Deed of record in Book 5792, Page 540 (Tract 1), R.O.W.C.T, Register's Office for Williamson County, Tennessee.

Total land area to include 122.107 acres, not including that portion of the Split Log Road right-of-way as shown on the attached concept plan

And a Portion of the Split Log Road right-of-way to include the following:

A portion of Split Log Road that fronts the subject properties to include the east side measured from the centerline of Split Log Road along Adcock (056 08400), then the entire portion of Split Log Road that bisects Adcock and the westerly portion measured from the centerline of Split Log Road to the northerly boundary of Adcock.

SECTION 2. That the Plan of Services for this territory which is attached as *Exhibit A* hereto is approved and the same is hereby adopted.

SECTION 3. That the City Recorder will cause a copy of this Resolution to be forwarded to the Mayor of Williamson County including the Plan of Services.

SECTION 4. That a copy of this Resolution shall be recorded with the Williamson County Register of Deeds, and a copy shall also be sent to the Tennessee Comptroller of the Treasury and the Williamson County Assessor of Property.

SECTION 5. That a copy of this Resolution, as well as the portion of the Plan of Services related to emergency services and a detailed map of the annexed area, shall be filed with the Brentwood Emergency Communication District.

SECTION 6. That this resolution shall take effect from and after its passage, the general welfare of the City of Brentwood, Williamson County, Tennessee requiring it.

MAYOR Rhea E. Little, III

ADOPTED: _____

Approved as to form:

RECORDER Holly Earls

CITY ATTORNEY Kristen L. Corn

**RESOLUTION 2022-33
EXHIBIT “A”
VOLUNTARY ANNEXATION
PROPOSED PLAN OF SERVICES
ROSEBROOKE EAST PROPERTY
MAP 056 PARCEL 08400, MAP 056 PARCEL 09300, MAP 055 PARCEL 01200 AND
MAP 055 PARCEL 01205**

Police

Regular patrolling, radio responses to calls and other routine police services, using present personnel and equipment, will be provided on the effective date of annexation. Property adjacent to the area proposed for annexation is already located in the City limits, so services can be easily extended to this area. The Brentwood City Hall, located at 5211 Maryland Way is approximately 9.5 miles from the property. The new Police Headquarters building, which opened in April 2021, located at 910 Heritage Way and is approximately 7.6 miles from the subject property. The Safety Center East is located approximately 2.0 miles from the subject property.

Fire

Fire protection provided by present personnel and equipment of the firefighting force, within the standard limitations of available water and distances from existing fire stations, will be extended to the property on the effective date of annexation. Fire Station No. 4, located at the Safety Center East, is approximately 2.0 miles from the area to be annexed. The property proposed for annexation will be located within the primary response zone for Station No. 5, when it is completed with Station No. 4 providing back-up response as needed.

Fire Station No. 5 is a state of the art facility, having an area of 10,440 square feet, is currently under construction at 9551 Split Log Road and is expected to open in the Fall of 2022. The new station is located approximately 2.4 miles from the area proposed for annexation. The station has been designed to serve as a neighborhood facility, housing a single response unit and one crew.

All stations are staffed with full-time firefighters that provide 24 hour/seven days per week fire protection.

Currently, the area to be annexed is served by the Nolensville Fire and Rescue Department, located at 7347 Nolensville Road, and approximately 3.0 miles from the subject property. Note that Nolensville employs a full-time Fire Chief and nine full-time firefighters, supplemented by part-time and volunteer firefighters. A new Fire Station is in the planning stages, which will be located at 7231 Haley Industrial Boulevard, on the north side of Town. The existing station on Nolensville Road will be converted by Williamson County to an ambulance station. Due to improved fire protection offered by the City of Brentwood, the ISO fire insurance rating for the newly constructed residences in the annexed area will be improved.

Emergency Communications

Upon the effective date of the annexation, the property and any existing or future residences will be incorporated into the City's 911 Emergency Communications District and all 911 emergency calls will be routed to the Brentwood emergency dispatch center.

Public Works / Road Improvements

The area to be annexed includes a portion of Split Log Road that bisects the northerly portion of the property. This portion of the roadway is not presently within the City, but is within the City's Urban Growth Boundary. The proposed concept development plan shows a proposed future alignment of Split Log Road. The developer will be expected to provide the necessary additional right-of-way to accommodate the future roadway improvements.

The Board of Commissioners recently approved Resolution 2021-141, with Sullivan Engineering Inc., for preliminary Engineering and right-of-way design services for improvements for a 2.39 mile section of Split Log Road from the end of the Phase 2 project (approximately 1,500 linear feet east of its intersection with Pleasant Hill Road) to its intersection with Sunset Road and a small portion of Sunset Road. The project will include widening of the road to provide two 12-foot wide travel lanes and a continuous 12-foot wide center turn lane (with periodic islands). The improvements will also include a curb and gutter section with a 10-foot wide multi-use path along the south side, separated from the roadway by a 5-foot wide green strip. The recently annexed Taube property also included a proposed future alignment of the road through the project, which will eventually connect at the intersection of Sunset and Waller Roads. This project will be funded entirely by the City with a portion of the funding coming from road impact fees.

As part of the project, a corridor study will be prepared to include an estimate of future traffic demand based on the Urban Growth Boundary potential and surrounding development. The study will evaluate six intersections between Waller Road and Wilson Pike including Waller Road, Sunset Road, Sam Donald Road, Pleasant Hill Road, Ragsdale Road and Wilson Pike.

The City will extend routine road maintenance service (resurfacing, pot-hole repair, striping, signs, mowing and snow removal) to the additional portion of Split Log Road following the effective date of annexation. The future streets constructed within the proposed subdivision will become public streets in accordance with the City's normal development process and will be maintained in the same manner as existing neighborhood streets within the City.

Brush pickup service will be provided to all future residences in accordance with City policy.

The City does not provide refuse collection services. Future residents will have the option to contract with private haulers in a manner consistent with collection inside the city limits.

Planning and Development Oversight

All planning, zoning and development regulations and standards of the City will extend to the annexed area upon the effective date of annexation. Existing personnel will handle oversight and enforcement of existing regulations.

Zoning and Subdivision Plan Approvals in Area

The applicant will be requesting that the property to be annexed be rezoned to the Open Space Residential Development (OSRD) zoning classification, while the adjacent properties, in the County are zoned Municipal Growth Area (MGA-1). The adjacent properties in Nolensville are located within the Benington Subdivision and zoned Suburban Residential (SR). These properties also lie within the Annexation Buffer Overlay zone as established by an agreement between the City and the Town of Nolensville.

The remaining surrounding properties immediately north of the subject property are located in Brentwood and zoned OSRD and R-2. The remaining properties are zoned Suburban Residential – R-2.

The installation/extension of the underground public utilities within annexed area, as authorized by the Brentwood Planning Commission will be completed by the property owner at his expense under the City's current Subdivision Regulations and construction standards. The final platting of tract(s), infrastructure security, and future acceptance of public improvements for perpetual maintenance shall be carried out in accordance with applicable codes and ordinances.

Code Enforcement

Using existing personnel, all inspection services now provided by the City (building, plumbing, mechanical, gas, and other municipal codes and ordinances) will begin in the area with permits issued by the City after the effective date of annexation. The enforcement of nuisance related codes such as high weeds and grass, abandoned vehicles, illegal signs, etc. will be handled on a complaint basis beginning on the effective date of annexation.

Parks and Recreation

New residents in the annexed area will enjoy full access to all existing and future recreational facilities, parks, greenways, bikeways, etc., in the City in a manner similar to other City residents. As now occurs with existing property owners in the City, property owners in the annexed area will be required to pay City property taxes, a portion of which is used to support improvements and upkeep to existing parks and recreation facilities. This will eliminate any requirement for new residents to pay non-resident fees to participate in athletic programs in city parks.

Brentwood residents enjoy over 1,100 acres of parkland, including active and passive parks and greenways.

Public Library

New residents in the annexed area will have access to the John P. Holt Brentwood Library, which is conveniently located at 8109 Concord Road. The full-service library is open seven (7) days a week and currently has a collection in excess of 184,000 items and other materials, including audiobooks, DVD's, music CD's, eBooks, eAudiobooks, video streaming, and online resources. (2020). As now occurs with existing property owners in the city limits, existing and future property owners in the annexed area will be required to pay City property taxes, a portion of which is used to support the operation of the Library including expansion of the collections,

materials, and programs and for upkeep of the facility. This will eliminate any requirement for new residents to pay non-resident fees to fully use Library services.

Water and Sewer

Water service within the area proposed to be annexed is provided by the Nolensville College Grove Utility District. Sewer service is provided by the Metropolitan Department of Water Services. All future residents will be subject to the standard billing and service standards of these utility providers.

The developer in the annexed area will be responsible for upgrading and extending new sewer/water lines and fire hydrants to serve the property in conformance with the rules and regulations of each utility at the time of construction. Service is currently available in the area and must be extended or upgraded by the developer of the annexed property at their expense from existing gravity sewer lines to serve the new residential development.

Revenues (Taxes and Fees)

When fully developed, the City expects to generate sufficient new revenue to pay for the cost of service delivery. The primary sources will be the property taxes, state shared taxes distributed to the City on a per capita basis and residential building permits. The concept plan developed for the property shows 74 lots.

The annual tax bill for a house and land valued at \$1,000,000 is projected to be approximately \$725.00 based upon the current City tax rate of \$0.29 cents per \$100 of assessed value. Shared taxes received from the State of Tennessee are projected to average \$157.00 per person annually for the 2021/2022 fiscal year (<https://www.mtas.tennessee.edu/reference/state-shared-taxes-and-appropriations-coming-fiscal-year>), while building permits will average approximately \$2,000.00 per new house, based upon fees received during FY 2021

Additional one-time revenue will be received from the City's Road impact fee (Public Works Project Fees), which is currently established at \$5,860.00 for each new home constructed within the future subdivision.

Rosebrook East and South – Community Meeting

Thursday, April 28, 2022

Annex Room – City Hall

6:00PM – 7:00PM

Brett Smith, Ragan Smith Associates

Rob Pease, CPS Land

Craig Leanza, CPS Land

6 residents in attendance

Janet Donahue – Planning Commission

Meeting Notes:

- The residents had a question about if Split Log Road was planned to be widened. Split Log Road will be three lanes with one lane each way with a center turn lane. Ragan Smith told them that the road project was being handled by Sullivan Engineering and was a city project.
- Rosebrooke South will begin construction sometime next year where Rosebrook East will begin construction in two to three years.
- Rosebrooke Section 2 will be platted in the fall of this year.
- Rosebrooke South and East will have ponds, wetlands, as well as detention.
- There will be 124 lots in Rosebrooke South and East as well as 124 lots in Rosebrook Main. The total number of lots for the Rosebrooke Subdivision will be 248 lots.
- The average size of lot in Rosebrooke will be 0.5 acres to 0.75 acres.
- There are no amenities proposed for Rosebrooke South and East. The only amenity is proposed for Rosebrooke Main.
- The residents had a concern about tree removal on the properties. CPS Land let them know that trees would be removed for the road as well as for grading purposes on the lots. They put together a worse case scenario for tree removal to make sure that they meet the tree preservation requirements from the City. Ragan Smith let them know that both projects far exceed the required caliber inch.

Jeff Dobson
PLANNING AND CODES DIRECTOR

Michael Rinehart
CHIEF BUILDING OFFICIAL



Todd Petrowski
SENIOR CITY PLANNER

Allison Roberts
PLANNER

BRENTWOOD PLANNING AND CODES

PLANNING AND CODES DEPARTMENT MEMORANDUM 2022-08

TO: Honorable Mayor and City Commission Members

THROUGH: Kirk Bednar, City Manager

FROM: Jeff Dobson, Planning and Codes Director 

SUBJECT: **ORDINANCE 2022-01 AN ORDINANCE OF THE CITY OF BRENTWOOD, TENNESSEE TO AMEND THE ZONING ORDINANCE, SAME BEING CHAPTER 78 OF THE CODE OF ORDINANCES OF THE CITY OF BRENTWOOD, TO ESTABLISH A CERTAIN ZONING CLASSIFICATION, SAME BEING THE OSRD (OPEN SPACE RESIDENTIAL DEVELOPMENT) FOR CERTAIN PROPERTY LOCATED EAST OF SPLIT LOG ROAD AND NORTH OF SAM DONALD ROAD, SAID TERRITORY BEING ADJACENT TO AND INCLUDING SECTIONS OF SPLIT LOG ROAD, BEING MORE SPECIFICALLY DESCRIBED IN THE PROPERTY DESCRIPTION ATTACHED HERETO AND MADE A PART OF THIS ORDINANCE BY REFERENCE, AND SHOWN ON THE MAP ATTACHED HERETO AND MADE A PART OF THIS ORDINANCE BY REFERENCE; AND TO AMEND THE OFFICIAL ZONING MAP ACCORDINGLY**

DATE: May 3, 2022

At its May 2, 2022, regular meeting, the Planning Commission voted nine for and zero against (9-0) to recommend approval of Ordinance 2022-01 to the Board of Commissioners.

Brentwood City Commission Agenda

Meeting Date: 05/09/2022

Public hearing for Ordinance 2022-04 -- As Amended, which Proposes to Assign the OSRD and R-2 Zoning Districts to the Properties Annexed Pursuant to Resolution 2022-34

Submitted by: Jeff Dobson, Planning & Codes

Department: Planning & Codes

Information

Subject

Ordinance 2022-04 - An Ordinance proposing the establishment of a City zoning district for ≈ 84 acres of land, located west of Split Log Road. The subject properties are located within the Brentwood UGB and are currently zoned MGA-1 by Williamson County and would be assigned the OSRD (Open Space Residential Development) and R-2 (Suburban Residential) zoning districts.

Background

The attached ordinance requests approval of the assignment of the Open Space Residential Development (OSRD), and R-2 (Suburban Residential) zoning districts to ≈ 84 acres located north and west of Split Log Road. The subject properties are all currently zoned MGA-1 by Williamson County and are located within the City's Urban Growth Boundary (UGB) and adjacent to the existing city limits. The assignment of zoning is being considered in conjunction with an annexation request for the properties.

The properties for which annexation is requested are summarized in the table below. The total combined area of the properties as included as part of the development plan is ≈ 77.21 acres. The area proposed for annexation includes one property that will remain under separate ownership that is not part of the development plan and has an area of 7.12 acres, bringing the total land area proposed for annexation to 84.33 acres. Please note that this area does not include the Split Log Road ROW.

A total of 69.69 acres is proposed to be assigned the OSRD district, while a total of 7.52 acres, which is also shown on the development plan and fronts on Split Log Road, is proposed to be assigned the R-2 district. This area is proposed to be divided into three lots having an average area of 2.26 acres. There is also a 0.75 acre ROW dedication. Additionally, the McArthur property, which includes an area of 7.12 acres will also be assigned the R-2 district. Since first reading of the ordinance the owners of the other "enclave" property (the Culbreths -- 2.21 ac.) decided to withdraw their consent for annexation.

Staff is requesting that the McArthur property be assigned the R-2 zoning district because the technical standards of the R-2 district most closely resemble those of the MGA-1 district.

The properties under consideration for annexation are currently under the ownership of three

different property owners. Refer to the following table.

<i>PROPERTY DESCRIPTION -- ROSEBROOKE SOUTH</i>			
<i>OWNER</i>	<i>ADDRESS</i>	<i>PARCEL #</i>	<i>AREA (AC)</i>
Split Log Farms LLC	Split Log Rd.	055 01400	52.21
Bruce Sudano 2015 Family Trust	9814 Split Log Rd.	055 01401	25.00
John A. & Norma D. McArthur	9824 Split Log Rd.	055 01001	7.12
TOTAL			84.33 +/-

The proposed development plan shows a proposed future alignment of Split Log Road, which was developed in 2014. A current alignment has for the road not yet been established. The developer will be expected to provide the necessary additional right-of-way and/or adjust the lot layout to accommodate the future roadway improvements once an alignment has been established.

According to the Property Assessor there is one home currently located on Parcel Number 055 01401 (Sudano) that includes a total area of 13,279 square feet. The house will remain as part of the development plan and is shown on Lot 160. There are also a house and barn on the McArthur property.

The proposed OSRD Development Plan for a portion of the property includes a total of 47 lots, which yields an overall OSRD density of 0.67 dwelling units per acre (DUPA). The average lot size for the OSRD portion of the property is 35,132 sq. ft. or 0.81 acres.

Overall, the density of the Rosebrooke South project -- 50 lots, is 0.65 DUPA (including the three R-2 lots, but not including the McArthur property as it will remain under separate ownership and is not part of the development).

An R-2 concept plan was also included as part of the submittal. That plan also showed a total of 47 lots, all at or above the required one-acre lot area.

Since first reading of the ordinance, several changes have concurred to the plans, as a result of staff comments:

1. The splitter islands in the entrance streets have been revised, relocating them outside the proposed Split Log Road ROW.
2. If the property is annexed Split Log Road will be designated as an arterial street.
3. Based upon the recommendation of Mr. Judy, Road K has been redesigned as a "Collector" street from its intersection with Southwick Drive to Split Log Road.
4. The 100-year floodplain has been added to the plans.

Several other comments were provided by staff, which will be addressed as part of the preliminary plan and/or construction plan review process.

Note that Lot 174 is shown as a "Flag Lot". The configuration of this lot will meet the

requirements of Article 6.15 of the Subdivision Regulations. The Planning Commission has the authority to approve flag lots if all the requirements in the article are met.

The changes have resulted in a slight modification to the open space calculations, reducing the amount of excess open space from 16.84 acres to 16.60 acres (0.24 ac.). The comparison of the open space calculations as originally submitted and those provided as part of the re-submittal are attached below.

Utility service to the property is provided by the Nolensville/College Grove Utility District (water) and Metro Nashville Water Services (sewer). The provision of utilities will not change with the annexation of the property into the City of Brentwood. The future development will not be served by Brentwood's Water and Sewer system and therefore, the project will not impact the City's water/sewer infrastructure.

The tract can be developed under the existing zoning classification in the County. As noted above, the properties are currently zoned MGA-1 by Williamson County. The district was established in 2013 and assigned to all properties outside municipal boundaries and within the various UGBs around the County. The district standards require a minimum lot area of one acre and a gross density of one dwelling unit per acre, similar to the City's Suburban Residential (R-2) district. However, there are differences in the technical standards related to accessory uses and structure standards. MGA-1 allows the following accessory uses/structure standards:

1. Accessory dwelling units within an existing dwelling unit (interior apartment) or as a separate or converted structure (converted garage, carriage house or stable);
2. Only one accessory dwelling unit, regardless of the number of principle dwellings located on a single parcel are permitted;
3. Accessory dwellings shall be limited to 750 sq. ft. or 25% of the square footage of the principal structure, whichever is greater. In no case shall the accessory dwelling be more than 75% of the square footage of the principal dwelling; and
4. Interior apartments may be contained within the existing house or attached onto the exterior. They must be constructed so that the exterior appearance of the home is maintained. A second front door is not permitted.

Please note that the County does not regulate the existence or operation of Short Term Rentals (STRs) in the MGA-1 district. Requirements are that each operator must register with the County and collect the applicable Hotel/Motel taxes, which are charged to the occupant and collected by the property owner.

SCHOOLS

The proposed plan was provided to Williamson County Schools (WCS) for an assessment of the impact of the proposed development on the schools in the area. The properties lie between the Ravenwood and Nolensville High zone lines. WCS will review to determine if the school board needs to vote on a line change. WCS is rezoning for the new elementary schools this fall. Based upon the WCS review, the approximate student enrollment projections at build-out for the Rosebrooke East properties are as follows:

Jordan Elementary -- 21 Students;

Sunset Middle -- 12 Students
Ravenwood High -- 9 Students

The current capacity and enrollment numbers for the 2020/2021 school year, according to WCS data for the three impacted schools as of September 2, 2021, are as follows: Jordan Elementary (890 capacity/593 students enrolled), Sunset Middle (869 capacity/621 students enrolled), and Ravenwood High (1,649 capacity/1,875 students enrolled). Note that the enrollment for Ravenwood High exceeds its capacity, but construction is underway to enlarge the school.

TRAFFIC IMPACTS

A Traffic Impact Study (TIS) was provided as part of the initial request for annexation of the property. A copy of the TIS was forwarded to Mr. Greg Judy with Neel-Shaffer Inc., who assists staff in the review of the submitted TIS. The applicant will pay for the Neel-Shaffer review per the requirements of Section 50-29(b) of the Municipal Code.

Site Traffic

ROSEBROOKE ADDITION									
TRIP GENERATION (1)									
Proposed Development	ITE Land Use Code	Total Units	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Rosebrooke South (50 Single Family Detached Homes)	210	50 Homes	550	10	30	40	33	19	52
Rosebrooke East (74 Single Family Detached Homes)	210	74 Homes	788	14	43	57	48	28	76
(1) <i>Trip Generation Manual, 10th Edition</i> published by the Institute of Transportation Engineers (ITE)									

A copy of the Executive Summary, which is included as part of the TIS is attached below. Additionally, the entire TIS is also attached below.

The TIS recommends the following improvements be incorporated to the design of the proposed access to Split Log Road (Access #1) include the following.

Split Log Road at Project Access #1

- The intersection is projected to operate at acceptable levels of service in total traffic conditions during the am. and p.m. peak hours.
- The project access should be constructed to allow a minimum of one ingress lane and two (2) egress lanes with a storage length of 75 feet.
- This proposed access will be near the location of an existing driveway on a generally straight section of Split Log Road and should provide acceptable intersection sight

distance. Site plans for the Rosebrooke Addition should confirm that acceptable intersection sight distance per AASHTO guidelines will be available at this intersection.

As mentioned above the TIS was forwarded to Neel-Shaffer for their staff review. Their review will be attached below upon receipt.

The developer will be expected to design the project in consideration of the recommendations included as part of the TIS and the recommendations from Neel-Shaffer.

The request will track along the following hearing schedule.

<i>REMAINING HEARING SCHEDULE</i>	
<i>April 11, 2022</i>	Board of Commissioners -- First Reading of the Ordinance Assigning OSRD and R-2 to the Properties
<i>April 28, 2022</i>	Required Community Meeting -- 6:00 p.m. -- Annex Room
<i>May 2, 2022</i>	Planning Commission -- Review & Recommendation of the Ordinance Assigning OSRD and R-2 to the Properties
<i>May 9, 2022</i>	Board of Commissioners -- Public Hearing on the Ordinance Assigning OSRD and R-2 to the Properties
<i>May 23, 2022</i>	Board of Commissioners -- Second and Final Reading of the Ordinance Assigning OSRD and R-2 to the Properties
<i>May 23, 2022</i>	Board of Commissioners -- Review of Resolution Annexing the properties into the City of Brentwood

A total of six residents attended the community meeting. A copy of the staff notes from the meeting is attached below.

As noted above the Planning Commission will provide their review and recommendation of the ordinance at their May 2, 2022, regular meeting.

Should you have any questions or require additional information, please contact the Planning and Codes Director.

Staff Recommendation

Not Applicable.

Previous Commission Action

On April 11, 2022, the Board of Commissioners voted unanimously, seven for and zero against (7-0) to approve Ordinance 2022-04 on first reading.

On March 28, 2022, the Board of Commissioners conducted the required public hearing for the plan of services and the annexation. No one spoke during the public hearing.

On February 14, 2022, the Board of Commissioners voted unanimously six for and zero

against (6-0) to approve Resolution 2022-09, scheduling the required public hearing for the plan of services for March 28, 2022.

Fiscal Impact

Attachments

Ordinance 2022-04 -- As Amended
Revised Dev. Plan & OS Calcs
OS Comparison -- Rosebrooke South
R-2 Concept Plan
Project Rendering
Rosebrooke South Landscape Sheets
Rosebrooke South -- Tree Preservation Sheets
Rosebrooke South -- Trees to Remain Listing
Rosebrooke South -- Trees to be Removed Listing
Owner Authorizations
Resolution 2022-34
Staff Notes -- Community Meeting
PC Review Memo -- Ordinance 2022-04

**ORDINANCE 2022-04
AS AMENDED**

AN ORDINANCE OF THE CITY OF BRENTWOOD, TENNESSEE TO AMEND THE ZONING ORDINANCE, SAME BEING CHAPTER 78 OF THE CODE OF ORDINANCES OF THE CITY OF BRENTWOOD, TO ESTABLISH CERTAIN ZONING CLASSIFICATIONS, SAME BEING THE OSRD (OPEN SPACE RESIDENTIAL DEVELOPMENT) AND THE R-2 (SUBURBAN RESIDENTIAL) ZONING DISTRICTS FOR CERTAIN PROPERTIES LOCATED WEST OF SPLIT LOG ROAD AND SOUTH OF THE EXISTING ROSEBROOKE SUBDIVISION SAID TERRITORY BEING ADJACENT TO AND INCLUDING SECTIONS OF SPLIT LOG ROAD, BEING MORE SPECIFICALLY DESCRIBED IN THE PROPERTY DESCRIPTIONS ATTACHED HERETO AND MADE A PART OF THIS ORDINANCE BY REFERENCE, AND SHOWN ON THE MAP ATTACHED HERETO AND MADE A PART OF THIS ORDINANCE BY REFERENCE; AND TO AMEND THE OFFICIAL ZONING MAP ACCORDINGLY

WHEREAS, the City of Brentwood intends to annex certain territory, adjacent to and including a certain section Split Log Road into its corporate limits by Resolution 2022-34, pursuant to Tennessee Code Annotated Section 6-51-101 *et seq.*; and

WHEREAS, it is in the best interest of the City of Brentwood and the said annexed territory that a zoning classification be established for said territory: and

WHEREAS, the City of Brentwood intends to establish a zoning classification for a portion of the property lying west of Split Log Road and south of the existing Rosebrooke Subdivision same being the OSRD Open Space Residential Development zoning district: and

WHEREAS, the City of Brentwood also intends to establish a zoning classification for a portion of the property also lying west of Split Log Road and southeasterly of the existing Rosebrooke Subdivision same being the the the R-2 Suburban Residential zoning district: and

WHEREAS, the zoning of the property shall be contingent upon approval of the proposed annexation, pursuant to Resolution 2022-34.

NOW THEREFORE, BE IT ORDAINED BY THE CITY OF BRENTWOOD, TENNESSEE, AS FOLLOWS:

SECTION 1. That the OSRD (Open Space Residential Development) zoning district, as defined by the zoning ordinance of the City of Brentwood, Tennessee, be and the same is hereby established for portion of the property identified on the current Williamson County tax maps as Map 055, Parcel 01400, and Map 055, Parcel 01401 said property being more particularly described in the property description attached hereto as Attachment “A,” and being more particularly shown on Attachment “C,” said attachments being made a part of this ordinance by reference.

SECTION 2. That the R-2 Suburban Residential zoning district, as defined by the zoning ordinance of the City of Brentwood, Tennessee, be and the same is hereby established for a portion

of certain property identified on the current Williamson County tax maps as Map 055, Parcel 01400, and the entire property identified on the current Williamson County tax maps as Map 055, Parcel 01001 said property being more particularly described in the property description attached hereto as Attachment “B,” and being more particularly shown on Attachment “C,” said attachments being made a part of this ordinance by reference.

SECTION 3. That approval of the zoning shall be contingent upon approval of the proposed annexation of the property, pursuant to Resolution 2022-34

SECTION 4. That the official zoning map be and the same is hereby amended accordingly.

SECTION 5. That the development plan attached hereto as Attachment “C” is hereby approved as the basis for design and layout of the subdivision plat, pursuant to Section 78-185 of the Code of Ordinances of the City of Brentwood.

SECTION 6. That this ordinance shall take effect from and after its final passage, or fifteen days after its first passage, whichever occurs later, the general welfare of the City of Brentwood, Williamson County, Tennessee, requiring it.

PASSED:	1st reading	_____	PLANNING COMMISSION	_____
	2nd reading	_____	NOTICE OF PASSAGE	
			Notice published in:	_____
			Date of publication:	_____
PUBLIC HEARING				
	Notice published in:	<u>Williamson A.M.</u>		
	Date of publication:	_____		
	Date of hearing:	_____	EFFECTIVE DATE	_____

_____ MAYOR	_____ Rhea E. Little III	_____ RECORDER	_____ Holly Earls
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Approved as to form:

_____ CITY ATTORNEY	_____ Kristen L. Corn
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**ATTACHMENT A
ORDINANCE 2022-04
LANDS LYING WITHIN WILLIAMSON COUNTY, TENNESSEE
SPLIT LOG ROAD
ANNEXATION DESCRIPTION**

SPLIT-LOG FARMS, LLC PROPERTY

MAP 055, P/O PARCEL 014.00

BRUCE SUDANO PROPERTY

MAP 055, P/O PARCEL 014.01

SPLIT LOG ROAD

WILLIAMSON COUNTY

PROPOSED OSRD ZONING DESCRIPTION

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County, Tennessee. Being bounded on the north by the Sunset Road Development, LLC property of record in Book 8670, Page 432, Register's Office for Williamson County, Tennessee (R.O.W.C.T.) and; at the northeast by the John A. McArthur and wife, Norma D. McArthur property of record in Book 220, Page 602, R.O.W.C.T.; on the east by the Michael D. Culbreth and Lynette Culbreth property of record in Book 6010, Page 811, R.O.W.C.T., the remainder of the Split-Log Farms, LLC Property of record in Book 8075, Page 31, R.O.W.C.T., the remainder of the Bruce Sudano Property of record in Book 7044, Page 324, and Split Log Road (right-of-way width varies); on the south by: the Larry R. Williams, Trustee property of record in Book 1010, Page 991, R.O.W.C.T. and the Split Log Farm, LLC property of record in Book 4155, Page 912, R.O.W.C.T.; on the south and west by the Alan D. Jeffries and wife, Jill Carlene Jeffries property of record in Book 782, Page 586, R.O.W.C.T.; on the west by the Rex Elbert H. Arendall, II and wife, Carol B. Arendall property of record in Will Book 1008, Page 159, R.O.W.C.T. and being more particularly described as follows:

Beginning in the centerline of Split Log Road at the northeast corner of said Split Log Farm property of record in Book 4155, Page 912, R.O.W.C.T.;

Thence, leaving said centerline of Split Log Road with the north line of Split Log Farm property the following five (5) calls:

1. North 82 degrees 59 minutes 59 seconds West, 518.72 feet to an iron rod (old) with cap stamped "Cherry";
2. South 52 degrees 58 minutes 32 seconds West, 362.37 feet to an iron rod (old) with cap stamped "Cherry";
3. North 67 degrees 39 minutes 25 seconds West, 347.21 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
4. North 26 degrees 31 minutes 29 seconds West, 103.37 feet to an iron rod (old) with cap stamped "Cherry";
5. North 73 degrees 06 minutes 29 seconds West, 419.64 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" to the southeast corner of said Jeffries property;

Thence, with the east line of Jeffries, North 07 degrees 44 minutes 54 seconds East, 1006.38 feet to

a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" at the northeast corner of Jeffries;

Thence, with the north line of Jeffries and said Williams property, North 83 degrees 10 minutes 32 seconds West, 732.71 feet to 1/2-inch iron rod (old) at the southeast corner of said Arendall, II property;

Thence, with the east line of Arendall the following two (2) calls:

1. North 07 degrees 41 minutes 27 seconds East, 427.32 feet to an iron rod (old) with cap stamped "Cherry";
2. North 05 degrees 39 minutes 27 seconds East, 268.53 feet to a 1/2-inch iron rod (old) with cap stamped "Cherry" in the south line of said Sunset Road Development, LLC property;

Thence, with the south line of said Sunset Road Development, LLC the following seven (7) calls:

1. South 85 degrees 15 minutes 25 seconds East, 158.67 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
2. South 83 degrees 15 minutes 35 seconds East, 417.87 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
3. South 83 degrees 04 minutes 30 seconds East, 200.87 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
4. South 83 degrees 16 minutes 49 seconds East, 245.37 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
5. South 83 degrees 28 minutes 51 seconds East, 599.99 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
6. South 79 degrees 08 minutes 40 seconds East, 337.28 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
7. South 75 degrees 25 minutes 08 seconds East, 111.08 feet to an iron rod (old) with cap stamped "Cherry" at a northwest corner of said McArthur property;

Thence, with the easterly line of the herein described tract of land and proposed OSRD (Open Space Residential Development) Zoning Line the following eight (8) calls:

1. South 10 degrees 44 minutes 11 seconds West, 160.01 feet;
2. South 07 degrees 59 minutes 27 seconds East, 176.53 feet;
3. South 06 degrees 21 minutes 31 seconds West, 158.95 feet;
4. South 75 degrees 24 minutes 49 seconds West, 100.95 feet;
5. South 02 degrees 39 minutes 45 seconds West, 154.39 feet;
6. South 13 degrees 48 minutes 03 seconds East, 166.79 feet;
7. South 12 degrees 22 minutes 00 seconds East, 198.09 feet;
8. South 79 degrees 49 minutes 19 seconds East, 151.90 feet to a point in the west right-of-way line of said Split Log Road;

Thence, with the west line of Split Log Road the following two (2) calls:

1. Along a curve to the left, having an arc length of 360.15 feet, a radius of 3,853.75 feet, a delta angle of 05 degrees 21 minutes 16 seconds and a chord bearing and distance of South 07 degrees 26 minutes 21 seconds West, 360.02 feet;
2. South 04 degrees 45 minutes 43 seconds West, 95.14 feet to the **Point of Beginning**, containing 3,035,660 square feet or 69.69 acres, more or less.

Being a portion of the same property conveyed to Split-Log Farms, LLC by Warranty Deed of record in Book 8075, page 31, Register's Office for Williamson County, Tennessee, and a portion of the same property conveyed to Bruce Sudano, Trustee of the Bruce Sudano 2015 Family Trust by Quitclaim Deed of record in Book 7044, page 324, Register's Office for Williamson County, Tennessee.

**ATTACHMENT B
ORDINANCE 2022-04
ANNEXED TERRITORY
LANDS LYING WITHIN WILLIAMSON COUNTY, TENNESSEE
SPLIT LOG ROAD
ANNEXATION DESCRIPTION**

SPLIT-LOG FARMS, LLC PROPERTY

MAP 055, P/O PARCEL 014.00

BRUCE SUDANO PROPERTY

MAP 055, P/O PARCEL 014.01

SPLIT LOG ROAD

WILLIAMSON COUNTY

R-2 ZONING DESCRIPTION

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County, Tennessee. Being bounded on the north by the Michael D. Culbreth and Lynette Culbreth property of record in Book 6010, Page 811, R.O.W.C.T.; on the east by Split Log Road (right-of-way width varies); on the south and west by the remainder of the Bruce Sudano Property of record in Book 7044, Page 324, R.O.W.C.T.; on the west by the remainder of the Split-Log Farms, LLC Property of record in Book 8075, Page 31, R.O.W.C.T., and being more particularly described as follows:

Beginning on a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" in the west right-of-way line of said Split Log Road and in the north line of said Sudano property;

Thence, leaving said right-of-way line with the north line of Sudano, South 82 degrees 59 minutes 59 seconds East, 25.84 feet to the centerline of Split Log Road;

Thence, with the centerline of said Split Log Road the following two (2) calls:

1. South 11 degrees 09 minutes 08 seconds West, 111.37 feet;
2. Along a curve to the left, having an arc length of 69.66 feet, a radius of 3853.75 feet, a delta angle of 01 degrees 02 minutes 09 seconds and a chord bearing and distance of South 10 degrees 38 minutes 04 seconds West, 69.66 feet;

Thence, with the southerly and westerly line of the herein described tract of land and proposed R-2 (Suburban Residential) Zoning Line the following eight (8) calls:

1. North 79 degrees 49 minutes 19 seconds West, 151.90 feet;
2. North 12 degrees 22 minutes 00 seconds West, 198.09 feet;
3. North 13 degrees 48 minutes 03 seconds West, 166.79 feet;
4. North 02 degrees 39 minutes 45 seconds East, 154.39 feet;
5. North 75 degrees 24 minutes 49 seconds East, 100.95 feet;
6. North 06 degrees 21 minutes 31 seconds East, 158.95 feet;
7. North 07 degrees 59 minutes 27 seconds West, 176.53 feet;

8. North 10 degrees 44 minutes 11 seconds East, 160.01 feet to a 1/2-inch iron rod (old) with no cap at the southwest corner of Culbreth;

Thence, with the south line of Culbreth, South 82 degrees 27 minutes 16 seconds East, 604.80 feet to an iron rod (old) with cap stamped "H&H" in the west right-of-way line of said Split Log Road;

Thence, with the west line of Split Log Road the following five (5) calls:

1. South 51 degrees 40 minutes 26 seconds West, 114.04 feet to an iron rod (old) with cap stamped "H&H";
2. Along a curve to the left, having an arc length of 174.22 feet, a radius of 611.67 feet, a delta angle of 16 degrees 19 minutes 09 seconds and a chord bearing and distance of South 43 degrees 30 minutes 51 seconds West, 173.63 feet to an iron rod (old) with cap stamped "H&H"
3. South 35 degrees 21 minutes 16 seconds West, 236.58 feet to an iron rod (old) with cap stamped "H&H"
4. Along a curve to the left, having an arc length of 289.84 feet, a radius of 687.33 feet, a delta angle of 24 degrees 09 minutes 41 seconds and a chord bearing and distance of South 23 degrees 16 minutes 26 seconds West, 287.70 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
5. South 11 degrees 11 minutes 21 seconds West, 140.45 feet to the **Point of Beginning** containing 327,778 square feet or 7.52 acres, more or less;

Being a portion of the same property conveyed to Split-Log Farms, LLC by Warranty Deed of record in Book 8075, page 31, Register's Office for Williamson County, Tennessee, and a portion of the same property conveyed to Bruce Sudano, Trustee of the Bruce Sudano 2015 Family Trust by Quitclaim Deed of record in Book 7044, page 324, Register's Office for Williamson County, Tennessee.

PROPERTY DESCRIPTION

JOHN A. MCARTHUR SR, AND NORMA D. MCARTHUR PROPERTY

MAP 055, PARCEL 01001

9824 SPLIT LOG ROAD

WILLIAMSON COUNTY

ANNEXATION DESCRIPTION

R-2 ZONING DESCRIPTION

Williamson County Paracel Number 055 01001 00016055, including an area of approximately 7.12 acres and located at 9824 Split Log Road. The current property owners are John A. McArthur Sr, And Norma D. McArthur. As recorded in Plat Book 14, Page 99.

To include a Portion of the Split Log Road right-of-way as follows:

A portion of Split Log Road that fronts the subject properties to include a portion of Split Log Road fronting along the Sudano property – 9814 Split Log Road (055 01401), and portion of Split Log Road fronting along the Split Log Farms property – (055 01400),

1. SUBJECT PROPERTY CONSISTS OF PARCELS 14.00 AND 14.01 AS SHOWN ON WILLIAMSON COUNTY PROPERTY MAP NO. 055.

2. PROPERTY OWNERS: (PARCEL 14.00) SPLIT-LOG FARMS, LLC
BOOK 8075, PAGE 31, R.O.W.C.T.
(PARCEL 14.01) BRUCE SUDANO, TRUSTEE
BOOK 7044, PAGE 324, R.O.W.C.T.

3. EXISTING ZONING: MGA-1 (MUNICIPAL GROWTH AREA DISTRICT 1).
PROPOSED ZONING: R-2 (SUBURBAN RESIDENTIAL) AND OSRD (OPEN SPACE RESIDENTIAL DEVELOPMENT)

4. GROSS SITE AREA: (R-2 - 7.52 ACRES, OSRD - 69.69 ACRES) - 77.21 ACRES.

5. BOUNDARY INFORMATION TAKEN FROM FIELD RUN SURVEY PERFORMED BY RAGANSMITH ON OCTOBER 13, 2021 - CHRIS MABERY, RLS.

6. FOR TOPOGRAPHIC ASPECTS OF THIS SURVEY, RTK GPS POSITIONAL DATA WAS OBSERVED ON JULY 23, 2021 UTILIZING A TRIMBLE R10 DUAL FREQUENCY RECEIVER. THE GRID COORDINATES OF THE FIXED STATION(S) SHOWN WERE DERIVED USING A VRS NETWORK OF CORS STATIONS REFERENCED TO NAD 83 (2011) (EPOCH 2010), GEOID 12B.
ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88. CONTOURS ARE AT TWO FOOT INTERVALS AND ARE BASED ON A FIELD RUN SURVEY USING RANDOM SPOT ELEVATIONS. CONTOURS WERE DERIVED USING SURFACE MODELING TECHNIQUES.

7. NUMBER OF PROPOSED LOTS: R2 - 3 LOTS, OSRD - 47 LOTS = 50 LOTS TOTAL.

8. PROPOSED DENSITY: 0.65 DU/AC. (1.0 DU/AC. MAXIMUM).

9. MAXIMUM BUILDING COVERAGE OF PROPOSED LOTS: 25%.

10. EACH PROPOSED LOT SHALL PROVIDE A MINIMUM OF TWO OFF-STREET PARKING SPACES.

11. MINIMUM LOT WIDTH AT BUILDING LINE: R-2 LOTS - 125', OSRD LOTS - 110', OR 120' FOR TRANSITIONAL LOTS.

12. MINIMUM BUILDING SETBACKS: (UNLESS SHOWN OTHERWISE)
R-2 (LOTS 125-127)-
FRONT - 150'
SIDE - 30' (SIDE YARD SETBACK FOR ANY SIDE YARD ABUTTING A LOT ON AN ARTERIAL STREET WHICH THE PRINCIPAL STRUCTURE FACES REAR - 30'
OSRD (LOTS 128-174)-
FRONT - 50'
SIDE - 15'/25' OR 20'/20' (TOTAL 40' BETWEEN BUILDING) SIDE ABUTTING A STREET - 30'
REAR - 30'
ABUTTING PROJECT PERIMETER - 35'

13. ALL ELECTRIC SERVICE FOR THE PROPOSED DEVELOPMENT SHALL BE UNDERGROUND. ALL PUBLIC PUBLIC UTILITIES SHALL BE SUBJECT TO THE APPROVAL OF THE APPLICABLE UTILITY COMPANIES.

14. UTILITY PROVIDERS:
ELECTRICITY: MIDDLE TN ELECTRIC MEMBERSHIP CORP. (615) 794-1102
WATER: WATERSVILLE COLLEGE GROVE UTILITY DISTRICT (615) 776-2511

TELEPHONE: UNITED TELEPHONE (931) 364-2289
SANITARY SEWER: METRO WATER SERVICES (615) 862-4600
NATURAL GAS: ATMOS GAS (888) 286-6700

15. PER REQUIREMENTS 78-184(3) & (7), ANY OSRD LOT SHOWN HEREON AS A "TRANSITIONAL" LOT SHALL HAVE A MINIMUM WIDTH OF 120' AT THE BUILDING SETBACK.

16. EXISTING VEGETATION TO REMAIN SHALL BE CONTAINED WITHIN A SCENIC EASEMENT. ALL OPEN SPACE AREAS DESIGNATED AS SCENIC EASEMENTS SHALL REMAIN UNDISTURBED. SCENIC EASEMENT LOCATIONS TO BE DETERMINED ON FINAL PLATS.

17. WATERWAY NATURAL AREAS RELATE TO WATERCOURSES CLASSIFIED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENTAL AND CONSERVATION AS STREAMS OR "WATERS OF THE STATE." THESE STREAMS ARE INTENDED TO REMAIN IN THEIR NATURAL CONDITION AND TO BE BUFFERED IN ACCORDANCE WITH TDEC CRITERIA. NO DISTURBANCE IS TO OCCUR WITHIN THE BUFFER LIMITS EXCEPT AS PERMITTED BY TDEC OR THE U.S. CORPS OF ENGINEERS.

18. THIS OSRD PLAN IS SUBJECT TO A THREE YEAR VESTING PERIOD, DURING WHICH THE DEVELOPMENT STANDARDS IN EFFECT ON THE DATE OF APPROVAL WILL REMAIN THE STANDARDS APPLICABLE TO THIS PLAN. IF UPON EXPIRATION OF THE VESTING PERIOD, DEVELOPMENT OF THE PROPERTY SHOWN ON THIS PLAN MAY BE SUBJECT TO STANDARDS OTHER THAN THOSE THAT WERE APPLICABLE DURING THE VESTING PERIOD. THE VESTING PERIOD FOR THIS PLAN EXPIRES ON _____, UNLESS EXTENDED BY THE CITY OF BRENTWOOD. PERSONS RELYING ON THIS PLAN AFTER SAID DATE SHOULD CONTACT THE CITY OF BRENTWOOD TO DETERMINE IF DEVELOPMENT MAY CONTINUE AS DEPICTED ON THE PLAN.

19. LOTS DESIGNATED WITH HAVE NATURAL SLOPES OF GREATER THAN 15%. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR A RESIDENTIAL LOT WITH A SLOPE OF 15% OR GREATER, A PLAN SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER FOR APPROVAL BY THE CITY ENGINEER SHOWING EXISTING TOPOGRAPHIC INFORMATION FROM FIELD RUN SURVEY DATA, BOUNDARY AND SETBACK LINES, UTILITY AND DRAINAGE EASEMENTS, EXISTING AND PROPOSED DRAINAGE PIPES, DITCHES AND SWALES TO BE CONNECTED TO PUBLIC DRAINAGE LINES AND/OR TO DIRECT OR RE-DIRECT STORMWATER RUNOFF, THE PROPOSED BUILDING FOOTPRINT AND THE DRIVEWAY PLAN, INCLUDING THE FINISH FLOOR ELEVATIONS AND FINISHED GRADES OF PAVEMENTS AND GROUND LINES, IDENTIFICATION OF EXISTING TREES IN EXCESS OF FOUR-INCH CALIPER AND TREES TO BE PRESERVED, AND THE LOCATION AND TIMING OF INSTALLATION OF EROSION CONTROL FEATURES. NO CLEAR CUTTING OF TREES OR GRADING OF THE LOT SHALL BE PERMITTED UNTIL APPROVAL OF THE SITE PLAN BY THE CITY ENGINEER.

20. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN ZONE "X", AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47187C02303, WITH AN EFFECTIVE DATE OF FEBRUARY 26, 2021, WHICH MAKES UP A PORTION OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 472024, PANEL NO. 0230, SUFFIX G, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AREAS OF MINIMAL FLOOD HAZARD.

21. THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION WITHIN THE WATERWAY NATURAL AREA, EXCEPT AS PERMITTED BY THE CITY OF BRENTWOOD.

22. MIDDLE TENNESSEE ELECTRIC MEMBERSHIP CORPORATION (MTEMC) SHALL HAVE ACCESS TO INSTALL, CONSTRUCT, REPHASE, OPERATE, AND MAINTAIN ITS ELECTRIC FACILITIES LOCATED WITHIN THE SUBJECT PROPERTY. MTEMC HAS THE RIGHT TO CUT, TRIM AND CONTROL THE GROWTH BY CHEMICAL MEANS, MACHINERY, OR OTHERWISE OF TREES AND SUBSTRY LOCATED WITHIN 20 FEET OF THE CENTER LINE (A TOTAL OF 40') OF ITS FACILITIES, OR ANY VEGETATION THAT MAY INTERFERE WITH OR THREATEN TO ENDANGER THE OPERATION AND MAINTENANCE OF ITS FACILITIES.

23. MTEMC WILL PROVIDE ELECTRIC SERVICE TO THE SUBJECT PROPERTY ACCORDING TO THE NORMAL OPERATING PRACTICES OF MTEMC AS DEFINED IN ITS RULES AND REGULATIONS, BYLAWS, AND POLICIES, AND IN ACCORDANCE WITH THE PLAT APPROVAL CHECKLIST, TREE PLANTING GUIDELINES AND OTHER REQUIREMENTS CONTAINED ON THE MTEMC WEBSITE AT WWW.MTEMC.COM (COLLECTIVELY THE "REQUIREMENTS"). NO ELECTRIC SERVICE WILL BE PROVIDED UNTIL MTEMC'S REQUIREMENTS HAVE BEEN MET AND APPROVED BY WRITING BY AN AUTHORIZED REPRESENTATIVE OF MTEMC. AN APPROVAL IS, AT ALL TIMES, CONTINGENT UPON CONTINUING COMPLIANCE WITH MTEMC'S REQUIREMENTS.

ROSEBROOKE SOUTH OVERALL OSD CALCULATIONS	
Total Site Area (AC)	69.69
Less R.O.W. dedication -- Split Log Road	0.47
Less R.O.W. dedication -- Internal streets	5.62
TOTAL	63.60
Less Areas in 25% Slopes	0.90
Plus 25% of slopes over 25%	0.23
Less Areas in Floodway	0.00
Plus 25% Areas in Floodways	0.00
Less Areas in Electrical Natural & Gas Easements	0.00
Plus 25% of Areas in Electrical Natural & Gas Easements	0.00
Total Usable Land Area (AC)	62.93
Less area in lots>1 acre	4.06
TOTAL LAND AREA AVAILABLE	58.87
Total Land Area Required @ 1 DUPA (AC)	47.00
Land Area in Lots	37.91
Open Space Required	9.09
Dedicated Open Space	25.69
EXCESS OPEN SPACE	16.60

LOT	SQ. FT.	AC.	TOTAL	
125	95815	2.20	Lots	3
126	90796	2.08	Sq. Ft.	294932
127	108321	2.49	Acres	6.77

SPLIT LOG ROAD R.O.W. DEDICATION	SQ. FT.	AC.
	32845	0.75

R-2 SITE CALCULATIONS	
TOTAL LOT AREA	6.77
SPLIT LOG ROAD R.O.W. DEDICATION	0.75
TOTAL	7.52

		LOT	SQ. FT.	AC.
	*	128	27698	0.64
		129	27462	0.63
	*	130	24050	0.55
	*	131	24050	0.55
		132	25346	0.58
	*	133	27059	0.62
		134	28832	0.66
		135	27577	0.63
		136	27303	0.63
	*	137	27251	0.63
	*	138	30587	0.70
	*	139	31125	0.71
		140	30493	0.70
		141	34249	0.79
		142	36572	0.84
	*	143	49798	1.14
	*	144	35140	0.81
	*	145	38117	0.88
		146	44338	1.02
		147	30974	0.71
		148	27690	0.64
		149	29357	0.67
		150	23104	0.53
		151	22800	0.52
		152	22800	0.52
	*	153	23482	0.54
	*	154	34378	0.79
		155	32545	0.75
		156	24534	0.56
		157	22802	0.52
		158	21600	0.50
	*	159	25356	0.56
	*	160	111628	2.58
		161	33285	0.76
		162	43132	0.99
	*	163	32156	0.74
	*	164	27157	0.62
	*	165	31366	0.72
		166	29762	0.68
		167	24718	0.57
	*	168	38330	0.88
	*	169	31366	0.72
	*	170	33977	0.78
	*	171	52737	1.21
	*	172	60128	1.38
	*	173	44208	1.01
	*	174	11800	2.73

TOTAL	
Lots	47
Sq. Ft.	1651221
Acres	37.91

OPEN SPACE		
18	29659	0.68
19	567768	13.03
20	296590	6.81
21	48469	1.11
22	1075	0.02
23	1075	0.02
24	173183	3.98
25	1075	0.02

TOTAL
SQ. FT. 1,118,894
ACRES 25.69

128-174)

(UNLESS SHOWN OTHERWISE)
N.T.S.

FOR
CPS LAND, LLC



Nashville - Murfreesboro - Chattanooga
ragansmith.com



Scale: N/A

Date: JANUARY 5, 2022

Approved By: JFV

Revisions:

—	—	—
—	—	—
—	—	—
—	—	—

2	2022.04.28	PER STAFF COMMENTS
1	2022.03.14	LANDSCAPE REVISIONS

Drawing Title:

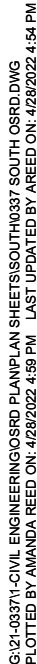
GENERAL NOTES, AREA TABLES, ROADWAY SECTIONS

Drawing No.

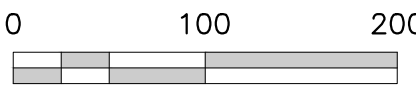
2

Project No.
21-0337

K:\21-03371-CIVIL ENGINEING\OSRD PLAN\PLAN SHEETS\SOUTH\0337 SOUTH OSRD.DWG
 PLOTTED BY AMANDA REED ON: 4/28/2022 4:59 PM LAST UPDATED BY AREED ON: 4/28/2022 4:54 PM



811
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SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH CIVIL DISTRICT OF WILLIAMSON COUNTY

Scale: 1"=100'

Date: JANUARY 5, 2022

Approved By: JFV

Revisions:

2	2022.04.28	PER STAFF COMMENTS
1	2022.03.14	LANDSCAPE REVISIONS

Drawing Title:

OVERALL SITE PLAN

Drawing No.

3

Project No.
21-0337

GENERAL NOTES

1. SEE SHEET 2 FOR GENERAL NOTES, SITE DATA, AREA TABLES, AND OSRD CALCULATIONS.

TRANSITIONAL LOT NOTE:

LOTS DESIGNATED WITH [REDACTED] HAVE NATURAL SLOPES OF GREATER THAN 15%. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR A RESIDENTIAL LOT WITH A SLOPE OF 15% OR GREATER, THE APPLICANT SHALL OBTAIN A LANDSCAPE ARCHITECT'S REPORT FROM A LICENSED LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL BY THE ENGINEERING DEPARTMENT SHOWING EXISTING TOPOGRAPHIC INFORMATION FROM FIELD RUN SURVEY DATA; BOUNDARY AND SETBACK LINES; EXISTING AND PROPOSED PLANTINGS; EXISTING AND PROPOSED DRAINAGE PIPES, SURFACE DRAINAGE FEATURES SUCH AS DITCHES AND SWALES TO BE CONNECTED TO PUBLIC DRAINAGE LINES AND/OR TO DIRECT OR REDIRECT STORMWATER RUN-OFF; LOCATION OF RETAINING WALLS; THE PROPOSED BUILDING FOOTPRINT AND THE PROPOSED DRIVEWAY; EXISTING AND PROPOSED DRIVEWAYS; EXISTING AND PROPOSED WALKWAYS; EXISTING AND PROPOSED GROUND LINES; IDENTIFICATION OF EXISTING TREES IN EXCESS OF FOUR-INCH CALIPER AND TREES TO BE PRESERVED; AND THE LOCATION AND TIMING OF INSTALLATION OF EROSION CONTROL MEASURES. THE REPORT SHALL BE REVIEWED AND APPROVED BY THE ENGINEERING DEPARTMENT. THE REPORT SHALL BE PERMITTED UNTIL APPROVAL OF THE SITE PLAN BY THE ENGINEERING DEPARTMENT.

LEGEND

- | | | | |
|----------------|--|------------|---|
| ○(R) | IRON ROD (OLD) | Ø | UTILITY POLE |
| ⊕ | EXISTING FIRE HYDRANT | ⊕ | UTILITY POLE W/ ANCHOR |
| ⚡ | PROPOSED FIRE HYDRANT | ⊕ | UTILITY POLE W/ LIGHT |
| W | WATER VALVE | —•— | SIGN |
| M | WATER METER | —P&T— | OVERHEAD POWER AND TELEPHONE LINES |
| S | SEWER VALVE | —SA— | PROPOSED SANITARY SEWER LINE |
| ■ | CATCH BASIN | —FM— | PROPOSED FORCE MAIN LINE |
| ■ | PROPOSED STORM INLET | —W— | WATER LINE |
| ● | PROPOSED SANITARY MANHOLE | —ST— | PROPOSED STORM PIPE |
| 25% + SLOPES | | <u>AC</u> | AIR CONDITIONER |
| | | M.B.S.L. | MINIMUM BUILDING SETBACK LINE |
| | | P.U.D.A.E. | PUBLIC UTILITY, DRAINAGE & ACCESS EASEMENT |
| 15%-25% SLOPES | | ★ | TRANSITIONAL LOT (SEE NOTE 19) |
| | | WWC | WET WEATHER CONVEYANCE |
| | WATERWAY NATURAL AREA/
WATERWAY BUFFER AREA | R.O.W.C.T. | REGISTER'S OFFICE FOR
WILLAMSON COUNTY,
TENNESSEE |

ROSEBROOKE SOUTH OVERALL OSRD CALCULATIONS -- COMPARISON		
	1/2022	4/2022
Total Site Area (AC)	69.69	69.69
Less R.O.W. dedication -- Split Log Road	0.47	0.47
Less R.O.W. dedication -- Internal streets	5.38	5.62
TOTAL	63.84	63.60
Less Areas in 25% Slopes	0.90	0.90
Plus 25% of slopes over 25%	0.23	0.23
Less Areas in Floodway	0.00	0.00
Plus 25% Areas in Floodways	0.00	0.00
Less Areas in Electrical Natural & Gas Easements	0.00	0.00
Plus 25% of Areas in Electrical Natural & Gas Easements	0.00	0.00
Total Usable Land Area (AC)	63.17	62.93
Less area in lots>1 acre	2.48	4.06
TOTAL LAND AREA AVAILABLE	60.69	58.87
Total Land Area Required @ 1 DUPA (AC)	47.00	47.00
Land Area in Lots	38.09	37.91
Open Space Required	8.91	9.09
Dedicated Open Space	25.75	25.69
EXCESS OPEN SPACE	16.84	16.60
AVERAGE LOT SIZE (AC)	0.81	0.81

GENERAL NOTES AND SITE DATA

- SUBJECT PROPERTY CONSISTS OF PARCELS 14.00 AND 14.01 AS SHOWN ON WILLIAMSON COUNTY PROPERTY MAP NO. 055.
- PROPERTY OWNERS:
(PARCEL 14.00) SPLIT-LOG FARMS, LLC
BOOK 8075, PAGE 31, R.O.W.C.T.

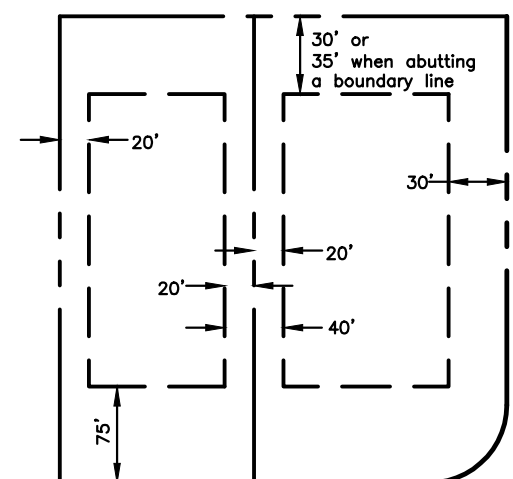
(PARCEL 14.01) BRUCE SUDANO, TRUSTEE
BOOK 7044, PAGE 324, R.O.W.C.T.
- EXISTING ZONING: MGA-1 (MUNICIPAL GROWTH AREA DISTRICT 1).
- GROSS SITE AREA: 77.21 ACRES.
- BOUNDARY INFORMATION TAKEN FROM FIELD RUN SURVEY PERFORMED BY RAGAN-SMITH ASSOCIATES ON OCTOBER 13, 2021 - CHRIS MABERY, RLS.
- FOR TOPOGRAPHIC ASPECTS OF THIS SURVEY, RTK GPS POSITIONAL DATA WAS OBSERVED ON JULY 23, 2021 UTILIZING A TRIMBLE R10 DUAL FREQUENCY RECEIVER. THE GRID COORDINATES OF THE FIXED STATION(S) SHOWN WERE DERIVED USING A VRS NETWORK OF CORS STATIONS REFERENCED TO NAD 83 (2011) (EPOCH 2010), GEOID 12B.

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88. CONTOURS ARE AT TWO FOOT INTERVALS AND ARE BASED ON A FIELD RUN SURVEY USING RANDOM SPOT ELEVATIONS. CONTOURS WERE DERIVED USING SURFACE MODELING TECHNIQUES.
- NUMBER OF PROPOSED LOTS: 50.
- PROPOSED DENSITY (R-2 ZONING): 0.65 DU/AC. (1.0 DU/AC. MAXIMUM).
- MAXIMUM BUILDING COVERAGE OF PROPOSED LOTS: 25%.
- EACH PROPOSED LOT SHALL PROVIDE A MINIMUM OF TWO OFF-STREET PARKING SPACES.
- MINIMUM BUILDING SETBACKS: (UNLESS SHOWN OTHERWISE)
FRONT - 7'5"
SIDE - 20'
SIDE ABUTTING A STREET - 30'
REAR - 30'
ABUTTING PROJECT PERIMETER - 35'
- ALL ELECTRIC SERVICE FOR THE PROPOSED DEVELOPMENT SHALL BE UNDERGROUND. ALL PUBLIC PUBLIC UTILITIES SHALL BE SUBJECT TO THE APPROVAL OF THE APPLICABLE UTILITY COMPANIES.
- LOTS DESIGNATED AS TRANSITIONAL SHALL REQUIRE DETAILED SITE AND GRADING PLANS REVIEW BY THE CITY ENGINEER PRIOR TO ISSUANCE OF A BUILDING PERMIT.
- UTILITY PROVIDERS:
ELECTRICITY: MIDDLE TN ELECTRIC MEMBERSHIP CORP. (615) 794-1102
WATER: NOLENSVILLE COLLEGE GROVE UTILITY DISTRICT (615) 776-2511

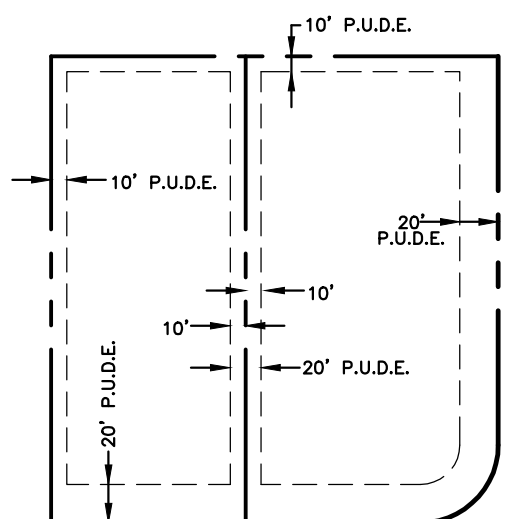
TELEPHONE: UNITED TELEPHONE (931) 364-2289
SANITARY SEWER: METRO WATER SERVICES (615) 862-4600
NATURAL GAS: ATMOS GAS (888) 286-6700
- WATERWAY NATURAL AREAS RELATE TO WATERCOURSES CLASSIFIED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENTAL AND CONSERVATION AS STREAMS OR "WATERS OF THE STATE." THESE STREAMS ARE INTENDED TO REMAIN IN THEIR NATURAL CONDITION AND TO BE BUFFERED IN ACCORDANCE WITH TDEC CRITERIA. NO DISTURBANCE IS TO OCCUR WITHIN THE BUFFER LIMITS EXCEPT AS PERMITTED BY TDEC OR THE U.S. CORPS OF ENGINEERS.
- BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN ZONE "X", AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47187C0230G, WITH AN EFFECTIVE DATE OF FEBRUARY 26, 2021, WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 470204; PANEL NO. 0230; SUFFIX G, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AREAS OF MINIMAL FLOOD HAZARD.
- THE DRIVEWAYS ON LOTS 36, 37 AND 38 SHALL ALIGN WITH EXISTING DRIVEWAYS ACROSS THE STREET.

TRANSITIONAL LOT NOTE:

LOTS DESIGNATED WITH  HAVE NATURAL SLOPES OF GREATER THAN 15%. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR A RESIDENTIAL LOT WITH A SLOPE OF 15% OR GREATER, A SITE DEVELOPMENT PLAN SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL BY THE ENGINEERING DEPARTMENT SHOWING EXISTING TOPOGRAPHIC INFORMATION FROM FIELD RUN SURVEY DATA; BOUNDARY AND SETBACK LINES; PUBLIC UTILITY AND DRAINAGE EASEMENTS; PROPOSED CITY-OWNED UTILITIES; EXISTING AND PROPOSED DRAINAGE PIPES, SURFACE DRAINAGE FEATURES SUCH AS DITCHES AND SWALES TO BE CONNECTED TO PUBLIC DRAINAGE LINES AND/OR TO DIRECT OR REDIRECT STORMWATER RUN-OFF; LOCATION OF RETAINING WALLS; THE PROPOSED BUILDING FOOTPRINT AND THE DRIVEWAY PLAN, INCLUDING FLOOR ELEVATIONS AND FINISHED GRADES OF PAVEMENT AND GROUND LINES; IDENTIFICATION OF EXISTING TREES IN EXCESS OF FOUR-INCH CALIPER AND TREES TO BE PRESERVED; AND THE LOCATION AND TIMING OF INSTALLATION OF EROSION CONTROL FEATURES. NO CLEAR CUTTING OF TREES OR GRADING OF THE LOT SHALL BE PERMITTED UNTIL APPROVAL OF THE SITE PLAN BY THE ENGINEERING DEPARTMENT.



TYPICAL LOT SETBACK LINES
(UNLESS SHOWN OTHERWISE)
N.T.S.



TYPICAL LOT EASEMENT LINES
N.T.S.

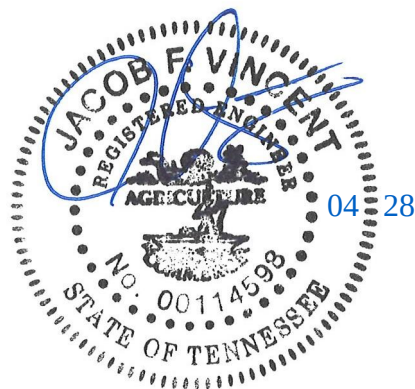
LEGEND

- 15-25% SLOPES
- 25% + SLOPES

CURVE TABLE						
CURVE	RADIUS	LENGTH	DELTA	TANGENT	CHORD	CHD BRG
C1	611.67'	174.22'	16°19'09"	87.70	173.63'	S43°30'51"W
C2	687.33'	289.84'	24°09'41"	147.11	287.70'	S23°16'26"W
C3	3853.75'	429.81'	6°23'25"	215.13	429.59'	S07°57'25"W



LOT AREA TABLE		
LOT	SQ. FT.±	ACRES±
1	43,638	1.00
2	46,086	1.06
3	43,582	1.00
4	46,216	1.06
5	53,579	1.23
6	55,408	1.27
7	49,712	1.14
8	43,770	1.00
9	44,471	1.02
10	44,357	1.02
11	43,984	1.01
12	44,905	1.03
13	59,625	1.37
14	49,677	1.14
15	44,882	1.03
16	43,607	1.00
17	43,683	1.00
18	46,757	1.07
19	47,210	1.08
20	43,915	1.01
21	45,048	1.03
22	44,413	1.02
23	43,843	1.01
24	43,744	1.00
25	45,380	1.04
26	43,747	1.00
27	43,750	1.00
28	45,376	1.04
29	45,638	1.05
30	47,180	1.08
31	44,662	1.03
32	43,883	1.01
33	43,600	1.00
34	43,917	1.01
35	45,717	1.05
36	87,703	2.01
37	102,917	2.36
38	95,971	2.20
39	44,918	1.03
40	43,780	1.01
41	44,606	1.02
42	45,392	1.04
43	43,616	1.00
44	48,238	1.11
45	50,473	1.16
46	57,513	1.32
47	46,082	1.06
48	43,900	1.01
49	43,750	1.00
50	43,750	1.00



ROSEBROOKE SOUTH
FOR
CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH CIVIL DISTRICT OF WILLIAMSON COUNTY

Scale: 1"=200'

Date: JANUARY 5, 2022

Approved By: JFV

Revisions:

- 2 2022.04.28 PER STAFF COMMENTS
- 1 2022.03.14 LANDSCAPE REVISIONS

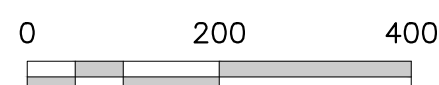
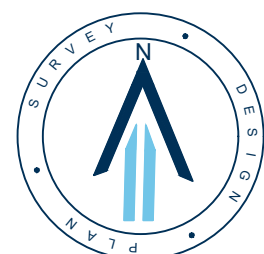
Drawing Title:

ALTERNATE R-2
SITE PLAN

Drawing No.

4

Project No.
21-0337





LOTS:

OSRD LOTS:
- SOUTH: 47
- EAST: 74
- MAIN: 116

R2 LOTS:
- SOUTH: 3
- EAST: 0
- MAIN: 8

TOTAL SITE AREA:

SOUTH: 69.69 AC
EAST: 122.16 AC

LEGEND:

OSRD LOTS

R2 LOTS

PONDS

WETLANDS

BRENTWOOD CITY LIMITS

BRENTWOOD UGB

EXISTING SPLIT LOG RD.

ROSEBROKE SOUTH:	
PROPOSED SPLIT LOG ROAD R.O.W. DEDICATION	0.47AC
OSRD PORTION	0.75 AC
R-2 PORTION	
ROSEBROOKE EAST:	
PROPOSED SPLIT LOG ROAD R.O.W. DEDICATION	
OSRD PORTION	3.99 AC
TOTAL PROPOSED SPLIT LOG ROAD R.O.W. AREA (90' R.O.W.)	
	5.21 AC
TOTAL EXISTING SPLIT LOG ROAD R.O.W. AREA (50' ASSUMED R.O.W.) THROUGH PROPERTIES	
	3.11 AC


RaganSmith

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ROSEBROOKE ADDITION

FOR

CPS LAND (CPS)

16th CIVIL DISTRICT OF WILLIAMSON COUNTY, CITY OF BRENTWOOD, TENNESSEE

Scale: 1"=300'

Date: APRIL 27, 2022

Approved By: TF

Drawn By: TF

Revisions:

Drawing Title:
EXHIBIT

Drawing No.
COMPOSITE MAP

Project No.

<u>LANDSCAPE BUFFER "A" REQUIREMENT:</u>	
ROAD FRONTAGE (SPLIT LOG ROAD)	458 L.F.
BUFFER WIDTH PROVIDED:	150
TREES REQUIRED (458/100 X 45):	207
TREES PROVIDED:	207
EXISTING VEGETATION:	45 TREES
PROPOSED VEGETATION:	162 TREES
EVERGREEN (MIN. 75%):	169 (81.6%)
DECIDUOUS:	38

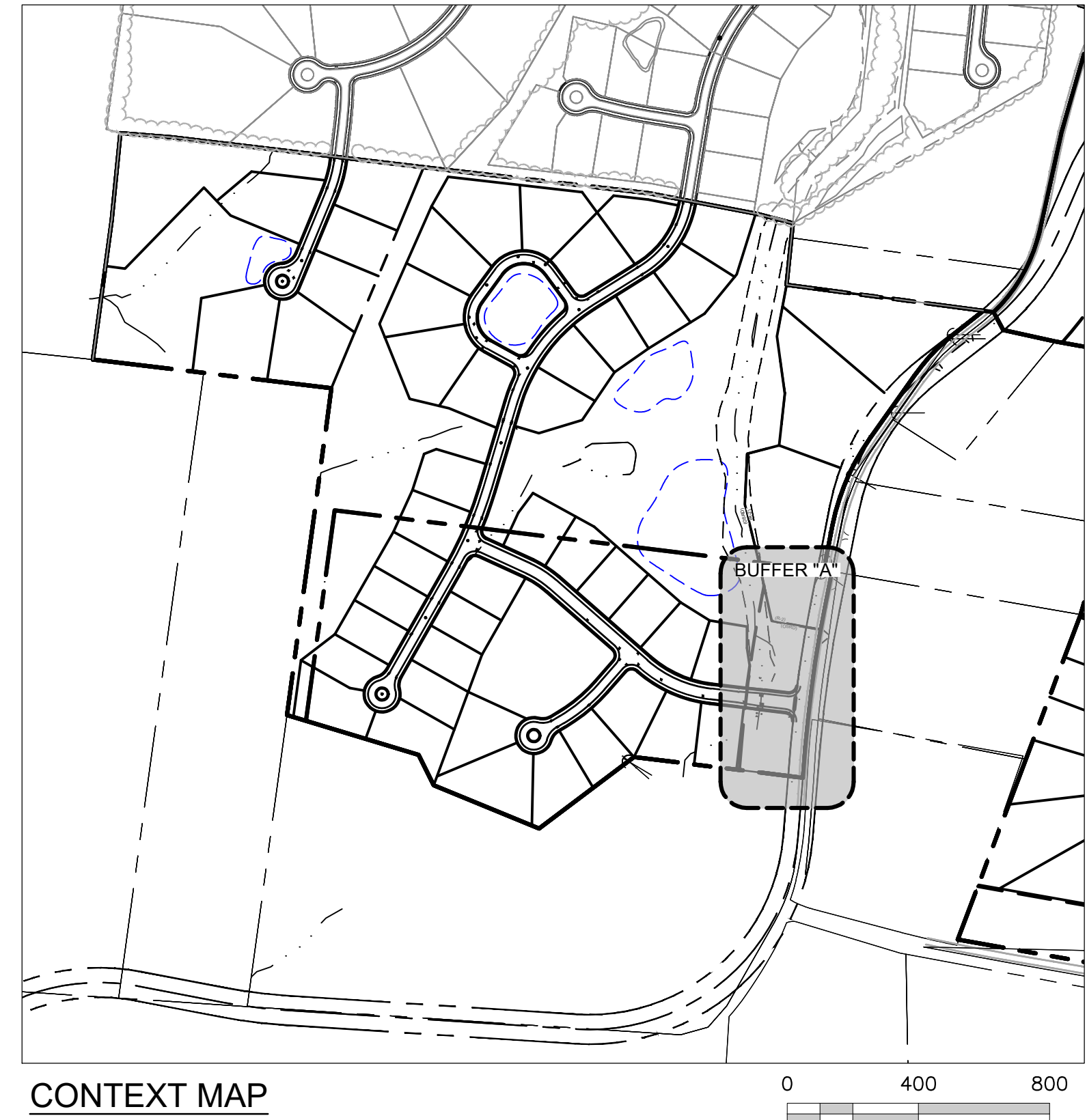
LANDSCAPE SITE DATA

PROPERTY INFORMATION:
STREET ADDRESS: 9814 SPLIT LOG ROAD
SITE ACREAGE: OSRD - 69.69 AC , R2 - 6.77 AC
TOTAL - 76.46 AC

OWNER/DEVELOPER:
ROB PEASE
CPS LAND, LLC
213 OVERLOOK CT.
BRENTWOOD, TN 37027
(615) 376-5177
ROB.PEASE@CPSLAND.COM

PROJECT LANDSCAPE ARCHITECT:
TYLOR FISCHER, PLA
RAGAN-SMITH ASSOCIATES, INC.
315 WOODLAND STREET
NASHVILLE, TN 37206
(615) 244-8591
TFISCHER@RAGANSMITH.COM

<u>RESIDENTIAL STANDARDS:</u>	
CALIPERS REQUIRED (25 CAL PER AC) 76.46 X 25:	1,911.50"
CALIPERS PROVIDED:	25,019.00"
STREET TREES (138 X 3"):	414.00"
BUFFER TREES (162 X 2"):	324.00"
EXISTING VEGETATION TO REMAIN:	24,281.00"



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ROSEBROOKE SOUTH
FOR
CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH CIVIL DISTRICT OF WILLIAMSON
COUNTY

Scale: 1"=50'

Date: JANUARY 5, 2022

Approved By: _____ TF

Revisions:

-	-	-
-	-	-
-	-	-
-	-	-
2	4/28/22	PER STAFF COMMENTS
1	3/14/22	LANDSCAPE REVISIONS

Drawing Title:

LANDSCAPE
BUFFER A

Drawing No.

L1.1

Project No.
21-0337





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ROSEBROOKE SOUTH
FOR
CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH CIVIL DISTRICT OF WILLIAMSON COUNTY

Scale: 1"=100'

Date: JANUARY 5, 2022

Approved By: _____ TF

Revisions:

	-	-
	-	-
	-	-
	-	-
2	4/28/22	PER STAFF COMMENTS
	3/14/22	LANDSCAPE REVISIONS

Drawing Title:

STREET
TREE PLAN

Drawing No.

L1.2

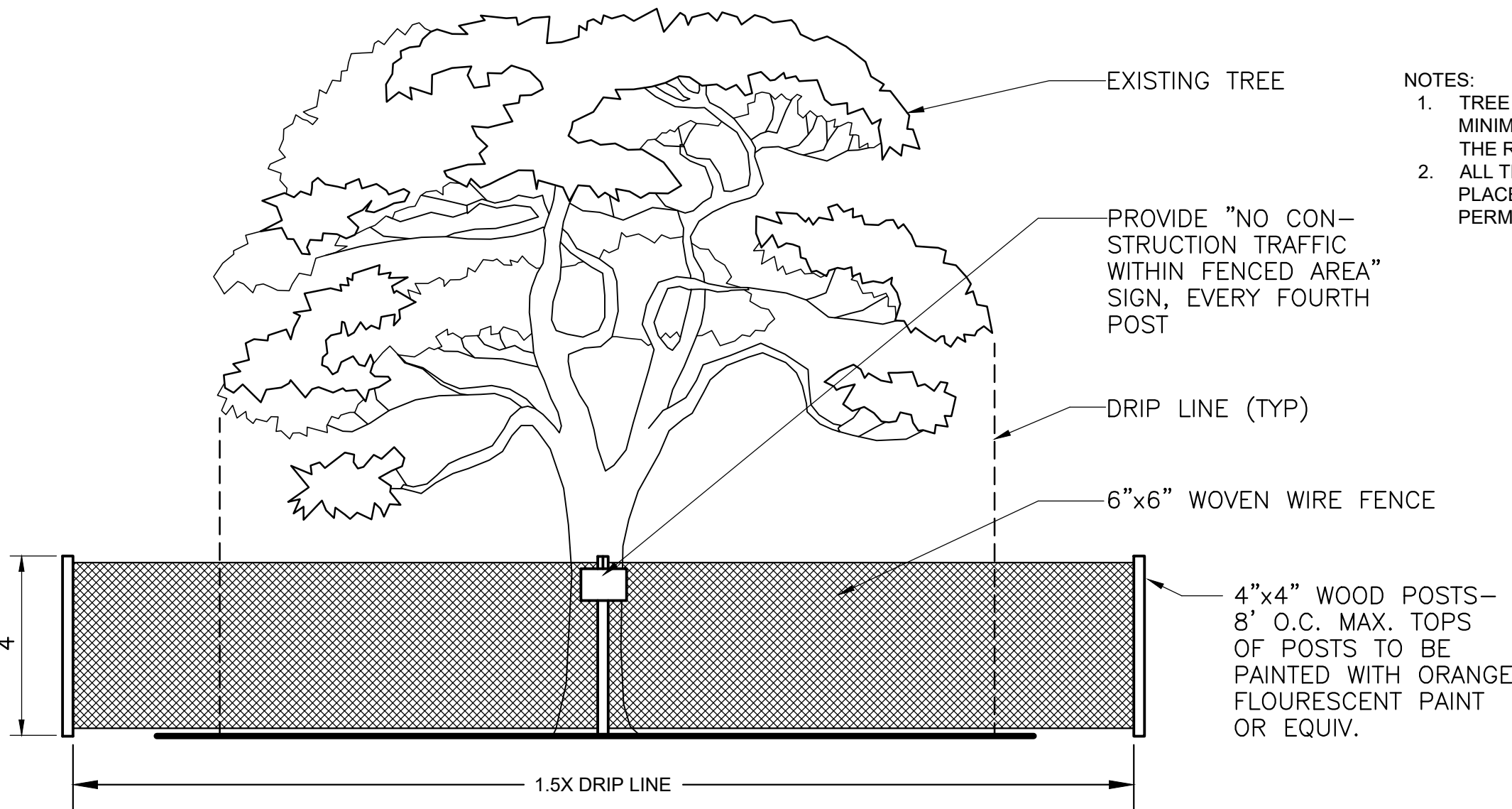
Project No.

21-0337



PLANT SCHEDULE OSRD LANDSCAPE

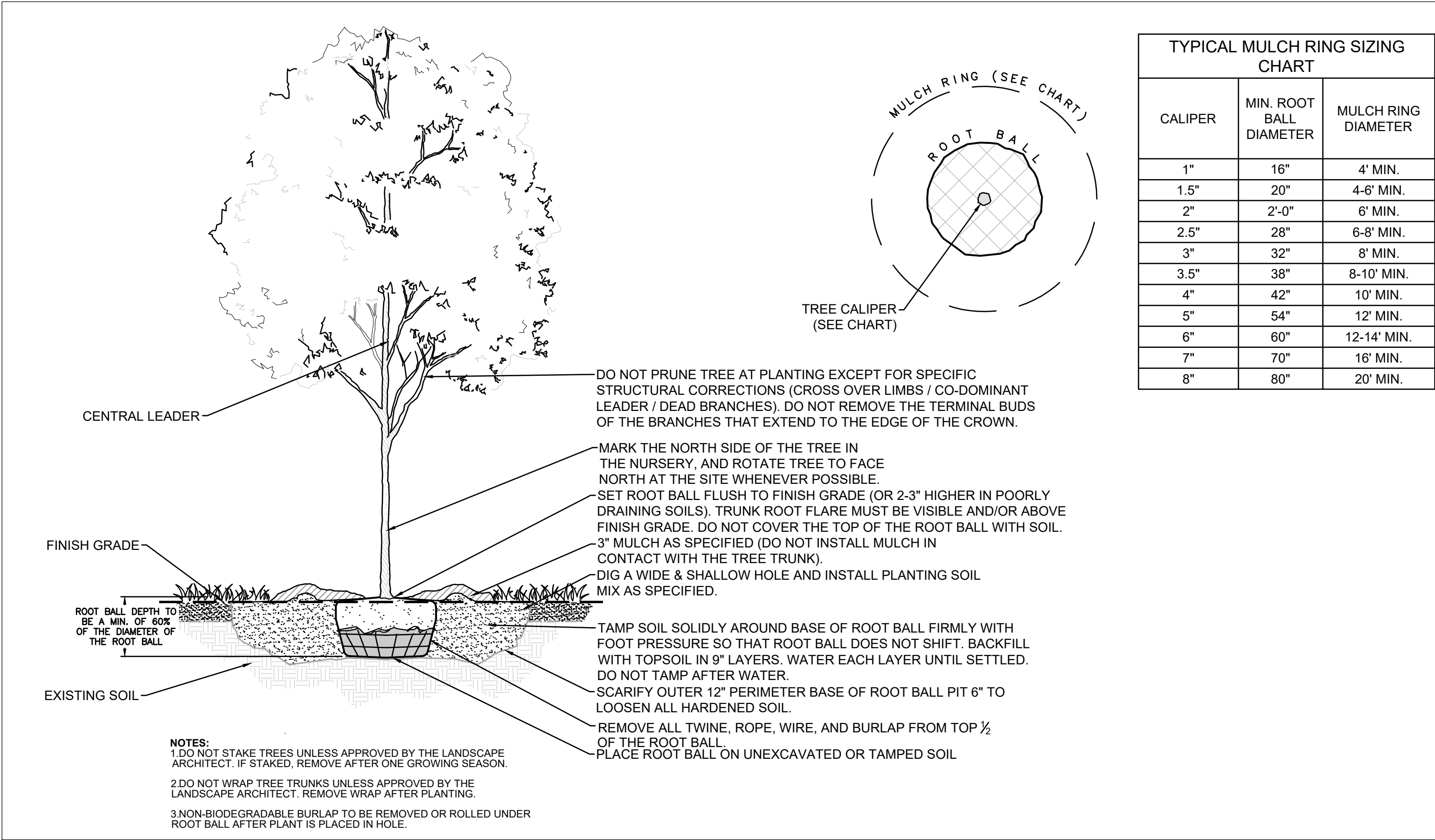
BUFFER TREES	CODE	QTY	BOTANICAL / COMMON NAME	TYPE	SIZE	HEIGHT	SPACING	REMARKS
	Ia	25	ILEX OPACA 'AIKEN RED' / AMERICAN HOLLY 'AIKEN RED'	EVERGREEN	2" CAL.	8' MIN.	AS SHOWN	B&B, FULL TO BASE.
	Je	46	JUNIPERUS VIRGINIANA / EASTERN REDCEDAR	EVERGREEN	2" CAL.	8' MIN.	AS SHOWN	B&B, FULL TO BASE.
	Jb	31	JUNIPERUS VIRGINIANA 'BURKII' / BURK EASTERN REDCEDAR	EVERGREEN	2" CAL.	8' MIN.	AS SHOWN	B&B, FULL TO BASE.
	Mb	14	MAGNOLIA GRANDIFLORA 'BRACKENS BROWN BEAUTY' / BRACKEN'S BEAUTY SOUTHERN MAGNOLIA	EVERGREEN	2" CAL.	8' MIN.	AS SHOWN	B&B, FULL TO BASE.
	Mi	46	MAGNOLIA GRANDIFLORA 'LITTLE GEM' / LITTLE GEM DWARF SOUTHERN MAGNOLIA	EVERGREEN	2" CAL.	8' MIN.	AS SHOWN	B&B, FULL TO BASE.
STREET TREES	CODE	QTY	BOTANICAL / COMMON NAME	TYPE	SIZE	HEIGHT	SPACING	REMARKS
	Qi	31	QUERCUS LYRATA / OVERCUP OAK	DECIDUOUS	3" CAL.	14 - 16' HT.	AS SHOWN	B&B, STRONG CENTRAL LEADER, FULL CANOPY, WELL-MATCHED, 6' CLEAR TRUNK.
	Qn	35	QUERCUS NUTTALLII / NUTTALL OAK	DECIDUOUS	3" CAL.	14 - 16' HT.	AS SHOWN	B&B, STRONG CENTRAL LEADER, FULL CANOPY, WELL-MATCHED, 6' CLEAR TRUNK.
	Qp	40	QUERCUS PHELLOS / WILLOW OAK	DECIDUOUS	3" CAL.	14 - 16' HT.	AS SHOWN	B&B, STRONG CENTRAL LEADER, FULL CANOPY, WELL-MATCHED, 6' CLEAR TRUNK.
	Qs	19	QUERCUS SHUMARDII / SHUMARD OAK	DECIDUOUS	3" CAL.	14 - 16' HT.	AS SHOWN	B&B, STRONG CENTRAL LEADER, FULL CANOPY, WELL-MATCHED, 6' CLEAR TRUNK.
	Ua	14	ULMUS PARVIFOLIA 'ALLEE' TM / ALLEE LACEBARK ELM	DECIDUOUS	3" CAL.	14 - 16' HT.	AS SHOWN	B&B, STRONG CENTRAL LEADER, FULL CANOPY, WELL-MATCHED, 6' CLEAR TRUNK.



TREE PROTECTION DETAIL
NOT TO SCALE

PLANTING NOTES:

- ANY SERIES OF TREES TO BE PLACED IN A PARTICULAR ARRANGEMENT WILL BE FIELD CHECKED FOR ACCURACY. ANY PLANTS MISARRANGED WILL BE RELOCATED.
- SOIL USED IN BACKFILLING PLANTING PITS SHALL BE TOPSOIL AND MIXED WITH 25% PEAT BY VOLUME. EXCEPT FOR ERICACEOUS PLANTS, VERY ACID OR SOUR SOIL (SOIL HAVING A pH less than 6) SHALL BE MIXED WITH SUFFICIENT LIME TO PRODUCE A SLIGHTLY ACID REACTION (A pH of 6.0 to 6.5). ADD 10-10-10 COMMERCIAL FERTILIZER AT THE RATE OF 2 POUNDS PER CUBIC YARD. MIX BOTH FERTILIZER AND PEAT THOROUGHLY BY HAND OR ROTARY TILLER.
- SOIL USED IN BACKFILLING ERICACEOUS PLANTS SHALL BE TOPSOIL MIXED WITH 50% PEAT BY VOLUME. ADD 5-10-5 COMMERCIAL FERTILIZER AT THE RATE OF 5 POUNDS PER CUBIC YARD. MIX BOTH FERTILIZER AND PEAT THOROUGHLY BY HAND OR ROTARY TILLER.
- UPON SECURING PLANT MATERIAL AND BEFORE INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE FOR A PRE-INSTALLATION INSPECTION TO VERIFY ALL PLANT MATERIAL MEETS SPECIFICATION, MATCH TREES OF SAME SPECIES IN GROWTH CHARACTER AND UNIFORMITY.
- APPLY HERBICIDE (TRIFLAN OR EQUIVALENT) TO ALL PLANT BEDS PRIOR TO PLANTING FOR NOXIOUS WEED CONTROL AT A RATE OF 2 POUNDS PER 1,000 SQUARE FEET.
- CONTRACTOR SHALL SUBMIT A 10 OUNCE SAMPLE OF THE TOPSOIL PROPOSED TO A TESTING LABORATORY FOR ANALYSIS. SUBMIT TEST RESULTS WITH RECOMMENDATIONS FOR SUITABILITY TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.
- PLANTS SHALL BE ORIENTED FOR BEST APPEARANCE AND VERTICAL. ALL NON-BIODEGRADABLE ROOT CONTAINERS SHALL BE REMOVED.
- SELECTIVELY TRIM TREE BRANCHES BY 25%, MAINTAINING NATURAL SHAPE. PRUNE ALL DEAD AND BROKEN BRANCHES IN TREES AND SHRUBS. REMOVE TAGS, TWINE OR OTHER NON-BIODEGRADABLE MATERIAL.
- SCARIFY SUBSOIL IN PLANTING BEDS TO A DEPTH OF 3 INCHES. ALL PLANTING BEDS SHALL RECEIVE A MINIMUM OF 6 INCHES OF TOPSOIL.
- CONTRACTOR SHALL PROVIDE SMOOTH, NEATLY TRENCHED (3 INCH DEEP) BED EDGES.
- ALL PLANTING BEDS TO HAVE A MINIMUM 4 INCH DEEP PINE BARK MULCH, PINE STRAW MULCH OR OTHER MULCH AS SPECIFIED.
- DIMENSIONS FOR TRUNK CALIPER, HEIGHTS, AND SPREAD SPECIFIED ON THE MATERIAL SCHEDULE ARE A GENERAL GUIDE FOR THE MINIMUM REQUIRED SIZE OF EACH PLANT. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH A.N.S.I. Z80 'AMERICAN STANDARD FOR NURSERY STOCK' (CURRENT EDITION) AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
- THE QUANTITIES INDICATED ON THE MATERIAL SCHEDULE ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR, BUT SHOULD NOT BE ASSUMED TO ALWAYS BE CORRECT. IN THE EVENT OF A DISCREPANCY, THE PLANTING PLAN (PLANT SYMBOLS) WILL TAKE PRECEDENCE OVER THE MATERIAL SCHEDULE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN QUANTITY CALCULATIONS AND THE LIABILITY PERTAINING TO THOSE QUANTITIES AND ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS.
- CONTRACTOR TO WARRANTY ALL MATERIAL FOR ONE YEAR AFTER DATE OF FINAL ACCEPTANCE.



SEEDING NOTES:

- SEED ALL DISTURBED AREAS WITH KY-31 AT THE RATE OF 5 POUNDS PER 1,000 S.F. ALL SEED TO BE 98% PURE WITH 85% GERMINATION AND CONFORM TO ALL STATE REQUIREMENTS FOR GRASS SEED. THE FERTILIZER TO BE 6-12-12 COMMERCIAL TYPE WITH 50% OF ITS ELEMENTS DERIVED FROM ORGANIC SOURCES.
- PLACE STRAW MULCH ON SEEDED AREAS. STRAW TO BE OATS OR WHEAT STRAW, FREE FROM WEEDS, FOREIGN MATTER DETRIMENTAL TO PLANT LIFE, AND DRY. HAY OR CHOPPED CORNSTALKS ARE NOT ACCEPTABLE.
- THE CONTRACTOR SHALL VERIFY THAT THE PREPARED SOIL BASE IS READY TO RECEIVE WORK. CULTIVATE THE TOPSOIL TO A DEPTH OF 4 INCHES WITH A MECHANICAL TILLER AND SUBSEQUENTLY RAKE UNTIL SMOOTH. REMOVE FOREIGN MATERIALS COLLECTED DURING CULTIVATION AND RAKING OPERATIONS.
- APPLY FERTILIZER ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. LIMESTONE MAY BE APPLIED WITH THE FERTILIZER. APPLY FERTILIZER AFTER SMOOTH RAKING AND PRIOR TO ROLLER COMPACTION AND MIX THOROUGHLY IN THE UPPER 2 INCHES OF TOPSOIL.
- APPLY SEED EVENLY IN TWO INTERSECTING DIRECTIONS AND RAKE IN LIGHTLY. WATER TOPSOIL LIGHTLY PRIOR TO APPLYING SEED. DO NOT SEED AREA IN EXCESS OF THAT WHICH CAN BE MULCHED ON THE SAME DAY.
- ROLL SEEDED AREA WITH ROLLER NOT EXCEEDING 112 POUNDS.
- IMMEDIATELY FOLLOWING SEEDING AND COMPACTING, APPLY STRAW MULCH AT THE RATE OF ONE AND ONE HALF BALES PER 1,000 SQUARE FEET. IMMEDIATELY AFTER MULCHING, APPLY WATER WITH A FINE SPRAY AND SATURATE THE GROUND TO A DEPTH OF 4 INCHES.
- CONTRACTOR IS RESPONSIBLE FOR WATERING SEEDED AREAS TO PREVENT GRASS AND SOIL FROM DRYING OUT UNTIL THE INSTALLATION IS INSPECTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE.
- CONTRACTOR IS RESPONSIBLE FOR RESEEDING BARE SPOTS FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF INSTALLATION.

NOTE:
ALL DISTURBED LAND NOT OTHERWISE PLANTED SHALL BE SEEDED PER SEEDING NOTES ON THIS SHEET.



Scale:	NTS	
Date:	JANUARY 5, 2022	
Approved By:	TF	
Revisions:		
-	-	-
-	-	-
-	-	-
-	-	-
2	4/28/22	PER STAFF COMMENTS
1	3/14/22	LANDSCAPE REVISIONS

Drawing Title:

LANDSCAPE NOTES, SCHEDULES, AND DETAILS

Drawing No.

L1.3

Project No.
21-0337





ROSEBROOKE SOUTH
FOR
CPS LAND, LLC

Scale: 1"=50'

Date: MARCH 14, 2022

Approved By: TF

Revisions:

1	4/28/22	PER STAFF COMMENTS
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Drawing Title:
TREE PRESERVATION PLAN

Drawing No.

L2.1

Project No.
21-0337



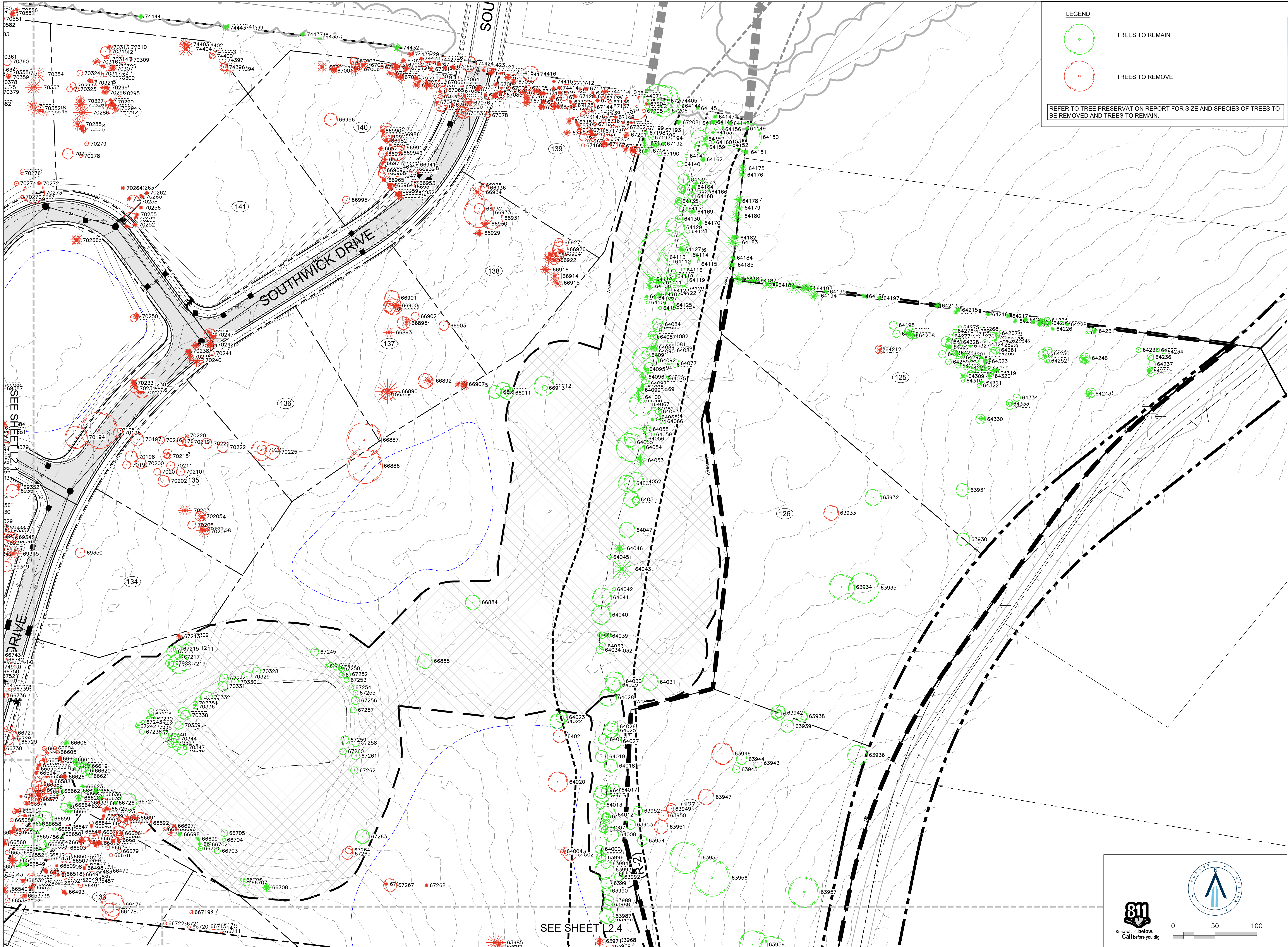
LEGEND

TREES TO REMAIN

TREES TO REMOVE

REFER TO TREE PRESERVATION REPORT FOR SIZE AND SPECIES OF TREES TO BE REMOVED AND TREES TO REMAIN.

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LEGEND

TREES TO REMAIN

TREES TO REMOVE

REFER TO TREE PRESERVATION REPORT FOR SIZE AND SPECIES OF TREES TO BE REMOVED AND TREES TO REMAIN.

RaganSmith

Nashville - Murfreesboro - Chattanooga
ragansmith.com



ROSEBROOKE SOUTH

FOR

CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH CIVIL DISTRICT OF WILLIAMSON COUNTY

Scale: 1"=50'

Date: MARCH 14, 2022

Approved By: TF

Revisions:

1	4/28/22	PER STAFF COMMENTS
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Drawing Title:

TREE PRESERVATION PLAN

Drawing No.

L2.2

Project No.

21-0337

811
Know what's below.
Call before you dig.

0 50 100

COORDINATES: NAD83 UTM ZONE 18N, ELEVATION: 400 FEET, DATUM: NAD83, UNITS: FEET, SCALE: 1"=50', PLOTTED BY: RAGAN SMITH, DATE: 4/28/22, LAST UPDATED BY: RAGAN SMITH, 4/28/22



ROSEBROOKE SOUTH

FOR
CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH CIVIL DISTRICT OF WILLIAMSON COUNTY

Scale: 1"=50'

Date: MARCH 14, 2022

Approved By: TF

Revisions:

1	4/28/22	PER STAFF COMMENTS
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Drawing Title:

TREE PRESERVATION
PLAN

Drawing No.

L2.1

Project No.

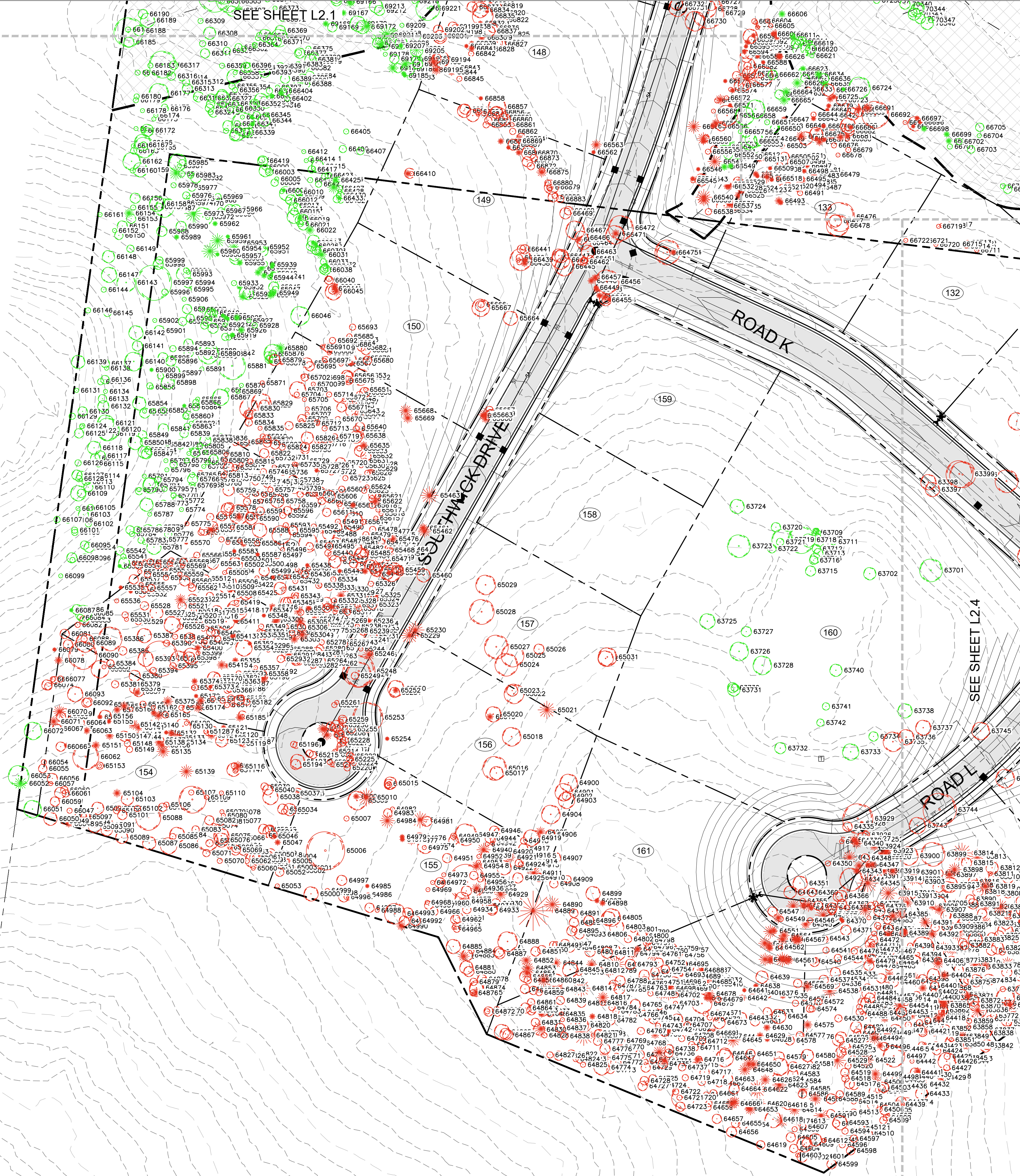
21-0337

LEGEND

TREES TO REMAIN

TREES TO REMOVE

REFER TO TREE PRESERVATION REPORT FOR SIZE AND SPECIES OF TREES TO BE REMOVED AND TREES TO REMAIN.





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ROSEBROOKE SOUTH

FOR
CPS LAND, LLC

SPLIT LOG ROAD, BRENTWOOD, TENNESSEE 37027 16TH CIVIL DISTRICT OF WILLIAMSON COUNTY

Scale: 1"=50'

Date: MARCH 14, 2022

Approved By: TF

Revisions:

1	4/28/22	PER STAFF COMMENTS
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Drawing Title:

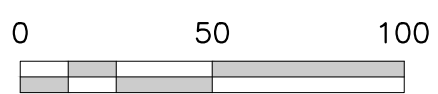
TREE PRESERVATION
PLAN

Drawing No.

L2.4

Project No.

21-0337



TREES TO REMAIN - ROSEBROOKE SOUTH

POINT	CALIPER	SPECIES
11020	36	OAK
63000	10	HICKORY
63001	17	HACKBERRY
63005	9	MAPLE
63007	11	HICKORY
63008	11	HICKORY
63009	17	MAPLE
63010	11	MAPLE
63011	15	OAK
63012	24	OAK
63013	13	OAK
63014	17	CEDAR
63491	17	CEDAR
63492	14	SASSAFRAS
63493	9	PERSIMMON
63494	22	OAK
63495	10	OAK
63496	12	OAK
63497	22	OAK
63498	18	OAK
63499	15	OAK
63500	12	OAK
63501	16	CEDAR
63502	10	CEDAR
63503	14	ELM
63504	37	OAK
63505	27	OAK
63506	14	HICKORY
63507	4	CEDAR
63508	30	OAK
63509	25	OAK
63510	12	CEDAR
63511	13	OAK
63512	5	OAK
63513	15	OAK
63514	13	OAK
63515	15	OAK
63516	20	DBL10SYCAMORE
63517	8	SYCAMORE
63518	6	CEDAR
63519	13	OAK
63520	11	OAK
63521	17	OAK
63522	11	OAK
63523	11	OAK
63524	8	OAK
63525	20	DBL10HICKORY
63526	17	OAK
63527	15	CEDAR
63528	14	CEDAR
63529	12	CEDAR
63530	10	CEDAR
63531	11	ELM
63532	14	CEDAR
63533	16	CEDAR
63534	15	OAK
63535	13	OAK
63536	15	ELM
63537	18	ASH
63538	13	CEDAR
63539	9	ELM
63540	15	OAK
63541	13	HICKORY
63542	13	OAK
63543	16	OAK
63545	10	OAK
63546	10	OAK
63547	7	OAK
63548	14	OAK
63549	10	CEDAR
63550	10	CEDAR
63551	11	CEDAR
63552	6	CEDAR
63553	9	CEDAR
63554	10	PERSIMMON
63555	8	HICKORY
63556	12	HICKORY
63557	22	OAK
63558	14	ASH
63559	15	ASH
63560	16	PERSIMMON
63561	15	OAK
63562	16	OAK
63563	12	PERSIMMON
63564	13	PERSIMMON
63565	8	PERSIMMON
63566	21	OAK
63567	15	ELM
63568	12	ELM
63569	17	ASH
63701	22	OAK
63702	12	MAGNOLIA

63703	4	HOLLY
63704	4	HOLLY
63705	5	HOLLY
63706	5	HOLLY
63707	5	HOLLY
63708	6	HOLLY
63709	4	HACKBERRY
63710	9	HOLLY
63711	6	ASH
63712	8	HOLLY
63713	9	HOLLY
63714	10	HOLLY
63715	10	HOLLY
63716	8	HOLLY
63717	13	CHERRY
63718	26	DBL13WILLOW
63719	20	DBL10WILLOW
63720	9	HOLLY
63721	7	MAGNOLIA
63722	8	HOLLY
63723	22	OAK
63724	14	MAPLE
63725	15	MAPLE
63726	18	OAK
63727	10	HOLLY
63728	18	OAK
63729	7	OAK
63730	10	OAK
63731	12	OAK
63732	11	MAPLE
63733	16	OAK
63734	9	ELM
63738	14	ASH
63740	12	MAGNOLIA
63741	7	SYCAMORE
63742	7	SYCAMORE
63930	16	LOCUST
63931	16	PERSIMMON
63932	20	LOCUST
63934	31	ASH
63935	37	ASH
63936	24	OAK
63937	9	ELM
63938	14	DBL7PERSIMMON
63939	16	OAK
63940	9	OAK
63941	12	OAK
63942	18	OAK
63943	11	OAK
63944	13	OAK
63945	9	PERSIMMON
63952	11	OAK
63953	12	HACKBERRY
63954	12	OAK
63955	38	OAK
63956	44	OAK
63957	37	OAKBADCONDITION
63958	32	OAK
63959	34	OAK
63960	10	ELM
63961	15	OAK
63962	17	CEDAR
63963	12	OAK
63964	13	OAK
63965	4	HACKBERRY
63966	18	CEDAR
63967	6	HACKBERRY
63968	11	OAK
63986	8	HACKBERRY
63987	18	HACKBERRY
63988	12	HACKBERRY
63989	12	OAK
63990	10	OAK
63991	14	OAK
63992	10	ASH
63993	23	OAK
63994	12	HACKBERRY
63995	8	ASH
63996	12	HACKBERRY
63997	7	ELM
63998	6	HACKBERRY
63999	5	ASH
64000	10	HACKBERRY
64005	11	HACKBERRY
64006	8	ELM
64007	6	HACKBERRY
64008	18	OAK
64009	11	OAK
64010	7	HACKBERRY
64011	10	CATALPA
64012	22	DBL11CATALPA
64013	10	HACKBERRY
64014	19	OAK
64015	16	OAK

64016	12	OAK
64017	15	HACKBERRY
64018	16	HACKBERRY
64019	15	HACKBERRY
64022	18	HACKBERRY
64023	14	HACKBERRY
64024	12	HACKBERRY
64025	18	OAK
64026	14	ELM
64027	20	HACKBERRY
64028	21	HACKBERRY
64029	19	OAK
64030	23	OAK
64031	20	HACKBERRY
64032	8	HACKBERRY
64033	8	HACKBERRY
64034	9	HACKBERRY
64035	5	HACKBERRY
64036	6	WILLOW
64037	8	WILLOW
64038	4	HACKBERRY
64039	5	HACKBERRY
64040	23	OAK
64041	23	OAK
64042	4	BODDOCK
64043	28	DBL14CEDAR
64044	4	HACKBERRY
64045	5	HACKBERRY
64046	14	CEDAR
64047	19	HACKBERRY
64048	8	PERSIMMON
64049	9	PERSIMMON
64050	19	OAK
64051	20	OAK
64052	24	OAK
64053	14	CEDAR
64054	34	OAK
64055	12	OAK
64056	27	OAK
64057	6	HACKBERRY
64058	10	OAK
64059	4	OAK
64060	4	CEDAR
64061	4	ELM
64062	4	REDBUD
64063	7	ELM
64064	8	CEDAR
64065	6	HACKBERRY
64066	7	WALNUT
64067	28	OAK
64068	6	OAK
64069	4	HACKBERRY
64070	8	ELM
64071	10	WALNUT
64072	4	HACKBERRY
64073	4	HACKBERRY
64074	6	REDBUD
64075	6	REDBUD
64076	15	CEDAR
64077	10	LOCUST
64078	4	HACKBERRY
64079	7	HACKBERRY
64080	5	OAK
64081	16	ELM
64082	4	BODDOCK
64083	11	OAK
64084	14	OAK
64085	10	HACKBERRY
64086	6	HACKBERRY
64087	6	ASH
64088	7	HACKBERRY
64089	8	CEDAR
64090	13	ELM
64091	10	OAK
64092	32	OAK
64093	7	CEDAR
64094	13	OAK
64095	6	CEDAR
64096	10	CEDAR
64097	10	HACKBERRY
64098	9	CEDAR
64099	10	CEDAR
64100	12	CEDAR
64101	4	OAK
64102	4	OAK
64103	4	CEDAR
64104	4	HACKBERRY
64105	4	HACKBERRY
64106	4	CEDAR
64107	9	CEDAR
64108	10	CEDAR
64109	2	CEDAR
64110	9	CEDAR
64111	13	CEDAR

64112	9	HACKBERRY
64113	4	REDBUD
64114	64	OAK
64115	52	OAK
64116	5	BODDOCK
64117	13	ELM
64118	8	ELM
64119	16	OAK
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64121	6	REDBUD
64122	15	ELM
64123	8	ASH
64124	4	BODDOCK
64125	13	OAK
64126	12	CEDAR
64127	6	CEDAR
64128	5	BODDOCK
64129	23	MULBERRY
64130	9	HACKBERRY
64131	9	HACKBERRY
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64133	8	HACKBERRY
64134	8	HACKBERRY
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64137	8	HACKBERRY
64138	6	HACKBERRY
64139	14	HACKBERRY
64140	7	LOCUST
64141	4	WALNUT
64142	20	OAK
64143	7	CEDAR
64144	7	BODDOCK
64145	4	CEDAR
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64166	32	OAK
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64187	17	CEDAR
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64230	5	REDBUD
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64232	6	HACKBERRY
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64234	5	HACKBERRY
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64242	12	LOCUST
64243	11	CEDAR
64244	12	CEDAR
64245	13	CEDAR
64246	13	LOCUST
64247	12	PERSIMMON
64248	12	PERSIMMON
64249	4	REDBUD
64250	11	LOCUST
64251	10	PERSIMMON
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64257	4	CEDAR
64258	9	HACKBERRY
64259	6	HACKBERRY
64260	9	HACKBERRY
64261	10	AILANTHUS
64262	21	AILANTHUS
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64264	5	HACKBERRY
64265	5	CEDAR
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64267	5	ELM
64268	5	PERSIMMON
64269	8	PERSIMMON
64270	7	CEDAR
64271	5	CEDAR
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64309	9	CEDAR
64310	4	REDBUD
64311	18	LOCUST
64312	9	HACKBERRY
64313	4	CEDAR
64314	4	CEDAR
64315	6	ELM
64316	9	CEDAR
64317	9	LOCUST
64318	8	PERSIMMON
64319	6	PERSIMMON
64320	9	CEDAR
64321	6	CEDAR
64322	5	REDBUD
64323	4	HACKBERRY
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64325	5	PERSIMMON
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64327	5	CEDAR
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64330	12	PERSIMMON
64331	9	PERSIMMON
64332	8	PERSIMMON
64333	4	PERSIMMON
64334	9	PERSIMMON
65538	4	CEDAR
65539	4	CEDAR
65540	11	LOCUST
65541	5	ASH
65542	8	HACKBERRY
65763	4	ASH
65765	5	ASH
65766	10	HACKBERRY
65767	4	HACKBERRY
65769	6	MAPLE
65770	5	HACKBERRY
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65772	10	HACKBERRY
65773	6	HACKBERRY
65774	4	MAPLE
65776	7	ASH
65777	4	CEDAR
65778	5	ASH
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65781	14	ASH
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65784	5	ASH
65785	8	ASH
65786	7	HACKBERRY
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65788	13	ASH
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65794	6	ELM
65795	5	REDBUD
65796	4	HACKBERRY
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65799	5	HACKBERRY
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65802	4	ELM
65803	4	ASH
65804	9	ASH
65805	5	ASH
65806	4	ASH
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65837	4	ASH
65838	11	ASH
65839	8	ASH
65840	5	HACKBERRY
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65844	9	PERSIMMON
65845	4	MAPLE
65846	13	ASH
65847	10	ELM
65848	9	ELM
65849	8	ELM
65850	14	MAPLE
65851	10	MAPLE
65852	4	WALNUT
65853	5	ELM
65854	13	ASH
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65857	6	HACKBERRY
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65865	4	ASH
65866	6	ASH
65867	16	OAK
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65869	4	HACKBERRY
65870	4	HACKBERRY
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65873	6	ELM
65874	7	ASH
65875	7	HACKBERRY
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65877	4	CEDAR
65880	10	CEDAR
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65901	10	ASH
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65904	8	MAPLE
65905	9	MAPLE
65906	4	REDBUD
65907	5	ASH
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65913	9	PERSIMMON
65914	7	MAPLE
65915	10	OAK
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65927	4	ELM
65928	5	ELM
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65930	11	MAPLE
65931	11	ASH
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65936	6	CEDAR
65937	6	ELM
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65942	6	HACKBERRY
65943	4	HACKBERRY
65944	4	HACKBERRY
65945	10	HACKBERRY
65946	5	ELM
65947	6	ASH
65948	8	CEDAR
65949	8	CEDAR
65950	7	MULLBERRY
65951	10	BODDOCK
65952	4	MAPLE

65953	11	REDBUD
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65955	6	CEDAR
65956	12	HACKBERRY
65957	10	HACKBERRY
65958	4	CEDAR
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65960	16	MAPLEBADCONDITION
65961	4	CEDAR
65962	5	CEDAR
65963	10	ASH
65964	12	ASH
65965	8	ELM
65966	9	WALNUT
65967	6	HACKBERRY
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65969	6	ASH
65970	5	MAPLE
65971	4	ELM
65972	18	BODDOCK
65973	17	CEDAR
65974	8	ELM
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65976	7	MAPLE
65977	7	MAPLE
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65984	6	MULLBERRY
65985	17	ASH
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65987	18	ELM
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65997	34	OAK
65998	10	ASH
65999	7	ASH
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66003	7	ELM
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66011	6	ASH
66012	10	ASH
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66014	12	OAK
66015	7	MAPLE
66016	13	ELM
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66022	9	CEDAR
66023	12	ELM
66024	4	CEDAR
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66029	4	ELM
66030	8	HACKBERRY
66031	10	CEDAR
66032	10	CEDAR
66033	6	ELM
66034	5	ASH
66035	5	HACKBERRY
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66038	10	ELM
66046	18	BODDOCK
66051	17	ASH
66052	13	CEDAR
66053	20	OAK
66072	17	ASH
66084	6	HACKBERRY
66085	16	HACKBERRY
66086	10	ASH

66087	4	CEDAR
66094	10	HACKBERRY
66095	8	HACKBERRY
66096	8	HACKBERRY
66097	5	HACKBERRY
66098	10	ASH
66099	4	REDBUD
66100	6	HACKBERRY
66101	6	HACKBERRY
66102	6	HACKBERRY
66103	10	LOCUST
66104	4	HACKBERRY
66105	6	HACKBERRY
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66107	6	PERSIMMON
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66109	8	WALNUT
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66111	7	HACKBERRY
66112	10	WALNUT
66113	5	WALNUT
66114	6	PERSIMMON
66115	6	PERSIMMON
66116	9	PERSIMMON
66117	10	HACKBERRY
66118	13	SASSAFRAS
66119	14	SASSAFRAS
66120	22	SASSAFRAS
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66122	4	SASSAFRAS
66123	4	SASSAFRAS
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66126	6	HACKBERRY
66127	10	WALNUT
66128	6	HACKBERRY
66129	6	MULLBERRY
66130	9	OAK
66131	4	OAK
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66133	8	ELM
66134	4	MAPLE
66135	6	ELM
66136	8	ELM
66137	8	WALNUT
66138	4	WALNUT
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66141	10	ASH
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66143	18	ASH
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66146	5	ELM
66147	15	OAK
66148	12	MAPLE
66149	7	ELM
66150	8	ELM
66151	10	HACKBERRY
66152	4	HACKBERRY
66153	9	HACKBERRY
66154	9	CEDAR
66155	5	ELM
66156	10	HACKBERRY
66157	7	HACKBERRY
66158	15	ASH
66159	14	HICKORY
66160	5	OAK
66161	4	OAK
66162	17	ASH
66163	6	ELM
66164	4	ELM
66165	20	ASH
66166	16	ASH
66167	6	HACKBERRY
66168	4	MAPLE
66169	5	ELM
66170	5	ELM
66171	8	ELM
66172	12	ELM
66173	4	OAK
66174	4	ELM
66175	6	ELM
66176	4	HACKBERRY
66177	19	ASH
66178	4	ELM
66179	5	HACKBERRY
66180	5	HACKBERRY
66181	5	HACKBERRY
66182	6	ELM
66183	5	OAK
66184	26	OAK
66185	10	HACKBERRY
66186	28	HACKBERRY

66187	5	HACKBERRY
66188	10	HACKBERRY
66189	14	OAK
66190	9	OAK
66191	5	MAPLE
66192	4	PERSIMMON
66193	4	CEDAR
66194	9	OAK
66195	5	ELM
66196	12	ASH
66197	7	ASH
66198	7	ASH
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66200	5	ELM
66201	8	PERSIMMON
66202	16	OAK
66203	5	HACKBERRY
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66206	15	BODDOCK
66207	9	PERSIMMON
66208	12	OAK
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66210	4	CEDAR
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66214	9	ELM
66215	17	HACKBERRY
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66219	6	HACKBERRY
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66230	5	HACKBERRY
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66234	17	HACKBERRY
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66236	7	HACKBERRY
66237	10	HICKORY
66239	33	HACKBERRY
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66243	6	HACKBERRY
66244	10	LOCUST
66245	31	OAK
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66247	10	PERSIMMON
66248	4	HACKBERRY
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66250	4	BODDOCK
66251	9	HACKBERRY
66252	6	HACKBERRY
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66255	10	HACKBERRY
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66257	5	HACKBERRY
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66262	4	ASH
66263	8	ELM
66264	7	HACKBERRY
66265	5	HACKBERRY
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66267	10	HACKBERRY
66268	8	HACKBERRY
66269	8	HACKBERRY
66270	8	BODDOCK
66271	12	LOCUST
66272	4	OAK
66273	6	ELM
66274	6	HACKBERRY
66275	5	BODDOCK
66276	5	HACKBERRY
66277	5	HACKBERRY
66278	9	HACKBERRY
66279	5	BODDOCK
66280	7	HACKBERRY
66281	25	OAK
66282	4	HACKBERRY
66283	7	HACKBERRY

66284	10	PERSIMMON
66285	7	ELM
66286	4	HACKBERRY
66287	7	MAPLE
66288	4	HACKBERRY
66289	5	ELM
66290	8	ELM
66291	5	ELM
66292	4	HACKBERRY
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66294	6	ELM
66295	20	OAK
66296	5	OAK
66297	4	ELM
66298	4	ELM
66299	4	OAK
66300	16	OAK
66301	32	DBL16OAK
66302	4	OAK
66303	22	OAK
66304	25	OAK
66305	7	OAK
66306	10	OAK
66307	9	CEDAR
66308	12	DBL6ELM
66309	5	ELM
66310	6	HACKBERRY
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66313	10	ELM
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66318	10	ELM
66319	4	ELM
66320	8	MAPLE
66321	8	HACKBERRY
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66327	15	OAK
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66329	6	MAPLE
66330	6	ASH
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66333	5	ASH
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66338	9	OAK
66339	9	OAK
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66342	4	CEDAR
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66344	12	LOCUST
66345	4	ELM
66346	4	ELM
66347	4	ELM
66348	4	ELM
66349	12	LOCUST
66350	13	ASH
66351	4	ASH
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66359	5	ELM
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66362	5	ASH
66363	5	ASH
66364	4	ASH
66365	5	ASH
66366	5	OAK
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66368	10	OAK
66369	10	OAK
66370	17	OAK
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66372	4	ELM
66373	4	REDBUD
66374	5	HACKBERRY
66375	5	REDBUD
66376	6	ELM
66377	10	ELM

66378	6	ELM
66379	4	CEDAR
66380	9	LOCUST
66381	11	ASH
66382	5	ELM
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66384	9	ELM
66385	7	PERSIMMON
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66387	8	LOCUST
66388	9	OAK
66389	9	LOCUST
66390	7	ELM
66391	7	HACKBERRY
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66393	10	HACKBERRY
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66395	10	ELM
66396	6	ELM
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66398	4	ELM
66399	6	LOCUST
66400	4	CEDAR
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66403	4	ELM
66404	10	HACKBERRY
66405	5	LOCUST
66406	7	LOCUST
66407	7	LOCUST
66411	4	LOCUST
66412	4	LOCUST
66413	4	LOCUST
66414	5	LOCUST
66415	12	ASH
66416	4	ELM
66417	7	PERSIMMON
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66423	6	ELM
66424	5	ELM
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66426	12	CEDAR
66427	6	ELM
66428	4	HACKBERRY
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66512	5	CEDAR
66548	7	CEDAR
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66550	6	CEDAR
66551	5	CEDAR
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66553	8	CEDAR
66554	10	CEDAR
66606	7	CEDAR
66610	8	CEDAR
66611	4	HACKBERRY
66612	9	OAK
66613	8	ELM
66614	8	HACKBERRY
66615	17	OAK
66616	15	ELM
66617	5	HACKBERRY
66618	4	HACKBERRY
66619	5	HACKBERRY
66620	10	HACKBERRY
66621	4	ELM
66622	5	HACKBERRY
66623	6	CEDAR
66624	4	CEDAR
66627	8	LOCUST
66628	10	CEDAR
66629	6	CEDAR
66630	5	CEDAR
66631	4	CEDAR
66632	5	CEDAR
66634	8	CEDAR
66635	7	CEDAR
66636	10	ELM
66648	4	CEDAR
66650	8	ELM
66651	5	ASH
66652	12	OAK
66653	4	CEDAR
66654	17	OAK
66655	16	OAK
66656	10	HACKBERRY

66657	4	ASH
66658	18	OAK
66659	18	ELM
66662	9	ASH
66663	9	ASH
66664	9	CEDAR
66665	10	CEDAR
66698	6	CEDAR
66699	6	CEDAR
66700	6	CEDAR
66701	5	PERSIMMON
66702	6	ASH
66703	7	ELM
66704	4	HACKBERRY
66705	8	WILLOW
66706	5	HACKBERRY
66707	8	BOXELDER
66708	10	CEDAR
66724	21	OAK
66726	4	CEDAR
66775	10	ELM
66777	6	OAK
66778	13	OAK
66779	5	OAK
66780	27	OAK
66781	13	OAK
66782	13	OAK
66783	25	OAK
66784	10	OAK
66785	10	ASH
66786	44	OAK
66787	17	OAK
66788	9	ASH
66789	8	OAK
66790	5	HACKBERRY
66791	6	CEDAR
66792	4	CEDAR
66793	6	ASH
66794	10	ASH
66795	16	ASH
66796	4	ELM
66800	26	OAK
66801	9	CEDAR
66802	8	ASH
66803	22	OAK
66804	4	ELM
66805	22	OAK
66806	9	ASH
66807	6	ASH
66808	18	OAK
66884	18	HACKBERRY
66885	18	HACKBERRY
66908	16	DBL8PERSIMMON
66909	18	DBL9PERSIMMON
66910	7	PERSIMMON
66911	16	DBL8PERSIMMON
66912	24	DBL12PERSIMMON
66913	6	PERSIMMON
67187	12	CEDAR
67188	11	CEDAR
67189	9	CEDAR
67190	5	HACKBERRY
67191	4	HACKBERRY
67192	4	CEDAR
67193	4	HACKBERRY
67194	5	ELM
67195	5	ELM
67196	7	CEDAR
67197	6	PERSIMMON
67198	5	CEDAR
67206	4	BODOCK
67207	15	HACKBERRY
67208	6	CEDAR
67210	10	HACKBERRY
67211	5	HACKBERRY
67212	9	HACKBERRY
67214	12	HACKBERRY
67215	10	DBL5BODOCK
67216	6	HACKBERRY
67217	5	CEDAR
67218	10	HACKBERRY
67219	24	DBL12HACKBERRY
67220	10	HACKBERRY
67221	10	HACKBERRY
67222	7	WILLOW
67223	5	WILLOW
67224	6	WILLOW
67225	6	WILLOW
67226	6	WILLOW
67227	6	WILLOW
67228	6	WILLOW
67229	4	WILLOW
67230	4	WILLOW
67231	4	COTTONWOOD

67232	8	COTTONWOOD
67233	8	COTTONWOOD
67234	10	COTTONWOOD
67235	12	COTTONWOOD
67236	4	WILLOW
67237	4	WILLOW
67238	6	COTTONWOOD
67239	7	WILLOW
67240	5	WILLOW
67241	5	WILLOW
67242	4	WILLOW
67243	4	WILLOW
67244	11	COTTONWOOD
67245	10	ASH
67246	4	PERSIMMON
67247	4	PERSIMMON
67248	6	HACKBERRY
67249	7	HACKBERRY
67250	5	HACKBERRY
67251	6	ELM
67252	10	HACKBERRY
67253	6	HACKBERRY
67254	6	HACKBERRY
67255	6	HACKBERRY
67256	10	HACKBERRY
67257	7	ASH
67258	9	HACKBERRY
67259	10	DBL5WILLOW
67260	8	DBL4WILLOW
67261	10	HACKBERRY
67262	9	BOXELDER
67263	17	PERSIMMON
68968	18	CEDAR
68969	12	ELM
68970	6	ELM
68971	9	HACKBERRY
68972	7	CEDAR
68973	8	ELM
68974	10	ELM
68975	7	HACKBERRY
68976	9	PERSIMMON
68977	9	PERSIMMON
68978	10	PERSIMMON
68979	10	PERSIMMON
68980	12	PERSIMMON
68981	18	PERSIMMON
68982	4	HACKBERRY
68983	6	HACKBERRY
68984	4	HACKBERRY
68985	4	HACKBERRY
68986	5	PERSIMMON
68987	6	BODOCK
68988	13	ELM
68989	4	HACKBERRY
68990	8	HACKBERRY
68991	6	ELM
68992	4	OAK
68993	10	LOCUST
68994	9	HACKBERRY
68995	6	HACKBERRY
68996	13	HACKBERRY
68997	8	ELM
68998	7	HACKBERRY
68999	4	HACKBERRY
69000	10	ELM
69001	8	BODOCK
69002	4	ELM
69003	5	ELM
69004	7	ELM
69005	4	HACKBERRY
69006	7	HACKBERRY
69007	12	HACKBERRY
69008	9	HACKBERRY
69009	9	ELM
69010	8	HACKBERRY
69011	13	WALNUT
69012	10	HACKBERRY
69013	6	HACKBERRY
69014	4	HACKBERRY
69015	4	HACKBERRY
69016	10	HACKBERRY
69017	10	HACKBERRY
69018	6	HACKBERRY
69019	4	HACKBERRY
69020	8	HACKBERRY
69021	12	HACKBERRY
69022	5	HACKBERRY
69023	10	HACKBERRY
69024	4	HACKBERRY
69025	10	HACKBERRY
69026	4	HACKBERRY
69027	8	HACKBERRY
69028	4	HACKBERRY
69029	6	HACKBERRY

69030	7	OAK
69031	8	PERSIMMON
69032	5	HACKBERRY
69033	5	HACKBERRY
69034	5	HACKBERRY
69035	7	ELM
69036	5	ELM
69037	4	CEDAR
69038	4	ELM
69039	5	ELM
69040	5	CEDAR
69041	8	REDBUD
69042	15	OAK
69043	4	ELM
69044	5	ELM
69045	5	ELM
69046	5	ELM
69047	5	ELM
69048	5	CEDAR
69049	15	OAK
69050	5	OAK
69051	17	OAK
69052	5	ASH
69053	5	ASH
69054	13	OAK
69055	16	OAK
69056	4	CEDAR
69057	16	ELM
69058	4	ELM
69059	5	CEDAR
69060	13	ELM
69061	4	HACKBERRY
69062	8	HACKBERRY
69063	6	ELM
69064	9	HACKBERRY
69065	9	ELM
69066	6	HACKBERRY
69067	4	HACKBERRY
69068	8	HACKBERRY
69069	5	ELM
69070	9	HACKBERRY
69071	12	LOCUST
69072	5	HACKBERRY
69073	13	LOCUST
69074	6	HACKBERRY
69075	11	ELM
69076	6	ELM
69077	7	HACKBERRY
69078	11	HACKBERRY
69079	10	HACKBERRY
69080	10	ELM
69081	10	ELM
69082	10	CEDAR
69083	9	LOCUST
69084	4	HACKBERRY
69085	12	HACKBERRY
69086	4	ELM
69087	10	HACKBERRY
69088	6	HACKBERRY
69089	6	HACKBERRY
69090	7	HACKBERRY
69091	7	HACKBERRY
69092	7	HACKBERRY
69093	4	CEDAR
69094	5	ELM
69095	7	HACKBERRY
69096	8	ELM
69097	8	HACKBERRY
69098	5	HACKBERRY
69099	10	ELM
69100	5	ELM
69101	6	HACKBERRY
69102	11	HACKBERRY
69103	7	CEDAR
69104	10	ELM
69105	8	HACKBERRY
69106	5	ELM
69107	6	HACKBERRY
69108	5	HACKBERRY
69109	11	ELM
69110	12	CEDAR
69111	10	ELM
69112	8	HACKBERRY
69113	8	HACKBERRY
69114	5	ELM
69115	6	PERSIMMON
69116	9	CEDAR
69117	7	CEDAR
69118	6	ELM
69119	4	ELM
69120	4	ASH
69121	8	ELM
69122	40	BODOCK
69127	9	ELM

69128	10	ELM
69129	15	ASH
69130	10	DBLSHACKBERRY
69131	6	CEDAR
69132	4	CEDAR
69133	12	LOCUST
69134	8	ASH
69135	6	REDBUD
69136	6	REDBUD
69137	6	REDBUD
69138	6	REDBUD
69139	8	WALNUT
69140	10	ELM
69141	22	OAK
69142	7	ELM
69143	13	ASH
69144	4	ASH
69145	36	DBL18OAK
69146	27	OAK
69147	20	OAK
69148	25	OAK
69149	10	OAK
69150	28	OAK
69151	5	ELM
69152	5	ELM
69153	5	OAK
69154	5	REDBUD
69155	4	ELM
69156	10	ASH
69157	5	ELM
69158	12	ASH
69159	12	ASH
69160	16	OAK
69161	8	ASH
69162	13	ASH
69163	9	ASH
69164	10	ASH
69165	9	CEDAR
69166	6	ELM
69167	6	CEDAR
69168	6	CEDAR
69169	9	PERSIMMON
69170	15	OAK
69171	13	HACKBERRY
69172	14	CEDAR
69173	4	ASH
69174	6	MAPLE
69175	10	HACKBERRY
69176	12	CEDAR
69177	7	HACKBERRY
69178	4	HACKBERRY
69179	9	HACKBERRY
69180	9	HACKBERRY
69181	10	CEDAR
69182	5	CEDAR
69183	6	CEDAR
69184	6	CEDAR
69185	4	CEDAR
69186	13	HACKBERRY
69187	10	CEDAR
69188	8	ASH
69189	10	ELM
69190	4	ELM
69203	10	ELM
69204	13	CEDAR
69205	12	ASH
69206	12	ASH
69207	5	CEDAR
69208	11	CEDAR
69209	4	ASH
69210	6	ELM
69211	19	CEDAR
69212	10	ELM
69213	13	ASH
69214	4	ELM
69215	11	ELM
69216	8	ASH
69217	6	ELM
69218	5	ELM
69219	5	ELM
69220	4	ELM
69221	23	OAK
69222	4	ELM
69223	10	ASH
69224	8	ELM
69225	10	ASH
69226	8	ASH
69227	8	ASH
69228	11	ELM
69229	10	OAK
69230	20	OAK
69231	10	ASH
69232	17	OAK
69233	4	ASH

69234	10	ELM
69235	27	OAK
69236	4	OAK
69237	19	OAK
69238	32	OAK
69239	5	OAK
69240	10	OAK
69241	10	ASH
69242	6	OAK
69243	6	OAK
69244	11	ASH
69245	11	OAK
69246	9	ELM
69247	8	CEDAR
69248	4	ELM
69249	10	ELM
69250	14	ASH
69251	4	OAK
69252	4	OAK
69253	11	ASH
69254	8	ELM
69255	4	ELM
69256	8	ELM
69257	7	ELM
69258	4	REDBUD
69259	4	REDBUD
69260	7	ASH
69261	5	ASH
69262	17	OAK
69263	13	ASH
69264	12	ASH
69265	8	ASH
69266	7	CEDAR
69267	5	ELM
69268	5	ELM
69269	15	ELM
69270	25	OAK
69271	26	OAK
69272	6	CEDAR
69273	5	CEDAR
69274	16	OAK
69275	12	OAK
69276	7	OAK
69277	29	OAK
69278	14	OAK
69664	10	ELM
69665	8	HACKBERRY
69666	4	ELM
69824	15	ASH
69825	15	ASH
69826	11	ASH
69827	11	ASH
69828	17	ASH
69829	13	MAPLE
69830	5	OAK
69831	12	ASH
69832	6	ELM
69833	29	OAK
69834	12	ASH
69835	6	ELM
69836	13	MAPLE
69837	10	ASH
69838	11	HICKORY
69839	17	HICKORY
69840	10	MAPLE
69841	7	ELM
69842	10	HICKORY
69843	13	MAPLE
69844	38	OAK
69845	12	HICKORY
69846	5	MAPLE
69847	7	MAPLE
69848	18	MAPLE
69849	4	MAPLE
69850	22	ELM
69851	12	MAPLE
69852	5	MAPLE
69853	7	HICKORY
69854	16	OAK
69855	24	OAK
69856	7	ELM
69857	13	HICKORY
69858	9	MAPLE
69859	9	HICKORY
69860	8	MAPLE
69861	5	MAPLE
69862	10	MAPLE
69863	10	MAPLE
69864	31	OAK
69865	14	OAK
69866	14	OAK
69867	10	MAPLE
69868	10	MAPLE
69869	8	MAPLE

69870	18	OAK
69871	7	MAPLE
69872	7	MAPLE
69873	7	ASH
69874	6	HICKORY
69875	16	HICKORY
69876	26	OAK
69877	7	ASH
69878	34	OAK
69879	5	MAPLE
69880	6	ASH
69881	18	HICKORY
69882	5	MAPLE
69883	6	ELM
69884	16	ASH
69885	6	ELM
69886	6	ELM
69887	6	ELM
69888	4	ELM
69889	9	HACKBERRY
69890	13	ASH
69986	12	OAK
69990	12	ASH
69991	4	ELM
69992	4	ELM
69993	5	ASH
69994	14	OAK
69995	12	ASH
69996	12	ASH
69997	6	HICKORY
69998	10	HICKORY
69999	14	HICKORY
70000	20	ASH
70001	12	MAPLE
70002	8	MAPLE
70003	12	OAK
70004	7	MAPLE
70005	11	MAPLE
70006	22	OAK
70007	10	ASH
70008	6	MAPLE
70009	8	ASH
70010	10	ASH
70011	7	MAPLE
70012	10	ASH
70013	11	MAPLE
70014	10	ASH
70015	13	MAPLE
70016	15	MAPLE
70017	10	ASH
70018	10	ASH
70019	4	MAPLE
70020	16	HICKORY
70021	8	MAPLE
70022	12	MAPLE
70023	11	ASH
70024	7	ASH
70025	12	ASH
70026	7	MAPLE
70027	9	MAPLE
70028	17	MAPLE
70029	7	MAPLE
70030	6	MAPLE
70031	13	ASH
70032	15	MAPLE
70033	17	MAPLE
70034	14	ASH
70035	12	MAPLE
70036	6	MAPLE
70037	5	MAPLE
70038	19	ASH
70039	7	OAK
70040	17	ASH
70041	11	HICKORY
70042	13	HICKORY
70043	4	MAPLE
70044	13	ASH
70045	10	MAPLE
70046	24	OAK
70047	10	MAPLE
70048	10	MAPLE
70049	7	MAPLE
70050	7	MAPLE
70051	11	HICKORY
70124	9	HACKBERRY
70125	10	HACKBERRY
70126	4	HACKBERRY
70127	5	HACKBERRY
70128	5	HACKBERRY
70129	5	HACKBERRY
70130	8	HACKBERRY
70131	15	ELM
70132	10	HACKBERRY
70133	6	HACKBERRY

70134	12	TRI4HACKBERRY
70135	12	HACKBERRY
70136	6	HACKBERRY
70137	10	HACKBERRY
70138	4	HACKBERRY
70139	4	HACKBERRY
70140	8	HACKBERRY
70141	5	ELM
70142	5	ELM
70143	5	CEDAR
70144	10	ELM
70145	6	ELM
70146	6	HACKBERRY
70147	7	CEDAR
70148	4	ELM
70149	4	ELM
70150	8	ELM
70151	4	HACKBERRY
70152	5	MAPLE
70153	10	CEDAR
70154	14	HACKBERRY
70155	9	HACKBERRY
70156	10	ELM
70157	4	ELM
70158	4	ELM
70159	10	LOCUST
70328	10	WILLOW
70329	13	WILLOW
70330	9	WILLOW
70331	12	WILLOW
70332	15	WILLOW
70333	8	WILLOW
70334	5	WILLOW
70335	5	WILLOW
70336	5	WILLOW
70337	14	DBL7WILLOW
70338	12	WILLOW
70339	10	WILLOW
70340	10	DBL5WILLOW
70341	8	DBL4WILLOW
70342	14	DBL7WILLOW
70343	12	DBL6WILLOW
70344	10	DBL5WILLOW
70345	10	DBL5WILLOW
70346	12	DBL6WILLOW
70347	5	COTTONWOOD
70752	7	ASH
70753	4	ELM
70754	8	ASH
70755	8	ASH
70757	6	CEDAR
70758	6	ASH
70759	6	HACKBERRY
70760	12	ASH
70761	4	HACKBERRY
70762	12	ASH
70763	12	ASH
70764	4	ELM
70765	6	ELM
70766	8	HACKBERRY
70767	11	CEDAR
70768	14	ASH
70769	12	ASH
70770	8	HICKORY
70771	10	MAPLE
70772	15	ASH
70773	15	ASH
70774	10	MAPLE
70775	10	ASH
70776	16	OAK
70777	18	ASH
70778	7	MAPLE
70779	5	MAPLE
70780	5	MAPLE
70781	5	OAK
70782	11	ASH
70783	10	MAPLE
70784	8	MAPLE
70785	8	MAPLE
70786	15	MAPLE
70787	15	MAPLE
70788	12	MAPLE
70789	4	MAPLE
70790	10	ASH
70791	13	ASH
70792	4	CEDAR
70793	12	ASH
70794	10	ASH
70795	5	MAPLE
70796	5	MAPLE
70797	11	ASH
70798	8	ASH
70799	11	ASH
70800	5	CEDAR

72080	11	HACKBERRY
72090	12	OAK
72128	6	ELM
72130	6	ELM
72131	10	ELM
72132	4	ELM
72133	5	HACKBERRY
72134	6	ELM
72135	20	OAK
72136	18	OAK
72137	12	OAK
72138	13	PERSIMMON
72139	5	OAK
72140	7	OAK
72141	9	OAK
72142	12	DBLGOAK
72143	5	ELM
72144	8	ELM
72145	4	HACKBERRY
72146	6	HACKBERRY
72147	7	OAK
72148	21	OAK
72149	24	OAK
72150	5	HACKBERRY
72151	12	OAK
72152	4	OAK
72153	15	OAK
72154	6	HACKBERRY
72155	12	HACKBERRY
72156	10	HACKBERRY
72157	4	HACKBERRY
72158	6	OAK
72159	14	OAK
72160	14	OAK
72161	5	OAK
72162	5	OAK
72163	5	ELM
72164	5	CEDAR
72165	4	CEDAR
72166	12	HACKBERRY
72167	12	HACKBERRY
72168	4	ELM
72169	12	HACKBERRY
72171	10	HACKBERRY
72264	5	CEDAR
72265	14	HACKBERRY
72267	10	HACKBERRY
72268	11	HACKBERRY
72269	11	HACKBERRY
72270	10	HACKBERRY
72271	7	HACKBERRY
72272	4	HACKBERRY
72273	15	OAK
72274	5	HACKBERRY
72275	22	HACKBERRY
72276	28	ELM
72277	11	HACKBERRY
72278	4	MULBERRY
72279	10	HACKBERRY
72280	8	HACKBERRY
72281	9	HACKBERRY
72282	5	BOXELDER
72283	11	HACKBERRY
72290	7	HACKBERRY
72291	13	ELM
72292	10	HACKBERRY
72295	4	HACKBERRY
72296	15	PERSIMMON
72297	13	ELM
72298	11	HACKBERRY
72299	5	ELM
72300	7	ELM
72301	15	ELM
72302	8	ELM
72303	7	HACKBERRY
72304	9	PERSIMMON
72305	7	PERSIMMON
72306	5	ELM
72307	6	HACKBERRY
72308	12	HACKBERRY
72309	11	ELM
72310	8	HACKBERRY
72312	22	HACKBERRY
72313	7	HACKBERRY
72314	13	HACKBERRY
72315	8	HACKBERRY
72316	10	HACKBERRY
72317	8	PERSIMMON
72318	8	PERSIMMON
72319	6	HACKBERRY
72320	12	HACKBERRY
72321	7	ELM
72322	6	HACKBERRY
72323	11	HACKBERRY

72324	5	HACKBERRY
72325	12	HACKBERRY
72326	7	HACKBERRY
72327	10	HACKBERRY
72328	8	HACKBERRY
72329	8	HACKBERRY
72330	23	HACKBERRY
72331	6	HACKBERRY
72332	7	HACKBERRY
72333	7	ELM
72334	10	HACKBERRY
72335	10	HACKBERRY
72336	5	ELM
72337	8	HACKBERRY
72338	8	HACKBERRY
72339	5	HACKBERRY
72340	8	HACKBERRY
72341	8	WALNUT
72343	4	HACKBERRY
72344	12	HACKBERRY
72345	7	LOCUST
72346	7	ELM
72347	10	HACKBERRY
72348	5	HACKBERRY
72349	8	HACKBERRY
72350	8	HACKBERRY
72351	11	HACKBERRY
72352	7	ELM
72353	12	ELM
72354	7	ELM
72355	5	HACKBERRY
72356	4	HACKBERRY
72357	11	HACKBERRY
72358	9	HACKBERRY
72359	13	ASH
72360	10	HACKBERRY
72365	6	ASH
72373	6	HACKBERRY
72374	11	HACKBERRY
72375	6	HACKBERRY
72376	5	ELM
72377	7	BODDOCK
72378	11	OAK
72379	6	HACKBERRY
72380	6	HACKBERRY
72381	4	CEDAR
72382	10	ELM
72383	4	ELM
72384	4	ASH
72385	12	PERSIMMON
72386	4	ELM
72387	4	ELM
72388	6	ASH
72395	5	HACKBERRY
72396	5	HACKBERRY
72397	7	HACKBERRY
72398	10	HACKBERRY
72399	9	ELM
72400	5	PERSIMMON
72412	8	ASH
72414	12	OAK
72415	10	HACKBERRY
72416	5	ELM
72417	15	ELM
72418	9	ELM
72421	8	OAK
72422	5	CEDAR
72423	5	CEDAR
72424	10	HACKBERRY
72425	6	HACKBERRY
72426	12	HACKBERRY
72427	5	ASH
72428	17	HACKBERRY
72429	7	HACKBERRY
72431	6	ELM
72433	8	HACKBERRY
72434	6	HACKBERRY
72436	14	HACKBERRY
72437	10	ELM
72438	7	HACKBERRY
72439	5	HACKBERRY
72440	6	ELM
72441	14	ELM
72442	8	ELM
72443	14	HACKBERRY
72445	7	HACKBERRY
72446	6	HACKBERRY
72447	8	BODDOCK
72448	4	CEDAR
72449	4	CEDAR
72450	20	DBL10BODDOCK
72451	15	HACKBERRY
72452	18	HACKBERRY
72453	20	QUAD5BODDOCK

72454	7	HACKBERRY
72455	5	HACKBERRY
72456	6	HACKBERRY
72459	11	WALNUT
72486	10	HACKBERRY
72487	5	ELM
72488	8	OAK
72489	4	CEDAR
72561	11	HACKBERRY
72565	8	ELM
72566	8	HACKBERRY
72567	8	HACKBERRY
72568	6	HACKBERRY
73346	6	WALNUT
73438	10	PERSIMMON
73439	5	HACKBERRY
73441	5	ELM
73442	4	BOXELDER
73443	6	HACKBERRY
73444	6	HACKBERRY
73445	7	HACKBERRY
73446	10	BOXELDER
73447	5	HACKBERRY
73455	12	HACKBERRY
73456	12	HACKBERRY
73457	9	HACKBERRY
73458	10	ELM
73459	4	OAK
73460	5	HACKBERRY
73462	7	HACKBERRY
73463	13	HACKBERRY
73465	10	HACKBERRY
73466	12	HACKBERRY
73467	15	HACKBERRY
73469	15	ASH
73470	10	HACKBERRY
73471	10	WALNUT
73512	6	ELM
73513	6	HACKBERRY
73514	4	BOXELDER
73517	4	ELM
73518	6	ELM
73519	6	BOXELDER
73520	4	BOXELDER
73521	6	ELM
73522	27	ASH
73527	14	OAK
73536	5	HACKBERRY
73537	13	MAPLE
73547	4	MAPLE
73548	13	ELM
73549	10	ELM
73550	4	OAK
73551	8	ELM
73552	11	ELM
73553	4	HICKORY
73554	12	MAPLE
73555	10	SASSAFRAS
73556	10	SASSAFRAS
73557	4	MAPLE
73558	4	ELM
73559	11	SASSAFRAS
73560	11	SASSAFRAS
73561	12	SASSAFRAS
73562	12	SASSAFRAS
73563	12	MAPLE
73564	6	HACKBERRY
73565	21	WALNUT
73566	10	HACKBERRY
73567	8	MULBERRY
73568	4	HACKBERRY
73569	4	OAK
73570	15	ELM
73571	6	HACKBERRY
73572	8	HACKBERRY
73573	11	WALNUT
73574	12	HACKBERRY
73575	12	HACKBERRY
73576	12	HACKBERRY
73577	6	ASH
73578	8	SASSAFRAS
73579	11	HACKBERRY
73580	15	HACKBERRY
73581	15	ASH
73582	12	ASH
73615	6	ELM
73616	15	ASH
73639	9	SASSAFRAS
73640	9	SASSAFRAS
73641	9	SASSAFRAS
73642	7	SASSAFRAS
73643	6	MAPLE
73644	4	BOXELDER
73645	5	CEDAR

73646	10	ASH
73647	13	SASSAFRAS
73648	10	SASSAFRAS
73649	10	SASSAFRAS
73650	10	SASSAFRAS
73651	10	SASSAFRAS
73652	8	SASSAFRAS
73653	10	SASSAFRAS
73654	5	ASH
73655	4	ELM
73656	4	MAPLE
73657	8	SASSAFRAS
73658	8	SASSAFRAS
73659	8	SASSAFRAS
73660	8	SASSAFRAS
73661	8	SASSAFRAS
73662	10	SASSAFRAS
73663	12	SASSAFRAS
73664	4	MAPLE
73665	5	SASSAFRAS
73666	8	SASSAFRAS
73667	8	SASSAFRAS
73668	14	SASSAFRAS
73669	14	SASSAFRAS
73670	7	SASSAFRAS
73671	10	SASSAFRAS
73672	8	MAPLE
73673	4	MAPLE
73674	10	SASSAFRAS
73675	13	SASSAFRAS
73676	5	SASSAFRAS
73677	12	SASSAFRAS
73678	12	SASSAFRAS
73679	6	SASSAFRAS
73680	17	SASSAFRAS
73681	10	SASSAFRAS
73682	4	MAPLE
73683	6	ASH
73684	6	ELM
73685	4	BOXELDER
73686	10	HACKBERRY
73687	5	HACKBERRY
73688	4	ELM
73689	7	HACKBERRY
73690	7	HACKBERRY
73691	7	OAK
73692	5	ASH
73693	15	WALNUT
73694	4	HACKBERRY
73695	10	ELM
73696	9	ELM
73697	5	OAK
73698	7	MAPLE
73699	7	ELM
73700	19	MAPLE
73701	12	SASSAFRAS
73702	10	SASSAFRAS
73703	10	SASSAFRAS
73704	10	SASSAFRAS
73705	12	SASSAFRAS
73706	7	SASSAFRAS
73707	11	ELM
73708	4	ELM
73709	4	MAPLE
73710	6	MAPLE
73711	12	SASSAFRAS
73715	4	MAPLE
73716	8	MAPLE
73717	11	SASSAFRAS
73718	11	SASSAFRAS
73719	25	OAK
73720	28	OAK
73721	24	OAK
73722	6	ASH
73723	10	HACKBERRY
73724	4	ELM
73725	8	ELM
73726	9	ASH
73727	7	HACKBERRY
73728	7	MAPLE
73729	8	MAPLE
73730	10	PERSIMMON
73731	17	ASH
73732	9	ASH
73733	5	ELM
73734	10	ASH
73735	15	ASH
73736	7	MAPLE
73737	4	OAK
73738	13	ASH
73739	6	ELM
73740	22	OAK
73741	6	ELM
73742	6	ELM

73743	6	ELM
73744	10	MAPLE
73745	5	ASH
73746	4	ELM
73747	12	HACKBERRY
73748	10	MAPLE
73749	5	ELM
73750	12	OAK
73751	31	OAK
73752	5	ELM
73753	13	MAPLE
73754	13	MAPLE
73755	10	MAPLE
73756	14	ASH
73757	9	MAPLE
73758	15	ASH
73759	26	OAK
73760	8	ELM
73761	11	MAPLE
73762	18	OAK
73763	26	OAK
73764	12	MAPLE
73765	8	HACKBERRY
73766	7	MAPLE
73767	13	SASSAFRAS
73768	9	MAPLE
73769	10	SASSAFRAS
73770	5	ELM
73771	4	ELM
73772	12	SASSAFRAS
73773	5	MAPLE
73774	11	SASSAFRAS
73775	13	SASSAFRAS
73776	14	SASSAFRAS
73777	14	SASSAFRAS
73778	18	ELM
73779	5	ELM
73780	18	HACKBERRY
73781	17	MAPLE
73782	8	HACKBERRY
73783	5	ELM
73784	7	ELM
73785	8	HACKBERRY
73786	8	HACKBERRY
73787	13	HACKBERRY
73788	5	BOXELDER
73790	10	HACKBERRY
73792	10	HACKBERRY
73793	12	HACKBERRY
73794	13	BOXELDER
73795	6	HACKBERRY
73797	5	MAPLE
73798	20	WALNUT
73799	13	SASSAFRAS
73800	12	MAPLE
73801	6	MAPLE
73802	9	MAPLE
73803	8	OAK
73804	10	SASSAFRAS
73805	15	SASSAFRAS
73806	15	ELM
73807	6	MAPLE
73808	5	MAPLE
73809	10	SASSAFRAS
73810	10	SASSAFRAS
73811	10	SASSAFRAS
73812	10	SASSAFRAS
73813	8	SASSAFRAS
73814	5	MAPLE
73815	16	OAK
73816	9	HICKORY
73817	12	MAPLE
73818	7	MAPLE
73819	11	MAPLE
73820	31	ASH
73821	5	OAK
73822	6	MAPLE
73823	8	MAPLE
73824	13	ASH
73825	8	OAK
73826	4	ELM
73827	18	ASH
73828	5	ELM
73829	5	ASH
73830	14	OAK
73831	12	OAK
73832	12	OAK
73833	7	ASH
73834	16	OAK
73835	4	ELM
73836	7	MAPLE
73837	10	OAK
73838	6	MAPLE
73839	19	ASH

73840	7	ELM
73841	6	MAPLE
73842	16	ASH
73843	9	MAPLE
73844	12	MAPLE
73845	13	ASH
73846	4	ELM
73847	4	ELM
73848	14	ASH
73849	38	OAK
73850	6	ELM
73851	13	OAK
73852	7	ELM
73853	8	OAK
73854	5	ELM
73855	15	ASH
73856	4	MAPLE
73857	9	OAK
73858	5	ASH
73859	9	ASH
73860	32	OAK
73861	19	OAK
73862	6	MAPLE
73863	4	ELM
73864	4	ASH
73868	4	ELM
73879	4	OAK
73880	6	ELM
73881	5	MAPLE
73882	6	ELM
73883	9	MAPLE
73884	24	OAK
73885	9	MAPLE
73886	28	OAK
73887	26	ASH
73888	13	ASH
73889	11	ASH
73890	9	MAPLE
73891	5	MAPLE
73892	8	MAPLE
73893	10	MAPLE
73894	15	ASH
73895	6	ASH
73896	6	ASH
73897	5	ELM
73898	26	DBL13ASH
73899	4	HICKORY
73900	4	HICKORY
73901	18	ASH
73902	4	ELM
73903	7	ELM
73904	5	ELM
73905	10	ASH
73906	11	ASH
73907	6	ASH
73908	8	OAK
73909	18	OAK
73910	30	OAK
73911	6	MULBERRY
73912	11	MAPLE
73913	11	MAPLE
73914	14	ASH
73915	7	HACKBERRY
73916	16	OAK
73917	11	ELM
73918	6	ELM
73919	14	OAK
73920	18	OAK
73921	4	MAPLE
73922	8	HACKBERRY
73923	4	ELM
73924	7	ASH
73925	8	MAPLE
73926	4	ELM
73927	12	OAK
73928	5	HICKORY
73929	4	OAK
73930	4	ELM
73931	20	ASH
73932	9	CEDAR
73933	6	MAPLE
73934	6	HICKORY
73935	4	ELM
73936	17	OAK
73937	4	ELM
73938	6	ELM
73939	9	HACKBERRY
73940	8	HACKBERRY
73941	20	ASH
73942	6	CEDAR
73943	13	MAPLE
73944	16	OAK
73945	10	OAK
73946	5	ELM

73947	10	SASSAFRAS
73948	6	OAK
73949	5	ELM
73950	6	MAPLE
73951	19	OAK
73952	4	MULBERRY
73953	6	MULBERRY
73954	4	ELM
73955	5	REDBUD
73961	7	ASH
73962	12	OAK
73963	14	ASH
73964	14	ASH
73965	6	ASH
73966	6	MAPLE
73967	8	ASH
73968	10	ASH
73969	6	ASH
73970	5	ASH
73971	4	ASH
73972	5	OAK
73973	6	ASH
73974	9	ASH
73975	7	ASH
73976	16	ASH
73977	7	ASH
73978	10	ASH
73979	6	ASH
73980	20	ASH
73981	4	ELM
73982	4	ELM
73983	10	HACKBERRY
73984	12	DBLGHACKBERRY
73985	14	ASH
73986	5	ASH
73987	5	ASH
73988	7	ASH
73989	5	ASH
73990	7	ASH
73991	5	ASH
73992	4	ASH
73993	4	ASH
73994	4	ASH
73995	7	ASH
73996	7	ASH
73997	4	ELM
73998	15	ASH
73999	19	HACKBERRY
74000	8	HACKBERRY
74001	4	HACKBERRY
74002	10	HACKBERRY
74003	10	HACKBERRY
74004	17	ASH
74005	7	ASH
74006	4	ELM
74007	4	ELM
74008	13	OAK
74009	11	ASH
74010	6	HACKBERRY
74011	4	HICKORY
74012	12	ASH
74013	8	HICKORY
74014	10	ASH
74015	8	ASH
74016	8	ASH
74017	6	ASH
74018	6	ELM
74019	5	ELM
74020	5	ELM
74021	5	HICKORY
74022	16	ASH
74023	5	ASH
74024	5	ASH
74025	22	ASH
74026	8	OAK
74027	7	ASH
74028	12	ASH
74029	8	ASH
74030	5	ASH
74031	9	ASH
74032	9	ASH
74033	5	HICKORY
74034	12	ASH
74035	4	ELM
74036	8	CEDAR
74037	17	ASH
74038	6	MAPLE
74039	8	MAPLE
74040	20	OAK
74041	25	OAK
74042	10	MAPLE
74043	17	OAK
74044	11	MAPLE
74045	16	ASH

74046	10	MAPLE
74047	15	ASH
74048	5	MAPLE
74049	8	MAPLE
74050	16	ASH
74051	9	CEDAR
74052	8	MAPLE
74053	10	MAPLE
74054	8	ASH
74055	18	ASH
74056	10	ASH
74057	12	MAPLE
74058	6	MAPLE
74059	6	ASH
74060	13	ASH
74061	14	OAK
74062	4	ASH
74063	4	ASH
74064	5	ASH
74065	5	ASH
74066	16	ASH
74067	9	ASH
74068	6	ASH
74069	6	ASH
74070	12	ASH
74071	8	ASH
74072	8	ASH
74073	5	ASH
74074	4	ASH
74075	6	ASH
74076	9	ASH
74077	9	CEDAR
74078	6	CEDAR
74079	9	OAK
74080	16	ASH
74081	4	ASH
74082	4	ASH
74083	18	ASH
74084	13	ASH
74085	9	ASH
74086	16	ASH
74087	6	WALNUT
74088	10	ASH
74089	7	ASH
74090	7	ASH
74091	8	ASH
74092	8	ASH
74093	6	ASH
74094	10	ASH
74095	14	ASH
74096	5	ASH
74097	6	ASH
74098	7	ELM
74099	15	ASH
74100	15	ASH
74101	12	ASH
74102	7	ASH
74103	7	ASH
74104	4	ASH
74105	4	ELM
74106	8	ASH
74107	7	ASH
74108	4	ELM
74109	10	ASH
74110	7	ASH
74111	5	ASH
74112	15	ASH
74113	8	BUCKEYE
74114	10	ASH
74115	13	ASH
74116	7	HACKBERRY
74117	10	MAPLE
74118	5	HACKBERRY
74119	19	OAK
74120	5	MAPLE
74121	15	ASH
74122	7	HACKBERRY
74123	7	OAK
74124	14	ASH
74125	4	BOXELDER
74126	7	CEDAR
74127	6	HACKBERRY
74128	6	ASH
74129	5	CEDAR
74130	18	OAK
74131	4	ASH
74132	10	OAK
74133	18	ASH
74134	6	CEDAR
74135	7	ELM
74138	4	ASH
74139	8	ASH
74144	6	CEDAR
74166	5	OAK

74167	8	MAPLE
74168	18	ASH
74169	16	OAK
74170	21	OAK
74171	7	ASH
74172	12	ASH
74173	9	ASH
74174	9	CEDAR
74175	8	ASH
74176	13	ASH
74177	6	ASH
74178	10	ASH
74179	20	OAK
74180	4	ELM
74181	12	ASH
74182	8	ASH
74183	12	HACKBERRY
74184	5	ASH
74185	5	ASH
74186	11	ASH
74187	5	ASH
74188	12	ASH
74189	10	ASH
74190	10	ASH
74191	8	OAK
74192	17	ASH
74193	5	HICKORY
74194	13	OAK
74195	6	CEDAR
74196	6	CEDAR
74197	9	ASH
74198	4	ASH
74199	6	ELM
74229	14	OAK
74230	5	ELM
74231	10	MAPLE
74364	18	WALNUT
74405	38	OAK
74432	10	CEDAR
74433	5	CEDAR
74434	5	CEDAR
74435	5	CEDAR
74436	5	CEDAR
74437	6	CEDAR
74439	8	CEDAR
74440	6	CEDAR
74441	6	BODDOCK
74442	4	CEDAR
74443	7	CEDAR
74444	6	CEDAR
74445	6	CEDAR
74448	12	CEDAR
74449	7	CEDAR
74450	7	CEDAR
74451	6	CEDAR
74452	12	CEDAR
74453	5	CEDAR
74454	9	ELM
74455	4	CEDAR
74456	7	HACKBERRY
74457	7	HACKBERRY
74458	5	ELM
74540	7	ASH
74541	13	HACKBERRY
92165	9	CEDAR
24281		CALIPERS TO REMAIN

TREES TO REMOVE - ROSEBROOKE SOUTH

POINT	CALIPER	SPECIES
63002	11	PERSIMMON
63003	10	PERSIMMON
63004	12	PERSIMMON
63006	25	OAK
63015	10	PERSIMMON
63016	12	PERSIMMON
63017	7	PERSIMMON
63018	10	HICKORY
63019	10	ASH
63020	5	ASH
63021	16	CEDAR
63022	4	PERSIMMON
63023	11	CEDAR
63024	5	ELM
63025	13	CEDAR
63026	9	ELM
63027	9	ELM
63028	10	ELM
63029	10	ELM
63030	4	ELM
63031	5	CEDAR
63032	8	ELM
63033	13	ASH
63034	10	HACKBERRY
63035	5	ELM
63036	5	ELM
63037	5	CEDAR
63038	8	ELM
63039	14	ASH
63040	9	ELM
63041	8	ELM
63042	8	ELM
63043	8	ELM
63044	9	ELM
63045	7	ELM
63046	6	ELM
63047	10	ELM
63048	5	HACKBERRY
63049	7	ELM
63050	12	HACKBERRY
63051	9	HACKBERRY
63052	12	ELM
63053	9	CEDAR
63054	10	HACKBERRY
63055	8	PERSIMMON
63056	5	ASH
63057	5	HACKBERRY
63058	4	HACKBERRY
63059	5	ELM
63060	7	ELM
63061	5	ASH
63062	4	ASH
63063	9	LOCUST
63064	5	HACKBERRY
63065	10	ELM
63066	10	ELM
63067	11	CEDAR
63068	4	ASH
63069	6	PERSIMMON
63070	8	LOCUST
63071	4	PERSIMMON
63072	5	HACKBERRY
63073	5	ELM
63074	5	ELM
63075	4	HACKBERRY
63076	10	PERSIMMON
63077	5	PERSIMMON
63078	5	ELM
63079	5	ELM
63080	8	HACKBERRY
63081	8	ELM
63082	8	HACKBERRY
63083	8	ELM
63084	4	HACKBERRY
63085	5	HACKBERRY
63086	4	PERSIMMON
63087	11	ELM
63088	5	REDBUD
63089	6	ELM
63090	14	ELM
63091	10	PERSIMMON
63092	7	CEDAR
63093	10	ELM
63094	10	ELM
63095	6	ASH
63096	5	ASH
63097	9	ELM
63098	4	ELM
63099	7	ELM
63100	9	ELM
63101	5	ELM
63102	6	HACKBERRY

63103	6	CEDAR
63104	10	HACKBERRY
63105	4	ELM
63106	6	ELM
63107	6	LOCUST
63108	5	ELM
63109	5	ELM
63110	5	ASH
63111	4	ELM
63112	6	OAK
63113	8	HACKBERRY
63114	4	HACKBERRY
63115	9	ELM
63116	4	ELM
63117	4	ELM
63118	5	ELM
63119	10	ELM
63120	6	OAK
63121	4	ASH
63122	5	OAK
63123	10	ELM
63124	7	HACKBERRY
63125	11	HACKBERRY
63126	10	ELM
63127	10	ELM
63128	5	ELM
63129	7	ELM
63130	5	ELM
63131	6	ELM
63132	7	ASH
63133	11	ELM
63134	8	LOCUST
63135	4	ASH
63136	9	ASH
63137	22	OAK
63138	5	HACKBERRY
63139	4	ELM
63140	8	ELM
63141	5	OAK
63142	9	ELM
63143	6	ELM
63144	9	CEDAR
63145	9	HACKBERRY
63146	4	ASH
63147	5	ASH
63148	6	ASH
63149	6	CEDAR
63150	11	HACKBERRY
63151	11	HACKBERRY
63152	8	ELM
63153	8	ASH
63154	6	ASH
63155	7	CEDAR
63156	7	CEDAR
63157	10	HACKBERRY
63158	4	OAK
63159	8	ELM
63160	12	HACKBERRY
63161	8	HICKORY
63162	8	OAK
63163	7	OAK
63164	4	ELM
63165	4	HACKBERRY
63166	16	ASH
63167	9	OAK
63168	10	CEDAR
63169	5	ASH
63170	4	ELM
63171	14	HACKBERRY
63172	5	ELM
63173	4	OAK
63174	10	ELM
63175	10	ELM
63176	9	LOCUST
63177	6	ASH
63178	8	ASH
63179	5	ASH
63180	5	ASH
63181	4	ELM
63182	5	ASH
63183	7	ELM
63184	8	ASH
63185	8	PERSIMMON
63186	6	PERSIMMON
63187	4	CEDAR
63188	10	ELM
63189	12	ELM
63190	10	PERSIMON
63191	10	OAK
63192	9	ELM
63193	9	ELM
63194	4	HACKBERRY
63195	4	HACKBERRY
63196	7	ASH

63197	9	ASH
63198	9	ASH
63199	6	ASH
63200	4	LOCUST
63201	11	ELM
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63203	4	CEDAR
63204	4	CEDAR
63205	4	CEDAR
63206	5	REDBUD
63207	5	CEDAR
63208	5	CEDAR
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63212	7	CEDAR
63213	5	CEDAR
63214	7	CEDAR
63215	6	CEDAR
63216	10	ASH
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63218	12	ELM
63219	9	OAK
63220	16	OAK
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63222	10	OAK
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63226	7	LOCUST
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63228	6	CEDAR
63229	4	CEDAR
63230	4	CEDAR
63231	5	CEDAR
63232	5	LOCUST
63233	5	CEDAR
63234	5	CEDAR
63235	4	CEDAR
63236	6	LOCUST
63237	4	LOCUST
63238	6	HACKBERRY
63239	8	ASH
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63241	7	ELM
63242	5	HACKBERRY
63243	12	CEDAR
63244	4	REDBUD
63245	8	ASH
63246	6	ASH
63247	9	ASH
63248	8	LOCUST
63249	4	HACKBERRY
63250	6	ASH
63251	9	LOCUST
63252	12	CEDAR
63253	8	HACKBERRY
63254	10	LOCUST
63255	27	CEDAR
63256	5	HACKBERRY
63257	7	ELM
63258	10	ELM
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63269	5	ELM
63270	5	ELM
63271	5	ASH
63272	6	LOCUST
63273	5	LOCUST
63274	4	ASH
63275	4	ASH
63276	7	LOCUST
63277	9	LOCUST
63278	11	CEDAR
63279	4	ASH
63280	6	ASH
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63283	5	ASH
63284	5	ASH
63285	4	MAPLE
63286	20	OAK
63287	15	OAK
63288	11	OAK
63289	8	ASH
63290	12	CEDAR

63291	18	CEDAR
63292	6	ASH
63293	8	LOCUST
63294	23	OAK
63295	6	ASH
63296	13	ASH
63297	4	MAPLE
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63299	12	CEDAR
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63308	32	OAK
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63311	15	ASH
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63314	21	OAK
63315	10	OAK
63316	16	ASH
63317	9	MAPLE
63318	14	CEDAR
63319	11	MAPLE
63320	11	ASH
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63322	26	ASH
63323	14	ELM
63324	14	ELM
63325	9	MAPLE
63326	10	MAPLE
63327	10	MAPLE
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63329	10	MAPLE
63330	9	MAPLE
63331	10	ELM
63332	12	ELM
63333	8	ELM
63334	8	ASH
63335	7	ASH
63336	24	DOUBLE12ASH
63337	9	ASH
63338	6	WALNUT
63339	25	OAK
63340	17	ASH
63341	8	OAK
63342	18	ASH
63343	12	ASH
63344	26	OAK
63345	12	MAPLE
63346	24	OAK
63347	20	OAK
63348	5	HICKORY
63349	33	OAK
63350	18	OAK
63351	18	CEDAR
63352	20	OAK
63353	26	OAK
63354	5	HICKORY
63355	6	HICKORY
63356	9	ASH
63357	9	MAPLE
63358	15	CEDAR
63359	11	CEDAR
63360	13	ELM
63361	5	CEDAR
63362	11	HACKBERRY
63363	12	CEDAR
63364	18	ASH
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63367	17	CEDAR
63368	9	MAPLE
63369	16	HACKBERRY
63370	18	CEDAR
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63373	12	ELM
63374	10	ELM
63375	10	MAPLE
63376	10	MAPLE
63377	32	OAK
63378	21	OAK
63379	23	OAK
63380	27	OAK
63381	8	MAPLE
63382	9	MAPLE
63383	29	OAK
63384	18	OAK

63385	17	OAK
63386	17	HICKORY
63387	19	OAK
63388	5	ELM
63389	8	ELM
63390	20	ASH
63391	23	OAK
63392	32	OAK
63393	24	OAK
63394	19	ASH
63395	22	OAK
63396	25	OAK
63397	14	OAK
63398	15	PERSIMMON
63399	26	OAK
63400	24	DOUBLE12CEDAR
63401	19	CEDAR
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63404	6	ELM
63405	6	HACKBERRY
63406	5	CEDAR
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63411	6	CEDAR
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63417	15	PERSIMMON
63418	10	PERSIMMON
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63435	12	CEDAR
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63437	20	DBL10PERSIMMON
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63439	10	PERSIMMON
63440	4	CEDAR
63441	6	CEDAR
63442	10	ELM
63443	4	ELM
63444	6	HICKORY
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63446	35	OAK
63447	13	MAPLE
63448	16	MAPLE
63449	14	ASH
63450	10	SASSAFRAS
63451	6	SASSAFRAS
63452	11	WALNUT
63453	15	MAPLE
63454	12	MAPLE
63455	16	ELM
63456	22	DBL11HICKORY
63457	8	ASH
63458	9	ELM
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63460	9	OAK
63461	13	OAK
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63465	12	ELM
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63622	6	OAK
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63639	13	OAK
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63671	16	OAK
63672	17	OAK
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63676	8	HACKBERRY
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63736	15	OAK
63737	15	ASH
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63745	17	OAK
63746	18	OAK
63747	12	ASH
63748	4	ASH
63749	11	ELM
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63751	6	ASH
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63757	12	OAK
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63764	5	OAK
63765	8	ASH
63766	8	ASH
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63782	5	CEDAR
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63949	9	OAK
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63969	17	OAK
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63977	10	ASH
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63979	6	OAK
63980	6	OAK
63981	9	HACKBERRY
63982	20	OAK
63983	4	REDBUD
63984	15	CEDAR
63985	23	CEDAR
64001	7	BODDOCK
64002	15	BODDOCK
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64021	16	ELM
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64477	8	ASH
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64481	13	OAK
64482	7	WALNUT
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64499	10	CEDAR
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65010	17	CEDAR
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65014	4	HACKBERRY
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65017	13	OAK
65018	18	OAK
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65023	11	OAK
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65027	23	OAK
65028	24	OAK
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65034	12	DBL6DOGWOOD
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65036	5	ELM
65037	4	ELM
65038	15	TRIPLE5PERSIMMON
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65040	10	ELM
65041	10	IRONWOOD
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65057	8	CEDAR
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65098	12	ASH

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65105	8	DBL4DOGWOOD
65106	5	REDBUD
65107	5	REDBUD
65108	26	OAK
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65111	4	WALNUT
65112	5	HACKBERRY
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65186	4	CEDAR
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65188	9	CEDAR
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65190	4	REDBUD
65191	6	ASH
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65209	8	HACKBERRY
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65294	4	HACKBERRY
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65343	7	HACKBERRY
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65346	7	CEDAR
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65354	16	ASH
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65357	4	ELM
65358	6	ELM
65359	5	ELM
65360	5	HACKBERRY
65361	7	HACKBERRY
65362	6	ELM
65363	6	MULLBERRY
65364	9	ELM
65365	6	HACKBERRY
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65367	4	ELM
65368	5	ELM
65369	6	ELM
65370	13	LOCUST
65371	5	HACKBERRY
65372	11	ELM
65373	4	CEDAR
65374	6	CEDAR
65375	10	CEDAR
65376	7	CEDAR
65377	10	ASH
65378	9	OAK
65379	5	CEDAR
65380	11	OAK

65381	7	ASH
65382	17	HICKORY
65383	4	MAPLE
65384	7	MAPLE
65385	8	HACKBERRY
65386	23	ELM
65387	14	ASH
65388	16	HACKBERRY
65389	5	ASH
65390	6	ASH
65391	5	ELM
65392	34	OAK
65393	15	OAK
65394	6	ELM
65395	6	HACKBERRY
65396	18	DBL9HACKBERRY
65397	16	HACKBERRY
65398	11	HACKBERRY
65399	4	ASH
65400	6	CEDAR
65401	4	ASH
65402	10	ELM
65403	10	ELM
65404	4	ELM
65405	4	ELM
65406	4	ASH
65407	8	ELM
65408	6	HACKBERRY
65409	7	HACKBERRY
65410	16	HACKBERRY
65411	4	CEDAR
65412	4	CEDAR
65413	4	CEDAR
65414	6	CEDAR
65415	9	CEDAR
65416	10	HACKBERRY
65417	20	QUAD5HACKBERRY
65418	11	HACKBERRY
65419	4	ASH
65420	10	HACKBERRY
65421	4	ASH
65422	6	HACKBERRY
65423	9	HACKBERRY
65424	12	ELM
65425	4	ELM
65426	4	ELM
65427	4	CEDAR
65428	4	CEDAR
65429	4	ASH
65430	4	ASH
65431	12	ASH
65432	5	HACKBERRY
65433	4	ASH
65434	4	HACKBERRY
65435	4	OAK
65436	7	ASH
65437	4	ASH
65438	4	CEDAR
65439	8	ELM
65440	6	HACKBERRY
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65442	5	ELM
65443	4	CEDAR
65444	8	HACKBERRY
65445	8	HACKBERRY
65446	6	CEDAR
65447	10	ELM
65448	10	HACKBERRY
65449	8	ELM
65450	12	OAK
65451	5	LOCUST
65452	5	CEDAR
65453	6	ELM
65454	19	ASH
65455	13	ELM
65456	8	HACKBERRY
65457	6	ELM
65458	6	ELM
65459	9	PERSIMMON
65460	13	PERSIMMON
65461	9	CEDAR
65462	12	CEDAR
65463	17	CEDAR
65464	8	ASH
65465	10	HACKBERRY
65466	8	HACKBERRY
65467	4	ELM
65468	6	PERSIMMON
65469	7	PERSIMMON
65470	8	PERSIMMON
65471	4	OAK
65472	8	PERSIMMON
65473	8	PERSIMMON
65474	8	PERSIMMON

65475	9	CEDAR
65476	8	CEDAR
65477	6	ELM
65478	6	ELM
65479	6	ELM
65480	4	HACKBERRY
65481	5	ELM
65482	15	ASH
65483	10	ASH
65484	14	ASH
65485	8	MAPLE
65486	15	ASH
65487	7	ELM
65488	12	ASH
65489	4	ELM
65490	8	ELM
65491	5	OAK
65492	5	OAK
65493	18	OAK
65494	7	HACKBERRY
65495	7	ELM
65496	4	ASH
65497	7	HACKBERRY
65498	6	OAK
65499	10	OAK
65500	5	HACKBERRY
65501	4	OAK
65502	14	OAK
65503	8	ASH
65504	6	ASH
65505	4	HACKBERRY
65506	8	ASH
65507	4	ASH
65508	6	ASH
65509	13	ELM
65510	7	ASH
65511	4	ASH
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65513	4	ASH
65514	7	ASH
65515	10	ASH
65516	5	ASH
65517	5	ASH
65518	5	ASH
65519	6	ASH
65520	4	ASH
65521	8	HACKBERRY
65522	10	HACKBERRY
65523	11	CEDAR
65524	4	ASH
65525	5	ASH
65526	5	ASH
65527	13	LOCUST
65528	8	ASH
65529	6	ASH
65530	4	ELM
65531	6	ASH
65532	6	ASH
65533	4	ASH
65534	4	CEDAR
65535	4	CEDAR
65536	4	ASH
65537	9	ASH
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65544	4	HACKBERRY
65545	7	ASH
65546	4	ASH
65547	6	ASH
65548	6	ASH
65549	4	ASH
65550	5	ASH
65551	5	ASH
65552	5	ASH
65553	4	ASH
65554	6	ASH
65555	4	BODDOCK
65556	6	WALNUT
65557	7	ASH
65558	5	ELM
65559	4	ASH
65560	10	HACKBERRY
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65566	6	ASH
65567	7	ASH
65568	7	ASH
65569	4	ASH
65570	4	CEDAR
65571	6	ELM
65572	10	HACKBERRY
65573	14	CEDAR

65574	9	ELM
65575	7	ELM
65576	9	HACKBERRY
65577	12	OAK
65578	10	ELM
65579	19	OAK
65580	9	CEDAR
65581	4	ASH
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65584	6	CEDAR
65585	4	ASH
65586	5	ELM
65587	4	CEDAR
65588	14	ASH
65589	8	MAPLE
65590	12	OAK
65591	8	MAPLE
65592	6	ASH
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65595	9	MAPLE
65596	8	ELM
65597	9	ASH
65598	6	HACKBERRY
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65601	10	ASH
65602	10	ASH
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65604	4	ELM
65605	7	HACKBERRY
65606	12	ASH
65607	6	ELM
65608	6	HACKBERRY
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65610	4	HACKBERRY
65611	8	ASH
65612	6	CEDAR
65613	18	ASH
65614	5	ELM
65615	4	PERSIMMON
65616	4	REDBUD
65617	4	ELM
65618	6	PERSIMMON
65619	6	ELM
65620	7	ELM
65621	5	REDBUD
65622	10	CEDAR
65623	5	ELM
65624	4	ELM
65625	7	ELM
65626	5	LOCUST
65627	6	LOCUST
65628	4	CEDAR
65629	10	CEDAR
65630	4	ASH
65631	5	ELM
65632	10	ELM
65633	11	ELM
65634	5	ELM
65635	8	CEDAR
65636	12	ELM
65637	6	ELM
65638	6	ELM
65639	6	ELM
65640	9	ELM
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65642	8	ELM
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65644	4	ELM
65645	5	CEDAR
65646	4	ELM
65647	4	ELM
65648	4	ELM
65649	6	ASH
65650	10	OAK
65651	4	ELM
65652	16	DBL8PERSIMMON
65653	4	CEDAR
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65655	11	ELM
65656	11	ELM
65657	7	HACKBERRY
65658	7	HACKBERRY
65659	7	HACKBERRY
65660	9	CEDAR
65661	6	CEDAR
65662	5	CEDAR
65663	12	CEDAR
65664	14	ELM
65665	11	ELM
65666	6	HACKBERRY
65667	17	HACKBERRY

65668	12	CEDAR
65669	10	CEDAR
65670	5	ELM
65671	9	ASH
65672	10	ASH
65673	6	CEDAR
65674	5	ELM
65675	8	PERSIMMON
65676	4	HACKBERRY
65677	10	DBL5ELM
65678	6	CEDAR
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65684	5	ELM
65685	5	ELM
65686	4	CEDAR
65687	4	ASH
65688	4	ASH
65689	9	ASH
65690	6	HACKBERRY
65691	4	ELM
65692	6	ELM
65693	6	ELM
65694	10	ELM
65695	9	ASH
65696	6	BODDOCK
65697	4	BODDOCK
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65699	5	PERSIMMON
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65701	4	ELM
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65706	4	ELM
65707	4	ELM
65708	4	ELM
65709	8	ELM
65710	5	LOCUST
65711	5	ELM
65712	4	HACKBERRY
65713	5	ELM
65714	5	ELM
65715	4	ELM
65716	4	ELM
65717	9	ELM
65718	5	ELM
65719	5	ELM
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65721	5	HACKBERRY
65722	6	ELM
65723	5	ELM
65724	4	PERSIMMON
65725	10	PERSIMMON
65726	10	ASH
65727	4	CEDAR
65728	4	CEDAR
65729	7	LOCUST
65730	8	ELM
65731	5	HACKBERRY
65732	4	HACKBERRY
65733	4	HACKBERRY
65734	4	HACKBERRY
65735	4	MULLBERRY
65736	6	HACKBERRY
65737	4	HACKBERRY
65738	9	HACKBERRY
65739	10	ASH
65740	5	HACKBERRY
65741	4	HACKBERRY
65742	6	HACKBERRY
65743	6	ASH
65744	7	ASH
65745	5	HACKBERRY
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65747	6	HACKBERRY
65748	5	HACKBERRY
65749	4	ASH
65750	4	ASH
65751	4	ELM
65752	7	LOCUST
65753	7	HACKBERRY
65754	5	HACKBERRY
65755	4	HACKBERRY
65756	5	ELM
65757	5	HACKBERRY
65758	13	LOCUST
65759	11	HACKBERRY
65760	10	ELM
65761	6	BODDOCK

65762	5	ASH
65764	6	ELM
65768	4	HACKBERRY
65775	4	HACKBERRY
65809	4	HACKBERRY
65810	4	HACKBERRY
65811	10	ELM
65812	6	HACKBERRY
65813	5	ASH
65814	4	HACKBERRY
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65816	5	HACKBERRY
65817	10	BODDOCK
65818	5	HACKBERRY
65819	5	HACKBERRY
65820	8	LOCUST
65821	8	OAK
65822	9	LOCUST
65823	9	ELM
65824	6	HACKBERRY
65825	8	LOCUST
65826	12	PERSIMMON
65827	9	ELM
65828	10	OAK
65829	19	OAK
65830	18	OAK
65831	9	PERSIMMON
65832	9	ELM
65833	6	HACKBERRY
65834	7	ASH
65835	4	ELM
65871	4	ELM
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65879	11	ASH
66039	5	HACKBERRY
66040	8	HACKBERRY
66041	8	HACKBERRY
66042	16	HACKBERRY
66043	8	CEDAR
66044	4	CEDAR
66045	10	CEDAR
66047	5	ASH
66048	7	CEDAR
66049	6	HACKBERRY
66050	13	HACKBERRY
66054	5	PERSIMMON
66055	8	PERSIMMON
66056	10	ASH
66057	4	ASH
66058	11	ASH
66059	9	PERSIMMON
66060	7	OAK
66061	7	OAK
66062	25	OAK
66063	7	CEDAR
66064	9	ASH
66065	5	CEDAR
66066	9	ASH
66067	9	ELM
66068	9	ELM
66069	10	ELM
66070	12	CEDAR
66071	10	CEDAR
66073	7	HACKBERRY
66074	10	HACKBERRY
66075	7	HACKBERRY
66076	5	ELM
66077	6	ELM
66078	8	CEDAR
66079	4	CEDAR
66080	9	HACKBERRY
66081	9	HACKBERRY
66082	5	HACKBERRY
66083	9	HACKBERRY
66088	6	ELM
66089	18	ASH
66090	27	OAK
66091	9	OAK
66092	9	HACKBERRY
66093	15	HACKBERRY
66238	4	HACKBERRY
66240	7	OAK
66241	8	WALNUT
66408	10	ELM
66409	7	CEDAR
66410	4	HACKBERRY
66434	5	ELM
66435	4	ELM
66436	6	ELM
66437	6	CEDAR
66438	7	CEDAR
66439	21	HACKBERRY
66440	8	ELM
66441	9	ELM

66442	13	OAK
66443	13	OAK
66444	18	OAK
66445	18	OAK
66446	7	CEDAR
66447	7	CEDAR
66448	7	CEDAR
66449	4	CEDAR
66450	6	CEDAR
66451	8	CEDAR
66452	4	CEDAR
66453	5	CEDAR
66454	12	ELM
66455	7	ELM
66456	23	OAK
66457	4	ELM
66458	6	ELM
66459	6	OAK
66460	6	OAK
66461	6	OAK
66462	7	OAK
66463	13	ELM
66464	13	ASH
66465	6	CEDAR
66466	13	OAK
66467	18	OAK
66468	8	BODDOCK
66469	11	BODDOCK
66470	8	CEDAR
66471	18	OAK
66472	24	OAK
66473	13	OAK
66474	24	OAK
66475	6	CEDAR
66476	28	OAK
66477	12	OAK
66478	21	OAK
66479	10	BOXELDER
66480	4	CEDAR
66481	6	CEDAR
66482	6	CEDAR
66483	6	CEDAR
66484	6	CEDAR
66485	6	CEDAR
66486	4	REDBUD
66487	4	REDBUD
66488	12	CEDAR
66489	4	CEDAR
66490	6	CEDAR
66491	5	ELM
66492	5	CEDAR
66493	8	CEDAR
66494	8	ASH
66495	5	ASH
66497	5	CEDAR
66498	5	CEDAR
66499	5	CEDAR
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66501	4	CEDAR
66502	4	CEDAR
66503	6	CEDAR
66504	4	ELM
66505	9	ASH
66506	6	ASH
66507	10	OAK
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66510	4	CEDAR
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66513	6	CEDAR
66514	6	CEDAR
66515	4	CEDAR
66516	12	CEDAR
66517	4	CEDAR
66518	4	ASH
66519	6	ASH
66520	7	HACKBERRY
66521	5	CEDAR
66522	10	CEDAR
66523	13	CEDAR
66524	8	CEDAR
66525	8	CEDAR
66526	7	CEDAR
66527	7	CEDAR
66528	4	CEDAR
66529	10	MULLBERRY
66530	4	CEDAR
66531	7	CEDAR
66532	7	CEDAR
66533	8	CEDAR
66534	8	CEDAR
66535	9	CEDAR
66536	6	CEDAR
66537	15	ELM

66538	6	ASH
66539	11	CEDAR
66540	15	CEDAR
66541	4	SASSAFRAS
66542	12	ELM
66543	10	CEDAR
66544	5	CEDAR
66545	4	ASH
66546	4	CEDAR
66547	13	CEDAR
66555	7	ELM
66556	5	ELM
66557	6	HACKBERRY
66558	6	HACKBERRY
66559	6	CEDAR
66560	12	CEDAR
66561	13	CEDAR
66562	4	CEDAR
66563	10	CEDAR
66564	6	CEDAR
66565	8	CEDAR
66566	9	ELM
66567	20	OAK
66568	4	ELM
66569	5	PERSIMMON
66570	10	CEDAR
66571	4	CEDAR
66572	4	ELM
66573	4	ELM
66574	5	CEDAR
66575	4	CEDAR
66576	9	ELM
66577	12	OAK
66578	8	OAK
66579	22	CEDAR
66580	13	OAK
66581	7	OAK
66582	17	OAK
66583	12	ELM
66584	8	ELM
66585	5	ASH
66586	4	DOGWOOD
66587	5	CEDAR
66588	4	CEDAR
66589	8	CEDAR
66590	5	CEDAR
66591	5	CEDAR
66592	4	CEDAR
66593	5	CEDAR
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66597	7	ELM
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66600	4	SASSAFRAS
66601	4	SASSAFRAS
66602	4	SASSAFRAS
66603	5	OAK
66604	4	SASSAFRAS
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66607	6	CEDAR
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66625	6	CEDAR
66626	8	CEDAR
66633	4	HACKBERRY
66637	12	OAK
66638	7	CEDAR
66639	5	CEDAR
66640	4	CEDAR
66641	4	CEDAR
66642	7	CEDAR
66643	5	CEDAR
66644	5	ELM
66645	6	CEDAR
66646	6	ASH
66647	6	CEDAR
66649	6	CEDAR
66660	5	ELM
66661	18	OAK
66666	10	CEDAR
66667	13	OAK
66668	4	CEDAR
66669	8	CEDAR
66670	5	CEDAR
66671	5	CEDAR
66672	7	CEDAR
66673	7	CEDAR
66674	5	CEDAR
66675	13	BODDOCK
66676	5	AILANTHUS
66677	8	CEDAR
66678	4	REDBUD

66679	5	WALNUT
66680	4	ELM
66681	6	CEDAR
66682	9	ELM
66683	7	OAK
66684	5	OAK
66685	15	OAK
66686	5	CEDAR
66687	12	OAK
66688	12	OAK
66689	8	OAK
66690	7	CEDAR
66691	10	CEDAR
66692	26	OAK
66693	4	HACKBERRY
66694	14	PERSIMMON
66695	4	CEDAR
66696	4	CEDAR
66697	5	CEDAR
66709	4	PERSIMMON
66710	4	PERSIMMON
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66712	4	PERSIMMON
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66714	4	PERSIMMON
66715	4	PERSIMMON
66716	4	PERSIMMON
66717	4	PERSIMMON
66718	4	PERSIMMON
66719	4	PERSIMMON
66720	4	PERSIMMON
66721	4	PERSIMMON
66722	4	PERSIMMON
66723	10	OAK
66725	5	CEDAR
66727	17	OAK
66728	18	OAK
66729	30	DBL15OAK
66730	19	OAK
66731	17	OAK
66732	12	ELM
66733	5	OAK
66734	8	CEDAR
66735	4	OAK
66736	6	OAK
66737	4	OAK
66738	4	ELM
66739	4	LOCUST
66740	11	OAK
66741	6	CEDAR
66742	10	OAK
66743	16	OAK
66744	19	OAK
66745	12	OAK
66746	12	OAK
66747	10	OAK
66748	4	CEDAR
66749	5	CEDAR
66750	9	OAK
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66754	6	ELM
66755	7	OAK
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66757	4	CEDAR
66758	4	ELM
66759	9	ELM
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66761	4	CEDAR
66762	15	OAK
66763	9	ASH
66764	5	ASH
66765	5	ASH
66766	16	OAK
66767	20	OAK
66768	5	ELM
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66773	10	CEDAR
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66776	6	ELM
66797	4	CEDAR
66798	6	CEDAR
66799	10	ASH
66809	13	ASH
66810	8	CEDAR
66811	5	CEDAR
66812	5	PERSIMMON
66813	5	REDBUD
66814	4	CEDAR
66815	4	CEDAR

66816	4	CEDAR
66817	6	CEDAR
66818	4	ELM
66819	4	MULBERRY
66820	4	ELM
66821	5	PERSIMMON
66822	6	REDBUD
66823	4	REDBUD
66824	4	REDBUD
66825	7	CEDAR
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66827	10	ELM
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66829	4	CEDAR
66830	7	CEDAR
66831	4	CEDAR
66832	5	CEDAR
66833	10	ASH
66834	15	ASH
66835	20	ASH
66836	9	PERSIMMON
66837	10	HACKBERRY
66838	4	CEDAR
66839	5	CEDAR
66840	4	CEDAR
66841	6	CEDAR
66842	5	ASH
66843	6	CEDAR
66844	7	CEDAR
66845	5	REDBUD
66846	10	OAK
66847	13	OAK
66848	12	ASH
66849	4	ELM
66850	6	ASH
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66855	7	ELM
66856	12	ASH
66857	17	ELM
66858	4	CEDAR
66859	20	OAK
66860	12	OAK
66861	4	ASH
66862	6	ELM
66863	8	DBL4HACKBERRY
66864	8	CEDAR
66865	4	CEDAR
66866	6	CEDAR
66867	11	ELM
66868	6	CEDAR
66869	4	PERSIMMON
66870	14	ASH
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66872	7	ELM
66873	7	ELM
66874	5	ELM
66875	10	CEDAR
66876	4	ELM
66877	5	ELM
66878	6	ELM
66879	14	DBL7HACKBERRY
66880	6	ASH
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66882	10	ELM
66883	7	ELM
66886	42	ASH
66887	42	OAK
66888	10	HACKBERRY
66889	14	HACKBERRY
66890	30	CEDAR
66891	18	HACKBERRY
66892	13	CEDAR
66893	13	CEDAR
66894	12	CEDAR
66895	16	ELM
66896	13	ELM
66897	13	HACKBERRY
66898	8	HACKBERRY
66899	20	DBL10HACKBERRY
66900	10	CEDAR
66901	18	ASH
66902	10	PERSIMMON
66903	12	PERSIMMON
66904	8	CEDAR
66905	14	CEDAR
66906	8	CEDAR
66907	7	ELM
66914	15	CEDAR
66915	13	CEDAR
66916	13	CEDAR
66917	13	CEDAR

66918	7	CEDAR
66919	4	CEDAR
66920	4	CEDAR
66921	8	CEDAR
66922	11	HACKBERRY
66923	15	ASH
66924	13	ELM
66925	9	CEDAR
66926	19	HACKBERRY
66927	10	HACKBERRY
66928	11	CEDAR
66929	8	CEDAR
66930	11	CEDAR
66931	27	ASH
66932	13	ELM
66933	36	ASH
66934	17	CEDAR
66935	4	SASSAFRAS
66936	10	SASSAFRAS
66937	17	ASH
66938	17	ASH
66939	10	ELM
66940	7	HACKBERRY
66941	9	CEDAR
66942	4	CEDAR
66943	6	CEDAR
66944	4	HACKBERRY
66945	11	ASH
66946	5	CEDAR
66947	4	CEDAR
66948	4	CEDAR
66949	8	CEDAR
66950	6	CEDAR
66951	8	CEDAR
66952	10	CEDAR
66953	5	BODDOCK
66954	5	CEDAR
66955	10	CEDAR
66956	10	CEDAR
66957	9	CEDAR
66958	9	CEDAR
66959	6	ELM
66960	7	CEDAR
66961	6	CEDAR
66962	7	CEDAR
66963	4	CEDAR
66964	4	CEDAR
66965	7	CEDAR
66966	5	CEDAR
66967	15	ASH
66968	12	ELM
66969	7	ELM
66970	8	ELM
66971	6	CEDAR
66972	6	CEDAR
66973	15	CEDAR
66974	10	HACKBERRY
66975	6	CEDAR
66976	4	CEDAR
66977	4	CEDAR
66978	5	CEDAR
66979	5	CEDAR
66980	4	CEDAR
66981	4	CEDAR
66982	6	HACKBERRY
66983	13	ASH
66984	14	ASH
66985	15	ASH
66986	16	ASH
66987	15	ASH
66988	8	ELM
66989	6	CEDAR
66990	4	CEDAR
66991	6	ELM
66992	5	ELM
66993	18	DBL9ELM
66994	4	CEDAR
66995	9	HACKBERRY
66996	16	ELM
66997	13	CEDAR
66998	7	CEDAR
66999	10	CEDAR
67000	14	CEDAR
67001	5	ELM
67002	4	ELM
67003	10	ELM
67004	6	ELM
67005	9	HACKBERRY
67006	16	CEDAR
67007	15	CEDAR
67008	4	HACKBERRY
67009	5	ELM
67010	7	ELM
67011	7	CEDAR

67012	10	CEDAR
67013	10	CEDAR
67014	12	CEDAR
67015	12	CEDAR
67016	6	CEDAR
67017	6	CEDAR
67018	6	CEDAR
67019	7	CEDAR
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67033	10	CEDAR
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67035	13	CEDAR
67036	12	DBLG6CEDAR
67037	6	ELM
67038	5	CEDAR
67039	5	CEDAR
67040	5	LOCUST
67041	6	LOCUST
67042	4	HACKBERRY
67043	8	HACKBERRY
67044	8	BODDOCK
67045	8	ELM
67046	14	LOCUST
67047	4	CEDAR
67048	4	CEDAR
67049	4	PERSIMMON
67050	10	ELM
67051	13	LOCUST
67052	15	LOCUST
67053	5	ELM
67054	10	ELM
67055	6	CEDAR
67056	6	ELM
67057	4	ELM
67058	4	PERSIMMON
67059	4	PERSIMMON
67060	9	HACKBERRY
67061	8	ELM
67062	4	ELM
67063	5	CEDAR
67064	4	ELM
67065	9	BODDOCK
67066	10	OAK
67067	7	CEDAR
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67070	5	CEDAR
67071	8	CEDAR
67072	5	CEDAR
67073	7	CEDAR
67074	6	ELM
67075	6	PERSIMMON
67076	11	CEDAR
67077	4	LOCUST
67078	6	LOCUST
67079	4	HACKBERRY
67080	4	ELM
67081	7	CEDAR
67082	6	CEDAR
67083	6	CEDAR
67084	4	CEDAR
67085	10	ELM
67086	6	CEDAR
67087	7	CEDAR
67088	4	CEDAR
67089	4	CEDAR
67090	6	CEDAR
67091	6	CEDAR
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67093	9	CEDAR
67094	4	CEDAR
67095	8	CEDAR
67096	4	HACKBERRY
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67099	4	HACKBERRY
67100	10	CEDAR
67101	10	CEDAR
67102	8	CEDAR
67103	5	ELM
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67105	7	ELM
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67109	6	CEDAR
67110	7	CEDAR
67111	6	CEDAR
67112	8	CEDAR
67113	6	ELM
67114	7	LOCUST
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67132	4	CEDAR
67133	4	CEDAR
67134	5	CEDAR
67135	4	ELM
67136	4	ELM
67137	4	BODDOCK
67138	4	HACKBERRY
67139	5	HACKBERRY
67140	5	ELM
67141	5	HACKBERRY
67142	6	HACKBERRY
67143	6	HACKBERRY
67144	15	ASH
67145	7	ELM
67146	5	ELM
67147	5	ELM
67148	4	CEDAR
67149	9	CEDAR
67150	9	CEDAR
67151	4	CEDAR
67152	6	CEDAR
67153	7	CEDAR
67154	4	PERSIMMON
67155	4	PERSIMMON
67156	5	PERSIMMON
67157	10	PERSIMMON
67158	5	ELM
67159	7	ELM
67160	4	HACKBERRY
67161	5	CEDAR
67162	6	CEDAR
67163	11	CEDAR
67164	7	ELM
67165	4	HACKBERRY
67166	5	HACKBERRY
67167	5	ELM
67168	4	ELM
67169	4	CEDAR
67170	4	CEDAR
67171	5	HACKBERRY
67172	10	HACKBERRY
67173	6	ASH
67174	12	ASH
67175	5	PERSIMMON
67176	5	PERSIMMON
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67178	5	CEDAR
67179	10	CEDAR
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67182	8	CEDAR
67183	8	CEDAR
67184	5	CEDAR
67185	9	CEDAR
67186	12	ELM
67199	5	PERSIMMON
67200	9	CEDAR
67201	7	CEDAR
67202	6	PERSIMMON
67203	32	OAK
67204	5	CEDAR
67205	4	BODOCK
67209	7	CEDAR
67213	8	CEDAR
67264	9	PERSIMMON
67265	14	PERSIMMON
67266	4	CEDAR
67267	16	PERSIMMON
67268	4	CEDAR

68959	5	MAPLE
68960	5	HACKBERRY
68961	4	PERSIMMON
68962	8	HACKBERRY
68963	4	ASH
68964	4	ASH
68965	4	ASH
68966	16	CEDAR
68967	13	ELM
69123	19	ELM
69124	4	ELM
69125	4	ASH
69126	18	DBL9PERSIMMON
69191	4	MAPLE
69192	9	ELM
69193	11	CEDAR
69194	16	ASH
69195	10	CEDAR
69196	7	ELM
69197	11	ELM
69198	10	ASH
69199	9	ASH
69200	13	ASH
69201	11	ELM
69202	9	ASH
69279	8	ELM
69280	7	ASH
69281	9	WALNUT
69282	20	OAK
69283	11	OAK
69284	11	OAK
69285	12	ELM
69286	5	CEDAR
69287	9	HACKBERRY
69288	5	ELM
69289	15	ASH
69290	4	CEDAR
69291	10	ELM
69292	15	HACKBERRY
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69294	13	ASH
69295	12	HACKBERRY
69296	6	HACKBERRY
69297	6	HACKBERRY
69298	5	ELM
69299	4	ELM
69300	12	ELM
69301	12	ELM
69302	6	CEDAR
69303	5	HACKBERRY
69304	24	OAK
69305	6	CEDAR
69306	9	ELM
69307	12	LOCUST
69308	4	CEDAR
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69310	6	CEDAR
69311	7	CEDAR
69312	12	CEDAR
69313	7	PERSIMMON
69314	4	CEDAR
69315	9	CEDAR
69316	39	OAK
69317	4	MAPLE
69318	4	CEDAR
69319	8	HACKBERRY
69320	10	HACKBERRY
69321	6	ASH
69322	18	MULBERRY
69323	18	MULBERRY
69324	14	MULBERRY
69325	6	HACKBERRY
69326	16	WALNUT
69327	11	HACKBERRY
69328	9	HACKBERRY
69329	12	LOCUST
69330	4	ASH
69331	12	HACKBERRY
69332	5	HACKBERRY
69333	10	HACKBERRY
69334	10	HACKBERRY
69335	8	HACKBERRY
69336	5	HACKBERRY
69337	5	HACKBERRY
69338	5	HACKBERRY
69339	4	CEDAR
69340	4	CEDAR
69341	17	HACKBERRY
69342	8	HACKBERRY
69343	4	HACKBERRY
69344	10	DBL5HACKBERRY
69345	20	CEDAR
69346	5	BODOCK
69347	10	HACKBERRY

69348	12	HACKBERRY
69349	13	HACKBERRY
69350	12	HACKBERRY
69351	16	HACKBERRY
69352	8	CEDAR
69354	4	CEDAR
69355	4	ASH
69356	6	ELM
69357	5	ELM
69358	5	ELM
69359	8	ASH
69360	15	BODOCK
69361	14	LOCUST
69362	5	HACKBERRY
69363	13	HACKBERRY
69364	4	CEDAR
69365	9	BODOCK
69366	4	CEDAR
69367	6	HACKBERRY
69368	7	HACKBERRY
69369	7	HACKBERRY
69370	4	HACKBERRY
69371	5	CEDAR
69372	6	HACKBERRY
69373	6	HACKBERRY
69374	7	HACKBERRY
69375	7	HACKBERRY
69376	7	HACKBERRY
69377	7	HACKBERRY
69378	9	CEDAR
69379	12	HACKBERRY
69380	9	PERSIMMON
69381	9	PERSIMMON
69382	5	LOCUST
69383	5	ELM
69384	10	CEDAR
69385	8	HACKBERRY
69386	8	HACKBERRY
69387	12	CEDAR
69388	10	CEDAR
69389	5	CEDAR
69390	12	CEDAR
69391	6	CEDAR
69392	4	HACKBERRY
69393	13	HACKBERRY
69394	13	HACKBERRY
69395	4	ELM
69396	9	HACKBERRY
69397	4	HACKBERRY
69398	9	ELM
69399	7	ELM
69400	6	HACKBERRY
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69404	10	HACKBERRY
69405	20	ELM
69406	8	HACKBERRY
69407	7	ELM
69408	6	HACKBERRY
69409	8	CEDAR
69410	10	ELM
69411	4	HACKBERRY
69412	4	HACKBERRY
69413	6	HACKBERRY
69414	6	HACKBERRY
69415	6	ELM
69416	7	ELM
69417	16	DBL8LOCUST
69418	6	CEDAR
69419	10	ASH
69420	8	BODOCK
69421	4	BODOCK
69422	7	ASH
69423	11	ASH
69424	4	ELM
69425	8	OAK
69426	14	ASH
69427	6	CEDAR
69428	6	ELM
69429	9	CEDAR
69430	4	ELM
69431	5	ELM
69432	4	BODOCK
69433	6	CEDAR
69434	12	ELM
69435	25	OAK
69436	4	HACKBERRY
69437	4	ELM
69438	7	HACKBERRY
69439	6	HACKBERRY
69440	10	ELM
69441	4	CEDAR
69442	6	OAK

69443	23	HACKBERRY
69444	5	CEDAR
69445	5	CEDAR
69446	5	CEDAR
69447	4	CEDAR
69448	18	ASH
69449	9	LOCUST
69450	6	HACKBERRY
69451	6	HACKBERRY
69452	6	HACKBERRY
69453	4	HACKBERRY
69454	8	HACKBERRY
69455	20	DBL10ELM
69456	16	OAK
69457	12	OAK
69458	6	ELM
69459	6	ELM
69460	4	ELM
69461	8	BODOCK
69462	6	CEDAR
69463	4	CEDAR
69464	4	CEDAR
69465	6	HACKBERRY
69466	6	HACKBERRY
69467	6	HACKBERRY
69468	4	CEDAR
69469	4	ELM
69470	6	ASH
69471	6	ASH
69472	21	OAK
69473	8	HACKBERRY
69474	6	HACKBERRY
69475	15	HACKBERRY
69476	14	OAK
69477	10	HACKBERRY
69478	7	HACKBERRY
69479	5	CEDAR
69480	13	ELM
69481	10	OAK
69482	13	OAK
69483	8	CEDAR
69484	12	CEDAR
69485	8	CEDAR
69486	10	CEDAR
69487	5	CEDAR
69488	8	CEDAR
69489	8	CEDAR
69490	6	LOCUST
69491	10	OAK
69492	6	HACKBERRY
69493	7	CEDAR
69494	20	OAK
69495	12	OAK
69496	10	LOCUST
69497	4	CEDAR
69498	4	CEDAR
69499	5	ASH
69500	4	ASH
69501	6	ELM
69502	6	ELM
69503	30	OAK
69504	6	CEDAR
69505	6	CEDAR
69506	18	OAK
69507	6	OAK
69508	10	OAK
69509	6	ELM
69510	6	ELM
69511	6	ELM
69512	18	OAK
69513	4	HACKBERRY
69514	10	HACKBERRY
69515	8	DBL4PERSIMMON
69516	15	ELM
69517	4	PERSIMMON
69518	6	CEDAR
69519	17	CEDAR
69520	8	PERSIMMON
69521	6	ELM
69522	6	PERSIMMON
69523	7	PERSIMMON
69524	10	PERSIMMON
69525	6	PERSIMMON
69526	8	PERSIMMON
69527	7	CEDAR
69528	6	PERSIMMON
69529	4	OAK
69530	4	ELM
69531	4	ELM
69532	4	ELM
69533	4	ELM
69534	4	ELM
69535	4	HACKBERRY
69536	5	ASH

69537	4	ASH
69538	4	ELM
69539	4	ELM
69540	4	ELM
69541	4	ELM
69542	4	ELM
69543	4	LOCUST
69544	7	LOCUST
69545	5	LOCUST
69546	5	HACKBERRY
69547	4	LOCUST
69548	5	ELM
69549	4	WALNUT
69550	5	HACKBERRY
69551	5	ELM
69552	4	ELM
69553	4	ELM
69555	4	ELM
69556	4	ELM
69557	4	ELM
69558	4	ASH
69559	4	ELM
69560	6	BOXELDER
69561	5	HACKBERRY
69562	5	HACKBERRY
69563	4	ASH
69564	5	ELM
69565	4	ASH
69566	4	ASH
69567	7	LOCUST
69568	5	LOCUST
69569	5	LOCUST
69570	5	LOCUST
69571	5	LOCUST
69572	9	LOCUST
69573	9	LOCUST
69574	4	LOCUST
69575	4	LOCUST
69576	5	LOCUST
69577	4	LOCUST
69578	19	ELM
69579	21	ELM
69580	4	ELM
69581	5	ELM
69582	4	CEDAR
69583	4	CEDAR
69585	6	ELM
69586	12	ASH
69587	10	ELM
69588	7	ASH
69589	10	ELM
69590	6	ASH
69591	10	LOCUST
69592	10	ASH
69593	8	ELM
69594	8	ELM
69595	5	HACKBERRY
69596	5	CEDAR
69597	6	ELM
69598	4	HACKBERRY
69599	10	ELM
69600	10	ELM
69601	10	BODOCK
69602	10	BODOCK
69603	6	BODOCK
69604	5	HACKBERRY
69605	10	CEDAR
69606	10	ELM
69607	7	ELM
69608	10	ELM
69609	6	ELM
69610	4	HACKBERRY
69611	4	HACKBERRY
69612	6	ELM
69613	6	ELM
69614	6	ELM
69615	9	REDBUD
69616	10	ELM
69617	6	ELM
69618	7	HACKBERRY
69619	8	ELM
69620	4	HACKBERRY
69621	14	CEDAR
69622	7	CEDAR
69623	9	CEDAR
69624	4	ELM
69625	6	ELM
69626	6	ELM
69627	5	REDBUD
69628	12	ELM
69629	10	CEDAR
69630	6	SASSAFRAS
69631	6	SASSAFRAS
69632	6	SASSAFRAS

69633	6	SASSAFRAS
69634	10	SASSAFRAS
69635	4	ELM
69636	4	SASSAFRAS
69637	12	DBL6PERSIMMON
69638	7	CEDAR
69639	12	ELM
69640	10	ELM
69641	5	ELM
69642	6	CEDAR
69643	6	CEDAR
69644	4	SASSAFRAS
69645	4	SASSAFRAS
69646	11	CEDAR
69647	10	SASSAFRAS
69648	6	SASSAFRAS
69649	6	SASSAFRAS
69650	12	LOCUST
69651	12	OAK
69652	11	LOCUST
69653	4	SASSAFRAS
69654	4	SASSAFRAS
69655	4	SASSAFRAS
69656	6	SASSAFRAS
69657	6	SASSAFRAS
69658	8	HACKBERRY
69659	10	CEDAR
69660	10	LOCUST
69661	7	CEDAR
69662	6	CEDAR
69663	10	ELM
69667	8	ELM
69668	5	ELM
69669	7	LOCUST
69670	7	LOCUST
69671	5	ELM
69672	5	CEDAR
69673	11	LOCUST
69674	12	PERSIMMON
69675	7	ELM
69676	5	HACKBERRY
69677	5	HACKBERRY
69678	15	HACKBERRY
69679	4	ELM
69680	5	SASSAFRAS
69681	7	ELM
69682	8	CEDAR
69683	6	ELM
69684	8	BODOCK
69685	9	HACKBERRY
69686	4	ELM
69687	6	ELM
69688	9	WALNUT
69689	4	ELM
69690	4	HACKBERRY
69691	7	HACKBERRY
69692	4	ELM
69693	6	ELM
69694	14	WALNUT
69695	7	ELM
69696	8	ELM
69697	4	ELM
69698	17	WALNUT
69699	5	CEDAR
69700	5	CEDAR
69701	6	HACKBERRY
69702	9	HACKBERRY
69703	6	MULBERRY
69704	5	ELM
69705	13	ELM
69706	4	HACKBERRY
69707	5	ELM
69708	16	WALNUT
69709	18	WALNUT
69710	5	ELM
69711	4	HACKBERRY
69712	4	HACKBERRY
69713	10	WALNUT
69714	17	CEDAR
69715	5	HACKBERRY
69716	6	CEDAR
69717	8	WALNUT
69718	7	ELM
69719	11	ELM
69720	4	HACKBERRY
69721	5	CEDAR
69722	7	ELM
69723	14	DBL7PERSIMMON
69724	7	CEDAR
69725	5	CEDAR
69726	12	CEDAR
69727	6	ELM
69728	4	ELM
69729	7	ELM

69730	5	BODOCK
69731	7	ELM
69733	4	ELM
69734	4	ELM
69735	6	ELM
69736	6	ELM
69737	8	ELM
69738	5	HACKBERRY
69739	6	ELM
69740	6	ELM
69741	6	ELM
69742	6	ELM
69743	5	ELM
69744	8	ELM
69745	8	ELM
69746	8	ELM
69747	4	ELM
69748	4	ELM
69749	4	PERSIMMON
69750	7	ELM
69751	7	ELM
69752	7	ELM
69753	5	ELM
69754	5	ELM
69755	5	ELM
69756	9	ELM
69757	9	ELM
69758	6	ELM
69759	4	ELM
69760	4	ELM
69761	4	PERSIMMON
69762	4	PERSIMMON
69764	7	PERSIMMON
69765	6	PERSIMMON
69766	8	ELM
69767	4	ELM
69768	5	PERSIMMON
69769	5	PERSIMMON
69770	5	PERSIMMON
69771	6	ELM
69772	4	ELM
69773	9	ELM
69774	4	CEDAR
69775	8	PERSIMMON
69776	8	PERSIMMON
69777	6	CEDAR
69778	8	LOCUST
69779	7	WALNUT
69780	11	CATALPA
69781	9	BOXELDER
69782	15	LOCUST
69783	6	LOCUST
69784	8	LOCUST
69785	19	LOCUST
69786	10	LOCUST
69787	4	WALNUT
69788	5	LOCUST
69789	4	LOCUST
69790	6	LOCUST
69791	8	LOCUST
69792	4	LOCUST
69793	5	BOXELDER
69794	12	LOCUST
69795	4	LOCUST
69796	4	LOCUST
69797	11	HACKBERRY
69798	22	ELM
69799	6	WALNUT
69800	5	LOCUST
69801	8	LOCUST
69802	8	LOCUST
69803	6	LOCUST
69804	5	CEDAR
69805	30	HICKORY
69806	16	HACKBERRY
69807	12	HICKORY
69808	4	HICKORY
69809	9	OAK
69810	14	HACKBERRY
69811	17	ASH
69812	14	MAPLE
69813	18	HICKORY
69814	12	HACKBERRY
69815	13	WALNUT
69816	23	OAK
69817	25	MAPLE
69818	13	HACKBERRY
69819	31	OAK
69820	4	MAPLE
69821	5	ASH
69822	24	OAK
69823	14	HICKORY
69891	7	HICKORY
69892	23	OAK

69893	6	ELM
69894	9	ASH
69895	22	DBL11OAK
69896	16	OAK
69897	9	ASH
69898	12	HICKORY
69899	20	OAK
69900	6	ASH
69901	6	ASH
69902	15	CEDAR
69903	4	BODDOCK
69904	5	CEDAR
69905	5	CEDAR
69906	7	ASH
69907	24	OAK
69908	22	OAK
69909	8	MAPLE
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69911	6	ELM
69912	11	ASH
69913	5	OAK
69914	10	MAPLE
69915	5	OAK
69916	12	OAK
69917	17	HICKORY
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69919	12	MAPLE
69920	10	OAK
69921	32	OAK
69922	6	MAPLE
69923	6	MAPLE
69924	6	MAPLE
69925	7	ASH
69926	9	MAPLE
69927	13	OAK
69928	5	MAPLE
69929	4	HACKBERRY
69930	16	ASH
69931	15	ASH
69932	15	ASH
69933	19	MAPLE
69934	8	HICKORY
69935	8	ELM
69936	18	HICKORY
69937	6	ELM
69938	8	AILANTHUS
69939	6	SASSAFRAS
69940	4	MAPLE
69941	4	ELM
69942	18	HACKBERRY
69943	15	ELM
69944	4	ELM
69945	16	OAK
69946	27	OAK
69947	16	HICKORY
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69949	4	MAPLE
69950	4	MAPLE
69951	6	CEDAR
69952	14	MAPLE
69953	5	CEDAR
69954	4	MAPLE
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69957	7	MAPLE
69958	13	ASH
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69960	4	OAK
69961	10	ASH
69962	10	ASH
69963	13	ASH
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69965	5	CEDAR
69966	4	CEDAR
69967	5	ASH
69968	6	ASH
69969	5	LOCUST
69970	5	ASH
69971	6	ASH
69972	6	ASH
69973	7	HICKORY
69974	6	ASH
69975	9	ASH
69976	7	ELM
69977	11	ASH
69978	4	ELM
69979	11	ASH
69980	6	MAPLE
69981	6	MAPLE
69982	4	ELM
69983	17	ASH
69984	12	OAK
69985	12	OAK
69987	6	HACKBERRY

69988	6	HICKORY
69989	6	MAPLE
70052	5	ELM
70053	19	ASH
70054	7	OAK
70055	15	ASH
70056	9	ASH
70057	9	MAPLE
70058	7	MAPLE
70059	5	DOGWOOD
70060	5	MAPLE
70061	26	ASH
70062	12	MAPLE
70063	15	HACKBERRY
70064	9	MAPLE
70065	10	WALNUT
70066	4	ELM
70067	6	HACKBERRY
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70069	20	WALNUT
70070	15	ELM
70071	6	ASH
70072	7	ASH
70073	16	LOCUST
70074	6	ELM
70075	12	ELM
70076	15	HACKBERRY
70077	6	ELM
70078	12	ELM
70079	4	ELM
70080	13	ELM
70082	4	BRADFORD
70083	6	LOCUST
70084	5	LOCUST
70085	7	AILANTHUS
70086	10	HACKBERRY
70087	8	HACKBERRY
70088	22	LOCUST
70089	7	HACKBERRY
70090	5	WALNUT
70091	4	HACKBERRY
70092	12	LOCUST
70093	12	MAPLE
70094	5	HACKBERRY
70095	16	LOCUST
70096	13	WALNUT
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70101	16	LOCUST
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70103	5	LOCUST
70104	11	LOCUST
70105	4	ELM
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70107	6	WALNUT
70108	7	LOCUST
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70111	13	HACKBERRY
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70113	4	HACKBERRY
70114	12	LOCUST
70115	8	LOCUST
70116	6	HACKBERRY
70117	9	LOCUST
70118	10	WALNUT
70119	4	MAPLE
70120	12	LOCUST
70121	10	LOCUST
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70160	7	LOCUST
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70162	16	ELM
70163	5	ELM
70164	11	ELM
70165	13	ELM
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70168	6	ELM
70169	6	ELM
70170	10	LOCUST
70171	8	PERSIMMON
70172	4	ELM
70173	6	ELM
70174	16	WALNUT
70175	30	ASH
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70177	6	HACKBERRY
70178	9	ELM
70179	5	CEDAR
70180	7	BOXELDER

70181	4	ASH
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70183	7	HACKBERRY
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70185	5	CEDAR
70186	15	CEDAR
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70191	5	ELM
70192	10	ELM
70193	10	ELM
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70195	44	OAK
70196	12	ELM
70197	16	ELM
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70201	8	HACKBERRY
70202	14	HACKBERRY
70203	17	CEDAR
70204	15	CEDAR
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70206	10	ELM
70207	10	CEDAR
70208	20	DBL10CEDAR
70209	8	ASH
70210	10	HACKBERRY
70211	10	HACKBERRY
70212	12	HACKBERRY
70213	7	HACKBERRY
70214	6	HACKBERRY
70215	6	HACKBERRY
70216	9	HACKBERRY
70217	11	HACKBERRY
70218	13	HACKBERRY
70219	12	ELM
70220	4	ELM
70221	13	HACKBERRY
70222	13	HACKBERRY
70223	24	DBL12HACKBERRY
70224	12	HACKBERRY
70225	18	HACKBERRY
70226	19	HACKBERRY
70227	9	CEDAR
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70229	12	ELM
70230	17	ELM
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70233	8	CEDAR
70234	15	CEDAR
70235	15	CEDAR
70236	6	HACKBERRY
70237	8	CEDAR
70238	5	CEDAR
70239	10	CEDAR
70240	8	ELM
70241	6	BODDOCK
70242	13	CEDAR
70243	9	CEDAR
70244	9	CEDAR
70245	9	CEDAR
70246	5	CEDAR
70247	15	LOCUST
70248	6	HACKBERRY
70249	9	HACKBERRY
70250	9	CEDAR
70251	6	CEDAR
70252	6	CEDAR
70253	18	ELM
70254	5	CEDAR
70255	5	CEDAR
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70257	5	CEDAR
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70261	4	CEDAR
70262	4	CEDAR
70263	5	CEDAR
70264	5	CEDAR
70265	16	CEDAR
70266	12	CEDAR
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70268	4	PERSIMMON
70269	4	PERSIMMON
70270	4	PERSIMMON
70271	4	PERSIMMON
70272	4	PERSIMMON
70273	26	OAK
70274	5	WALNUT

70275	5	HACKBERRY
70276	3	DBL15PERSIMMON
70277	13	PERSIMMON
70278	4	HACKBERRY
70279	5	WALNUT
70280	9	CEDAR
70281	6	CEDAR
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70288	10	CEDAR
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70294	10	CEDAR
70295	12	CEDAR
70296	8	CEDAR
70297	8	CEDAR
70298	13	LOCUST
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70300	5	OAK
70301	9	CEDAR
70302	7	ELM
70303	6	CEDAR
70304	8	CEDAR
70305	6	ELM
70306	13	CEDAR
70307	6	CEDAR
70308	15	CEDAR
70309	5	HACKBERRY
70310	7	ELM
70311	10	ELM
70312	7	ELM
70313	7	CEDAR
70314	10	CEDAR
70315	12	ELM
70316	10	CEDAR
70317	10	CEDAR
70318	12	CEDAR
70319	6	CEDAR
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70321	7	PERSIMMON
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70323	7	PERSIMMON
70324	7	PERSIMMON
70325	6	ELM
70326	15	CEDAR
70327	14	DBL7CEDAR
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70351	10	CEDAR
70352	21	TRI7CEDAR
70353	20	DBL10CEDAR
70354	22	CEDAR
70355	9	PERSIMMON
70356	9	PERSIMMON
70357	10	HACKBERRY
70358	7	BODDOCK
70359	7	CEDAR
70360	10	HACKBERRY
70361	12	ELM
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70363	5	ELM
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70368	10	PERSIMMON
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70370	6	ELM
70371	6	ELM
70372	9	ELM
70373	5	HACKBERRY
70374	5	ELM
70375	20	OAK
70376	8	HACKBERRY
70377	7	ELM
70378	5	ELM
70379	11	BODDOCK
70380	5	PERSIMMON
70381	5	PERSIMMON
70382	5	HACKBERRY
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70384	12	ELM
70385	14	WALNUT
70386	16	DBL8HACKBERRY
70387	8	CEDAR
70388	8	CEDAR

70389	6	ELM
70390	6	ELM
70391	8	PERSIMMON
70392	15	PERSIMMON
70393	4	ASH
70394	4	HACKBERRY
70395	8	WALNUT
70396	4	WALNUT
70397	4	CEDAR
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70399	5	ELM
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70403	6	PERSIMMON
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70409	8	PERSIMMON
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70411	12	ELM
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70417	8	ELM
70418	6	ELM
70419	13	WALNUT
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70423	4	LOCUST
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70425	6	LOCUST
70426	30	TRI10LOCUST
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70430	8	LOCUST
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70439	7	ASH
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70501	4	ELM
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70504	7	HACKBERRY
70505	7	HACKBERRY
70506	7	HACKBERRY
70507	10	HACKBERRY
70508	10	HACKBERRY
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70510	7	HACKBERRY
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70512	6	BODDOCK
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70525	4	CEDAR
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70544	5	BODDOCK
70545	13	CEDAR
70546	7	ELM
70547	10	ELM
70548	5	CEDAR
70549	11	ELM
70550	12	CEDAR
70551	11	WALNUT
70552	24	DBL12CEDAR
70553	9	BODDOCK
70554	5	ELM
70555	5	ELM
70556	6	ELM
70557	6	CEDAR
70558	6	ELM
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70561	13	CEDAR
70562	13	CEDAR
70563	6	CEDAR
70564	4	ELM
70565	4	ELM
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70571	7	ELM
70572	4	ELM
70573	10	HACKBERRY
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70575	6	CEDAR
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70577	6	CEDAR
70578	5	ELM
70579	9	CEDAR
70580	10	ELM
70581	5	ELM
70582	11	CEDAR
70583	11	CEDAR
70584	4	ASH
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70586	7	CEDAR
70587	9	CEDAR
70588	20	DBL10CEDAR
70589	6	CEDAR
70590	9	CEDAR
70591	6	ELM
70592	6	ELM
70593	5	PERSIMMON
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70655	6	ELM
70656	7	LOCUST
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70662	5	ELM
70663	8	ASH
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70669	5	HACKBERRY
70670	12	HACKBERRY

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70674	8	ELM
70675	12	HACKBERRY
70676	7	OAK
70677	9	HACKBERRY
70678	7	HACKBERRY
70679	12	WALNUT
70680	9	ELM
70681	6	HACKBERRY
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70683	4	MAPLE
70684	6	SASAFRAS
70685	7	BOXELDER
70686	4	MAPLE
70687	4	MAPLE
70688	12	MAPLE
70689	8	HACKBERRY
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70691	21	WALNUT
70692	5	ELM
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70694	10	MAPLE
70695	13	MAPLE
70696	4	ELM
70697	18	MAPLE
70698	4	ELM
70699	5	MAPLE
70700	13	PERSIMON
70701	11	SASAFRAS
70702	13	SASAFRAS
70703	13	SASAFRAS
70704	5	MAPLE
70705	9	MAPLE
70706	11	SASAFRAS
70707	4	MAPLE
70708	4	HACKBERRY
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70720	11	ASH
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70745	6	ASH
70746	6	ASH
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70749	6	ELM
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70803	6	ELM
70804	12	MAPLE
70805	8	MAPLE
70806	12	SASAFRAS
70807	12	SASAFRAS
70808	12	SASAFRAS
70809	12	SASAFRAS
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70812	13	SASAFRAS

70813	13	SASAFRAS
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70817	14	SASAFRAS
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70825	8	SASAFRAS
70826	11	SASAFRAS
70827	6	MAPLE
70828	14	SASAFRAS
70829	10	SASAFRAS
70830	10	MAPLE
70831	5	HACKBERRY
72078	11	HACKBERRY
72079	9	ELM
72081	11	HACKBERRY
72082	10	OAK
72083	10	PERSIMMON
72084	15	OAK
72085	4	CEDAR
72086	9	HACKBERRY
72087	4	ELM
72089	12	OAK
72091	12	OAK
72092	12	HACKBERRY
72093	12	HACKBERRY
72094	4	HACKBERRY
72095	4	HACKBERRY
72096	11	HACKBERRY
72097	7	OAK
72098	7	HACKBERRY
72099	8	BODDOCK
72100	22	OAK
72101	10	HACKBERRY
72102	25	OAK
72103	9	OAK
72104	8	HACKBERRY
72105	4	HACKBERRY
72106	5	ELM
72107	5	ELM
72108	5	ELM
72109	11	LOCUST
72110	8	OAK
72111	8	OAK
72112	4	ELM
72113	4	ELM
72114	6	HACKBERRY
72115	8	CEDAR
72116	6	HACKBERRY
72117	6	ELM
72118	4	HACKBERRY
72119	9	LOCUST
72120	18	ELM
72121	17	WALNUT
72122	10	ASH
72123	15	HACKBERRY
72124	18	ELMBADCONDITION
72125	5	HACKBERRY
72126	10	HACKBERRY
72127	5	BODDOCK
72129	6	ELM
72170	8	HACKBERRY
72172	4	ELM
72173	6	ELM
72174	4	OAK
72175	22	OAK
72176	10	ELM
72177	6	HACKBERRY
72178	6	ELM
72179	4	HACKBERRY
72180	4	HACKBERRY
72181	7	HACKBERRY
72182	10	WALNUT
72183	10	HACKBERRY
72184	4	HACKBERRY
72185	13	ELM
72186	11	ELM
72187	6	ELM
72188	7	ELM
72189	5	ELM
72190	10	CEDAR
72191	6	ELM
72192	5	ELM
72193	7	ELM
72194	8	CEDAR
72195	8	WALNUT
72196	8	HACKBERRY
72197	10	HACKBERRY

72198	10	HACKBERRY
72199	4	ELM
72200	8	ELM
72201	10	ELM
72202	5	CEDAR
72203	4	ELM
72204	24	OAK
72205	4	ELM
72211	13	WALNUT
72212	10	HACKBERRY
72213	4	ELM
72214	5	ELM
72215	6	HACKBERRY
72216	10	HACKBERRY
72217	10	HACKBERRY
72218	11	HACKBERRY
72219	5	HACKBERRY
72220	8	HACKBERRY
72221	10	ELM
72222	4	HACKBERRY
72223	10	HACKBERRY
72224	13	LOCUST
72225	4	HACKBERRY
72226	7	HACKBERRY
72227	7	HACKBERRY
72228	10	HACKBERRY
72229	8	HACKBERRY
72230	14	HACKBERRY
72231	13	WALNUT
72232	19	HACKBERRY
72233	10	OAK
72234	5	ELM
72235	8	HACKBERRY
72236	10	ELM
72237	14	LOCUST
72238	10	ELM
72239	12	WALNUT
72240	4	ELM
72241	10	HACKBERRY
72242	6	HACKBERRY
72243	5	ELM
72244	4	ELM
72245	4	HACKBERRY
72246	11	WALNUT
72247	15	ELM
72248	4	ELM
72249	7	HACKBERRY
72250	8	HACKBERRY
72251	10	ELM
72252	6	BODOCK
72253	4	ELM
72254	6	ELM
72255	7	BODDOCK
72256	5	CEDAR
72257	4	ELM
72258	4	ELM
72259	4	ELM
72260	4	ELM
72261	7	HACKBERRY
72262	10	ELM
72263	7	ELM
72266	14	HACKBERRY
72284	6	HACKBERRY
72285	10	HACKBERRY
72286	11	WALNUT
72287	11	WALNUT
72288	10	HACKBERRY
72289	4	ELM
72293	4	CEDAR
72294	10	ELM
72342	12	OAK
72361	6	ASH
72362	16	LOCUST
72363	5	HACKBERRY
72364	10	HACKBERRY
72366	5	HACKBERRY
72367	7	HACKBERRY
72368	7	HACKBERRY
72369	10	HACKBERRY
72370	10	HACKBERRY
72371	10	HACKBERRY
72372	4	HACKBERRY
72389	5	HACKBERRY
72390	5	HACKBERRY
72391	13	HACKBERRY
72392	12	ELM
72393	7	HACKBERRY
72394	4	HACKBERRY
72401	12	HACKBERRY
72402	10	HACKBERRY
72403	20	HACKBERRY
72404	4	CEDAR
72405	10	HACKBERRY
72406	4	CEDAR

72407	15	HACKBERRY
72408	6	HACKBERRY
72409	6	HACKBERRY
72410	19	HACKBERRY
72411	16	HACKBERRY
72413	4	ASH
72419	7	HACKBERRY
72420	10	OAK
72430	4	ELM
72432	8	BODDOCK
72435	10	HACKBERRY
72444	17	HACKBERRY
72457	7	ELM
72458	9	HACKBERRY
72460	9	HACKBERRY
72461	6	HACKBERRY
72462	13	HACKBERRY
72463	6	HACKBERRY
72464	9	ELM
72465	12	ELM
72466	5	HACKBERRY
72467	4	HACKBERRY
72468	7	HACKBERRY
72469	5	HACKBERRY
72470	9	HACKBERRY
72471	20	HACKBERRY
72472	9	HACKBERRY
72473	12	HACKBERRY
72474	12	HACKBERRY
72477	7	HACKBERRY
72478	9	HACKBERRY
72479	4	HACKBERRY
72480	4	HACKBERRY
72481	6	ELM
72482	5	CEDAR
72483	10	HACKBERRY
72484	12	HACKBERRY
72485	6	ELM
72490	12	HACKBERRY
72491	12	HACKBERRY
72492	15	HACKBERRY
72493	4	HACKBERRY
72494	6	ASH
72495	5	HACKBERRY
72496	4	OAK
72497	5	HACKBERRY
72498	5	ASH
72499	5	ELM
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72501	20	HACKBERRY
72502	6	HACKBERRY
72503	4	HACKBERRY
72504	4	HACKBERRY
72505	10	HACKBERRY
72506	15	HACKBERRY
72507	4	OAK
72508	11	AILANTHUS
72509	5	CEDAR
72510	5	CEDAR
72511	6	ELM
72512	7	OAK
72513	20	OAK
72514	6	HACKBERRY
72515	8	HACKBERRY
72516	6	HACKBERRY
72517	6	HACKBERRY
72518	9	OAK
72519	12	OAK
72520	6	HACKBERRY
72521	6	HACKBERRY
72522	4	HACKBERRY
72523	4	HACKBERRY
72524	8	HACKBERRY
72525	15	HACKBERRY
72526	11	HACKBERRY
72527	6	ELM
72528	11	HACKBERRY
72529	6	HACKBERRY
72530	8	HACKBERRY
72531	8	HACKBERRY
72532	16	WALNUT
72533	14	ELM
72534	8	HACKBERRY
72535	10	BOXELDER
72536	10	HACKBERRY
72537	13	PERSIMMON
72538	4	ELM
72539	10	HACKBERRY
72540	4	HACKBERRY
72541	10	HACKBERRY
72542	5	HACKBERRY
72543	6	ELM
72544	4	ELM
72545	4	HACKBERRY

72546	25	HACKBERRY
72547	11	PERSIMMON
72548	11	PERSIMMON
72549	9	PERSIMMON
72550	9	HACKBERRY
72551	5	ELM
72552	4	ELM
72553	4	HACKBERRY
72554	12	HACKBERRY
72555	10	HACKBERRY
72556	10	HACKBERRY
72557	10	HACKBERRY
72558	23	OAK
72559	7	HACKBERRY
72560	11	LOCUST
72562	5	HACKBERRY
72563	8	HACKBERRY
72564	10	ELM
72569	12	HACKBERRY
72570	5	ELM
72571	8	ELM
72572	4	HACKBERRY
72573	4	HACKBERRY
72574	10	HACKBERRY
72575	4	HACKBERRY
72576	5	HACKBERRY
72577	5	HACKBERRY
72578	15	HACKBERRY
72579	18	HACKBERRY
72580	8	HACKBERRY
72581	13	WALNUT
72582	10	ELM
72583	17	MAPLE
72584	6	HACKBERRY
72585	13	HACKBERRY
72586	15	HACKBERRY
72587	10	HACKBERRY
72588	7	HACKBERRY
72589	7	BODDOCK
72590	6	ELM
72591	11	HACKBERRY
72592	26	HACKBERRY
72593	6	HACKBERRY
72594	5	ELM
72595	4	HACKBERRY
72596	4	HACKBERRY
72597	10	HACKBERRY
72598	6	HACKBERRY
72599	11	HACKBERRY
72600	4	ASH
72601	5	ASH
72602	9	HACKBERRY
72603	16	HACKBERRY
72604	5	HACKBERRY
72605	30	DBL15WALNUT
72606	4	HACKBERRY
72607	4	HACKBERRY
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72609	10	HACKBERRY
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72612	12	BOXELDER
72613	11	ELM
72614	10	BOXELDER
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72616	12	HACKBERRY
72617	9	HACKBERRY
72618	6	HACKBERRY
72619	12	WALNUT
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72622	11	HACKBERRY
72623	8	HACKBERRY
72624	7	ELM
72625	10	HACKBERRY
72626	8	HACKBERRY
72627	4	ELM
72628	10	HACKBERRY
72629	4	HACKBERRY
72630	10	SASSAFRAS
72631	7	HACKBERRY
72632	10	SASSAFRAS
72633	10	SASSAFRAS
72634	19	OAK
72635	15	ELM
72636	10	OAK
72637	28	OAK
72638	20	HACKBERRY
72639	19	HACKBERRY
72640	25	OAK
72641	13	HACKBERRY
72642	4	ELM
72643	13	HACKBERRY
72644	9	ELM

72645	20	HACKBERRY
72646	7	HACKBERRY
72647	10	HACKBERRY
72648	9	HACKBERRY
72649	8	ELM
72650	8	HACKBERRY
72651	8	LOCUST
72652	4	LOCUST
72653	10	HACKBERRY
72654	11	OAK
72655	7	HACKBERRY
72656	6	HACKBERRY
72657	10	PERSIMMON
72658	10	PERSIMMON
72659	6	HACKBERRY
72660	8	HACKBERRY
72661	4	HACKBERRY
72662	7	HACKBERRY
72663	9	HACKBERRY
72664	14	HACKBERRY
72665	4	HACKBERRY
72666	10	HACKBERRY
72667	12	HACKBERRY
72668	6	HACKBERRY
72669	4	HACKBERRY
72670	4	ELM
72671	5	CEDAR
72672	5	CEDAR
72673	9	ELM
72674	4	HACKBERRY
72675	4	HACKBERRY
72676	4	HACKBERRY
72677	10	HACKBERRY
72678	10	HACKBERRY
72679	18	ELM
72680	6	OAK
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72686	9	ELM
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72691	21	HACKBERRY
72692	7	HACKBERRY
72693	10	HACKBERRY
72694	9	OAK
72695	14	WALNUT
72696	9	HACKBERRY
72697	5	HACKBERRY
72698	5	HACKBERRY
72699	7	HACKBERRY
72700	4	HACKBERRY
72701	4	HACKBERRY
72702	4	HACKBERRY
72703	4	HACKBERRY
72704	8	HACKBERRY
72705	6	HACKBERRY
72706	6	HACKBERRY
72707	6	HACKBERRY
72708	6	HACKBERRY
72709	9	ELM
72710	4	HACKBERRY
72711	6	HACKBERRY
72712	15	WALNUT
72713	10	HACKBERRY
72714	14	HACKBERRY
72715	18	WALNUT
72716	16	ELM
72717	9	WALNUT
72718	7	CEDAR
72719	10	LOCUST
72720	10	LOCUST
72721	4	HACKBERRY
72722	5	ELM
72723	9	SASSAFRAS
72724	7	SASSAFRAS
72725	10	SASSAFRAS
72726	14	SASSAFRAS
72727	6	SASSAFRAS
72728	6	SASSAFRAS
72729	9	SASSAFRAS
72730	6	MULBERRY
72731	4	ELM
72732	12	SASSAFRAS
72733	13	SASSAFRAS
72734	8	HACKBERRY
72735	4	ELM
72736	17	HACKBERRY
72737	7	HACKBERRY
72738	4	OAK

72739	12	HACKBERRY
72740	12	HACKBERRY
72741	6	ELM
72742	12	ELM
72743	6	HACKBERRY
72744	5	HACKBERRY
72745	12	HACKBERRY
72746	8	HACKBERRY
72747	8	HACKBERRY
72748	8	HACKBERRY
72749	12	HACKBERRY
72750	5	HACKBERRY
72751	7	HACKBERRY
72752	10	HACKBERRY
72753	5	HACKBERRY
72754	18	HACKBERRY
72755	13	HACKBERRY
72756	6	MAPLE
72757	6	BOXELDER
72758	15	WALNUT
72759	7	HACKBERRY
72760	4	HACKBERRY
72761	9	HACKBERRY
72762	9	HACKBERRY
72763	8	BODDOCK
72764	6	BOXELDER
72765	10	ELM
72766	6	BOXELDER
72767	10	ASH
72768	5	CEDAR
72769	5	CEDAR
72770	6	MAPLE
72771	5	HACKBERRY
72772	4	DOGWOOD
72773	10	BOXELDER
72774	6	HACKBERRY
72775	7	PERSIMMON
72776	4	MAPLE
72777	5	MAPLE
72778	12	BOXELDER
72779	7	ELM
72780	12	ELM
72781	12	BOXELDER
72782	10	HACKBERRY
72783	8	HACKBERRY
72784	12	HACKBERRY
72785	6	PERSIMMON
72786	10	PERSIMMON
72787	7	HACKBERRY
72788	4	ELM
72789	12	HACKBERRY
72790	12	HACKBERRY
72791	4	ELM
72792	11	SASSAFRAS
72793	5	SASSAFRAS
72794	6	OAK
72795	15	HACKBERRY
72796	12	SASSAFRAS
72797	14	SASSAFRAS
72798	8	SASSAFRAS
72799	13	SASSAFRAS
72800	6	SASSAFRAS
72801	4	SASSAFRAS
72802	4	ELM
72803	12	HACKBERRY
72804	9	SASSAFRAS
72805	12	SASSAFRAS
72806	6	SASSAFRAS
72807	6	ELM
72808	5	CEDAR
72809	13	ELM
72810	12	ASH
72811	5	SASSAFRAS
72812	8	ELM
72813	8	ELM
72814	10	ELM
72815	5	HACKBERRY
72816	13	HACKBERRY
72817	13	ELM
72818	20	CEDAR
72819	14	HACKBERRY
72820	9	AILANTHUS
72821	9	BRADFORD
72822	20	OAK
72823	5	HACKBERRY
72824	4	WALNUT
72825	5	BODDOCK
72826	5	BODDOCK
72827	6	ELM
72828	4	ELM
72829	8	HACKBERRY
72830	8	HACKBERRY
72831	16	WALNUT
72832	6	OAK

72833	14	HACKBERRY
72834	11	LOCUST
72835	12	ELM
72836	7	HACKBERRY
72837	8	HACKBERRY
72838	4	HACKBERRY
72839	4	HACKBERRY
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72843	20	DBL10ASH
72844	6	HACKBERRY
72845	6	HACKBERRY
72846	6	MAPLE
72847	7	CEDAR
72848	14	ASH
72849	16	BOXELDER
72850	15	HACKBERRY
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72852	4	HACKBERRY
72853	4	HACKBERRY
72854	4	ASH
72855	10	HACKBERRY
72856	8	HACKBERRY
72857	21	BOXELDER
72858	12	WALNUT
72859	4	HACKBERRY
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72861	4	HACKBERRY
72862	6	ELM
72863	13	PERSIMMON
72864	4	HACKBERRY
72865	4	HACKBERRY
72866	16	ASH
72867	11	BOXELDER
72868	12	HACKBERRY
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72870	10	HACKBERRY
72871	5	MAPLE
72872	7	DOGWOOD
72873	12	LOCUST
72874	7	ASH
72875	5	HACKBERRY
72876	16	PERSIMMON
72877	12	PERSIMMON
72878	12	HACKBERRY
72879	5	HACKBERRY
72880	7	HACKBERRY
72881	7	MAPLE
72882	12	PERSIMMON
72883	12	HACKBERRY
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72887	4	HACKBERRY
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72893	7	HACKBERRY
72894	4	ASH
72895	5	HACKBERRY
72896	12	HACKBERRY
72897	8	HACKBERRY
72898	16	OAK
72899	5	HACKBERRY
72900	10	HACKBERRY
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72912	5	HACKBERRY
72913	5	ELM
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72915	5	HACKBERRY
72916	6	HACKBERRY
72917	13	WALNUT
72918	13	LOCUST
72919	8	HACKBERRY
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72921	6	HACKBERRY
72922	12	MAPLE
72923	7	HACKBERRY
72924	7	HACKBERRY
72925	15	HACKBERRY
72926	10	HACKBERRY

72927	6	HACKBERRY
72928	6	HACKBERRY
72929	9	HACKBERRY
72930	7	ELM
72931	26	CHERRY
72932	12	HACKBERRY
72933	10	HACKBERRY
72934	5	LOCUST
72935	8	AILANTHUS
72936	9	AILANTHUS
72937	12	AILANTHUS
72938	10	AILANTHUS
72939	8	HACKBERRY
72940	5	CEDAR
72941	12	HACKBERRY
72942	12	HACKBERRY
72943	4	MAPLE
72944	12	HACKBERRY
72945	8	HACKBERRY
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72947	13	HACKBERRY
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72949	15	ELM
72950	9	HACKBERRY
72951	12	WALNUT
72952	6	BOXELDER
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72954	8	HACKBERRY
72955	13	HACKBERRY
72956	9	BODDOCK
72957	17	ASH
72958	5	WALNUT
72959	11	LOCUST
72960	5	HACKBERRY
72961	5	HACKBERRY
72962	12	WALNUT
72963	13	OAK
72964	6	HACKBERRY
72965	4	HACKBERRY
72966	14	HACKBERRY
72967	10	HACKBERRY
72968	8	HACKBERRY
72969	14	HICKORY
72970	4	HACKBERRY
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72972	12	HACKBERRY
72973	10	HACKBERRY
72974	4	ELM
72975	4	HACKBERRY
72976	14	HICKORY
72977	4	HACKBERRY
72978	11	WALNUT
72979	6	MAPLE
72980	14	HICKORY
72981	7	HACKBERRY
72982	7	HACKBERRY
72983	13	HACKBERRY
72984	10	HACKBERRY
72985	9	HACKBERRY
72986	9	HACKBERRY
72987	11	HACKBERRY
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72994	11	BODDOCK
72995	5	HACKBERRY
72996	14	HACKBERRY
72997	5	HACKBERRY
72998	11	HACKBERRY
72999	8	HACKBERRY
73000	4	HACKBERRY
73001	12	HACKBERRY
73002	6	HACKBERRY
73003	6	HACKBERRY
73004	4	HACKBERRY
73005	4	HACKBERRY
73006	5	CEDAR
73007	17	HACKBERRY
73008	12	HACKBERRY
73009	10	LOCUST
73010	10	LOCUST
73011	4	PERSIMMON
73012	4	PERSIMMON
73013	5	BOXELDER
73014	5	BOXELDER
73015	5	BOXELDER
73016	5	BOXELDER
73017	7	BOXELDER
73018	15	ELM
73019	10	CEDAR
73020	10	CEDAR

73021	11	LOCUST
73022	12	LOCUST
73023	4	ASH
73024	8	LOCUST
73025	6	LOCUST
73026	6	LOCUST
73027	6	LOCUST
73028	6	LOCUST
73029	6	LOCUST
73030	4	HACKBERRY
73031	4	HACKBERRY
73032	21	HACKBERRY
73033	4	ELM
73034	6	BODDOCK
73035	5	ASH
73036	4	BOXELDER
73037	4	AILANTHUS
73038	4	LOCUST
73039	5	LOCUST
73040	8	CEDAR
73041	20	CEDAR
73042	6	HACKBERRY
73043	4	AILANTHUS
73044	4	AILANTHUS
73045	4	AILANTHUS
73046	4	AILANTHUS
73047	4	AILANTHUS
73048	4	HACKBERRY
73049	4	LOCUST
73050	7	LOCUST
73051	7	LOCUST
73052	10	CEDAR
73053	6	AILANTHUS
73054	6	AILANTHUS
73055	6	AILANTHUS
73056	6	AILANTHUS
73057	8	AILANTHUS
73058	4	AILANTHUS
73059	6	WALNUT
73060	8	LOCUST
73061	9	CEDAR
73062	9	CEDAR
73063	5	AILANTHUS
73064	5	AILANTHUS
73065	5	AILANTHUS
73066	5	AILANTHUS
73067	6	AILANTHUS
73068	6	BODDOCK
73069	4	ASH
73070	12	HACKBERRY
73071	10	CEDAR
73072	4	WALNUT
73073	10	MAPLE
73074	10	WALNUT
73075	8	WALNUT
73076	6	WALNUT
73077	5	BOXELDER
73078	5	AILANTHUS
73079	5	AILANTHUS
73080	5	AILANTHUS
73081	5	AILANTHUS
73082	5	AILANTHUS
73083	6	ELM
73084	5	AILANTHUS
73085	4	HACKBERRY
73086	4	HACKBERRY
73087	4	AILANTHUS
73088	4	AILANTHUS
73089	8	PERSIMMON
73090	9	AILANTHUS
73091	9	AILANTHUS
73092	8	AILANTHUS
73093	4	HACKBERRY
73094	5	HACKBERRY
73095	5	HACKBERRY
73096	9	LOCUST
73097	9	LOCUST
73098	9	LOCUST
73099	9	LOCUST
73100	12	HACKBERRY
73101	12	CEDAR
73102	21	CEDAR
73103	5	ELM
73104	8	BODDOCK
73105	8	LOCUST
73106	9	ASH
73107	8	HACKBERRY
73108	13	LOCUST
73109	5	HACKBERRY
73110	7	HACKBERRY
73111	9	LOCUST
73112	13	CEDAR
73113	12	CEDAR
73114	5	ASH

73115	5	ASH
73116	8	CEDAR
73117	14	ELM
73118	9	PERSIMMON
73119	12	ELM
73120	14	CEDAR
73121	14	OAK
73122	16	ELM
73123	11	CEDAR
73124	17	CEDAR
73125	9	ELM
73126	12	CEDAR
73127	12	CEDAR
73128	20	DBL10ASH
73129	10	ASH
73130	10	ASH
73131	8	ELM
73132	12	ASH
73133	12	ELM
73134	11	HACKBERRY
73135	4	WALNUT
73136	13	ELM
73137	12	ASH
73138	6	PERSIMMON
73139	6	PERSIMMON
73140	7	LOCUST
73141	7	LOCUST
73142	4	ELM
73143	9	HACKBERRY
73144	6	LOCUST
73145	13	HACKBERRY
73146	12	ELM
73147	12	ELM
73148	4	WALNUT
73149	9	PERSIMMON
73150	13	CEDAR
73151	16	CEDAR
73152	8	LOCUST
73153	10	HACKBERRY
73154	12	HACKBERRY
73155	10	CEDAR
73156	6	LOCUST
73157	7	ELM
73158	7	WILLOW
73159	4	HACKBERRY
73160	9	LOCUST
73161	8	WALNUT
73162	4	WALNUT
73163	7	LOCUST
73164	4	HACKBERRY
73165	10	CEDAR
73166	9	BOXELDER
73167	6	HACKBERRY
73168	17	ELM
73169	12	HACKBERRY
73170	6	LOCUST
73171	6	LOCUST
73172	6	WALNUT
73173	10	ELM
73174	4	LOCUST
73175	12	ELM
73176	12	ELM
73177	12	ELM
73178	15	ELM
73179	7	ELM
73180	16	CEDAR
73182	4	BODDOCK
73183	8	ELM
73184	15	HACKBERRY
73185	8	CEDAR
73186	8	CEDAR
73187	15	ELM
73188	12	BOXELDER
73189	11	HACKBERRY
73190	11	HACKBERRY
73191	7	HACKBERRY
73192	5	ELM
73193	15	ELM
73194	9	ELM
73195	7	ELM
73196	17	ASH
73197	7	HACKBERRY
73198	17	ELM
73199	6	HACKBERRY
73200	5	MAPLE
73201	11	HACKBERRY
73202	14	HACKBERRY
73203	9	HACKBERRY
73204	9	HACKBERRY
73205	5	HACKBERRY
73206	15	HACKBERRY
73207	15	WALNUT
73208	4	HACKBERRY
73209	10	HACKBERRY

73210	8	HACKBERRY
73211	14	HACKBERRY
73212	4	HACKBERRY
73213	4	ELM
73214	14	HACKBERRY
73215	11	ASH
73216	4	HACKBERRY
73217	6	HACKBERRY
73218	14	HACKBERRY
73219	9	HACKBERRY
73220	5	HACKBERRY
73221	6	HACKBERRY
73222	8	ELM
73223	12	ELM
73224	10	ELM
73225	4	HACKBERRY
73226	8	HACKBERRY
73227	10	HACKBERRY
73228	14	HACKBERRY
73229	12	HACKBERRY
73230	7	HACKBERRY
73231	6	ELM
73232	5	HACKBERRY
73233	14	HACKBERRY
73234	8	ELM
73235	4	HACKBERRY
73236	5	MAPLE
73237	7	HACKBERRY
73238	5	WALNUT
73239	6	HACKBERRY
73240	15	ELM
73241	17	WALNUT
73242	9	PERSIMMON
73243	9	PERSIMMON
73244	6	HACKBERRY
73245	6	HACKBERRY
73246	6	HACKBERRY
73247	6	HACKBERRY
73248	6	HACKBERRY
73249	9	LOCUST
73250	12	ASH
73251	13	ELM
73252	10	ELM
73253	12	ELM
73254	5	CEDAR
73255	4	ELM
73256	11	ELM
73257	9	BODDOCK
73258	5	LOCUST
73259	5	LOCUST
73260	7	CEDAR
73261	5	CEDAR
73262	5	ELM
73263	8	LOCUST
73264	4	CEDAR
73265	5	CEDAR
73266	5	CEDAR
73267	11	CEDAR
73268	5	ELM
73269	6	ASH
73270	7	ASH
73271	4	BODDOCK
73272	4	ASH
73273	4	ASH
73274	6	ASH
73275	4	CEDAR
73276	4	OAK
73277	6	ELM
73278	7	CEDAR
73279	17	OAK
73280	4	OAK
73281	12	CEDAR
73282	6	ELM
73283	22	DBL11CEDAR
73284	10	CEDAR
73285	6	OAK
73286	8	ELM
73287	4	HACKBERRY
73288	12	ELM
73289	9	CEDAR
73290	4	HACKBERRY
73291	43	OAK
73292	6	ASH
73293	8	ELM
73294	10	CEDAR
73295	17	OAK
73296	5	HACKBERRY
73297	10	ASH
73298	8	BODDOCK
73299	11	BODDOCK
73300	6	OAK
73301	8	ASH
73302	7	CEDAR
73303	32	OAK

73304	4	ELM
73305	10	ASH
73306	7	ASH
73307	8	ELM
73308	5	ASH
73309	5	OAK
73310	4	ASH
73311	11	CEDAR
73312	14	ELM
73313	10	CEDAR
73314	10	HACKBERRY
73315	6	OAK
73316	7	ASH
73317	8	OAK
73318	20	ELM
73319	14	WALNUT
73320	7	OAK
73321	7	OAK
73322	10	ELM
73323	10	ELM
73324	6	HACKBERRY
73325	11	HACKBERRY
73326	13	HACKBERRY
73327	12	OAK
73328	7	ELM
73329	36	OAK
73330	12	ELM
73331	9	ELM
73332	9	ELM
73333	12	HACKBERRY
73334	4	HACKBERRY
73335	13	WALNUT
73336	12	ELM
73337	10	HACKBERRY
73338	4	ELM
73339	8	HACKBERRY
73340	8	ELM
73341	8	ELM
73342	10	LOCUST
73343	27	OAK
73344	4	ELM
73345	4	ELM
73347	17	HACKBERRY
73349	7	HACKBERRY
73350	4	HACKBERRY
73351	4	BODDOCK
73352	6	BODDOCK
73353	9	HACKBERRY
73354	12	BODDOCK
73355	8	ASH
73356	4	ELM
73357	4	HACKBERRY
73358	4	HACKBERRY
73359	4	ELM
73360	4	HACKBERRY
73361	4	HACKBERRY
73362	4	HACKBERRY
73363	4	HACKBERRY
73364	10	HACKBERRY
73365	10	HACKBERRY
73366	4	CEDAR
73367	12	ASH
73368	6	HACKBERRY
73369	5	CEDAR
73370	5	CEDAR
73371	6	ELM
73372	16	OAK
73373	8	ELM
73374	8	ELM
73375	6	ELM
73376	4	CEDAR
73377	6	HACKBERRY
73378	16	ASH
73379	17	BOXELDER
73380	12	ELM
73381	10	HACKBERRY
73382	12	HACKBERRY
73383	5	HACKBERRY
73384	18	PERSIMMON
73385	4	HACKBERRY
73386	9	BOXELDER
73387	15	ELM
73388	12	HACKBERRY
73389	12	HACKBERRY
73390	5	ELM
73391	11	HACKBERRY
73392	4	ELM
73393	10	HACKBERRY
73394	7	HACKBERRY
73395	12	HACKBERRY
73396	6	HACKBERRY
73397	11	HACKBERRY
73398	6	HACKBERRY
73399	7	ELM

73400	9	ELM
73401	16	WALNUT
73402	10	BOXELDER
73403	17	WALNUT
73404	6	ELM
73405	12	WALNUT
73406	17	MAPLE
73407	7	HACKBERRY
73408	5	ELM
73409	10	HACKBERRY
73410	4	ELM
73411	10	WALNUT
73412	10	ELM
73413	4	ASH
73414	5	MAPLE
73415	8	BOXELDER
73416	4	HACKBERRY
73417	10	HACKBERRY
73418	7	ELM
73419	5	ELM
73420	4	HACKBERRY
73421	8	HACKBERRY
73422	15	WALNUT
73423	5	ELM
73424	4	MAPLE
73425	6	HACKBERRY
73426	5	HICKORY
73427	13	ELM
73428	5	ELM
73429	5	HACKBERRY
73430	15	LOCUST
73431	14	HACKBERRY
73432	7	WALNUT
73433	5	HACKBERRY
73434	7	MAPLE
73435	15	ELM
73436	12	MAPLE
73437	5	BOXELDER
73440	12	HACKBERRY
73448	4	HACKBERRY
73449	10	HACKBERRY
73450	10	HACKBERRY
73451	4	ASH
73452	11	HACKBERRY
73453	5	HACKBERRY
73454	7	HACKBERRY
73461	7	HACKBERRY
73464	10	HACKBERRY
73468	12	HACKBERRY
73472	6	OAK
73473	7	HACKBERRY
73474	7	HACKBERRY
73475	7	HACKBERRY
73476	16	ELM
73477	4	HACKBERRY
73478	12	HACKBERRY
73479	12	PERSIMMON
73480	10	HACKBERRY
73481	12	HACKBERRY
73482	12	HACKBERRY
73483	5	MAPLE
73484	8	MAPLE
73485	7	ELM
73486	10	MAPLE
73487	15	WALNUT
73488	12	OAK
73489	4	MAPLE
73490	20	OAK
73491	5	ELM
73492	8	OAK
73493	13	OAK
73494	10	ELM
73495	7	ELM
73496	26	OAK
73497	10	ELM
73498	13	OAK
73499	4	HACKBERRY
73500	4	HACKBERRY
73501	14	ASH
73502	14	ASH
73503	4	MAPLE
73504	4	MAPLE
73505	9	HACKBERRY
73506	4	OAK
73507	5	ASH
73508	7	ELM
73509	5	BOXELDER
73510	14	HACKBERRY
73511	4	ASH
73515	10	ELM
73516	11	ELM
73523	14	HACKBERRY
73524	21	ASH
73525	4	ELM

73526	5	MAPLE
73528	4	ELM
73529	17	MAPLE
73530	7	ELM
73531	7	MAPLE
73532	4	HACKBERRY
73533	8	ELM
73534	14	ELM
73535	16	WALNUT
73538	10	SASSAFRAS
73539	7	SASSAFRAS
73540	4	MAPLE
73541	12	SASSAFRAS
73542	14	SASSAFRAS
73543	17	HACKBERRY
73544	7	ELM
73545	10	HACKBERRY
73546	4	MAPLE
73583	8	ELM
73584	6	OAK
73585	17	ASH
73586	8	ELM
73587	5	HACKBERRY
73588	4	ELM
73589	14	PERSIMMON
73590	4	ELM
73591	9	MAPLE
73592	4	HACKBERRY
73593	4	HACKBERRY
73594	4	MAPLE
73595	6	HACKBERRY
73596	7	ELM
73597	10	HACKBERRY
73598	7	ELM
73599	7	ELM
73600	15	AILANTHUS
73601	17	ASH
73602	6	ELM
73603	7	ELM
73604	5	ELM
73605	18	ASH
73606	16	ASH
73607	6	HACKBERRY
73608	21	HACKBERRY
73609	15	WALNUT
73610	20	ASH
73611	8	ASH
73612	10	ELM
73613	5	ELM
73614	7	ASH
73617	34	DBL17ASH
73618	4	HACKBERRY
73619	4	MAPLE
73620	5	MAPLE
73621	5	ELM
73622	34	DBL17ASH
73623	4	ASH
73624	9	ASH
73625	14	ASH
73626	22	ASH
73627	4	ELM
73628	17	ASH
73629	12	ASH
73630	5	HACKBERRY
73631	4	HACKBERRY
73632	7	ASH
73633	4	MAPLE
73634	5	ELM
73635	12	ELM
73636	6	MAPLE
73637	7	HACKBERRY
73638	12	ELM
73712	12	SASSAFRAS
73713	12	SASSAFRAS
73714	6	MAPLE
73789	10	MULBERRY
73791	7	ELM
73796	5	MAPLE
73865	6	CEDAR
73866	7	ASH
73867	12	ASH
73869	6	MAPLE
73870	22	ASH
73871	4	ELM
73872	15	ASH
73873	7	ASH
73874	9	ASH
73875	9	ASH
73876	12	ASH
73877	12	ASH
73878	4	ELM
74136	6	HICKORY
74137	8	ASH
74140	5	ELM

74141	14	ASH
74142	10	ASH
74143	8	HICKORY
74145	4	ELM
74146	7	CEDAR
74147	7	CEDAR
74148	6	ASH
74149	5	ELM
74150	5	ELM
74151	4	ASH
74152	4	ASH
74153	9	OAK
74154	12	ASH
74155	7	ASH
74156	16	ASH
74157	5	ASH
74158	10	CEDAR
74159	6	ASH
74160	5	ASH
74161	4	ASH
74162	6	CEDAR
74163	9	ASH
74164	6	ASH
74165	12	ASH
74200	6	ASH
74201	4	ASH
74202	8	ASH
74203	13	ASH
74204	7	ELM
74205	5	ELM
74206	20	ASH
74207	6	ELM
74208	5	HICKORY
74209	10	ASH
74210	6	HACKBERRY
74211	6	ASH
74212	10	CEDAR
74213	14	CEDAR
74214	20	DBL10ASH
74215	8	HICKORY
74216	11	OAK
74217	15	OAK
74218	26	OAK
74219	20	HICKORY
74220	16	ASH
74221	14	ASH
74222	14	ASH
74223	5	HICKORY
74224	5	OAK
74225	4	ELM
74226	10	MAPLE
74227	6	HACKBERRY
74228	5	ASH
74232	10	MAPLE
74233	24	ASH
74234	16	HACKBERRY
74235	10	HICKORY
74236	13	ASH
74237	24	DBL12HACKBERRY
74238	5	ELM
74239	8	MAPLE
74240	13	ASH
74241	13	ASH
74242	7	MAPLE
74243	19	ASH
74244	9	MAPLE
74245	5	OAK
74246	6	ELM
74247	6	MAPLE
74248	6	HACKBERRY
74249	5	MAPLE
74250	7	SASSAFRAS
74251	7	SASSAFRAS
74252	9	SASSAFRAS
74253	5	MAPLE
74254	13	SASSAFRAS
74255	13	SASSAFRAS
74256	10	SASSAFRAS
74257	10	SASSAFRAS
74258	10	SASSAFRAS
74259	14	SASSAFRAS
74260	12	SASSAFRAS
74261	10	SASSAFRAS
74262	12	SASSAFRAS
74263	12	SASSAFRAS
74264	5	MAPLE
74265	12	SASSAFRAS
74266	12	SASSAFRAS
74267	4	MAPLE
74268	4	MAPLE
74269	6	MAPLE
74270	8	HACKBERRY
74271	8	SASSAFRAS
74272	12	SASSAFRAS

74273	14	SASSAFRAS
74274	12	SASSAFRAS
74275	12	SASSAFRAS
74276	7	SASSAFRAS
74277	10	SASSAFRAS
74278	4	ELM
74279	4	ASH
74280	7	MAPLE
74281	10	SASSAFRAS
74282	10	SASSAFRAS
74283	4	MAPLE
74284	11	SASSAFRAS
74285	6	ELM
74286	10	SASSAFRAS
74287	10	SASSAFRAS
74288	12	SASSAFRAS
74289	7	SASSAFRAS
74290	9	SASSAFRAS
74291	7	CEDAR
74292	12	HACKBERRY
74293	4	HACKBERRY
74294	4	HACKBERRY
74295	6	ELM
74296	24	OAK
74297	9	OAK
74298	23	OAK
74299	7	ELM
74300	4	MAPLE
74301	10	SASSAFRAS
74302	13	SASSAFRAS
74303	13	SASSAFRAS
74304	11	SASSAFRAS
74305	12	SASSAFRAS
74306	12	SASSAFRAS
74307	14	SASSAFRAS
74308	16	SASSAFRAS
74309	10	MAPLE
74310	6	ELM
74311	14	SASSAFRAS
74312	14	SASSAFRAS
74313	11	SASSAFRAS
74314	11	SASSAFRAS
74315	11	SASSAFRAS
74316	11	SASSAFRAS
74317	4	ELM
74318	4	ELM
74319	8	SASSAFRAS
74320	12	SASSAFRAS
74321	12	SASSAFRAS
74322	12	SASSAFRAS
74323	12	SASSAFRAS
74324	12	SASSAFRAS
74325	12	SASSAFRAS
74326	14	SASSAFRAS
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74328	14	SASSAFRAS
74329	15	SASSAFRAS
74330	11	SASSAFRAS
74331	11	SASSAFRAS
74332	9	SASSAFRAS
74333	13	SASSAFRAS
74334	15	SASSAFRAS
74335	10	SASSAFRAS
74336	10	SASSAFRAS
74337	13	SASSAFRAS
74338	12	SASSAFRAS
74339	12	SASSAFRAS
74340	17	SASSAFRAS
74341	17	SASSAFRAS
74342	9	MAPLE
74343	8	ELM
74344	8	MAPLE
74345	6	MAPLE
74346	8	HACKBERRY
74347	9	ELM
74348	11	OAK
74349	15	OAK
74350	32	CHERRY
74351	4	ELM
74352	10	OAK
74353	13	OAK
74354	17	OAK
74355	5	ELM
74356	8	ASH
74357	13	OAK
74358	18	OAK
74359	4	ELM
74360	6	ELM
74361	15	OAK
74362	4	MAPLE
74363	4	MAPLE
74365	4	ASH
74366	7	REDBUD
74367	6	MAPLE

74368	4	HACKBERRY
74369	13	SASSAFRAS
74370	7	ELM
74371	13	SASSAFRAS
74372	13	SASSAFRAS
74373	15	SASSAFRAS
74374	8	HACKBERRY
74375	4	MAPLE
74376	5	HACKBERRY
74377	4	DOGWOOD
74378	5	HACKBERRY
74379	9	MAPLE
74380	4	MAPLE
74381	7	MAPLE
74382	15	HACKBERRY
74383	10	HACKBERRY
74384	5	HACKBERRY
74385	9	BOXELDER
74386	9	ASH
74387	13	BOXELDER
74388	13	BOXELDER
74389	10	BOXELDER
74390	13	BOXELDER
74391	8	ELM
74392	12	HACKBERRY
74393	6	HACKBERRY
74394	18	CEDAR
74395	10	ELM
74396	9	SASSAFRAS
74397	8	ELM
74398	10	ELM
74399	9	SASSAFRAS
74400	7	SASSAFRAS
74401	6	HACKBERRY
74402	6	ELM
74403	15	CEDAR
74404	20	CEDAR
74406	5	CEDAR
74407	6	CEDAR
74408	6	CEDAR
74409	4	CEDAR
74410	9	CEDAR
74411	9	CEDAR
74412	4	CEDAR
74413	6	CEDAR
74414	4	CEDAR
74415	4	CEDAR
74416	19	ASH
74417	4	CEDAR
74418	8	CEDAR
74419	8	CEDAR
74420	4	CEDAR
74421	8	CEDAR
74422	11	CEDAR
74423	7	CEDAR
74424	19	OAK
74425	6	CEDAR
74426	4	CEDAR
74427	4	CEDAR
74428	4	CEDAR
74429	4	CEDAR
74430	4	CEDAR
74431	7	CEDAR
74446	4	PERSIMMON
74447	5	PERSIMMON
74459	8	HACKBERRY
74460	6	HACKBERRY
74461	8	HACKBERRY
74462	10	OAK
74463	6	ELM
74464	6	LOCUST
74465	6	HACKBERRY
74466	8	CEDAR
74467	6	CEDAR
74468	4	CEDAR
74469	11	LOCUST
74470	9	LOCUST
74471	17	LOCUST
74472	15	LOCUST
74473	6	HACKBERRY
74474	16	WALNUT
74475	4	BODDOCK
74476	8	HACKBERRY
74477	12	LOCUST
74478	5	ELM
74479	15	HACKBERRY
74480	6	WALNUT
74481	5	WALNUT
74482	7	LOCUST
74483	12	CEDAR
74484	8	CEDAR
74485	4	CEDAR
74486	4	WALNUT
74487	4	WALNUT

74488	10	WALNUT
74489	4	HACKBERRY
74490	6	HACKBERRY
74491	6	HACKBERRY
74492	18	LOCUST
74493	11	LOCUST
74494	12	LOCUST
74495	6	HACKBERRY
74496	10	HACKBERRY
74497	10	CEDAR
74498	11	ELM
74499	23	LOCUST
74500	13	HACKBERRY
74501	6	HACKBERRY
74502	10	HACKBERRY
74503	12	HACKBERRY
74504	8	HACKBERRY
74505	13	HACKBERRY
74506	8	HACKBERRY
74507	7	ELM
74508	12	HACKBERRY
74509	14	HACKBERRY
74510	17	HACKBERRY
74511	13	HACKBERRY
74512	10	HACKBERRY
74513	7	HACKBERRY
74514	19	ELM
74515	8	HACKBERRY
74516	12	HACKBERRY
74517	12	HACKBERRY
74518	4	HACKBERRY
74519	6	BODDOCK
74520	10	BODDOCK
74521	8	HACKBERRY
74522	17	HACKBERRY
74523	5	HACKBERRY
74524	22	ELM
74525	12	ELM
74526	10	HACKBERRY
74527	10	HACKBERRY
74528	8	ELM
74529	10	HACKBERRY
74530	12	HACKBERRY
74531	5	CEDAR
74532	14	ELM
74533	4	CEDAR
74534	10	HACKBERRY
74535	5	HACKBERRY
74536	4	HACKBERRY
74537	6	ASH
74538	10	ASH
74539	24	OAK
74542	28	QUAD9HACKBERRY
74543	10	LOCUST
74544	11	HACKBERRY
74545	7	LOCUST
74546	8	LOCUST
74547	13	ELM
74548	19	ASH
74549	19	HACKBERRY
74550	10	HACKBERRY
74551	6	HACKBERRY
74552	14	HACKBERRY
74553	8	LOCUST
74554	10	HACKBERRY
74555	10	ELM
74556	13	HACKBERRY
74557	13	LOCUST
74558	10	HACKBERRY
74559	10	HACKBERRY
74560	6	HACKBERRY
74561	6	HACKBERRY
74562	7	HACKBERRY
74563	10	HACKBERRY
74564	10	HACKBERRY
74565	10	HACKBERRY
74566	5	AILANTHUS
74567	7	AILANTHUS
74568	15	LOCUST
74569	13	AILANTHUS
74570	6	MAPLE
74571	20	HICKORY
74572	27	HICKORY
74573	4	AILANTHUS
74574	5	AILANTHUS
74575	7	HACKBERRY
74576	5	BOXELDER
74577	12	MULBERRY
74578	9	AILANTHUS
74579	5	HACKBERRY
74580	19	LOCUST
74581	19	LOCUST
74582	12	BODDOCK
74583	6	MAPLE

74584	7	MAPLE
74585	6	HACKBERRY
74586	14	HACKBERRY
74587	7	HACKBERRY
74588	9	HACKBERRY
74589	10	MAPLE
74590	4	ELM
74591	8	HACKBERRY
74592	5	HACKBERRY
74593	10	HACKBERRY
74594	9	HACKBERRY
74595	5	MAPLE
74596	8	HACKBERRY
74597	16	ELM
74598	8	ELM
74599	8	ELM
74600	16	LOCUST
74601	12	HACKBERRY
74602	12	HACKBERRY
74603	4	HACKBERRY
74604	4	ELM
74605	4	ELM
74606	9	HACKBERRY
74607	11	HACKBERRY
74608	13	ELM
74609	7	ELM
74610	7	ELM
74611	8	MAPLE
74612	13	HACKBERRY
74613	6	HACKBERRY
74614	4	OAK
74615	4	MAPLE
74616	16	HACKBERRY
74617	9	ELM
74618	12	ELM
74619	8	ELM
74620	14	PERSIMMON
74621	10	MAPLE
74622	12	SASSAFRAS
74623	12	SASSAFRAS
74624	15	SASSAFRAS
74625	11	SASSAFRAS
74626	5	PERSIMMON
74627	7	MAPLE
74628	6	ELM
74629	10	MAPLE
74630	7	ELM
74631	7	ELM
74632	6	BOXELDER
74633	20	MAPLE
74634	21	HACKBERRY
74635	4	OAK
74636	6	HACKBERRY
74637	5	ELM
74638	5	ELM
74639	5	ELM
74640	4	ELM
74641	12	HACKBERRY
74642	4	HACKBERRY
74643	17	HACKBERRY
74644	4	ASH
74645	12	HACKBERRY
74646	7	MAPLE
74647	12	BOXELDER
74648	16	HACKBERRY
74649	13	HACKBERRY
74650	15	MULBERRY
74651	6	HACKBERRY
74652	4	ELM
74653	14	SASSAFRAS
74654	14	SASSAFRAS
74655	12	SASSAFRAS
74656	12	SASSAFRAS
74657	12	SASSAFRAS
74658	10	SASSAFRAS
74659	13	SASSAFRAS
74660	13	SASSAFRAS
74661	13	SASSAFRAS
74662	13	SASSAFRAS
74663	11	SASSAFRAS
74664	11	SASSAFRAS
74665	6	HACKBERRY
74666	11	SASSAFRAS
74667	10	MAPLE
74668	5	MAPLE
74669	9	MAPLE
74670	8	MAPLE
74671	8	HACKBERRY
74672	4	HACKBERRY
74673	10	HACKBERRY
74674	10	HACKBERRY
74675	4	ELM
74676	4	HACKBERRY
74677	4	BOXELDER

74678	14	PERSIMMON
74679	7	HACKBERRY
74680	16	ELM
74681	7	MAPLE
74682	7	HACKBERRY
74683	4	MAPLE
74684	8	SASSAFRAS
74685	7	ELM
74686	8	SASSAFRAS
74687	12	SASSAFRAS
74688	12	SASSAFRAS
74689	4	MAPLE
74690	10	SASSAFRAS
74691	8	HACKBERRY
74692	16	PERSIMMON
74693	7	MAPLE
74694	9	MAPLE
74695	12	HACKBERRY
74696	12	ELM
74697	10	HACKBERRY
74698	8	HACKBERRY
74699	13	HACKBERRY
74700	6	HACKBERRY
74701	11	HACKBERRY
74702	15	HACKBERRY
74703	10	HACKBERRY
74704	7	HACKBERRY
74705	9	HACKBERRY
74706	8	ELM
74707	7	HACKBERRY
74708	4	ELM
92129	12	LOCUST
92130	23	HICKORY
92132	34	OAK
92141	6	HACK
92160	10	HACK

53308	CALIPERS TO REMOVE
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December 14, 2021, 2021

Split Log Farms, LLC
Mike Ford
554 Franklin Rd.
Brentwood TN, 37067

Jeff Dobson
City of Brentwood
5211 Maryland Way
Brentwood, TN 37027

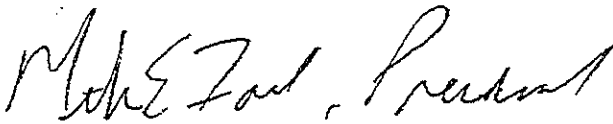
Subject: Authorization to Submit "Rosebrooke South" Engineering Documents

Mr. Dobson,

Please allow this letter to serve as authorization for Ragan Smith Associates, Inc., Sunset Road Development LLC, and representatives to submit engineering documents for the "Rosebrooke South" development, on our behalf.

Thank you for your consideration of our request.

Best Regards,

A handwritten signature in black ink, appearing to read "Mike Ford, President". The signature is fluid and cursive.

President
Split Log Farms, LLC

December 14, 2021, 2021

Bruce Sudano 2015 Family Trust
c/o Robert D. LaRosa, Esq.
1344 Lexington Ave.
New York, New York 10128

Jeff Dobson
City of Brentwood
5211 Maryland Way
Brentwood, TN 37027

Subject: Authorization to Submit "Rosebrooke South" Engineering Documents

Mr. Dobson,

Please allow this letter to serve as authorization for Ragan Smith Associates, Inc., Sunset Road Development LLC, and representatives to submit the engineering documents for the "**Rosebrooke South**", on our behalf.

Thank you for your consideration of our request.

Best Regards,

A handwritten signature in black ink, appearing to read 'Robert D. LaRosa', with a stylized flourish at the end.

Robert D. LaRosa , Esq.

PETITION FOR ANNEXATION

We, the undersigned property owners, hereby request that our property, as identified below, be annexed into the corporate limits of the City of Brentwood.

Norma D. McArthur

Printed Name

Norma D. McArthur

Signature

John A. McArthur Sr.

Printed Name

John A. McArthur Sr.

Signature

Property address: 9824 Split Log Road

Brentwood, TN

Tax map/parcel number: Map 055 Parcel 01001

STATE OF TENNESSEE

COUNTY OF

Williamson County

Personally appeared before me, B. Teri Daly, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence) and who executed the foregoing instrument, and acknowledged that he/she executed the same as his/her free act and deed.

Witness my hand, at office, this 2 day of MAY, 2022

[Signature]
Notary Public

My commission expires: Oct. 26, 2025



RESOLUTION 2022-34

A RESOLUTION TO ANNEX CERTAIN TERRITORY UPON WRITTEN CONSENT OF THE OWNERS AND TO INCORPORATE THE SAME WITHIN THE BOUNDARIES OF THE CITY OF BRENTWOOD, TENNESSEE, SAID TERRITORY BEING LOCATED ON THE WEST SIDE OF SPLIT LOG ROAD SOUTH OF THE ROSEBROOKE SUBDIVISION TO INCLUDE THE ADJOINING PORTIONS OF SPLIT LOG ROAD ADJACENT TO THE EXISTING CITY LIMITS TO

WHEREAS, the City of Brentwood, having been petitioned by interested persons, proposes the extension of its corporate limits by the annexation of certain territory adjoining its existing boundaries and within its urban growth area; and

WHEREAS, the owners of the property within the territory proposed for annexation have given their written consent by notarized petition so that a referendum is not required; and

WHEREAS, a copy of this Resolution, describing the territory proposed for annexation, was promptly sent by the City of Brentwood to the last known address listed in the office of the Williamson County Property Assessor for each property owner of record within the territory proposed for annexation, with such being sent by first class mail and mailed no later than fourteen (14) calendar days prior to the scheduled date of the hearing on the proposed annexation by owner consent; and

WHEREAS, this Resolution was also published by posting copies of it in at least three (3) public places in the City of Brentwood (it being noted that there are no “public places” in the territory proposed for annexation) and by publishing notice of the Resolution at or about the same time in the “Williamson” section of *The Tennessean*, a newspaper of general circulation in such territory and the City of Brentwood; and

WHEREAS, a Plan of Services for the area proposed for annexation is attached as *Exhibit A* hereto, which Plan of Services addresses the same services and timing of services as required in *Tennessee Code Annotated* § 6-51-102; and

WHEREAS, the proposed annexation and Plan of Services were submitted to the Brentwood Planning Commission for study, and the Planning Commission has recommended the same; and

WHEREAS, notice of the time, place and purpose of a public hearing on the proposed annexation and the Plan of Services was published in the “Williamson” section of *The Tennessean*, a newspaper of general circulation in the City of Brentwood, not less than fifteen (15) days before the hearing, which notice included the locations of a minimum of three (3) copies of the Plan of Services for public inspection during all business hours from the date of notice until the public hearing; and

WHEREAS, a public hearing on the proposed Plan of Services was held by the governing body on March 28, 2022.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF BRENTWOOD, TENNESSEE AS FOLLOWS:

SECTION 1. That the following territory is hereby annexed and incorporated into boundaries of the City of Brentwood, to be effective as of May 23, 2022, to wit:

**LANDS LYING WITHIN WILLIAMSON COUNTY, TENNESSEE
SPLIT LOG ROAD
ANNEXATION DESCRIPTION**

**SPLIT-LOG FARMS, LLC PROPERTY
MAP 055, P/O PARCEL 014.00
BRUCE SUDANO PROPERTY
MAP 055, P/O PARCEL 014.01
SPLIT LOG ROAD
WILLIAMSON COUNTY
PROPOSED OSRD REZONING DESCRIPTION**

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County, Tennessee. Being bounded on the north by the Sunset Road Development, LLC property of record in Book 8670, Page 432, Register's Office for Williamson County, Tennessee (R.O.W.C.T.) and; at the northeast by the John A. McArthur and wife, Norma D. McArthur property of record in Book 220, Page 602, R.O.W.C.T.; on the east by the Michael D. Culbreth and Lynette Culbreth property of record in Book 6010, Page 811, R.O.W.C.T., the remainder of the Split-Log Farms, LLC Property of record in Book 8075, Page 31, R.O.W.C.T., the remainder of the Bruce Sudano Property of record in Book 7044, Page 324, and Split Log Road (right-of-way width varies); on the south by: the Larry R. Williams, Trustee property of record in Book 1010, Page 991, R.O.W.C.T. and the Split Log Farm, LLC property of record in Book 4155, Page 912, R.O.W.C.T.; on the south and west by the Alan D. Jeffries and wife, Jill Carlene Jeffries property of record in Book 782, Page 586, R.O.W.C.T.; on the west by the Rex Elbert H. Arendall, II and wife, Carol B. Arendall property of record in Will Book 1008, Page 159, R.O.W.C.T. and being more particularly described as follows:

Beginning in the centerline of Split Log Road at the northeast corner of said Split Log Farm property of record in Book 4155, Page 912, R.O.W.C.T.;

Thence, leaving said centerline of Split Log Road with the north line of Split Log Farm property the following five (5) calls:

1. North 82 degrees 59 minutes 59 seconds West, 518.72 feet to an iron rod (old) with cap stamped "Cherry";
2. South 52 degrees 58 minutes 32 seconds West, 362.37 feet to an iron rod (old) with cap stamped "Cherry";
3. North 67 degrees 39 minutes 25 seconds West, 347.21 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
4. North 26 degrees 31 minutes 29 seconds West, 103.37 feet to an iron rod (old) with cap stamped "Cherry";

5. North 73 degrees 06 minutes 29 seconds West, 419.64 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" to the southeast corner of said Jeffries property;

Thence, with the east line of Jeffries, North 07 degrees 44 minutes 54 seconds East, 1006.38 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" at the northeast corner of Jeffries;

Thence, with the north line of Jeffries and said Williams property, North 83 degrees 10 minutes 32 seconds West, 732.71 feet to 1/2-inch iron rod (old) at the southeast corner of said Arendall, II property;

Thence, with the east line of Arendall the following two (2) calls:

1. North 07 degrees 41 minutes 27 seconds East, 427.32 feet to an iron rod (old) with cap stamped "Cherry";
2. North 05 degrees 39 minutes 27 seconds East, 268.53 feet to a 1/2-inch iron rod (old) with cap stamped "Cherry" in the south line of said Sunset Road Development, LLC property;

Thence, with the south line of said Sunset Road Development, LLC the following seven (7) calls:

1. South 85 degrees 15 minutes 25 seconds East, 158.67 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
2. South 83 degrees 15 minutes 35 seconds East, 417.87 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
3. South 83 degrees 04 minutes 30 seconds East, 200.87 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
4. South 83 degrees 16 minutes 49 seconds East, 245.37 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
5. South 83 degrees 28 minutes 51 seconds East, 599.99 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
6. South 79 degrees 08 minutes 40 seconds East, 337.28 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
7. South 75 degrees 25 minutes 08 seconds East, 111.08 feet to an iron rod (old) with cap stamped "Cherry" at a northwest corner of said McArthur property;

Thence, with the easterly line of the herein described tract of land and proposed OSRD (Open Space Residential Development) Zoning Line the following eight (8) calls:

1. South 10 degrees 44 minutes 11 seconds West, 160.01 feet;
2. South 07 degrees 59 minutes 27 seconds East, 176.53 feet;
3. South 06 degrees 21 minutes 31 seconds West, 158.95 feet;
4. South 75 degrees 24 minutes 49 seconds West, 100.95 feet;
5. South 02 degrees 39 minutes 45 seconds West, 154.39 feet;
6. South 13 degrees 48 minutes 03 seconds East, 166.79 feet;
7. South 12 degrees 22 minutes 00 seconds East, 198.09 feet;

8. South 79 degrees 49 minutes 19 seconds East, 151.90 feet to a point in the west right-of-way line of said Split Log Road;

Thence, with the west line of Split Log Road the following two (2) calls:

1. Along a curve to the left, having an arc length of 360.15 feet, a radius of 3,853.75 feet, a delta angle of 05 degrees 21 minutes 16 seconds and a chord bearing and distance of South 07 degrees 26 minutes 21 seconds West, 360.02 feet;
2. South 04 degrees 45 minutes 43 seconds West, 95.14 feet to the **Point of Beginning**, containing 3,035,660 square feet or 69.69 acres, more or less.

Being a portion of the same property conveyed to Split-Log Farms, LLC by Warranty Deed of record in Book 8075, page 31, Register's Office for Williamson County, Tennessee, and a portion of the same property conveyed to Bruce Sudano, Trustee of the Bruce Sudano 2015 Family Trust by Quitclaim Deed of record in Book 7044, page 324, Register's Office for Williamson County, Tennessee.

SPLIT-LOG FARMS, LLC PROPERTY

MAP 055, P/O PARCEL 014.00

BRUCE SUDANO PROPERTY

MAP 055, P/O PARCEL 014.01

SPLIT LOG ROAD

WILLIAMSON COUNTY

R-2 REZONING DESCRIPTION

Being a certain tract or parcel of land lying and being in the Sixteenth (16th) Civil District of Williamson County, Tennessee. Being bounded on the north by the Michael D. Culbreth and Lynette Culbreth property of record in Book 6010, Page 811, R.O.W.C.T.; on the east by Split Log Road (right-of-way width varies); on the south and west by the remainder of the Bruce Sudano Property of record in Book 7044, Page 324, R.O.W.C.T.; on the west by the remainder of the Split-Log Farms, LLC Property of record in Book 8075, Page 31, R.O.W.C.T., and being more particularly described as follows:

Beginning on a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc" in the west right-of-way line of said Split Log Road and in the north line of said Sudano property;

Thence, leaving said right-of-way line with the north line of Sudano, South 82 degrees 59 minutes 59 seconds East, 25.84 feet to the centerline of Split Log Road;

Thence, with the centerline of said Split Log Road the following two (2) calls:

1. South 11 degrees 09 minutes 08 seconds West, 111.37 feet;
2. Along a curve to the left, having an arc length of 69.66 feet, a radius of 3853.75 feet, a delta angle of 01 degrees 02 minutes 09 seconds and a chord bearing and distance of South 10 degrees 38 minutes 04 seconds West, 69.66 feet;

Thence, with the southerly and westerly line of the herein described tract of land and proposed R-2 (Suburban Residential) Zoning Line the following eight (8) calls:

1. North 79 degrees 49 minutes 19 seconds West, 151.90 feet;
2. North 12 degrees 22 minutes 00 seconds West, 198.09 feet;
3. North 13 degrees 48 minutes 03 seconds West, 166.79 feet;
4. North 02 degrees 39 minutes 45 seconds East, 154.39 feet;
5. North 75 degrees 24 minutes 49 seconds East, 100.95 feet;
6. North 06 degrees 21 minutes 31 seconds East, 158.95 feet;
7. North 07 degrees 59 minutes 27 seconds West, 176.53 feet;
8. North 10 degrees 44 minutes 11 seconds East, 160.01 feet to a 1/2-inch iron rod (old) with no cap at the southwest corner of Culbreth;

Thence, with the south line of Culbreth, South 82 degrees 27 minutes 16 seconds East, 604.80 feet to an iron rod (old) with cap stamped "H&H" in the west right-of-way line of said Split Log Road;

Thence, with the west line of Split Log Road the following five (5) calls:

1. South 51 degrees 40 minutes 26 seconds West, 114.04 feet to an iron rod (old) with cap stamped "H&H";
2. Along a curve to the left, having an arc length of 174.22 feet, a radius of 611.67 feet, a delta angle of 16 degrees 19 minutes 09 seconds and a chord bearing and distance of South 43 degrees 30 minutes 51 seconds West, 173.63 feet to an iron rod (old) with cap stamped "H&H"
3. South 35 degrees 21 minutes 16 seconds West, 236.58 feet to an iron rod (old) with cap stamped "H&H"
4. Along a curve to the left, having an arc length of 289.84 feet, a radius of 687.33 feet, a delta angle of 24 degrees 09 minutes 41 seconds and a chord bearing and distance of South 23 degrees 16 minutes 26 seconds West, 287.70 feet to a 1/2-inch iron rod (new) with cap stamped "Ragan Smith Assoc";
5. South 11 degrees 11 minutes 21 seconds West, 140.45 feet to the **Point of Beginning** containing 327,778 square feet or 7.52 acres, more or less;

Being a portion of the same property conveyed to Split-Log Farms, LLC by Warranty Deed of record in Book 8075, page 31, Register's Office for Williamson County, Tennessee, and a portion of the same property conveyed to Bruce Sudano, Trustee of the Bruce Sudano 2015 Family Trust by Quitclaim Deed of record in Book 7044, page 324, Register's Office for Williamson County, Tennessee.

PROPERTY DESCRIPTION
MICHAEL D. AND LYNNETTE CULBRETH PROPERTY
MAP 055, PARCEL 01000
9820 SPLIT LOG ROAD
WILLIAMSON COUNTY
ANNEXATION DESCRIPTION
R-2 REZONING DESCRIPTION

Williamson County Paracel Number 055 01000 00016055, including an area of approximately 2.21 acres and located at 9820 Split Log Road. The current property owners are Michael D. Culbreth, and Lynette Culbreth. As recorded in Plat Book 14, Page 99.

PROPERTY DESCRIPTION
JOHN A. MCARTHUR SR, AND NORMA D. MCARTHUR PROPERTY
MAP 055, PARCEL 01001
9824 SPLIT LOG ROAD
WILLIAMSON COUNTY
ANNEXATION DESCRIPTION
R-2 REZONING DESCRIPTION

Williamson County Paracel Number 055 01001 00016055, including an area of approximately 7.12 acres and located at 9824 Split Log Road. The current property owners are John A. McArthur Sr, And Norma D. McArthur. As recorded in Plat Book 14, Page 99.

Said parcels including a combined area of approximately **9.33** +/- acres

SECTION 2. That the Plan of Services for this territory which is attached as *Exhibit A* hereto is approved and the same is hereby adopted.

SECTION 3. That the City Recorder will cause a copy of this Resolution to be forwarded to the Mayor of Williamson County including the Plan of Services.

SECTION 4. That a copy of this Resolution shall be recorded with the Williamson County Register of Deeds, and a copy shall also be sent to the Tennessee Comptroller of the Treasury and the Williamson County Assessor of Property.

SECTION 5. That a copy of this Resolution, as well as the portion of the Plan of Services related to emergency services and a detailed map of the annexed area, shall be filed with the Brentwood Emergency Communication District.

SECTION 6. That this resolution shall take effect from and after its passage, the general welfare of the City of Brentwood, Williamson County, Tennessee requiring it.

MAYOR

Rhea E. Little, III

ADOPTED: _____

Approved as to form:

RECORDER

Holly Earls

CITY ATTORNEY

Kristen L. Corn

RESOLUTION 2022-34
EXHIBIT “A”
VOLUNTARY ANNEXATION
PROPOSED PLAN OF SERVICES
ROSEBROOKE SOUTH PROPERTY
MAP 055 PARCEL 01400, MAP 055 PARCEL 01401, MAP 055 PARCEL 01000
AND MAP 055 PARCEL 01001

Police

Regular patrolling, radio responses to calls and other routine police services, using present personnel and equipment, will be provided on the effective date of annexation. Property adjacent to the area proposed for annexation is already located in the City limits, so services can be easily extended to this area. The Brentwood City Hall, located at 5211 Maryland Way is approximately 10.0 miles from the property. The new Police Headquarters building, which opened in April 2021, located at 910 Heritage Way and is approximately 8.6 miles from the subject property. The Safety Center East is located approximately 2.0, miles from the subject property.

Fire

Fire protection provided by present personnel and equipment of the firefighting force, within the standard limitations of available water and distances from existing fire stations, will be extended to the property on the effective date of annexation. Fire Station No. 4, located at the Safety Center East, is approximately 2.0 miles from the area to be annexed. The property proposed for annexation is located within the response zone for Station No. 4. The new Station No. 5, when completed, will provide back-up response as needed.

Fire Station No. 5, is a state of the art facility, having an area of 10,440 square feet, is currently under construction at 9551 Split Log Road and is expected to open in the Fall of 2022. The new station is located approximately 2.4 miles from the area proposed for annexation. The station has been designed to serve as a neighborhood facility, housing a single response unit and one crew.

All stations are staffed with full-time firefighters that provide 24 hour/seven days per week fire protection.

Currently, the area to be annexed is served by the Nolensville Fire and Rescue Department, located at 7347 Nolensville Road, and approximately 3.0 miles from the subject property. Note that Nolensville employs a full-time Fire Chief and nine full-time firefighters, supplemented by part-time and volunteer firefighters. A new Fire Station is in the planning stages, which will be located at 7231 Haley Industrial Boulevard, on the north side of Town. The existing station on Nolensville Road will be converted by Williamson County to an ambulance station. Due to improved fire protection offered by the City of Brentwood, the ISO fire insurance rating for the newly constructed residences in the annexed area will be improved.

Emergency Communications

Upon the effective date of the annexation, the property and any existing or future residences will be incorporated into the City's 911 Emergency Communications District and all 911 emergency calls will be routed to the Brentwood emergency dispatch center.

Public Works/ Road Improvements

The area to be annexed includes a portion of Split Log Road that bisects the northerly portion of the property. This portion of the roadway is not presently within the City, but is within the City's Urban Growth Boundary. The proposed concept development plan shows a proposed future alignment of Split Log Road. The developer will be expected to provide the necessary additional right-of-way to accommodate the future roadway improvements.

The Board of Commissioners recently approved Resolution 2021-141, with Sullivan Engineering Inc. (SEI), for preliminary Engineering and right-of-way design services for improvements for a 2.39 mile section of Split Log Road from the end of the Phase 2 project (approximately 1,500 linear feet (LF) east of its intersection with Pleasant Hill Road) to its intersection with Sunset Road and a small portion of Sunset Road. The project will include widening of the road to provide two 12-foot travel lanes and a continuous 12-foot center turn lane (with periodic islands). The improvements will also include a curb and gutter section with a 10-foot wide multi-use path along the south side, separated from the roadway by a 5-foot wide green strip. The recently annexed Taube property also included a proposed future alignment through the project, which will connect the road to at the intersection of Sunset and Waller Roads. This project will be funded entirely by the City with a portion of City funding coming from road impact fees.

As part of the project, a corridor study will be prepared to include an estimate of future traffic demand based on the Urban Growth Boundary potential and surrounding development. The study assessment will evaluate six intersections between Waller Road and Wilson Pike including Waller Road, Sunset Road, Sam Donald Road, Pleasant Hill Road, Ragsdale Road and Wilson Pike.

The City will extend routine road maintenance service (resurfacing, pot-hole repair, striping, signs, mowing and snow removal) to the additional portion of Split Log Road following the effective date of annexation. The future streets constructed within the proposed subdivision will become public streets in accordance with the City's normal development process and will be maintained in the same manner as existing neighborhood streets within the City.

Brush pickup service will be provided to all future residences in accordance with City policy.

The City does not provide refuse collection services. Future residents will have the option to contract with private haulers in a manner consistent with collection inside the city limits.

Planning and Development Oversight

All planning, zoning and development regulations and standards of the City will extend to the annexed area upon the effective date of annexation. Existing personnel will handle oversight and enforcement of existing regulations.

Zoning and Subdivision Plan Approvals in Area

The applicant will be requesting that the property to be annexed be rezoned to the Open Space Residential Development (OSRD) and Suburban Residential (R-2) zoning classifications, while the adjacent properties, in the County are zoned Municipal Growth Area (MGA-1). The adjacent properties in Nolensville are located within the Benington Subdivision and zoned Suburban Residential (SR). These properties also lie within the Annexation Buffer Overlay zone as established by an agreement between the City and the Town of Nolensville.

The remaining surrounding properties immediately north of the subject property are located in Brentwood and zoned OSRD and R-2. The remaining properties are zoned Suburban Residential – R-2.

The installation/extension of the underground public utilities within annexed area, as authorized by the Brentwood Planning Commission will be completed by the property owner at his expense under the City's current Subdivision Regulations and construction standards. The final platting of tract(s), infrastructure security, and future acceptance of public improvements for perpetual maintenance shall be carried out in accordance with applicable codes and ordinances.

Code Enforcement

Using existing personnel, all inspection services now provided by the City (building, plumbing, mechanical, gas, and other municipal codes and ordinances) will begin in the area with permits issued by the City after the effective date of annexation. The enforcement of nuisance related codes such as high weeds and grass, abandoned vehicles, illegal signs, etc. will be handled on a complaint basis beginning on the effective date of annexation.

Parks and Recreation

New residents in the annexed area will enjoy full access to all existing and future recreational facilities, parks, greenways, bikeways, etc., in the City in a manner similar to other City residents. As now occurs with existing property owners in the City, property owners in the annexed area will be required to pay City property taxes, a portion of which is used to support improvements and upkeep to existing parks and recreation facilities. This will eliminate any requirement for new residents to pay non-resident fees to participate in athletic programs in city parks.

Brentwood residents enjoy over 1,100 acres of parkland, including active and passive parks and greenways.

Public Library

New residents in the annexed area will have access to the John P. Holt Brentwood Library, which is conveniently located at 8109 Concord Road. The full-service library is open seven (7) days a week and currently has a collection in excess of 184,000 items and other materials, including audiobooks, DVD's, music CD's, eBooks, eAudiobooks, video streaming, and online resources. (2020). As now occurs with existing property owners in the city limits, existing and future property owners in the annexed area will be required to pay City property taxes, a portion of which is used to support the operation of the Library including expansion of the collections, materials, and programs and for upkeep of the facility. This will eliminate any requirement for new residents to pay non-resident fees to

fully use Library services.

Water and Sewer

Water service within the area proposed to be annexed is provided by the Nolensville College Grove Utility District. Sewer service is provided by the Metropolitan Department of Water Services. All future residents will be subject to the standard billing and service standards of these utility providers.

The developer in the annexed area will be responsible for upgrading and extending new sewer/water lines and fire hydrants to serve the property in conformance with the rules and regulations of each utility at the time of construction. Service is currently available in the area and must be extended or upgraded by the developer of the annexed property at their expense from existing gravity sewer lines to serve the new residential development.

Revenues (Taxes and Fees)

When fully developed, the City expects to generate sufficient new revenue to pay for the cost of service delivery. The primary sources will be the property taxes, state shared taxes distributed to the City on a per capita basis and residential building permits. The concept plan developed for the property shows 47 lots, plus the three lots proposed to be zoned R-2 and the two enclave lots, also requested to be zoned R-2.

The annual tax bill for a house and land valued at \$1,000,000 is projected to be approximately \$725.00 based upon the current City tax rate of \$0.29 cents per \$100 of assessed value. Shared taxes received from the State of Tennessee are projected to average \$157.00 per person annually for the 2021/2022 fiscal year (<https://www.mtas.tennessee.edu/reference/state-shared-taxes-and-appropriations-coming-fiscal-year>), while building permits will average approximately \$2,000.00 per new house, based upon fees received during FY 2021

Additional one-time revenue will be received from the City's Road impact fee (Public Works Project Fees), which is currently established at \$5,860.00 for each new home constructed within the future subdivision.

Rosebrook East and South – Community Meeting

Thursday, April 28, 2022

Annex Room – City Hall

6:00PM – 7:00PM

Brett Smith, Ragan Smith Associates

Rob Pease, CPS Land

Craig Leanza, CPS Land

6 residents in attendance

Janet Donahue – Planning Commission

Meeting Notes:

- The residents had a question about if Split Log Road was planned to be widened. Split Log Road will be three lanes with one lane each way with a center turn lane. Ragan Smith told them that the road project was being handled by Sullivan Engineering and was a city project.
- Rosebrooke South will begin construction sometime next year where Rosebrook East will begin construction in two to three years.
- Rosebrooke Section 2 will be platted in the fall of this year.
- Rosebrooke South and East will have ponds, wetlands, as well as detention.
- There will be 124 lots in Rosebrooke South and East as well as 124 lots in Rosebrook Main. The total number of lots for the Rosebrooke Subdivision will be 248 lots.
- The average size of lot in Rosebrooke will be 0.5 acres to 0.75 acres.
- There are no amenities proposed for Rosebrooke South and East. The only amenity is proposed for Rosebrooke Main.
- The residents had a concern about tree removal on the properties. CPS Land let them know that trees would be removed for the road as well as for grading purposes on the lots. They put together a worse case scenario for tree removal to make sure that they meet the tree preservation requirements from the City. Ragan Smith let them know that both projects far exceed the required caliber inch.

Jeff Dobson
PLANNING AND CODES DIRECTOR

Michael Rinehart
CHIEF BUILDING OFFICIAL



Todd Petrowski
SENIOR CITY PLANNER

Allison Roberts
PLANNER

BRENTWOOD PLANNING AND CODES

PLANNING AND CODES DEPARTMENT MEMORANDUM 2022-09

TO: Honorable Mayor and City Commission Members

THROUGH: Kirk Bednar, City Manager

FROM: Jeff Dobson, Planning and Codes Director 

SUBJECT: **ORDINANCE 2022-04 (AS AMENDED) AN ORDINANCE OF THE CITY OF BRENTWOOD, TENNESSEE TO AMEND THE ZONING ORDINANCE, SAME BEING CHAPTER 78 OF THE CODE OF ORDINANCES OF THE CITY OF BRENTWOOD, TO ESTABLISH CERTAIN ZONING CLASSIFICATIONS, SAME BEING THE OSRD (OPEN SPACE RESIDENTIAL DEVELOPMENT) AND THE R-2 (SUBURBAN RESIDENTIAL) ZONING DISTRICTS FOR CERTAIN PROPERTIES LOCATED WEST OF SPLIT LOG ROAD AND SOUTH OF THE EXISTING ROSEBROOKE SUBDIVISION SAID TERRITORY BEING ADJACENT TO AND INCLUDING SECTIONS OF SPLIT LOG ROAD, BEING MORE SPECIFICALLY DESCRIBED IN THE PROPERTY DESCRIPTIONS ATTACHED HERETO AND MADE A PART OF THIS ORDINANCE BY REFERENCE, AND SHOWN ON THE MAP ATTACHED HERETO AND MADE A PART OF THIS ORDINANCE BY REFERENCE; AND TO AMEND THE OFFICIAL ZONING MAP ACCORDINGLY**

DATE: May 3, 2022

At its May 2, 2022, regular meeting, the Planning Commission voted nine for and zero against (9-0) to recommend approval of Ordinance 2022-04 to the Board of Commissioners.

Brentwood City Commission Agenda

Meeting Date: 05/09/2022

Approval or correction of minutes from Regular Scheduled Commission meeting

Submitted by: Holly Earls, Administration

Department: Administration

Information

Subject

Approval or correction of minutes from the April 25, 2022 meeting

Background

Staff Recommendation

Fiscal Impact

Attachments

Draft Minutes

DRAFT

MINUTES OF REGULAR MEETING OF BOARD OF COMMISSIONERS

BRENTWOOD, TENNESSEE

The Brentwood Board of Commissioners met in regular session on Monday, April 25, 2022 at 7:00 pm at Brentwood City Hall.

Present: Vice Mayor Nelson Andrews; Commissioner Anne Dunn; Commissioner Mark Gorman; Commissioner Susannah Macmillan; Commissioner Regina Smithson; Commissioner Ken Travis

Absent: Mayor Rhea Little

Staff City Manager Kirk Bednar; Assistant City Manager Jay Evans; City Attorney Kristen Corn;

Present: City Recorder Holly Earls

Commissioner Dunn led the Invocation. The Pledge of Allegiance was led by Commissioner Gorman.

Approval or Correction of Minutes

April 11, 2022

Moved by Commissioner Susannah Macmillan for approval of the minutes as written, seconded by Commissioner Ken Travis

Vote: 6 - 0 Approved - Unanimously

Consent Agenda

Resolution 2022-44 - A RESOLUTION AUTHORIZING AN AGREEMENT WITH NATIONWIDE FINANCIAL SOLUTIONS, INC. REGARDING THE 401(a) MONEY PURCHASE PLAN ADMINISTERED FOR THE CITY BY NATIONWIDE RETIREMENT SOLUTIONS, for adoption

Resolution 2022-45 - A RESOLUTION AUTHORIZING AN AGREEMENT WITH BLANKENSHIP CPA GROUP, PLLC, FOR FINANCIAL AND COMPLIANCE AUDIT SERVICES, for adoption

Resolution 2022-47 - A RESOLUTION AUTHORIZING AN AGREEMENT WITH GRAYBAR ELECTRIC COMPANY, INC., FOR THE PURCHASE OF FIFTY-THREE (53) FIBER TERMINATION PANELS WITH SPLICING TRAYS, for adoption

Approval to purchase office chairs for the Emergency Communications Center

Approval to purchase a tandem-axle dump truck for the Public Works Department

Approval to purchase a stock Mack/Petersen TLC3 grapple truck for the Public Works Department

Approval to purchase Microsoft Windows server licenses

Approval to purchase server upgrade for computer aided dispatch

Approval to purchase lightning protection and upgraded grounding for the Emergency Communications Center

Moved by Commissioner Susannah Macmillan for approval of the items on the Consent Agenda, seconded by Commissioner Regina Smithson

Vote: 6 - 0 Approved - Unanimously

New Business

Resolution 2022-46 - A RESOLUTION APPROVING EXTENSION OF SEWER SERVICE TO 9725 SPLIT LOG ROAD

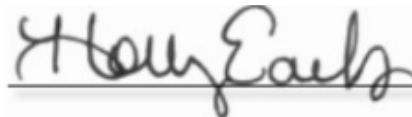
Moved by Commissioner Ken Travis for approval, seconded by Commissioner Anne Dunn

Moved by Commissioner Mark Gorman to defer to the May 23, 2022 meeting, seconded by Commissioner Susannah Macmillan

Vote: 6 - 0 Approved - Unanimously

With no further business, the meeting adjourned at 7:51 pm.

APPROVED _____

A handwritten signature in dark ink, appearing to read "Holly Earls", written over a horizontal line.

Holly Earls, City Recorder

Brentwood City Commission Agenda

Meeting Date: 05/09/2022

Res 2022-48 - Authorizing an Agreement with Four Star Paving, LLC for Annual Roadway Repairs and Improvements

Submitted by: Todd Hoppenstedt, Public Works

Department: Public Works

Information

Subject

Resolution 2022-48 - Authorizing an Agreement with Four Star Paving, LLC for Annual Roadway Repairs and Improvements.

Background

With the expiration of the current Roadway Repairs and Improvements contract approaching on June 30, 2022, Public Works has solicited bids for annual roadway repairs and improvements. The majority of the work under this contract is for the City's Annual Asphalt Resurfacing Program. Additional services covered under the paving contract can include smaller work elements, such as storm drainage improvements, sidewalk/bikeway repairs and construction, and ADA retrofits all contained within the CIP and Annual Public Works Department budget. The contract is structured to provide unit prices for the types of repair and improvement work that is typically undertaken by the City on a routine or annual basis.

After publicly advertising for bids for a period of six weeks, bids were received on April 12, 2022. Only two bids were received, with the lowest aggregate bid being \$3,955,990.61 from Four Star Paving, LLC. of Nashville, Tennessee.

The unit quantities included in the bid form are estimated amounts for each repair or improvement the City **may** perform throughout the year. They are used for comparison purposes only, in order to determine the lowest-cost bidder using items and quantities representative of actual work. Not all bid items or quantities will be utilized in the course of the contract period. The contract provides that the City is not obligated to the dollar amount of the contract, and the actual amount spent in a year will be based solely on the amount of work issued and authorized by the City. This approach provides the City the advantages of competitive pricing and the flexibility to expand or contract the scope of work as needed throughout the year.

The bids received were as follows (bid tab attached):

Company Name	Bid Amount
Four Star Paving, LLC	\$3,955,990.61
Sessions Paving Co.	\$4,114,179.51

The agreement, copy attached, includes an option to extend the contract for four additional years if the City and the Contractor mutually agree to the extension on a year-by-year basis. Because of the volatility of asphalt prices, staff has included a provision in this contract that allows the price of asphalt mix to vary based on the TDOT AC index, which is published monthly. Use of this index is standard practice in the industry. Prior to FY 2019, staff required a fixed price which resulted in contractors inflating their bids to financially protect themselves against loss during the contract period. The timing of this bid aligned with historically high asphalt costs, and as those costs hopefully begin to come down, the use of the index will allow us to take advantage of those cost savings relative to the bid amount. Given experience, it is staff's opinion that using the TDOT AC Index is prudent and appropriate.

The FY 2023 Budget includes a total of \$2,600,000 in Capital Improvements for Annual Roadway Repairs and Improvements. There are also several other line items that work from this contract could be performed under. The total amount approved may or may not be used in its entirety, and each project will be priced according to the unit pricing in the attached agreement.

Staff, along with Sullivan Engineering, Inc., agree that the contract for the 2022-2023 season should be awarded to Four Star Paving, LLC as the lowest and most qualified bidder (see attached letter of recommendation).

Please direct any questions to the Public Works Director.

Staff Recommendation

Staff, along with Paul Collins, our representative from Sullivan Engineering, Inc. recommend the contract be awarded to Four Star Paving, LLC as the lowest and most qualified bidder.

Fiscal Impact

Amount : \$3,190,000

Source of Funds: See Explanation Below

Account Number:

Fiscal Impact:

The following projects and funding are included in the proposed FY 2023 budget. It is unlikely the full amount for all these projects will be expended. The actual amount expended will be solely dependent on the work authorized by the City based upon the unit pricing included in this contract.

FY 2023 Street Resurfacing	2,600,000
FY 2023 Minor Street Repairs	\$50,000
ADA Retrofits	\$285,000
Storm Drainage Work	\$200,000
Bike and Pedestrian Work	\$50,000
Guardrail Repair	\$5,000
Total Contract Allowance	\$3,190,000

Attachments

Resolution 2022-48
Contract No. 2022-066
Bid Recommendation
Bid Tab
Notice of Award
Notice to Proceed

RESOLUTION 2022-48

A RESOLUTION OF THE CITY OF BRENTWOOD, TENNESSEE AUTHORIZING THE MAYOR TO EXECUTE AN AGREEMENT BY AND BETWEEN THE CITY OF BRENTWOOD AND FOUR STAR PAVING, LLC FOR ANNUAL ROADWAY REPAIRS AND IMPROVEMENTS, A COPY OF SAID AGREEMENT BEING ATTACHED HERETO AND MADE A PART OF THIS RESOLUTION BY REFERENCE

WHEREAS, bids were received by the City of Brentwood on April 12, 2022 for annual roadway repairs and improvements; and

WHEREAS, it is appropriate that the bid submitted by Four Star Paving, LLC be accepted.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF BRENTWOOD, TENNESSEE, AS FOLLOWS:

SECTION 1. That the Mayor is hereby authorized to execute an agreement by and between the City of Brentwood and Four Star Paving, LLC for roadway repairs and improvements, a copy of said agreement being attached hereto and made a part of this resolution by reference.

SECTION 2. That this resolution shall take effect from and after its passage, the general welfare of the City of Brentwood, Williamson County, Tennessee requiring it.

MAYOR

Rhea E. Little, III

ADOPTED: _____

Approved as to form:

RECORDER

Holly Earls

CITY ATTORNEY

Kristen L. Corn

**STANDARD FORM OF AGREEMENT
BETWEEN OWNER AND CONTRACTOR
ON THE BASIS OF STIPULATED PRICE**

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

And

SULLIVAN ENGINEERING, INC.

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AMERICAN CONSULTING ENGINEERS COUNCIL

AMERICAN SOCIETY OF CIVIL ENGINEERS

This Standard Form of Agreement has been prepared for use with the Standard General Conditions of the Construction Contract (No. 1910-8, 1996 Edition). Their provisions are interrelated, and a change in one may necessitate a change in the others. The suggested language for instructions of bidders contained in the Guide to the Preparation of Instructions to Bidders (No. 1910-12, 1996 Edition) is also carefully interrelated with the language of this Agreement. Comments concerning their usage are contained in the EJCDC Users Guide (No. 1910-50). See also Guide to the Preparation of Supplementary Conditions (No. 1910-17, 1996 Edition).

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National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314-2715

American Consulting Engineers Council
1015 15th Street, N.W., Washington, DC 20005

American Society of Civil Engineers
345 East 47th Street, New York, NY 10017

EJCDC No. 1910-8-A-2 (1996 Edition)

**EJCDC
STANDARD FORM OF AGREEMENT
BETWEEN OWNER AND CONTRACTOR**

Article I.

ON THE BASIS OF STIPULATED PRICE

THIS AGREEMENT is by and between **The City of Brentwood,** (hereinafter called OWNER) and **Four Star Paving, LLC,** (hereinafter called CONTRACTOR). OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 - WORK

Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

1. The contractor shall provide all labor, materials and equipment necessary for street repair projects within the City of Brentwood.
2. This project is to be constructed under the Standard Specifications of the Tennessee Department of Transportation Dated: January 1, 2021 and additional specifications and special provisions contained in the construction documents.
3. The cost of this project shall be based on a unit price bid for various items required on each work order issued by the City.

ARTICLE 2 - THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

General Construction - Roadway Repairs and Improvements in the City of Brentwood for fiscal Year 2022 - 2023.

Section 1.01

Sullivan Engineering Project No. 22-002

ARTICLE 3 - ENGINEER

3.01 The Project has been designed by Mr. Richard Sullivan, PE, Sullivan Engineering, Inc. who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Dates for Substantial Completion and Final Payment*

A. The Roadway Work will be substantially complete as indicated in section 6.01; 6.02; and 6.05 of the "BID FORM".

4.03 *Liquidated Damages*

A. CONTRACTOR and OWNER recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty),

CONTRACTOR shall pay OWNER \$500.00 for each day that expires after the time specified in paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER \$500.00 for each day that expires after the time specified in paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

- B. The contractor understands that any penalty, fine, enforcement or other type of monetary judgment levied on any and all firms, agencies or individuals while under contract with the City of Brentwood is the responsibility of the contractor and will not be paid or reimbursed by the City of Brentwood.

ARTICLE 5 - CONTRACT PRICE

5.01 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraph 5.01.A below:

- A. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the agreed upon estimated quantity of that item as indicated and attached hereto as an exhibit.
- B. As provided in paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by ENGINEER as provided in paragraph 9.08 of the General Conditions. Unit prices have been computed as provided in paragraph 11.03 of the General Conditions.
- C. C. For all Work, at the prices stated in CONTRACTOR's Bid, attached hereto as an exhibit.

CONSTRUCTION ESTIMATE

This project is to be constructed under the Standard and Supplemental Specifications of the Tennessee Department of Transportation Dated: January 1, 2015 and additional specifications and special provisions contained in the construction documents.

UNIT PRICE WORK

CONSTRUCTION ESTIMATE						
FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	202-03	REMOVAL & DISPOSAL OF RIGID PAVEMENT	S.Y.	2,500	\$0.01	\$25.00
	202-03.01	REMOVAL & DISPOSAL OF ASPHALT PAVEMENT	S.Y.	5,000	\$24.00	\$120,000.00
	202-08.10	REMOVAL & DISPOSAL OF EXISTING CURB (EXTRUDED & CURB/GUTTER)	L.F.	3,000	\$0.01	\$30.00
	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	2,000	\$0.01	\$20.00
	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	500	\$0.01	\$5.00

CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	500	\$0.01	\$5.00
	209-08.03	TEMPORARY FILTER BARRIER (WITHOUT BACKING), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT SHALL BE AT THE CONTRACTORS EXPENSE.)	L.F.	500	\$0.01	\$5.00
	209-08.06	ENHANCED SILT FENCE CHECK (TRAPEZOIDAL), DEPTH, OR AS DIRECTED BY THE ENGINEER, AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT SHALL BE AT THE CONTRACTORS EXPENSE.)	EACH	5	\$100.00	\$500.00
	303-01	MINERAL AGGREGATE TYPE A BASE GRADING D	TON	5,000	\$5.00	\$25,000.00
9	303-10.04	MINERAL AGGREGATE (SIZE #9)	TONS	500	\$0.01	\$5.00
1	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	2,500	\$70.00	\$175,000.00
1	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	5,000	\$72.00	\$360,000.00
1	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	28	\$0.01	\$0.28
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	112	\$0.01	\$1.12
1	403-02.01	TRACKLESS TACK COAT (TC)	TON	10	\$1,100.00	\$11,000.00
15	405-03.01	PM REJUVENATING SCRUB SEAL	S.Y	1,300	\$0.01	\$13.00
13, 14	407-02.14	ASPHALT PAVEMENT REPAIR (INFRARED)	L.S.	5	\$1,100.00	\$5,500.00
1	411-01.11	ACS MIX (PG64-22) GRADING "E" ROADWAY	TON	6,000	\$125.00	\$750,000.00
1, 11	411-01.11 (SH)	SPEED HUMP ACS MIX (PG64-22) GRADING "E"	EACH	1	\$4,000.00	\$4,000.00
1, 17	411-01.12 (ST)	SPEED TABLE ACS MIX (PG64-22) GRADING "E"	EACH	1	\$7,000.00	\$7,000.00
1	411-03.07	ACS MIX (PG64-22) THIN LIFT ASPHALT	TON	500	\$88.00	\$44,000.00
1	411-03.10	ACS MIX(PG76-22) GRADING D	TON	6,000	\$130.00	\$780,000.00
1	411-03.11	ACS MIX(PG76-22) GRADING E ROADWAY	TON	6,000	\$130.00	\$780,000.00

CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
1	411-03.12	ACS MIX (PG64-22) THIN LIFT D ASPHALT	TON	2,000	\$130.00	\$260,000.00
2	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	11,250	\$5.00	\$56,250.00
23	415-01.02 (A)	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	3,750	\$8.00	\$30,000.00
22	502-08.01	RESEALING JOINTS (HOT POURED ELASTIC)	S.F.	8,000	\$0.01	\$80.00
20	604-07.01	RETAINING WALL (REINFORCED EARTH, "MSE")	S.F.	1,000	\$10.00	\$10,000.00
	604-07.01	RETAINING WALL (CLASS "A" CONCRETE, NOT TO EXCEED 24" IN HEIGHT)	L.F.	200	\$25.00	\$5,000.00
	604-07.02	RETAINING WALL (CLASS "A" CONCRETE, 6" to 12" IN HEIGHT)	L.F.	750	\$27.00	\$20,250.00
20	604-07.75	RESTORATION OF REINFORCED EARTH WALLS	S.F.	1,000	\$10.00	\$10,000.00
3, 4	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-06.02	30" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-07.02	36" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-03.30	18" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
3, 4	607-05.30	24" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
3, 4	607-06.30	30" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
3, 4	607-07.30	36" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
	611-01.20	ADJUSTMENT OF MANHOLE COVERS & FRAMES	EACH	40	\$450.00	\$18,000.00
18	611-03.04	GRAY IRON CASTINGS (CATCHBASIN)	LB.	4,380	\$0.01	\$43.80
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	200	\$0.01	\$2.00
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	1,000	\$0.01	\$10.00
	611-07.03	STRUCTURAL STEEL (PIPE ENDWALLS)	LB.	500	\$0.01	\$5.00

CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	611-07.54	PRE-CAST HEADWALL (CROSS DRAIN 18 IN @ 3;1)	EACH	20	\$0.01	\$0.20
	611-07.57	PRE-CAST HEADWALL (CROSS DRAIN 24 IN @ 3;1)	EACH	20	\$0.01	\$0.20
	611-07.60	PRE-CAST HEADWALL (CROSS DRAIN 30 IN @ 3;1)	EACH	20	\$0.01	\$0.20
	611-07.63	PRE-CAST HEADWALL (CROSS DRAIN 36 IN)	EACH	20	\$0.01	\$0.20
	611-09.01	ADJUSTMENT OF EXISTING CATCHBASIN GRATES & FRAMES	EACH	40	\$450.00	\$18,000.00
18	611-12.01	CATCHBASINS, TYPE 12, DEPTH 0' - 4' (D-CB-12P, D-CB-12RA, & D-CBB-12A)	EACH	5	\$0.01	\$0.05
	611-12.01 (A)	CATCHBASINS, ADJUSTMENT TYPE 12, DEPTH +/- 1'	PER FT	1	\$1,000.00	\$1,000.00
18	611-14.01	CATCHBASINS, TYPE 14, DEPTH 0' - 4' (D-CB-14P, D-CB-14RB & D-CBB-12A)	EACH	5	\$0.01	\$0.05
	611-14.01 (A)	CATCHBASINS, ADJUSTMENT TYPE 14, DEPTH +/- 1'	PER FT	1	\$1,000.00	\$1,000.00
5, 21	701-01.01	CONCRETE SIDEWALK (4-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	10,000	\$8.00	\$80,000.00
5, 21	701-01.01 (A)	CONCRETE SIDEWALK (8-INCH DEPTH FOR RADIUS RETURNS, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	10,000	\$0.01	\$100.00
5, 21	701-01.06	PEBBLE FINISH CONCRETE SIDEWALK (4-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	2,000	\$0.01	\$20.00
5, 21	701-01.07	EXPOSED AGGREGATE CONCRETE DRIVEWAY (4-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-01.07 (A)	EXPOSED AGGREGATE CONCRETE DRIVEWAY (6-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02	CONCRETE DRIVEWAY (4-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02 (A)	CONCRETE DRIVEWAY (6-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02.01	CONCRETE HANDICAP RAMP (RETROFIT, 8-INCH DEPTH, CLASS "A" W/FIBER MESH, DETECTABLE WARNINGS)	EACH	50	\$1,500.00	\$75,000.00
5, 21	701-02.02	CONCRETE DRIVEWAY (8-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02.07 (B)	EXPOSED AGGREGATE CONCRETE DRIVEWAY (8-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500	\$0.01	\$15.00
6, 21	702-01	CONCRETE CURB, (TURN DOWN - TO BE USED AS DIRECTED)	L.F.	1,500	\$26.00	\$39,000.00

CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
6, 21	702-01.01	EXTRUDED SLOPING CURB (NEW INSTALLATION W/RUBBERIZED EXPANSION JOINT, GREATER THAN 300' Section, RP-MC-2)	L.F.	7,500	\$0.01	\$75.00
6, 21	702-01.01 (A)	EXTRUDED SLOPING CURB (REMOVAL AND REPAIR INSTALLATION LESS THAN 300' SECTION W/RUBBERIZED EXPANSION JOINT, RP-MC-2)	L.F.	2,500	\$28.00	\$70,000.00
	702-01.02	CONCRETE CURB, (12"-TO BE USED AS DIRECTED AT RADIUS RETURNS)	L.F.	200	\$25.00	\$5,000.00
6, 21	702-03	CONCRETE COMBINED CURB & GUTTER (NEW INSTALLATION W/RUBBERIZED EXPANSION JOINT, GREATER THAN 300' SECTION, RP-NMC-10)	L.F.	5,000	\$0.01	\$50.00
6, 21	702-03 (A)	CONCRETE COMBINED CURB & GUTTER (REMOVAL AND REPAIR INSTALLATION LESS THAN 300' SECTION W/RUBBERIZED EXPANSION JOINT, RP-NMC-10)	L.F.	500	\$60.00	\$30,000.00
	920-12.01	RUBBERIZED EXPANSION JOINT (ASTM D-1751-97)	L.F.	1,000	\$0.01	\$10.00
19	705-01.04	METAL BEAM GUARD FENCE	L.F.	200	\$125.00	\$25,000.00
	705-02.02	SINGLE GUARDRAIL (TYPE 2, NEW INSTALLATION)	L.F.	250	\$60.00	\$15,000.00
	705-04.09	EARTH PAD FOR TYPE 38 GR END TREATMENT	EACH	1	\$2,500.00	\$2,500.00
	705-06.20	TAN ENERGY ABSORBING TERMINAL (MASH TL3)	EACH	1	\$5,500.00	\$5,500.00
	705-06.30	GUARDRAIL TERMINAL (MASH TL2)	EACH	1	\$4,500.00	\$4,500.00
	705-12.11	GUARDRAIL STEEL POST TYPE 2 (8 FT.)	L.F.	125	\$80.00	\$10,000.00
	705-06.10	GR TERMINAL TRAILING END (TYPE 13) MASH TL-3	EACH	2	\$2,600.00	\$5,200.00
	706-02.01	GUARDRAIL (REMOVE & RESET)	L.F.	500	\$30.00	\$15,000.00
	710-02	AGGREGATE UNDERDRAINS (WITH 4 IN. PIPE)	L.F.	250	\$0.01	\$2.50
	710-04	FILTER CLOTH UNDERDRAIN (WITH PIPE)	L.F.	250	\$0.01	\$2.50
7	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	1	\$150.00	\$150.00
7	712-04.10	TEMPORARY FLEXIBLE TUBULAR DELINEATOR	EACH	1	\$150.00	\$150.00
7	712-05.01	WARNING LIGHTS (TYPE A)	EACH	1	\$125.00	\$125.00

CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
7	712-05.03	WARNING LIGHTS (TYPE C)	EACH	1	\$125.00	\$125.00
7	712-06	SIGNS (CONSTRUCTION)	S.F.	1	\$25.00	\$25.00
	730-12.02(A)	CONDUIT 2" DIAMETER, (PVC, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.02(B)	CONDUIT 2" DIAMETER, (PVC, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.03(A)	CONDUIT 3" DIAMETER, (PVC, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.03(B)	CONDUIT 3" DIAMETER, (PVC, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.08(A)	CONDUIT 2" DIAMETER (RGS, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.08(B)	CONDUIT 2" DIAMETER (RGS, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.09(A)	CONDUIT 3" DIAMETER (RGS, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.09(B)	CONDUIT 3" DIAMETER (RGS, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.13	CONDUIT 2" DIAMETER (JACKED OR BORED)	L.F.	100	\$0.01	\$1.00
	730-12.14	CONDUIT 3" DIAMETER (JACK AND BORE)	L.F.	100	\$0.01	\$1.00
	740-11.03	TEMPORARY SEDIMENT TUBE 18 INCH (TO BE USED FOR EROSION CONTROL OF "V-DITCH", AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT SHALL BE AT THE CONTRACTORS EXPENSE.)	L.F.	500	\$0.01	\$5.00
8	795-09.09	RELOCATE/RECONNECT EXISTING WATER METERS	EACH	20	\$0.01	\$0.20
10	795-09.09 (A)	ADJUST HEIGHT OF EXISTING WATER METERS	EACH	20	\$0.01	\$0.20
	795-12.20	ADJUSTMENT OF EXISTING WATER VALVE BOXES	EACH	40	\$450.00	\$18,000.00
	797-07.63	REPLACE MANHOLE CASTING	EACH	0	\$0.01	\$0.00
16	801-01	SEEDING (WITH MULCH)	UNIT	200	\$5.00	\$1,000.00
	801-03	WATER (SEEDING & SODDING)	M.G.	100	\$1.00	\$100.00

CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
16	803-01	SODDING (NEW SOD)	S.Y.	1,500	\$7.00	\$10,500.00
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	5,000	\$0.01	\$50.00
SUB-TOTAL ROADWAY BASE BID						\$3,904,085.50
FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	202-03.01	REMOVAL & DISPOSAL OF ASPHALT PAVEMENT	S.Y.	250	\$30.00	\$7,500.00
	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	200	\$10.00	\$2,000.00
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	20	\$10.00	\$200.00
	209-08.03	TEMPORARY FILTER BARRIER (WITHOUT BACKING)	L.F.	500	\$5.00	\$2,500.00
	303-01	MINERAL AGGREGATE TYPE A BASE GRADING D	TON	375	\$25.00	\$9,375.00
1	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	2	\$0.01	\$0.02
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	9	\$0.01	\$0.09
1, 12	411-01.07	ACS MIX (PG64-22) GRADING "E" SHOULDER	TON	150	\$135.00	\$20,250.00
3, 4	607-00(A)	6" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-00(B)	8" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-01(A)	12" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-02 (A)	15" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-03.30	18" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
5, 21	701-02.01	CONCRETE HANDICAP RAMP (RETROFIT, 8-INCH DEPTH, CLASS "A" W/FIBER MESH, DETECTABLE WARNINGS)	EACH	4	\$1,500.00	\$6,000.00
16	801-01	SEEDING (WITH MULCH)	UNIT	10	\$5.00	\$50.00
	801-03	WATER (SEEDING & SODDING)	M.G.	5	\$1.00	\$5.00

CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
16	803-01	SODDING (NEW SOD)	S.Y.	350	\$6.50	\$2,275.00
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	150	\$5.00	\$750.00
SUB-TOTAL PARK BASE BID						\$51,905.11
TOTAL PROJECT COST					\$3,955,990.61	

FOOTNOTES

- (1) UNIT COST IS ARE SUBJECT TO ADJUSTMENT PER TDOT'S SPECIAL PROVISION 109B, PRICE ADJUSTMENT FOR BITUMINOUS MATERIAL
- (2) COLD PLANE OPERATIONS SHALL BE BASED ON AN AVERAGE DEPTH OF ZERO TO THREE INCHES OVER THE ENTIRE AREA. AREAS TO BE COLD PLANNED SHALL BE RESURFACED WITHIN 30 DAYS OF COMPLETION OF THAT SECTION OF ROADWAY UNLESS AN AUTHORIZED REPRESENTATIVE OF THE CITY OF BRENTWOOD HAS OBTAINED PRIOR APPROVAL.
- (3) ALL EXCAVATION FOR STORM DRAINAGE PIPE SHALL BE CONSIDERED UNCLASSIFIED MATERIAL AT A DEPTH OF PIPE DIAMETER PLUS 3 FEET.
- (4) UNIT COST INCLUDES BEDDING MATERIAL IN ACCORDANCE WITH TDOT STANDARD DRAWING D-PB-1 AND D-PB-2.
- (5) UNIT PRICE BID INCLUDES EXCAVATION, 4" STONE BEDDING, RUBBERIZED EXPANSION MATERIAL (ASTM D-1751-97), TOPSOIL BACKFILL, 2-FOOT SOD STRIP ON EACH SIDE AND ALL APPURTENANCES TO COMPLETE THE WORK
- (6) UNIT PRICE BID INCLUDES EXCAVATION, STONE BEDDING, RUBBERIZED EXPANSION MATERIAL (ASTM D-1751-97), TOPSOIL BACKFILL, 2-FOOT SOD STRIP, AND ALL APPURTENANCES TO COMPLETE THE WORK.
- (7) TO BE USED AS DIRECTED BY THE BRENTWOOD PUBLIC WORKS DIRECTOR OR AUTHORIZED REPRESENTATIVE.
- (8) INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR REMOVAL OF EXISTING WATER SERVICE METER ASSEMBLY AND INSTALLING AT NEWLY IDENTIFIED LOCATION.
- (9) TO BE USED FOR ADDITIONAL PIPE BEDDING MATERIAL AS DIRECTED BY THE PUBLIC WORKS DIRECTOR OR AUTHORIZED REPRESENTATIVE.
- (10) INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR REMOVAL OF EXISTING WATER METER BOX AND ADJUSTING TO MATCH ADJOINING GRADE
- (11) COORDINATE WITH CITY OF BRENTWOOD SPECIAL PROVISION CB-111, DECEMBER 28, 2018
- (12) RESURFACING OF EXISTING TRAILS VARIES FROM 8 TO 10 FEET. NEW TRAIL CONSTRUCTION SHALL BE A MINIMUM OF 10 FEET IN WIDTH.
- (13) UNIT PRICE BID INCLUDES ALL EQUIPMENT, MATERIALS AND LABOR FOR REPAIR OF AN ASPHALT SURFACE. UNIT PRICE INCLUDES UP TO 126 SF OF SURFACE AREA AND A 4 HOUR ON SITE VISIT, WHICH MAY INCLUDE MULTIPLE LOCATIONS.
- (14) INFRARED PAVEMENT REPAIR USES AN INFRARED HEATING UNIT TO HEAT IN-PLACE ASPHALT TO SOFTEN IT TO A WORKABLE STATE, THEN NEW ASPHALT CAN BE ADDED WHICH FUSES SEAMLESSLY TO THE OLD. THE CONTRACTOR WILL BE COMPENSATED ON A LUMP SUM BASIS PER FOUR HOUR INCREMENT

WITH AN AVERAGE REPAIR OF 120 SQUARE FEET WHICH MAY INCLUDE MULTIPLE SITES. THE STEP-BY-STEP PROCESS FOR POTHOLE REPAIR USING A TRUCK-MOUNTED INFRARED PAVEMENT HEATER IS:

- a. SWEEP AND DRY THE AREA.
- b. POSITION THE INFRARED HEATING ARRAY OVER THE POTHOLE FOR SEVEN TO 10 MINUTES.
- c. REMOVE THE HEATER AND RAKE THE SOFTENED (350 DEGREE) ASPHALT.
- d. MIX IN A REJUVENATOR TO REPLENISH LIGHT OILS THAT HAVE OXIDIZED AWAY.
- e. ADD A SMALL AMOUNT OF FRESH ASPHALT AND GRADE IT TO LEVEL WITH A LUTE.
- f. USE A VIBRATORY ROLLER TO COMPACT AND FUSE THE PATCH WITH THE SURROUNDING PAVEMENT.
- g. 12-MONTH WARRANTY ON REPAIRED AREA.
- h. TIME BEGINS UPON ARRIVAL TO FIRST JOBSITE AND ENDS UPON DEPARTURE FROM FINAL JOB.
- i. TRAFFIC CONTROL INCLUDED

(15) REJUVENATING SCRUB SEAL

- a. PREP AND CLEAN ASPHALT FROM DIRT, DEBRIS, AND VEGETATION, WHICH MAY REQUIRE PRESSURE WASHING
- b. SEALER WILL NOT BOND TO SEVERE OIL ON ASPHALT DAMAGE

(16) SEED AND SOD SHALL BE PER TDOT SECTION 918.01. THE ONLY ALLOWABLE MIXTURE WILL BE LIMITED TO TABLE 918.01-1 GROUP A (FEBRUARY 1 – JULY 1) AND TABLE 918.01-4 GROUP C (AUGUST 1 – DECEMBER 1).

(17) COORDINATE WITH CITY OF BRENTWOOD SPECIAL PROVISION CB-112, DECEMBER 31, 2018.

(18) CURB IRON TO HAVE A SOLID BACK. THE CONTRACTOR MAY SUBSTITUTE NEENAH R-3067V OR APPROVED EQUAL HAVING A SOLID BACK. TOP OF CATCHBASIN MAY REQUIRE MINOR MODIFICATIONS TO ACCOMMODATE THE NEENAH R-3067V SOLID BACK CASTING.

(19) ATTACHMENT TO TOP DECK OF BOX/SLAB.

(20) UNIT COST DOES NOT INCLUDE PREPARATION OR SUBMITTAL OF NECESSARY PERMITS. UNIT PRICE BID IS FOR WALL HEIGHTS 6 FEET OR LESS, INCLUSIVE OF COFFER DAMS (IF REQUIRED), CLEARING, SITE PREPARATION, STRIP/PLACE TOPSOIL, EXCAVATION, BACKFILL AND ALL OTHER ITEMS NECESSARY FOR A COMPLETED WALL SYSTEM. EROSION CONTROL FEATURES, OTHER THAN COFFER DAMS, WILL BE PAID FOR SEPARATELY.

(21) BEGIN WORK WITHIN FOURTEEN (14) DAYS AFTER WRITTEN NOTIFICATION OF THE WORK ORDER ISSUED UNDER THIS CONTRACT. EACH AND EVERY WORK ORDER ISSUED SHALL HAVE A MUTUALLY AGREED UPON DATE OF SUBSTANTIAL COMPLETION, AND ALL WORK SHALL BE COMPLETED AND READY FOR FINAL PAYMENT IN ACCORDANCE WITH PARAGRAPH 14.07.B OF THE GENERAL CONDITIONS. THE CONTRACTOR FURTHER AGREES THAT IF WORK IS NOT INITIATED AND COMPLETED WITHIN THE MUTUALLY AGREED UPON CONSTRUCTION SCHEDULE THE OWNER RESERVES THE OPTION TO IMPOSE LIQUIDATED DAMAGES IN ACCORDANCE WITH SECTION 4.03 OF THE "STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR ON THE BASIS OF STIPULATED PRICE".

(22) UNIT PRICE BID INCLUDES PRIOR INSTALLATION OF THE SEAL COAT, CLEANING OF ALL SURFACES TO BE SEALED BY SWEEPING WITH A MOTORIZED BROOM TO REMOVE ANY LOOSE MATERIAL. CLEAN DEPRESSIONS AND CRACKS NOT REACHED BY THE POWER BROOM USING HAND BROOMS OR PRESSURIZED AIR. DEPENDING ON SEVERITY OF THE CRACK ADDITIONAL ROUTING MAY BE REQUIRED AS DIRECTED BY THE CITY OR AUTHORIZED REPRESENTATIVE. MATERIAL TO BE COORDINATED WITH TDOT SPECIFICATION 905.05.

(23) COLD PLANE OPERATIONS SHALL BE BASED ON AN AVERAGE DEPTH OF THREE TO FIVE INCHES OVER THE ENTIRE AREA. AREAS TO BE COLD PLANNED SHALL BE RESURFACED WITHIN 30 DAYS OF COMPLETION OF THAT SECTION OF ROADWAY UNLESS AN AUTHORIZED REPRESENTATIVE OF THE CITY OF BRENTWOOD HAS OBTAINED PRIOR APPROVAL.

GENERAL NOTES (ALL ITEMS)

(1) WORKING HOURS WILL BE FROM 7:00 AM UNTIL DARK MONDAY THROUGH SATURDAY. NO WORK WILL BE ALLOWED ON SUNDAY UNLESS IT HAS BEEN CLASSIFIED AS AN EMERGENCY AND APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

(2) AN INITIAL WORK ORDER IS TENTATIVELY SCHEDULED TO BE ISSUED ON JUNE 1, 2022. ONCE A CONTRACT HAS BEEN ISSUED, ON OR ABOUT JULY 1, 2022 ALL DOCUMENTS FROM THAT POINT, FORWARD WILL SENT TO THE ATTENTION OF MR. TODD HOPPENSTEDT, BRENTWOOD DIRECTOR OF PUBLIC WORKS.

(3) BONDS WILL BE REQUIRED AS NOTED IN THE CONTRACT DOCUMENTS. HOWEVER, BONDS WILL NOT BE REQUIRED FOR INDIVIDUAL WORK ORDERS ISSUED. A RETAINER WILL NOT BE WITHHELD FROM EACH WORK ORDER ISSUED.

(4) UNIT PRICE BID FOR ALL ITEMS SHALL INCLUDE ALL MOBILIZATION AND LAYOUT FOR A COMPLETE SYSTEM INCLUSIVE OF ALL WATER QUALITY, EROSION, AND TRAFFIC CONTROL MEASURE INCLUSIVE OF PERMIT PREPARATION TO COMPLY WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. PERMIT APPLICATION FEES SHALL BE REIMBURSED BY THE CITY OF BRENTWOOD.

(5) MEASUREMENT AND PAYMENT OF QUANTITIES SHALL BE IN ACCORDANCE WITH THE STANDARD AND SUPPLEMENTAL SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED: JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE CONSTRUCTION DOCUMENTS.

(6) ALL ITEMS WITHIN THIS CONTRACT INCLUDE INSTALLATION OF NECESSARY TRAFFIC AND EROSION CONTROL IN THE UNIT PRICE BID, IN ACCORDANCE WITH CITY REQUIREMENTS. TEMPORARY LANE LINE AND SPECIALTY MARKINGS WILL NOT BE REQUIRED AND SHALL BE THE RESPONSIBILITY OF THE CITY OF BRENTWOOD.

(7) TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 104 SCOPE OF WORK, ARTICLE 104.02 CHANGES IN PLANS OR IN CHARACTER OF CONSTRUCTION, SUB-SECTION C HAS BEEN DELETED AND NOT APPLICABLE TO THIS CONTRACT.

(8) PAYMENT FOR THE TOP TWO LAYERS OF ASPHALT ON MAINLINE AND SIDE ROAD PAVING SHALL BE BASED ON THE RATE OF APPLICATION NOTED ON THE PAVING SCHEDULE WITH A TOLERANCE OF 1/4" +/- . AN AVERAGE COMPACTED THICKNESS SHALL BE DETERMINED BASED ON CORE SAMPLES OBTAINED IN ACCORDANCE SPECIAL PROVISION 407DEN "TEST STRIPS." ALL QUANTITY OUTSIDE THE TOLERANCE RANGE SHALL NOT BE PAID BY THE OWNER AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR

Total of All Unit Prices:

Three Million Nine Hundred Fifty Five Thousand Nine Hundred Ninety Dollars and 61/100 Cents
(WORDS)

\$3,955,990.61
(DOLLARS)

ARTICLE 6 – N/A

ARTICLE 7 – N/A

ARTICLE 8 – N/A

ARTICLE 9 – N/A

ARTICLE 10 - PAYMENT PROCEDURES

10.01 *Submittal and Processing of Payments*

A. CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will indicate the amount of the CONTRACTOR's fee then payable. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

10.02 *Progress Payments; Retainage*

A. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR'S Applications for Payment as recommended by ENGINEER on or about the 25th day of each month during construction as provided in paragraphs 10.02.A.1 and 10.02.A.2 below. All such payments will be measured by the schedule of values established in paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

1. *For Cost of Work:* Progress payments on account of the Cost of the Work will be made:

a. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER may determine or OWNER may withhold, in accordance with paragraph 14.02 of the General Conditions:

(1) 100% Cost of Work completed (with the balance being retainage). If the Work has been 50% completed as determined by ENGINEER, and if the character and progress of the Work have been satisfactory to OWNER and ENGINEER, OWNER, on recommendation of ENGINEER, may determine that as long as the character and progress of the Work remain satisfactory to them, there will be no retainage on account of Work subsequently completed, in which case the remaining progress payments prior to Substantial Completion will be in an amount equal to 100% of the Work completed less the aggregate of payments previously made; and

(2) 100% of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

b. Upon Substantial Completion of each work order, OWNER shall pay an amount sufficient to increase total payments to CONTRACTOR to 100% of the Work completed, less such amounts as ENGINEER shall determine in accordance with paragraph 14.02.B.5 of the General Conditions and less 100% of ENGINEER's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

10.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraph 14.07.

ARTICLE 11 - INTEREST

11.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate of prime plus 1% per annum.

ARTICLE 12 - CONTRACTOR'S REPRESENTATIONS

12.01 In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. CONTRACTOR has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

E. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including applying the specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto.

F. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Contract Documents.

H. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

I. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 13 - ACCOUNTING RECORDS

13.01 CONTRACTOR shall check all materials, equipment, and labor entering into the Work and shall keep such full and detailed accounts as may be necessary for proper financial management under this Agreement, and the accounting methods shall be satisfactory to OWNER. OWNER shall be afforded access to all CONTRACTOR's records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and CONTRACTOR's fee. CONTRACTOR shall preserve all such documents for a period of three years after the final payment by OWNER.

ARTICLE 14 - CONTRACT DOCUMENTS

14.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 17, inclusive).
2. Performance Bond (pages 1 to 2, inclusive).
3. Payment Bond (pages 1 to 2, inclusive).
4. Bid Bonds
 - a. Penal Sum Form (pages 1 to 3, inclusive).
5. General Conditions (pages 1 to 43, inclusive).
6. Supplementary Conditions (pages 1 to 6, inclusive).
 - a. Exhibit 1 "Indemnification Agreement" (pages 1 to 7, inclusive).
 - b. Drug-Free Workplace: Contractor's Affidavit. (pages 1 to 3, inclusive).
 - c. Equal Opportunity "Title VI Policy Statements ".(pages 1 to 1, inclusive).
7. Specifications as listed in the table of contents of the Project Manual.
8. Addenda (numbers -1- to -2-, inclusive).
10. Exhibits to this Agreement (enumerated as follows):
 - a. Notice to Award (pages -1- to -11-, inclusive);
 - b. CONTRACTOR's Bid (pages -1- to -32-, inclusive);
 - c. Documentation submitted by CONTRACTOR prior to Notice of Award in accordance with "INSTRUCTIONS TO BIDDERS";
 - d. Certificate of Insurance
 - e. Notice to Proceed (pages -1- to -1- inclusive)
 - f. Contractor's Bid Package.
11. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Written Amendments;

- b. Work Change Directives;
- c. Change Order(s);
- d. Proposal Request.

B. The documents listed in paragraph 14.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 14.

D. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.05 of the General Conditions.

ARTICLE 15 - MISCELLANEOUS

15.01 Terms

A. Terms used in this Agreement will have the meanings indicated in the General Conditions.

15.02 Assignment of Contract

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

15.03 Successors and Assigns

A. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

15.04 Severability

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in duplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or on their behalf.

This Agreement will be effective on _____, _____ (which is the Effective Date of the Agreement).

OWNER:

CONTRACTOR:

By: _____

By: _____

[CORPORATE SEAL]

[CORPORATE SEAL]

Attest _____

Attest _____

Address for giving notices:

Address for giving notices:

(If OWNER is a corporation, attach evidence of authority to sign. If OWNER is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of OWNER-CONTRACTOR Agreement.)

License No. _____
(Where applicable)

Agent for service of process: _____

(If CONTRACTOR is a corporation or a partnership, attach evidence of authority to sign.)

Designated Representative:

Designated Representative:

Name: _____

Name: _____

Title: _____

Title: _____

Address: _____

Address: _____

Phone: _____

Phone: _____

Facsimile: _____

Facsimile: _____

Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

City of Brentwood

ATTN. Mr. Todd Hoppenstedt, Director of Public Works

P.O. Box 788

1750 General George Patton Drive

Brentwood, TN 37027

CONTRACT

Date: _____

Amount: \$ _____

Description (Name and Location):

Contract: General Construction

Project: Roadway Repairs and Improvements in the City of Brentwood for fiscal Year 2022 - 2023.

OWNER's Contract No.

ENGINEER's Contract No. 22-002

ENGINEER: Mr. Richard Sullivan, PE, Sullivan Engineering, Inc.

P.O. Box 1708, Brentwood, TN 37024

BOND

Date (Not earlier than Contract Date): _____

Amount: \$ _____

Modifications to this Bond Form:

N/A

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Contract, which is incorporated herein by reference.

2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.

3. If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:

3.1. The OWNER has notified the CONTRACTOR and the Surety at the addresses described in paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the OWNER's right, if any, subsequently to declare a CONTRACTOR Default; and

3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR's right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in paragraph 3.1; and

3.3. The OWNER has agreed to pay the Balance of the Contract Price to:

3.3.1. The Surety in accordance with the terms of the Contract;

3.3.2. Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

4. When the OWNER has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or

4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR Default; or

4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances;

4.4.1. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or

4.4.2. Deny liability in whole or in part and notify the OWNER citing reasons therefor.

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR's right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the

Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and

6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1. Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.

12.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

12.4. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

OWNER'S REPRESENTATIVE:

Mr. Richard Sullivan, PE
Sullivan Engineering, Inc.
P.O. Box 1708
Brentwood, TN 37024

Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

City of Brentwood

ATTN. Mr. Todd Hoppenstedt, Director of Public Works

P.O. Box 788

1750 General George Patton Drive

Brentwood, TN 37027

CONTRACT

Date: _____

Amount: \$ _____

Description (Name and Location):

Contract: General Construction

Project: Roadway Repairs and Improvements in the City of Brentwood for fiscal Year 2022 - 2023.

OWNER's Contract No.

ENGINEER's Contract No. 22-002

ENGINEER: Mr. Richard Sullivan, PE, Sullivan Engineering, Inc.

P.O. Box 1708, Brentwood, TN 37024

BOND

Date (Not earlier than Contract Date): _____

Amount: \$ _____

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER to pay for labor, materials and equipment furnished for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:

2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2. Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the addresses described in paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.

3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.

4. The Surety shall have no obligation to Claimants under this Bond until:

4.1. Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the addresses described in paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2. Claimants who do not have a direct contract with the CONTRACTOR:

1. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and

2. Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR had indicated the claim will be paid directly or indirectly; and

3. Not having been paid within the above 30 days, have sent a written notice to the Surety and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.

5. If a notice required by paragraph 4 is given by the OWNER to the CONTRACTOR or to the Surety, that is sufficient compliance.

6. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

6.1. Send an answer to the Claimant, with a copy to the OWNER, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

6.2. Pay or arrange for payment of any undisputed amounts.

7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy

obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds for the completion of the Work.

9. The Surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related Subcontracts, purchase orders and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

15.1. Claimant: An individual or entity having a direct contract with the CONTRACTOR or with a Subcontractor of the CONTRACTOR to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the CONTRACTOR and the CONTRACTOR's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

15.3. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

OWNER'S REPRESENTATIVE:

Mr. Richard Sullivan, PE
Sullivan Engineering, Inc.
P.O. Box 1708
Brentwood, TN 37024

BID BOND**BIDDER** (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

City of Brentwood
ATTN. Mr. Todd Hoppenstedt, Director of Public Works
P.O. Box 788
1750 General George Patton Drive
Brentwood, TN 37027

BID

PROJECT (Brief Description Including Location):

Contract: General Construction**Project:** Roadway Repairs and Improvements in the City of Brentwood for fiscal Year 2022 - 2023.**OWNER's Contract No.** _____**ENGINEER's Contract No.** 22-002

Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

1. The contractor shall supply all labor, materials and equipment necessary for street repair projects within the City of Brentwood.
2. This project is to be constructed under the Standard Specifications of the Tennessee Department of Transportation Dated: January 1, 2021 and additional specifications and special provisions contained in the construction documents.
3. The cost of this project shall be based on a unit price bid.

BOND

BOND NUMBER: _____

DATE (Not later than Bid due date): _____

PENAL SUM: _____

(Words)

(Figures)

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER

SURETY

_____(Seal)

Bidder's Name and Corporate Seal

_____(Seal)

Surety's Name and Corporate Seal

By: _____

Signature and Title

By: _____

Signature and Title

(Attach Power of Attorney)

Attest: _____

Signature and Title

Attest: _____

Signature and Title

Note: (1) Above addresses are to be used for giving required notice.

(2) Any singular reference to Bidder, Surety, OWNER or other party shall be considered plural where applicable.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to OWNER upon default of Bidder the penal sum set forth on the face of this Bond.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1. OWNER accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents, or

3.2. All Bids are rejected by OWNER, or

3.3. OWNER fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from OWNER, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of and any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by OWNER and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier or by

United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power or Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer or proposal as applicable.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

SULLIVAN ENGINEERING, INC.

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE

a practice division of the

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AMERICAN CONSULTING ENGINEERS COUNCIL

AMERICAN SOCIETY OF CIVIL ENGINEERS

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The Associated General Contractors of America

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms* 1.01

A. Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between OWNER and CONTRACTOR covering the Work.

3. *Application for Payment*--The form acceptable to ENGINEER which is to be used by CONTRACTOR during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

7. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, Bid security form, if any, and the Bid form with any supplements.

8. *Bonds*--Performance and payment bonds and other instruments of security.

9. *Change Order*--A document recommended by ENGINEER which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the

Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by OWNER or CONTRACTOR seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the OWNER and CONTRACTOR concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*--The Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by OWNER to CONTRACTOR are not Contract Documents.

13. *Contract Price*--The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment.

15. *CONTRACTOR*--The individual or entity with whom OWNER has entered into the Agreement.

16. *Cost of the Work*--See paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by ENGINEER which graphically shows the scope, extent, and character of the Work to be performed by CONTRACTOR. Shop Drawings and other CONTRACTOR submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *ENGINEER*--The individual or entity named as such in the Agreement.

20. *ENGINEER's Consultant*--An individual or entity having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

21. *Field Order*--A written order issued by ENGINEER which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

22. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

23. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

24. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

25. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

27. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

28. *Notice of Award*--The written notice by OWNER to the apparent successful bidder stating that upon timely compliance by the apparent successful bidder with the conditions precedent listed therein, OWNER will sign and deliver the Agreement.

29. *Notice to Proceed*--A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform the Work under the Contract Documents.

30. *OWNER*--The individual, entity, public body, or authority with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be performed.

31. *Partial Utilization*--Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

32. *PCBs*--Polychlorinated biphenyls.

33. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

34. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part as may be indicated elsewhere in the Contract Documents.

35. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

36. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

37. *Resident Project Representative*--The authorized representative of ENGINEER who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.

40. *Site*--Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by OWNER which are designated for the use of CONTRACTOR.

41. *Specifications*--That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

42. *Subcontractor*--An individual or entity having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the Site.

43. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

44. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

45. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.

46. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum

products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

47. *Unit Price Work*--Work to be paid for on the basis of unit prices.

48. *Work*--The entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

49. *Work Change Directive*--A written statement to CONTRACTOR issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

50. *Written Amendment*--A written statement modifying the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the nonengineering or nontechnical rather than strictly construction-related aspects of the Contract Documents.

1.02 Terminology

A. Intent of Certain Terms or Adjectives

1. Whenever in the Contract Documents the terms "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of ENGINEER as to the Work, it is intended that such action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such

term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.10 or any other provision of the Contract Documents.

B. Day

1. The word “day” shall constitute a calendar day of 24 hours measured from midnight to the next midnight.

C. Defective

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.04 or 14.05).

D. Furnish, Install, Perform, Provide

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of CONTRACTOR, “provide” is implied.

E. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 Delivery of Bonds

A. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish.

2.02 Copies of Documents

A. OWNER shall furnish to CONTRACTOR up to ten copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 Starting the Work

A. CONTRACTOR shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 Before Starting Construction

A. *CONTRACTOR’s Review of Contract Documents:* Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error, ambiguity, or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby;

however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless CONTRACTOR knew or reasonably should have known thereof.

B. *Preliminary Schedules:* Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for its timely review:

1. a preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
2. a preliminary schedule of Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; and
3. a preliminary schedule of values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

C. *Evidence of Insurance:* Before any Work at the Site is started, CONTRACTOR and OWNER shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which CONTRACTOR and OWNER respectively are required to purchase and maintain in accordance with Article 5.

2.06 *Preconstruction*

A. Within 20 days after the Contract Times start to run, but before any Work at the Site is started, a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.05.B, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of*

A. Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to review for acceptability to ENGINEER as provided below the schedules submitted in accordance with paragraph 2.05.B. CONTRACTOR shall have an additional ten days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to CONTRACTOR until acceptable schedules are submitted to ENGINEER.

1. The progress schedule will be acceptable to ENGINEER if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Times. Such acceptance will not impose on ENGINEER responsibility for the progress schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefor.

2. CONTRACTOR's schedule of Shop Drawing and Sample submittals will be acceptable to ENGINEER if it provides a workable arrangement for reviewing and processing the required submittals.

3. CONTRACTOR's schedule of values will be acceptable to ENGINEER as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to OWNER.

C. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in Article 9.

3.02 *Reference Standards*

A. *Standards, Specifications, Codes, Laws, and Regulations*

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to OWNER, ENGINEER, or any of ENGINEER's Consultants, agents, or employees any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in writing at once. CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as required by paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.04; provided, however, that CONTRACTOR shall not be liable to

OWNER or ENGINEER for failure to report any such conflict, error, ambiguity, or discrepancy unless CONTRACTOR knew or reasonably should have known thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways: (i) a Written Amendment; (ii) a Change Order; or (iii) a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways: (i) a Field Order; (ii) ENGINEER's approval of a Shop Drawing or Sample; or (iii) ENGINEER's written interpretation or clarification.

3.05 *Reuse of Documents*

A. CONTRACTOR and any Subcontractor or Supplier or other individual or entity performing or furnishing any of the Work under a direct or indirect contract with OWNER: (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER or ENGINEER's Consultant, including electronic media editions; and (ii) shall not reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaption by ENGINEER. This

prohibition will survive final payment, completion, and acceptance of the Work, or termination or completion of the Contract. Nothing herein shall preclude CONTRACTOR from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. OWNER shall furnish the Site. OWNER shall notify CONTRACTOR of any encumbrances or restrictions not of general application but specifically related to use of the Site with which CONTRACTOR must comply in performing the Work. OWNER will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If CONTRACTOR and OWNER are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in OWNER's furnishing the Site, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

B. Upon reasonable written request, OWNER shall furnish CONTRACTOR with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and OWNER's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that ENGINEER has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except

Underground Facilities) that ENGINEER has used in preparing the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER, or any of ENGINEER's Consultants with respect to:

1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If CONTRACTOR believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which CONTRACTOR is entitled to rely as provided in paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection

therewith (except in an emergency as required by paragraph 6.16.A), notify OWNER and ENGINEER in writing about such condition. CONTRACTOR shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *ENGINEER's Review:* After receipt of written notice as required by paragraph 4.03.A, ENGINEER will promptly review the pertinent condition, determine the necessity of OWNER's obtaining additional exploration or tests with respect thereto, and advise OWNER in writing (with a copy to CONTRACTOR) of ENGINEER's findings and conclusions.

C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in CONTRACTOR's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of paragraphs 9.08 and 11.03.

2. CONTRACTOR shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. CONTRACTOR knew of the existence of such conditions at the time CONTRACTOR made a final commitment to OWNER in respect of Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for CONTRACTOR prior to CONTRACTOR's making such final commitment; or

c. CONTRACTOR failed to give the written notice within the time and as required by paragraph 4.03.A.

3. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in paragraph 10.05. However, OWNER, ENGINEER, and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by CONTRACTOR on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities, including OWNER, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and CONTRACTOR shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including OWNER, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility.

2. If ENGINEER concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, OWNER or CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

4.05 *Reference Points*

A. OWNER shall provide engineering surveys to establish reference points for construction which in ENGINEER's judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points

or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the ENGINEER in the preparation of the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER or any of ENGINEER's Consultants with respect to:

1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. CONTRACTOR shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. CONTRACTOR shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.

D. If CONTRACTOR encounters a Hazardous Environmental Condition or if CONTRACTOR or anyone for whom CONTRACTOR is responsible creates a Hazardous Environmental Condition, CONTRACTOR shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such

condition and in any area affected thereby (except in an emergency as required by paragraph 6.16); and (iii) notify OWNER and ENGINEER (and promptly thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. CONTRACTOR shall not be required to resume Work in connection with such condition or in any affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by CONTRACTOR, either party may make a Claim therefor as provided in paragraph 10.05.

F. If after receipt of such written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in paragraph 10.05. OWNER may have such deleted portion of the Work performed by OWNER's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph

4.06.E shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.F shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of paragraphs 4.02, 4.03, and 4.04 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other*

A. CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Contract Documents.

B. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

C. If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.01.B, CONTRACTOR shall within 20 days thereafter substitute another Bond and surety, both of which shall comply with the requirements of paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All Bonds and insurance required by the Contract Documents to be purchased and maintained by OWNER or CONTRACTOR shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by OWNER or any other additional insured) which CONTRACTOR is required to purchase and maintain. OWNER shall deliver to CONTRACTOR, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by CONTRACTOR or any other additional insured) which OWNER is required to purchase and maintain.

5.04 *CONTRACTOR's Liability Insurance*

A. CONTRACTOR shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR's performance of the Work and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed by CONTRACTOR, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (ii) by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance so required by this paragraph 5.04 to be purchased and maintained shall:

1. with respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) OWNER, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering CONTRACTOR's indemnity obligations under paragraphs 6.07, 6.11, and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the CONTRACTOR pursuant to paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when CONTRACTOR may be correcting, removing, or replacing defective Work in accordance with paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and CONTRACTOR shall furnish OWNER and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to OWNER and any such additional insured of continuation of such insurance at final payment and one year thereafter).

5.05 *OWNER's Liability Insurance*

A. In addition to the insurance required to be provided by CONTRACTOR under paragraph 5.04, OWNER, at OWNER's option, may purchase and maintain at OWNER's expense OWNER's own liability insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, OWNER shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of

them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER;

5. allow for partial utilization of the Work by OWNER;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR, and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. OWNER shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with paragraph 5.06 will contain a provision or endorsement that the coverage afforded will

not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with paragraph 5.07.

D. OWNER shall not be responsible for purchasing and maintaining any property insurance specified in this paragraph 5.06 to protect the interests of CONTRACTOR, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by CONTRACTOR, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If CONTRACTOR requests in writing that other special insurance be included in the property insurance policies provided under paragraph 5.06, OWNER shall, if possible, include such insurance, and the cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. Prior to commencement of the Work at the Site, OWNER shall in writing advise CONTRACTOR whether or not such other insurance has been procured by OWNER.

5.07 *Waiver of Rights*

A. OWNER and CONTRACTOR intend that all policies purchased in accordance with paragraph 5.06 will protect OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. OWNER and CONTRACTOR waive all rights against each other and their respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary

Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by OWNER as trustee or otherwise payable under any policy so issued.

B. OWNER waives all rights against CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to OWNER's property or the Work caused by, arising out of, or resulting from fire or other peril whether or not insured by OWNER; and
2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by OWNER during partial utilization pursuant to paragraph 14.05, after Substantial Completion pursuant to paragraph 14.04, or after final payment pursuant to paragraph 14.07.

C. Any insurance policy maintained by OWNER covering any loss, damage or consequential loss referred to in paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against CONTRACTOR, Subcontractors, ENGINEER, or ENGINEER's Consultants and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by paragraph 5.06 will be adjusted with OWNER and made payable to OWNER as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.08.B. OWNER shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on

account thereof, and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.

B. OWNER as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, OWNER as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, OWNER as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either OWNER or CONTRACTOR has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but

the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. CONTRACTOR shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of OWNER or ENGINEER in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

B. At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the Site and shall have authority to act on behalf of CONTRACTOR. All communications given to or received from the superintendent shall be binding on CONTRACTOR.

6.02 *Labor; Working Hours*

A. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out, and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without OWNER's written consent (which will not be unreasonably withheld) given after prior written notice to ENGINEER.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the General Requirements, CONTRACTOR shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.07 as it may be adjusted from time to time as provided below.

1. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.07) proposed adjustments in the progress schedule that will not result in changing the Contract Times (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of Article 12. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using

the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to ENGINEER for review under the circumstances described below.

1. *"Or-Equal" Items:* If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment ENGINEER determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;

b. CONTRACTOR certifies that: (i) there is no increase in cost to the OWNER; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items*

a. If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be

accepted by ENGINEER from anyone other than CONTRACTOR.

c. The procedure for review by ENGINEER will be as set forth in paragraph 6.05.A.2.d, as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.

d. CONTRACTOR shall first make written application to ENGINEER for review of a proposed substitute item of material or equipment that CONTRACTOR seeks to furnish or use. The application shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute item. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute item.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in

ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.05.A.2.

C. *Engineer's Evaluation:* ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.05.A and 6.05.B. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until ENGINEER's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." ENGINEER will advise CONTRACTOR in writing of any negative determination.

D. *Special Guarantee:* OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

E. *ENGINEER's Cost Reimbursement:* ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitute proposed or submitted by CONTRACTOR pursuant to paragraphs 6.05.A.2 and 6.05.B and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER approves a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute.

F. *CONTRACTOR's Expense:* CONTRACTOR shall provide all data in support of any proposed substitute or "or-equal" at CONTRACTOR's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. CONTRACTOR shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to OWNER as indicated in paragraph 6.06.B), whether initially or as a replacement, against whom OWNER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to OWNER in

advance for acceptance by OWNER by a specified date prior to the Effective Date of the Agreement, and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. CONTRACTOR shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by OWNER of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

C. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other individual or entity, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR.

E. CONTRACTOR shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with ENGINEER through CONTRACTOR.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appro-

priate agreement between CONTRACTOR and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in paragraph 5.06, the agreement between the CONTRACTOR and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against OWNER, CONTRACTOR, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, CONTRACTOR will obtain the same.

6.07 *Patent Fees and Royalties*

A. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees or agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 Permits

A. Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto, such as plant investment fees.

6.09 Laws and Regulations

A. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

B. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work may be the subject of an adjustment in Contract Price or Contract Times. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in paragraph 10.05.

6.10 Taxes

A. CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant, and the officers, directors, partners, employees, agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER, or any other party indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work CONTRACTOR shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work CONTRACTOR shall clean the Site and make it ready for utilization by OWNER. At the completion of the Work CONTRACTOR shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all

property not designated for alteration by the Contract Documents.

D. *Loading Structures*: CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record*

A. CONTRACTOR shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to ENGINEER for OWNER.

6.13 *Safety and Protection*

A. CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury, or

loss to any property referred to in paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or ENGINEER's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. CONTRACTOR shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. CONTRACTOR shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, CONTRACTOR is obligated to act to prevent threatened damage, injury, or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If ENGINEER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 Shop Drawings and Samples

A. CONTRACTOR shall submit Shop Drawings to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. All submittals will be identified as ENGINEER may require and in the number of copies specified in the General Requirements. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show ENGINEER the services, materials, and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.17.E.

B. CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers, and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.17.E. The numbers of each Sample to be submitted will be as specified in the Specifications.

C. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER as required by paragraph 2.07, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

D. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to means, methods, techniques, sequences, and procedures of

construction and safety precautions and programs incident thereto; and

d. CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR's review and approval of that submittal.

3. At the time of each submittal, CONTRACTOR shall give ENGINEER specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

E. ENGINEER's Review

1. ENGINEER will timely review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER. ENGINEER's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. ENGINEER's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. ENGINEER's review and approval of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for any variation

from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of each submittal as required by paragraph 6.17.D.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.17.D.1.

F. *Resubmittal Procedures*

1. CONTRACTOR shall make corrections required by ENGINEER and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.18 *Continuing the Work*

A. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.04 or as OWNER and CONTRACTOR may otherwise agree in writing.

6.19 *CONTRACTOR's General Warranty and Guarantee*

A. CONTRACTOR warrants and guarantees to OWNER, ENGINEER, and ENGINEER's Consultants that all Work will be in accordance with the Contract Documents and will not be defective. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, Suppliers, or any other individual or entity for whom CONTRACTOR is responsible; or
2. normal wear and tear under normal usage.

B. CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will

constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents:

1. observations by ENGINEER;
2. recommendation by ENGINEER or payment by OWNER of any progress or final payment;
3. the issuance of a certificate of Substantial Completion by ENGINEER or any payment related thereto by OWNER;
4. use or occupancy of the Work or any part thereof by OWNER;
5. any acceptance by OWNER or any failure to do so;
6. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER;
7. any inspection, test, or approval by others; or
8. any correction of defective Work by OWNER.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:

1. is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom; and
2. is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for

whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of an individual or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such individual or entity.

B. In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of CONTRACTOR under paragraph 6.20.A shall not extend to the liability of ENGINEER and ENGINEER's Consultants or to the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

ARTICLE 7 - OTHER WORK

7.01 *Related Work at Site*

A. OWNER may perform other work related to the Project at the Site by OWNER's employees, or let other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to CONTRACTOR prior to starting any such other work; and

2. if OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in paragraph 10.05.

B. CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (and OWNER, if OWNER is performing the other work with OWNER's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

C. If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure to so report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If OWNER intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, OWNER shall have sole authority and responsibility for such coordination.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR through ENGINEER.

8.02 *Replacement of ENGINEER*

A. In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer to whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER.

8.03 *Furnish Data*

A. OWNER shall promptly furnish the data required of OWNER under the Contract Documents.

8.04 *Pay Promptly When*

A. OWNER shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.01 and 4.05. Paragraph 4.02 refers to OWNER's identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by ENGINEER in preparing the Contract Documents.

8.06 *Insurance*

A. OWNER's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. OWNER is obligated to execute Change Orders as indicated in paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. OWNER's responsibility in respect to certain inspections, tests, and approvals is set forth in paragraph 13.03.B.

8.09 *Limitations on OWNER's Responsibilities*

A. The OWNER shall not supervise, direct, or have control or authority over, nor be responsible for, CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. OWNER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. OWNER's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *OWNER'S*

A. ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth

in the Contract Documents and will not be changed without written consent of OWNER and ENGINEER.

9.02 *Visits to Site*

A. ENGINEER will make visits to the Site at intervals appropriate to the various stages of construction as ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of CONTRACTOR's executed Work. Based on information obtained during such visits and observations, ENGINEER, for the benefit of OWNER, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defective Work.

B. ENGINEER's visits and observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.10, and particularly, but without limitation, during or as a result of ENGINEER's visits or observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.10 and in the Supplementary Conditions. If OWNER designates another representative or agent to represent OWNER at the Site who is not ENGINEER's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Clarifications and Interpretations*

A. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a written clarification or interpretation, a Claim may be made therefor as provided in paragraph 10.05.

9.05 *Authorized Variations in*

A. ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER and also on CONTRACTOR, who shall perform the Work involved promptly. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of a Field Order, a Claim may be made therefor as provided in paragraph 10.05.

9.06 *Rejecting Defective Work*

A. ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be defective, or that ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the Work as provided in paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.07 *Shop Drawings, Change Orders and Payments*

A. In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraph 6.17.

B. In connection with ENGINEER's authority as to Change Orders, see Articles 10, 11, and 12.

C. In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

9.08 *Determinations for Unit Price*

A. ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. ENGINEER will review with CONTRACTOR the ENGINEER's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). ENGINEER's written decision thereon will be final and binding (except as modified by ENGINEER to reflect changed factual conditions or more accurate data) upon OWNER and CONTRACTOR, subject to the provisions of paragraph 10.05.

9.09 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work, the quantities and classifications of Unit Price Work, the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, and Claims seeking changes in the Contract Price or Contract Times will be referred initially to ENGINEER in writing, in accordance with the provisions of paragraph 10.05, with a request for a formal decision.

B. When functioning as interpreter and judge under this paragraph 9.09, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to this paragraph 9.09 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.07) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

9.10 *Limitations on ENGINEER's Authority and*

A. Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility

by ENGINEER shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. ENGINEER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.

C. ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this paragraph 9.10 shall also apply to ENGINEER's Consultants, Resident Project Representative, and assistants.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If OWNER and CONTRACTOR are unable to agree on entitlement to, or on the amount or extent, if any,

of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in paragraph 3.04, except in the case of an emergency as provided in paragraph 6.16 or in the case of uncovering Work as provided in paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) covering:

1. changes in the Work which are: (i) ordered by OWNER pursuant to paragraph 10.01.A, (ii) required because of acceptance of defective Work under paragraph 13.08.A or OWNER's correction of defective Work under paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility. The amount of each

applicable Bond will be adjusted to reflect the effect of any such change.

10.05 *Claims and Disputes*

A. *Notice:* Written notice stating the general nature of each Claim, dispute, or other matter shall be delivered by the claimant to ENGINEER and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. Notice of the amount or extent of the Claim, dispute, or other matter with supporting data shall be delivered to the ENGINEER and the other party to the Contract within 60 days after the start of such event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to ENGINEER and the claimant within 30 days after receipt of the claimant's last submittal (unless ENGINEER allows additional time).

B. *ENGINEER's Decision:* ENGINEER will render a formal decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any. ENGINEER's written decision on such Claim, dispute, or other matter will be final and binding upon OWNER and CONTRACTOR unless:

1. an appeal from ENGINEER's decision is taken within the time limits and in accordance with the dispute resolution procedures set forth in Article 16; or

2. if no such dispute resolution procedures have been set forth in Article 16, a written notice of intention to appeal from ENGINEER's written decision is delivered by OWNER or CONTRACTOR to the other and to ENGINEER within 30 days after the date of such decision, and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction within 60 days after the date of such decision or within 60 days after Substantial Completion, whichever is later (unless otherwise agreed in writing by OWNER and CONTRACTOR), to exercise such rights or remedies as the appealing party may have with respect to such Claim, dispute, or other matter in accordance with applicable Laws and Regulations.

C. If ENGINEER does not render a formal decision in writing within the time stated in paragraph 10.05.B, a decision denying the Claim in its entirety shall be deemed to have been issued 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

D. No Claim for an adjustment in Contract Price or Contract Times (or Milestones) will be valid if not submitted in accordance with this paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to CONTRACTOR will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Such employees shall include without limitation superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

3. Payments made by CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER, who will then determine, with the advice of ENGINEER, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in this paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

- a. The proportion of necessary transportation, travel, and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.

- b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of CONTRACTOR.

- c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from CONTRACTOR or others in accordance with

rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressage, and similar petty cash items in connection with the Work.

i. When the Cost of the Work is used to determine the value of a Change Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work or caused by the event giving rise to the Claim.

j. When all the Work is performed on the basis of cost-plus, the costs of premiums for all Bonds and insurance CONTRACTOR is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by CONTRACTOR, whether at the Site or in CONTRACTOR's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.01.A.1 or specifically covered by paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the CONTRACTOR's fee.

2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the Site.

3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.

4. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 11.01.A and 11.01.B.

C. *CONTRACTOR's Fee:* When all the Work is performed on the basis of cost-plus, CONTRACTOR's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, CONTRACTOR's fee shall be determined as set forth in paragraph 12.01.C.

D. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to paragraphs 11.01.A and 11.01.B, CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

11.02 *Cash Allowances*

A. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:

1. the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. CONTRACTOR's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

B. Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER subject to the provisions of paragraph 9.08.

B. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to

cover CONTRACTOR's overhead and profit for each separately identified item.

C. OWNER or CONTRACTOR may make a Claim for an adjustment in the Contract Price in accordance with paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. if CONTRACTOR believes that CONTRACTOR is entitled to an increase in Contract Price as a result of having incurred additional expense or OWNER believes that OWNER is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents

and agreement to a lump sum is not reached under paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in paragraph 11.01) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 12.01.C).

C. *CONTRACTOR's Fee:* The CONTRACTOR's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under paragraphs 11.01.A.1 and 11.01.A.2, the CONTRACTOR's fee shall be 15 percent;
 - b. for costs incurred under paragraph 11.01.A.3, the CONTRACTOR's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times (or Milestones) may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Times (or Milestones) shall be based on written notice submitted by the party making the claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. Any adjustment of the Contract Times (or Milestones) covered by a Change Order or of any Claim for an adjustment in the Contract Times (or Milestones) will be determined in accordance with the provisions of this Article 12.

12.03 *Delays Beyond CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in paragraph 12.02.A. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

12.04 *Delays Within CONTRACTOR's Control*

A. The Contract Times (or Milestones) will not be extended due to delays within the control of CONTRACTOR. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

12.05 *Delays Beyond OWNER's and CONTRACTOR's Control*

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay.

12.06 *Delay Damages*

A. In no event shall OWNER or ENGINEER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or

employee or agent of any of them, for damages arising out of or resulting from:

1. delays caused by or within the control of CONTRACTOR; or
2. delays beyond the control of both OWNER and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.

B. Nothing in this paragraph 12.06 bars a change in Contract Price pursuant to this Article 12 to compensate CONTRACTOR due to delay, interference, or disruption directly attributable to actions or inactions of OWNER or anyone for whom OWNER is responsible.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which OWNER or ENGINEER has actual knowledge will be given to CONTRACTOR. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. OWNER, ENGINEER, ENGINEER's Consultants, other representatives and personnel of OWNER, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. OWNER shall employ and pay for the services of an independent testing laboratory to perform all

inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by paragraphs 13.03.C and 13.03.D below;
2. that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.B shall be paid as provided in said paragraph 13.04.B; and
3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish ENGINEER the required certificates of inspection or approval.

D. CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for OWNER's and ENGINEER's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to OWNER and ENGINEER.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by CONTRACTOR without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation.

F. Uncovering Work as provided in paragraph 13.03.E shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER's observation and replaced at CONTRACTOR's expense.

B. If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspect-

ed or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefor as provided in paragraph 10.05. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

13.05 *OWNER May Stop the Work*

A. If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. CONTRACTOR shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by ENGINEER, remove it from the Project and replace it with Work that is not defective. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for CONTRACTOR's use by OWNER or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) repair such defective land or areas, or (ii) correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and (iii) satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or repaired or may have the rejected Work removed and replaced, and all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR.

B. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

C. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

D. CONTRACTOR's obligations under this paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, OWNER (and, prior to ENGINEER's recommendation of final payment, ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to OWNER's evaluation of and determination to accept such defective Work (such costs to be approved by ENGINEER as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by CONTRACTOR pursuant to this sentence. If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and OWNER shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefor as provided in paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

13.09 *OWNER May Correct Defective Work*

A. If CONTRACTOR fails within a reasonable time after written notice from ENGINEER to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.06.A, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days written notice to CONTRACTOR, correct and remedy any such deficiency.

B. In exercising the rights and remedies under this paragraph, OWNER shall proceed expeditiously. In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors, and ENGINEER and ENGINEER's Consultants access to the Site to enable

OWNER to exercise the rights and remedies under this paragraph.

C. All Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by OWNER in exercising the rights and remedies under this paragraph 13.09 will be charged against CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, OWNER may make a Claim therefor as provided in paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of CONTRACTOR's defective Work.

D. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies under this paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The schedule of values established as provided in paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments*

1. At least 20 days before the date established for each progress payment (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the

Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that OWNER has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect OWNER's interest therein, all of which must be satisfactory to OWNER.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the Work have been applied on account to discharge CONTRACTOR's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications*

1. ENGINEER will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

2. ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER's observations on the Site of the executed Work as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules, that to the best of ENGINEER's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for

Unit Price Work under paragraph 9.08, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to CONTRACTOR's being entitled to such payment appear to have been fulfilled in so far as it is ENGINEER's responsibility to observe the Work.

3. By recommending any such payment ENGINEER will not thereby be deemed to have represented that: (i) inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents; or (ii) that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

4. Neither ENGINEER's review of CONTRACTOR's Work for the purposes of recommending payments nor ENGINEER's recommendation of any payment, including final payment, will impose responsibility on ENGINEER to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for CONTRACTOR's failure to comply with Laws and Regulations applicable to CONTRACTOR's performance of the Work. Additionally, said review or recommendation will not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes CONTRACTOR has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials, or equipment has passed to OWNER free and clear of any Liens.

5. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.02.B.2. ENGINEER may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Written Amendment or Change Orders;

c. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.09; or

d. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A.

C. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of paragraph 14.02.D) become due, and when due will be paid by OWNER to CONTRACTOR.

D. *Reduction in Payment*

1. OWNER may refuse to make payment of the full amount recommended by ENGINEER because:

a. claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;

c. there are other items entitling OWNER to a set-off against the amount recommended; or

d. OWNER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.02.B.5.a through 14.02.B.5.c or paragraph 15.02.A.

2. If OWNER refuses to make payment of the full amount recommended by ENGINEER, OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action and promptly pay CONTRACTOR any amount remaining after deduction

of the amount so withheld. OWNER shall promptly pay CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by OWNER and CONTRACTOR, when CONTRACTOR corrects to OWNER's satisfaction the reasons for such action.

3. If it is subsequently determined that OWNER's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by paragraph 14.02.C.1.

14.03 *CONTRACTOR's Warranty of Title*

A. CONTRACTOR warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

A. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Promptly thereafter, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within 14 days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said 14 days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER

will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

B. OWNER shall have the right to exclude CONTRACTOR from the Site after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Use by OWNER at OWNER's option of any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which OWNER, ENGINEER, and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following conditions.

1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER

considers that part of the Work to be substantially complete, the provisions of paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

2. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will promptly make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment*

1. After CONTRACTOR has, in the opinion of ENGINEER, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12), and other documents, CONTRACTOR may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.04.B.7; (ii) consent of the surety, if any, to final payment; and (iii) complete and legally effective releases or waivers (satisfactory to OWNER) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in paragraph 14.07.A.2 and as approved by OWNER, CONTRACTOR may furnish receipts

or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

B. *Review of Application and Acceptance*

1. If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER's recommendation of payment and present the Application for Payment to OWNER for payment. At the same time ENGINEER will also give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.09. Otherwise, ENGINEER will return the Application for Payment to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due*

1. Thirty days after the presentation to OWNER of the Application for Payment and accompanying documentation, the amount recommended by ENGINEER will become due and, when due, will be paid by OWNER to CONTRACTOR.

14.08 *Final Completion Delayed*

A. If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that

portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by OWNER against CONTRACTOR, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by CONTRACTOR against OWNER other than those previously made in writing which are still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *OWNER May Suspend Work*

A. At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to CONTRACTOR and ENGINEER which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes a Claim therefor as provided in paragraph 10.05.

15.02 *OWNER May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. CONTRACTOR's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);

2. CONTRACTOR's disregard of Laws or Regulations of any public body having jurisdiction;

3. CONTRACTOR's disregard of the authority of ENGINEER; or

4. CONTRACTOR's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the Site, and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by OWNER arising out of or relating to completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses, and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses, and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and, when so approved by ENGINEER, incorporated in a Change Order. When exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

C. Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any

retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

15.03 *OWNER May Terminate For Convenience*

A. Upon seven days written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Contract. In such case, CONTRACTOR shall be paid (without duplication of any items):

1. for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. for all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. for reasonable expenses directly attributable to termination.

B. CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *CONTRACTOR May Stop Work or Terminate*

A. If, through no act or fault of CONTRACTOR, the Work is suspended for more than 90 consecutive days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within 30 days after it is submitted, or OWNER fails for 30 days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Contract and recover from OWNER payment on the same terms as provided in paragraph 15.03. In lieu of terminating the Contract and without prejudice to any other right or

remedy, if ENGINEER has failed to act on an Application for Payment within 30 days after it is submitted, or OWNER has failed for 30 days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may, seven days after written notice to OWNER and ENGINEER, stop the Work until payment is made of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude CONTRACTOR from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping the Work as permitted by this paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions of paragraphs 9.09 and 10.05, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Agreement.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

SUPPLEMENTARY CONDITIONS

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

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Construction Specifications Institute

This Guide to the Preparation of Supplementary Conditions has been prepared for use with the Standard General Conditions of the Construction Contract (No. 1910-8, 1996 Edition). Their provisions are interrelated and a change in one may necessitate a change in the other. The suggested language contained in the Guide to the Preparation of Instructions to Bidders (No. 1910-12, 1996 Edition) is also carefully integrated with the suggested language of this document. Comments concerning their usage are contained in the EJCDC User's Guide (No. 1910-50).

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I. INTRODUCTION

A. Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. 1910-8, 1996 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings indicated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings indicated below, which are applicable to both the singular and plural thereof.

SC-1.05.51 On-Call Services – Shall be defined as emergency services required for roadway repairs and improvements.

SC-2.02 Copies of Documents

GC-2.02 Amend the first sentence of paragraph 2.02 to read as follows: “Before starting construction the owner shall furnish to contractor up to five (5) copies of the contract documents.

GC-2.05.B.4 Schedule of values are not necessary on unit price items unless the unit price item has multiple parts or functions.

SC-4.02

Add the following new paragraph(s) immediately after paragraph 4.02.B:

C. In the preparation of Drawings and Specifications, ENGINEER or ENGINEER’s Consultants relied upon the following reports of explorations and tests of subsurface conditions at the Site:

1. Subsurface investigations have not been performed.

D. Copies of reports and drawings itemized in SC-4.02.C that are included with Bidding Documents. These reports and drawings are part of the Contract Documents. CONTRACTOR is not entitled to rely upon other information and data utilized by ENGINEER and ENGINEER’s Consultants in the preparation of Drawings and Specifications.

SC-4.03 Differing Subsurface or Physical conditions

GC-4.03.C.3 In the second sentence omit “or Arbitration”.

SC-4.04 Underground Facilities

GC-4.04 Replace the words “Underground Facility” with “Public or Private Utility Facility” throughout this section.

SC-4.05 Reference Points

GC-4.05.A Omit the first sentence and replace as follows: Owner shall provide initial engineering surveys to establish reference points for construction which in engineers judgement are necessary to enable contractor to proceed with work.”

GC-4.06.H Omit the words “or Arbitration” throughout.

SC-5.04 Add the following new paragraph immediately after paragraph 5.04.B:

C. The limits of liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations: *SEE EXHIBIT 1*

SC-5.06.A. Delete paragraph 5.06.A in its entirety and insert the following in its place:

A. A CONTRACTOR shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. This insurance shall:

1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER’s Consultants and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder’s Risk “all-risk” or open peril or special causes of loss policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER; and

5. allow for partial utilization of the Work by OWNER;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. CONTRACTOR shall be responsible for any deductible or self-insured retention.

C. The policies of insurance required to be purchased and maintained by CONTRACTOR in accordance with this paragraph SC-5.06 shall comply with the requirements of paragraph 5.06.C of the General Conditions.

GC-5.06.B Omit this section in its entirety.

GC-5.06.E Omit this section in its entirety.

SC-5.07 Waiver of Rights

GC-5.07.E Omit this section in its entirety.

SC-6.06 Concerning Subcontractors, suppliers and others.

SC-6.02 Labor; working hours.

GC-6.02A In the first sentence replace the words "competent, suitable qualified personnel to survey, layout and construct the work" with "a registered licensed surveyor to survey and layout the work and a competent, suitable qualified personnel to construct the work".

SC-6.06.4 Add the new paragraph immediately after paragraph 6.06.G:

The contractor, with his bid, shall submit the list of following subcontractors:

1. Grading
2. Concrete
3. Drainage
4. All others proposed in the execution of this contract per Document 00450.

OWNER or ENGINEER may furnish to any such Subcontractor, Supplier, or other individual or entity, to the extent practicable, information about amounts paid to CONTRACTOR on account of Work performed for CONTRACTOR by a particular Subcontractor, Supplier, or other individual or entity.

SC-6.07 Patent Fees and Royalties

GC-6.07 Omit the words "or Arbitration" throughout.

SC-6.09 Laws and Regulations

GC-6.09.B Omit the words "or Arbitration" throughout.

SC-6.11.A.3 Use of Site and Other Areas

GC6.11.A.3 Omit the words "or Arbitration" throughout.

SC-6.12 Record Documents

GC6.12.A Add the following sentence "The Owner reserves the option that progress payments may be withheld if the requirements of GC-6.12.A are not being satisfied.

SC-6.20 Indemnification

GC6.20 Omit the words "or Arbitration" throughout.

SC-7.02 Coordination

GC-7.02.B Omit the word "Owner" and replace with "Contractor".

SC-7.03 Add the following new paragraph immediately after paragraph GC-7.02:

SC-7.03 Claims Between Contractors

A. Should CONTRACTOR cause damage to the work or property of any separate contractor at the Site, or should any claim arising out of CONTRACTOR's performance of the Work at the Site be made by any separate contractor against CONTRACTOR, OWNER, ENGINEER, ENGINEER's Consultants, or the construction coordinator, CONTRACTOR shall promptly attempt to settle with such separate contractor by agreement, or to otherwise resolve the dispute by arbitration or at law.

B. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, the construction coordinator and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor against OWNER, ENGINEER, ENGINEER's Consultants, or the construction coordinator to the extent said claim is based on or arises out of CONTRACTOR's performance of the Work. Should a separate contractor cause damage to the Work or property of CONTRACTOR or should the performance of work by any separate contractor at the Site give rise to any other Claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER, ENGINEER, ENGINEER's Consultants, or the construction coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER, ENGINEER, ENGINEER's Consultants or the construction coordinator on account of any such damage or Claim.

C. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor, and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, CONTRACTOR may make a Claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be CONTRACTOR's exclusive remedy with respect to OWNER, ENGINEER, ENGINEER's Consultants, and construction coordinator for any delay, disruption, interference, or hindrance caused by any separate contractor. This paragraph does not prevent recovery from OWNER, ENGINEER, ENGINEER's Consultant, or construction coordinator for activities that are their respective responsibilities.

SC-8.11 Evidence of Financial Arrangements

SC-8.11 Add the following new paragraph immediately after paragraph 8.11.A:

B. On request of CONTRACTOR prior to the execution of any Change Order involving a significant increase in the Contract Price, OWNER shall furnish to CONTRACTOR reasonable evidence that adequate financial arrangements have been made by OWNER to

enable OWNER to fulfill the increased financial obligations to be undertaken by OWNER as a result of such Change Order.

SC-11.01 Cost of the Work

GC-11.01.C Omit this section in its entirety.

SC-12.01 Change of Contract Price

GC-12.01.B.3 Omit this section in its entirety.

GC-12.01.C Omit this section in its entirety.

SC-13.03 Tests and Inspections

GC-13.03 Replace the word "Engineer" with "Owner".

GC-13.03.A In the first sentence replace the words "Timely Notice" with "48 hour (min.) notice".

GC-13.04 Omit the words "or arbitration" throughout.

GC-13.06 Omit the words "or arbitration" throughout.

SC-14.02.A Applications for Payments

GC-14.02.A In the first sentence replace the words "20 Day" with "10 Days".

SC-14.02.B Review of Applications

GC-14.02.B.1 In the first sentence replace the words "Ten" with "Fourteen".

GC-14.02.C.1 In the first sentence replace the words "Ten" with "Twenty".

SC-14.05.A Add the following new paragraph immediately after paragraph 14.05.A.1, which is to read as follows:

2. OWNER may at any time request CONTRACTOR in writing to permit OWNER to take over operation of any part of the Work although it is not substantially complete. A copy of such request will be sent to ENGINEER, and within a reasonable time thereafter OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If CONTRACTOR does not object in writing to OWNER and ENGINEER that such part of the Work is not ready for separate operation by OWNER, ENGINEER will finalize

the list of items to be completed or corrected and will deliver such lists to OWNER and CONTRACTOR together with a written recommendation as to the division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, utilities, insurance, warranties, and guarantees for that part of the Work which will become binding upon OWNER and CONTRACTOR at the time when OWNER takes over such operation (unless they shall have otherwise agreed in writing and so informed ENGINEER). During such operation and prior to Substantial Completion of such part of the Work, OWNER shall allow CONTRACTOR reasonable access to complete or correct items on said list and to complete other related Work.

Paragraph 14.05.A.2 shall be renumbered to 14.05.A.3.

NOTICE OF AWARD

Dated: _____

TO: Four Star Paving, LLC
(BIDDER)

ADDRESS: Four Star Paving, LLC
C/O Mr. Mike Maynard
1441 Elm Hill Pike
Nashville, TN 37210

Contract: Roadway Repairs & Improvements Fiscal Year 2022 - 2023

Project: General Construction

ENGINEER's Contract No. 22-002

You are notified that your Bid dated April 12, 2022 for the above Contract has been accepted.
You are the apparent Successful Bidder and have been awarded the Contract for Roadway Repairs and Improvements, Fiscal Year 2022 – 2023 as described in the construction documents.

UNIT PRICE WORK

CONSTRUCTION ESTIMATE						
FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	202-03	REMOVAL & DISPOSAL OF RIGID PAVEMENT	S.Y.	2,500	\$0.01	\$25.00
	202-03.01	REMOVAL & DISPOSAL OF ASPHALT PAVEMENT	S.Y.	5,000	\$24.00	\$120,000.00
	202-08.10	REMOVAL & DISPOSAL OF EXISTING CURB (EXTRUDED & CURB/GUTTER)	L.F.	3,000	\$0.01	\$30.00
	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	2,000	\$0.01	\$20.00
	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	500	\$0.01	\$5.00
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	500	\$0.01	\$5.00
	209-08.03	TEMPORARY FILTER BARRIER (WITHOUT BACKING), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND	L.F.	500	\$0.01	\$5.00

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FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
		REPLACEMENT SHALL BE AT THE CONTRACTORS EXPENSE.)				
	209-08.06	ENHANCED SILT FENCE CHECK (TRAPEZOIDAL), DEPTH, OR AS DIRECTED BY THE ENGINEER, AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT SHALL BE AT THE CONTRACTORS EXPENSE.)	EACH	5	\$100.00	\$500.00
	303-01	MINERAL AGGREGATE TYPE A BASE GRADING D	TON	5,000	\$5.00	\$25,000.00
9	303-10.04	MINERAL AGGREGATE (SIZE #9)	TONS	500	\$0.01	\$5.00
1	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	2,500	\$70.00	\$175,000.00
1	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	5,000	\$72.00	\$360,000.00
1	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	28	\$0.01	\$0.28
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	112	\$0.01	\$1.12
1	403-02.01	TRACKLESS TACK COAT (TC)	TON	10	\$1,100.00	\$11,000.00
15	405-03.01	PM REJUVENATING SCRUB SEAL	S.Y	1,300	\$0.01	\$13.00
13, 14	407-02.14	ASPHALT PAVEMENT REPAIR (INFRARED)	L.S.	5	\$1,100.00	\$5,500.00
1	411-01.11	ACS MIX (PG64-22) GRADING "E" ROADWAY	TON	6,000	\$125.00	\$750,000.00
1, 11	411-01.11 (SH)	SPEED HUMP ACS MIX (PG64-22) GRADING "E"	EACH	1	\$4,000.00	\$4,000.00
1, 17	411-01.12 (ST)	SPEED TABLE ACS MIX (PG64-22) GRADING "E"	EACH	1	\$7,000.00	\$7,000.00
1	411-03.07	ACS MIX (PG64-22) THIN LIFT ASPHALT	TON	500	\$88.00	\$44,000.00
1	411-03.10	ACS MIX(PG76-22) GRADING D	TON	6,000	\$130.00	\$780,000.00
1	411-03.11	ACS MIX(PG76-22) GRADING E ROADWAY	TON	6,000	\$130.00	\$780,000.00
1	411-03.12	ACS MIX (PG64-22) THIN LIFT D ASPHALT	TON	2,000	\$130.00	\$260,000.00
2	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	11,250	\$5.00	\$56,250.00
23	415-01.02 (A)	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	3,750	\$8.00	\$30,000.00

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22	502-08.01	RESEALING JOINTS (HOT POURED ELASTIC)	S.F.	8,000	\$0.01	\$80.00
20	604-07.01	RETAINING WALL (REINFORCED EARTH, "MSE")	S.F.	1,000	\$10.00	\$10,000.00
	604-07.01	RETAINING WALL (CLASS "A" CONCRETE, NOT TO EXCEED 24" IN HEIGHT)	L.F.	200	\$25.00	\$5,000.00
	604-07.02	RETAINING WALL (CLASS "A" CONCRETE, 6" to 12" IN HEIGHT)	L.F.	750	\$27.00	\$20,250.00
20	604-07.75	RESTORATION OF REINFORCED EARTH WALLS	S.F.	1,000	\$10.00	\$10,000.00
3, 4	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-06.02	30" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-07.02	36" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-03.30	18" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
3, 4	607-05.30	24" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
3, 4	607-06.30	30" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
3, 4	607-07.30	36" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
	611-01.20	ADJUSTMENT OF MANHOLE COVERS & FRAMES	EACH	40	\$450.00	\$18,000.00
18	611-03.04	GRAY IRON CASTINGS (CATCHBASIN)	LB.	4,380	\$0.01	\$43.80
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	200	\$0.01	\$2.00
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	1,000	\$0.01	\$10.00
	611-07.03	STRUCTURAL STEEL (PIPE ENDWALLS)	LB.	500	\$0.01	\$5.00
	611-07.54	PRE-CAST HEADWALL (CROSS DRAIN 18 IN @ 3;1)	EACH	20	\$0.01	\$0.20
	611-07.57	PRE-CAST HEADWALL (CROSS DRAIN 24 IN @ 3;1)	EACH	20	\$0.01	\$0.20
	611-07.60	PRE-CAST HEADWALL (CROSS DRAIN 30 IN @ 3;1)	EACH	20	\$0.01	\$0.20
	611-07.63	PRE-CAST HEADWALL (CROSS DRAIN 36 IN)	EACH	20	\$0.01	\$0.20

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	611-09.01	ADJUSTMENT OF EXISTING CATCHBASIN GRATES & FRAMES	EACH	40	\$450.00	\$18,000.00
18	611-12.01	CATCHBASINS, TYPE 12, DEPTH 0' - 4' (D-CB-12P, D-CB-12RA, & D-CBB-12A)	EACH	5	\$0.01	\$0.05
	611-12.01 (A)	CATCHBASINS, ADJUSTMENT TYPE 12, DEPTH +/- 1'	PER FT	1	\$1,000.00	\$1,000.00
18	611-14.01	CATCHBASINS, TYPE 14, DEPTH 0' - 4' (D-CB-14P, D-CB-14RB & D-CBB-12A)	EACH	5	\$0.01	\$0.05
	611-14.01 (A)	CATCHBASINS, ADJUSTMENT TYPE 14, DEPTH +/- 1'	PER FT	1	\$1,000.00	\$1,000.00
5, 21	701-01.01	CONCRETE SIDEWALK (4-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	10,000	\$8.00	\$80,000.00
5, 21	701-01.01 (A)	CONCRETE SIDEWALK (8-INCH DEPTH FOR RADIUS RETURNS, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	10,000	\$0.01	\$100.00
5, 21	701-01.06	PEBBLE FINISH CONCRETE SIDEWALK (4-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	2,000	\$0.01	\$20.00
5, 21	701-01.07	EXPOSED AGGREGATE CONCRETE DRIVEWAY (4-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-01.07 (A)	EXPOSED AGGREGATE CONCRETE DRIVEWAY (6-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02	CONCRETE DRIVEWAY (4-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02 (A)	CONCRETE DRIVEWAY (6-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02.01	CONCRETE HANDICAP RAMP (RETROFIT, 8-INCH DEPTH, CLASS "A" W/FIBER MESH, DETECTABLE WARNINGS)	EACH	50	\$1,500.00	\$75,000.00
5, 21	701-02.02	CONCRETE DRIVEWAY (8-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02.07 (B)	EXPOSED AGGREGATE CONCRETE DRIVEWAY (8-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500	\$0.01	\$15.00
6, 21	702-01	CONCRETE CURB, (TURN DOWN - TO BE USED AS DIRECTED)	L.F.	1,500	\$26.00	\$39,000.00
6, 21	702-01.01	EXTRUDED SLOPING CURB (NEW INSTALLATION W/RUBBERIZED EXPANSION JOINT, GREATER THAN 300' Section, RP-MC-2)	L.F.	7,500	\$0.01	\$75.00
6, 21	702-01.01 (A)	EXTRUDED SLOPING CURB (REMOVAL AND REPAIR INSTALLATION LESS THAN 300' SECTION W/RUBBERIZED EXPANSION JOINT, RP-MC-2)	L.F.	2,500	\$28.00	\$70,000.00
	702-01.02	CONCRETE CURB, (12"-TO BE USED AS DIRECTED AT RADIUS RETURNS)	L.F.	200	\$25.00	\$5,000.00

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FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
6, 21	702-03	CONCRETE COMBINED CURB & GUTTER (NEW INSTALLATION W/RUBBERIZED EXPANSION JOINT, GREATER THAN 300' SECTION, RP-NMC-10)	L.F.	5,000	\$0.01	\$50.00
6, 21	702-03 (A)	CONCRETE COMBINED CURB & GUTTER (REMOVAL AND REPAIR INSTALLATION LESS THAN 300' SECTION W/RUBBERIZED EXPANSION JOINT, RP-NMC-10)	L.F.	500	\$60.00	\$30,000.00
	920-12.01	RUBBERIZED EXPANSION JOINT (ASTM D-1751-97)	L.F.	1,000	\$0.01	\$10.00
19	705-01.04	METAL BEAM GUARD FENCE	L.F.	200	\$125.00	\$25,000.00
	705-02.02	SINGLE GUARDRAIL (TYPE 2, NEW INSTALLATION)	L.F.	250	\$60.00	\$15,000.00
	705-04.09	EARTH PAD FOR TYPE 38 GR END TREATMENT	EACH	1	\$2,500.00	\$2,500.00
	705-06.20	TAN ENERGY ABSORBING TERMINAL (MASH TL3)	EACH	1	\$5,500.00	\$5,500.00
	705-06.30	GUARDRAIL TERMINAL (MASH TL2)	EACH	1	\$4,500.00	\$4,500.00
	705-12.11	GUARDRAIL STEEL POST TYPE 2 (8 FT.)	L.F.	125	\$80.00	\$10,000.00
	705-06.10	GR TERMINAL TRAILING END (TYPE 13) MASH TL-3	EACH	2	\$2,600.00	\$5,200.00
	706-02.01	GUARDRAIL (REMOVE & RESET)	L.F.	500	\$30.00	\$15,000.00
	710-02	AGGREGATE UNDERDRAINS (WITH 4 IN. PIPE)	L.F.	250	\$0.01	\$2.50
	710-04	FILTER CLOTH UNDERDRAIN (WITH PIPE)	L.F.	250	\$0.01	\$2.50
7	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	1	\$150.00	\$150.00
7	712-04.10	TEMPORARY FLEXIBLE TUBULAR DELINEATOR	EACH	1	\$150.00	\$150.00
7	712-05.01	WARNING LIGHTS (TYPE A)	EACH	1	\$125.00	\$125.00
7	712-05.03	WARNING LIGHTS (TYPE C)	EACH	1	\$125.00	\$125.00
7	712-06	SIGNS (CONSTRUCTION)	S.F.	1	\$25.00	\$25.00
	730-12.02(A)	CONDUIT 2" DIAMETER, (PVC, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.02(B)	CONDUIT 2" DIAMETER, (PVC, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.03(A)	CONDUIT 3" DIAMETER, (PVC, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50

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FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	730-12.03(B)	CONDUIT 3" DIAMETER, (PVC, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.08(A)	CONDUIT 2" DIAMETER (RGS, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.08(B)	CONDUIT 2" DIAMETER (RGS, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.09(A)	CONDUIT 3" DIAMETER (RGS, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.09(B)	CONDUIT 3" DIAMETER (RGS, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.13	CONDUIT 2" DIAMETER (JACKED OR BORED)	L.F.	100	\$0.01	\$1.00
	730-12.14	CONDUIT 3" DIAMETER (JACK AND BORE)	L.F.	100	\$0.01	\$1.00
	740-11.03	TEMPORARY SEDIMENT TUBE 18 INCH (TO BE USED FOR EROSION CONTROL OF "V-DITCH", AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT SHALL BE AT THE CONTRACTORS EXPENSE.)	L.F.	500	\$0.01	\$5.00
8	795-09.09	RELOCATE/RECONNECT EXISTING WATER METERS	EACH	20	\$0.01	\$0.20
10	795-09.09 (A)	ADJUST HEIGHT OF EXISTING WATER METERS	EACH	20	\$0.01	\$0.20
	795-12.20	ADJUSTMENT OF EXISTING WATER VALVE BOXES	EACH	40	\$450.00	\$18,000.00
	797-07.63	REPLACE MANHOLE CASTING	EACH	0	\$0.01	\$0.00
16	801-01	SEEDING (WITH MULCH)	UNIT	200	\$5.00	\$1,000.00
	801-03	WATER (SEEDING & SODDING)	M.G.	100	\$1.00	\$100.00
16	803-01	SODDING (NEW SOD)	S.Y.	1,500	\$7.00	\$10,500.00
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	5,000	\$0.01	\$50.00
SUB-TOTAL ROADWAY BASE BID						\$3,904,085.50
FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	202-03.01	REMOVAL & DISPOSAL OF ASPHALT PAVEMENT	S.Y.	250	\$30.00	\$7,500.00
	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	200	\$10.00	\$2,000.00

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FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	20	\$10.00	\$200.00
	209-08.03	TEMPORARY FILTER BARRIER (WITHOUT BACKING)	L.F.	500	\$5.00	\$2,500.00
	303-01	MINERAL AGGREGATE TYPE A BASE GRADING D	TON	375	\$25.00	\$9,375.00
1	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	2	\$0.01	\$0.02
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	9	\$0.01	\$0.09
1, 12	411-01.07	ACS MIX (PG64-22) GRADING "E" SHOULDER	TON	150	\$135.00	\$20,250.00
3, 4	607-00(A)	6" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-00(B)	8" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-01(A)	12" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-02 (A)	15" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-03.30	18" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
5, 21	701-02.01	CONCRETE HANDICAP RAMP (RETROFIT, 8-INCH DEPTH, CLASS "A" W/FIBER MESH, DETECTABLE WARNINGS)	EACH	4	\$1,500.00	\$6,000.00
16	801-01	SEEDING (WITH MULCH)	UNIT	10	\$5.00	\$50.00
	801-03	WATER (SEEDING & SODDING)	M.G.	5	\$1.00	\$5.00
16	803-01	SODDING (NEW SOD)	S.Y.	350	\$6.50	\$2,275.00
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	150	\$5.00	\$750.00
SUB-TOTAL PARK BASE BID						\$51,905.11
TOTAL PROJECT COST					\$3,955,990.61	

FOOTNOTES

(1) UNIT COST IS ARE SUBJECT TO ADJUSTMENT PER TDOT'S SPECIAL PROVISION 109B, PRICE ADJUSTMENT FOR BITUMINOUS MATERIAL

EJCDC No. 1910-22 (1996 Edition)

Prepared by the Engineers Joint Contract Documents Committee and endorsed by The Associated General Contractors of America and the Construction Specifications Institute.

- (2) COLD PLANE OPERATIONS SHALL BE BASED ON AN AVERAGE DEPTH OF ZERO TO THREE INCHES OVER THE ENTIRE AREA. AREAS TO BE COLD PLANNED SHALL BE RESURFACED WITHIN 30 DAYS OF COMPLETION OF THAT SECTION OF ROADWAY UNLESS AN AUTHORIZED REPRESENTATIVE OF THE CITY OF BRENTWOOD HAS OBTAINED PRIOR APPROVAL.
- (3) ALL EXCAVATION FOR STORM DRAINAGE PIPE SHALL BE CONSIDERED UNCLASSIFIED MATERIAL AT A DEPTH OF PIPE DIAMETER PLUS 3 FEET.
- (4) UNIT COST INCLUDES BEDDING MATERIAL IN ACCORDANCE WITH TDOT STANDARD DRAWING D-PB-1 AND D-PB-2.
- (5) UNIT PRICE BID INCLUDES EXCAVATION, 4" STONE BEDDING, RUBBERIZED EXPANSION MATERIAL (ASTM D-1751-97), TOPSOIL BACKFILL, 2-FOOT SOD STRIP ON EACH SIDE AND ALL APPURTENANCES TO COMPLETE THE WORK
- (6) UNIT PRICE BID INCLUDES EXCAVATION, STONE BEDDING, RUBBERIZED EXPANSION MATERIAL (ASTM D-1751-97), TOPSOIL BACKFILL, 2-FOOT SOD STRIP, AND ALL APPURTENANCES TO COMPLETE THE WORK.
- (7) TO BE USED AS DIRECTED BY THE BRENTWOOD PUBLIC WORKS DIRECTOR OR AUTHORIZED REPRESENTATIVE.
- (8) INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR REMOVAL OF EXISTING WATER SERVICE METER ASSEMBLY AND INSTALLING AT NEWLY IDENTIFIED LOCATION.
- (9) TO BE USED FOR ADDITIONAL PIPE BEDDING MATERIAL AS DIRECTED BY THE PUBLIC WORKS DIRECTOR OR AUTHORIZED REPRESENTATIVE.
- (10)
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR REMOVAL OF EXISTING WATER METER BOX AND ADJUSTING TO MATCH ADJOINING GRADE
- (11) COORDINATE WITH CITY OF BRENTWOOD SPECIAL PROVISION CB-111, DECEMBER 28, 2018
- (12) RESURFACING OF EXISTING TRAILS VARIES FROM 8 TO 10 FEET. NEW TRAIL CONSTRUCTION SHALL BE A MINIMUM OF 10 FEET IN WIDTH.
- (13) UNIT PRICE BID INCLUDES ALL EQUIPMENT, MATERIALS AND LABOR FOR REPAIR OF AN ASPHALT SURFACE. UNIT PRICE INCLUDES UP TO 126 SF OF SURFACE AREA AND A 4 HOUR ON SITE VISIT, WHICH MAY INCLUDE MULTIPLE LOCATIONS.
- (14) INFRARED PAVEMENT REPAIR USES AN INFRARED HEATING UNIT TO HEAT IN-PLACE ASPHALT TO SOFTEN IT TO A WORKABLE STATE, THEN NEW ASPHALT CAN BE ADDED WHICH FUSES SEAMLESSLY TO THE OLD. THE CONTRACTOR WILL BE COMPENSATED ON A LUMP SUM BASIS PER FOUR HOUR INCREMENT WITH AN AVERAGE REPAIR OF 120 SQUARE FEET WHICH MAY INCLUDE MULTIPLE SITES. THE STEP-BY-STEP PROCESS FOR POTHOLE REPAIR USING A TRUCK-MOUNTED INFRARED PAVEMENT HEATER IS:
- a. SWEEP AND DRY THE AREA.
 - b. POSITION THE INFRARED HEATING ARRAY OVER THE POTHOLE FOR SEVEN TO 10 MINUTES.
 - c. REMOVE THE HEATER AND RAKE THE SOFTENED (350 DEGREE) ASPHALT.
 - d. MIX IN A REJUVENATOR TO REPLENISH LIGHT OILS THAT HAVE OXIDIZED AWAY.
 - e. ADD A SMALL AMOUNT OF FRESH ASPHALT AND GRADE IT TO LEVEL WITH A LUTE.
 - f. USE A VIBRATORY ROLLER TO COMPACT AND FUSE THE PATCH WITH THE SURROUNDING PAVEMENT.
 - g. 12-MONTH WARRANTY ON REPAIRED AREA.
 - h. TIME BEGINS UPON ARRIVAL TO FIRST JOBSITE AND ENDS UPON DEPARTURE FROM FINAL JOB.
 - i. TRAFFIC CONTROL INCLUDED
- (15) REJUVENATING SCRUB SEAL

a. PREP AND CLEAN ASPHALT FROM DIRT, DEBRIS, AND VEGETATION, WHICH MAY REQUIRE PRESSURE WASHING

b. SEALER WILL NOT BOND TO SEVERE OIL ON ASPHALT DAMAGE

(16) SEED AND SOD SHALL BE PER TDOT SECTION 918.01. THE ONLY ALLOWABLE MIXTURE WILL BE LIMITED TO TABLE 918.01-1 GROUP A (FEBRUARY 1 – JULY 1) AND TABLE 918.01-4 GROUP C (AUGUST 1 – DECEMBER 1).

(17) COORDINATE WITH CITY OF BRENTWOOD SPECIAL PROVISION CB-112, DECEMBER 31, 2018.

(18) CURB IRON TO HAVE A SOLID BACK. THE CONTRACTOR MAY SUBSTITUTE NEENAH R-3067V OR APPROVED EQUAL HAVING A SOLID BACK. TOP OF CATCHBASIN MAY REQUIRE MINOR MODIFICATIONS TO ACCOMMODATE THE NEENAH R-3067V SOLID BACK CASTING.

(19) ATTACHMENT TO TOP DECK OF BOX/SLAB.

(20) UNIT COST DOES NOT INCLUDE PREPARATION OR SUBMITTAL OF NECESSARY PERMITS. UNIT PRICE BID IS FOR WALL HEIGHTS 6 FEET OR LESS, INCLUSIVE OF COFFER DAMS (IF REQUIRED), CLEARING, SITE PREPARATION, STRIP/PLACE TOPSOIL, EXCAVATION, BACKFILL AND ALL OTHER ITEMS NECESSARY FOR A COMPLETED WALL SYSTEM. EROSION CONTROL FEATURES, OTHER THAN COFFER DAMS, WILL BE PAID FOR SEPARATELY.

(21) BEGIN WORK WITHIN FOURTEEN (14) DAYS AFTER WRITTEN NOTIFICATION OF THE WORK ORDER ISSUED UNDER THIS CONTRACT. EACH AND EVERY WORK ORDER ISSUED SHALL HAVE A MUTUALLY AGREED UPON DATE OF SUBSTANTIAL COMPLETION, AND ALL WORK SHALL BE COMPLETED AND READY FOR FINAL PAYMENT IN ACCORDANCE WITH PARAGRAPH 14.07.B OF THE GENERAL CONDITIONS. THE CONTRACTOR FURTHER AGREES THAT IF WORK IS NOT INITIATED AND COMPLETED WITHIN THE MUTUALLY AGREED UPON CONSTRUCTION SCHEDULE THE OWNER RESERVES THE OPTION TO IMPOSE LIQUIDATED DAMAGES IN ACCORDANCE WITH SECTION 4.03 OF THE "STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR ON THE BASIS OF STIPULATED PRICE".

(22) UNIT PRICE BID INCLUDES PRIOR INSTALLATION OF THE SEAL COAT, CLEANING OF ALL SURFACES TO BE SEALED BY SWEEPING WITH A MOTORIZED BROOM TO REMOVE ANY LOOSE MATERIAL. CLEAN DEPRESSIONS AND CRACKS NOT REACHED BY THE POWER BROOM USING HAND BROOMS OR PRESSURIZED AIR. DEPENDING ON SEVERITY OF THE CRACK ADDITIONAL ROUTING MAY BE REQUIRED AS DIRECTED BY THE CITY OR AUTHORIZED REPRESENTATIVE. MATERIAL TO BE COORDINATED WITH TDOT SPECIFICATION 905.05.

(23) COLD PLANE OPERATIONS SHALL BE BASED ON AN AVERAGE DEPTH OF THREE TO FIVE INCHES OVER THE ENTIRE AREA. AREAS TO BE COLD PLANNED SHALL BE RESURFACED WITHIN 30 DAYS OF COMPLETION OF THAT SECTION OF ROADWAY UNLESS AN AUTHORIZED REPRESENTATIVE OF THE CITY OF BRENTWOOD HAS OBTAINED PRIOR APPROVAL.

GENERAL NOTES (ALL ITEMS)

(1) WORKING HOURS WILL BE FROM 7:00 AM UNTIL DARK MONDAY THROUGH SATURDAY. NO WORK WILL BE ALLOWED ON SUNDAY UNLESS IT HAS BEEN CLASSIFIED AS AN EMERGENCY AND APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

(2) AN INITIAL WORK ORDER IS TENTATIVELY SCHEDULED TO BE ISSUED ON JUNE 1, 2022. ONCE A CONTRACT HAS BEEN ISSUED, ON OR ABOUT JULY 1, 2022 ALL DOCUMENTS FROM THAT POINT, FORWARD WILL SENT TO THE ATTENTION OF MR. TODD HOPPENSTEDT, BRENTWOOD DIRECTOR OF PUBLIC WORKS.

(3) BONDS WILL BE REQUIRED AS NOTED IN THE CONTRACT DOCUMENTS. HOWEVER, BONDS WILL NOT BE REQUIRED FOR INDIVIDUAL WORK ORDERS ISSUED. A RETAINER WILL NOT BE WITHHELD FROM EACH WORK ORDER ISSUED.

(4) UNIT PRICE BID FOR ALL ITEMS SHALL INCLUDE ALL MOBILIZATION AND LAYOUT FOR A COMPLETE SYSTEM INCLUSIVE OF ALL WATER QUALITY, EROSION, AND TRAFFIC CONTROL MEASURE INCLUSIVE OF PERMIT PREPARATION TO COMPLY WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. PERMIT APPLICATION FEES SHALL BE REIMBURSED BY THE CITY OF BRENTWOOD.

(5) MEASUREMENT AND PAYMENT OF QUANTITIES SHALL BE IN ACCORDANCE WITH THE STANDARD AND SUPPLEMENTAL SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED: JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE CONSTRUCTION DOCUMENTS.

(6) ALL ITEMS WITHIN THIS CONTRACT INCLUDE INSTALLATION OF NECESSARY TRAFFIC AND EROSION CONTROL IN THE UNIT PRICE BID, IN ACCORDANCE WITH CITY REQUIREMENTS. TEMPORARY LANE LINE AND SPECIALTY MARKINGS WILL NOT BE REQUIRED AND SHALL BE THE RESPONSIBILITY OF THE CITY OF BRENTWOOD.

(7) TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 104 SCOPE OF WORK, ARTICLE 104.02 CHANGES IN PLANS OR IN CHARACTER OF CONSTRUCTION, SUB-SECTION C HAS BEEN DELETED AND NOT APPLICABLE TO THIS CONTRACT.

(8) PAYMENT FOR THE TOP TWO LAYERS OF ASPHALT ON MAINLINE AND SIDE ROAD PAVING SHALL BE BASED ON THE RATE OF APPLICATION NOTED ON THE PAVING SCHEDULE WITH A TOLERANCE OF 1/4"±. AN AVERAGE COMPACTED THICKNESS SHALL BE DETERMINED BASED ON CORE SAMPLES OBTAINED IN ACCORDANCE SPECIAL PROVISION 407DEN "TEST STRIPS." ALL QUANTITY OUTSIDE THE TOLERANCE RANGE SHALL NOT BE PAID BY THE OWNER AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR

Total of All Unit Prices:

Three Million Nine Hundred Fifty Five Thousand Nine Hundred Ninety Dollars and 61/100 Cents

(WORDS)

\$3,955,990.61

(DOLLARS)

Four (4) copies of each of the proposed Contract Documents and Drawings accompany this Notice of Award. Additional sets of drawings and specifications are available upon request.

You must comply with the following conditions precedent within 15 days of the date you receive this Notice of Award.

1. Deliver to the OWNER four (4) fully executed counterparts of the Contract Documents. Each of the Contract Documents must bear your signature where indicated.
2. Deliver with the executed Contract Documents the Contract security (Bonds) as specified in the Instructions to Bidders (Article 20) and General Conditions (paragraph 5.01).
3. (List other conditions precedent). N/A

Failure to comply with these conditions within the time specified will entitle OWNER to consider your Bid in default, to annul this Notice of Award and to declare your Bid security forfeited.

Within ten days after you comply with the above conditions, OWNER will return to you one fully executed counterpart of the Contract Documents.

City of Brentwood
(OWNER)

By: _____
(AUTHORIZED SIGNATURE)

(TITLE)

Copy to Engineer

BID FORM

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

SULLIVAN ENGINEERING, INC.

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE

A practice division of the

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AMERICAN CONSULTING ENGINEERS COUNCIL

AMERICAN SOCIETY OF CIVIL ENGINEERS

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The Associated General Contractors of America

Construction Specifications Institute

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American Consulting Engineers Council
1015 10th Street, N.W., Washington, DC 20005

American Society of Civil Engineers
345 East 47th Street, New York, NY 10017
EJCDC No. 1910-18 (1996 Edition)

PROJECT IDENTIFICATION:

Roadway Repairs and Improvements in the City of Brentwood for fiscal Year 2019-2020

CONTRACT IDENTIFICATION AND NUMBER:

Sullivan Engineering Project No. 22-002

Dated: May ___, 2022

THIS BID IS SUBMITTED TO:

City of Brentwood, TN
C/o Karen Harper, City Treasurer
P.O. Box 788
Brentwood, TN 37024-0788

1.01 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. The Bid will remain subject to acceptance for 75 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER.

3.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged.

<u>Addendum No.</u>	<u>Addendum Date</u>
<u>1</u>	<u>4-5-22</u>
<u>2</u>	<u>4-5-22</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazardous

Environmental Condition, if any, which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does **not** consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

I. Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by ENGINEER is acceptable to Bidder.

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

4.01 Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

brentwood bid form rev 2

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2009-2010

4/12/2022

COUNTY		CONSTRUCTION ESTIMATE					
PROJ. NO.		WILLIAMSON					
PROJ. LIMITS		22-002					
DESIGN BY SULLIVAN ENGINEERING, INC.		2022 - 2023 Annual Paving Contract					
BID PREPARED BY:		???			BID DATE	4/12/2022	
FOOTNOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.	UNIT PRICE	AMOUNT	
20	604-07.01	RETAINING WALL (REINFORCED EARTH, "MSE")	S.F.	1,000	\$10.00	\$10,000.00	
	604-07.01	RETAINING WALL (CLASS "A" CONCRETE, NOT TO EXCEED 24" IN HEIGHT)	L.F.	200	\$25.00	\$5,000.00	
	604-07.02	RETAINING WALL (CLASS "A" CONCRETE, 6" to 12" IN HEIGHT)	L.F.	750	\$27.00	\$20,250.00	
20	604-07.75	RESTORATION OF REINFORCED EARTH WALLS	S.F.	1,000	\$10.00	\$10,000.00	
3, 4	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00	
3, 4	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00	
3, 4	607-06.02	30" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00	
3, 4	607-07.02	36" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00	
3, 4	607-03.30	18" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00	
3, 4	607-05.30	24" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00	
3, 4	607-06.30	30" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00	
3, 4	607-07.30	36" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00	
18	611-01.20	ADJUSTMENT OF MANHOLE COVERS & FRAMES	EACH	40	\$450.00	\$18,000.00	
	611-03.04	GRAY IRON CASTINGS (CATCHBASIN)	L.B.	4,380	\$0.01	\$43.80	
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	200	\$0.01	\$2.00	
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	L.B.	1,000	\$0.01	\$10.00	
	611-07.03	STRUCTURAL STEEL (PIPE ENDWALLS)	L.B.	500	\$0.01	\$5.00	
	611-07.54	PRE-CAST HEADWALL (CROSS DRAIN 18 IN @ 3:1)	EACH	20	\$0.01	\$0.20	
	611-07.57	PRE-CAST HEADWALL (CROSS DRAIN 24 IN @ 3:1)	EACH	20	\$0.01	\$0.20	
	611-07.60	PRE-CAST HEADWALL (CROSS DRAIN 30 IN @ 3:1)	EACH	20	\$0.01	\$0.20	
	611-07.63	PRE-CAST HEADWALL (CROSS DRAIN 36 IN)	EACH	20	\$0.01	\$0.20	
	611-09.01	ADJUSTMENT OF EXISTING CATCHBASIN GRATES & FRAMES	EACH	40	\$450.00	\$18,000.00	
18	611-12.01	CATCHBASINS, TYPE 12, DEPTH 0' - 4' (D-CB-12P, D-CB-12RA, & D-CBB-12A)	EACH	5	\$0.01	\$0.05	
	611-12.01 (A)	CATCHBASINS, ADJUSTMENT TYPE 12, DEPTH +/- 1'	PER FT	1	\$1,000.00	\$1,000.00	
18	611-14.01	CATCHBASINS, TYPE 14, DEPTH 0' - 4' (D-CB-14P, D-CB-14RB & D-CBB-12A)	EACH	5	\$0.01	\$0.05	
	611-14.01 (A)	CATCHBASINS, ADJUSTMENT TYPE 14, DEPTH +/- 1'	PER FT	1	\$1,000.00	\$1,000.00	

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2009-2010

4/12/2022

		CONSTRUCTION ESTIMATE					
	COUNTY	WILLIAMSON					
	PROJ. NO.	22-002					
	PROJ. LIMITS	2022 - 2023 Annual Paving Contract					
	DESIGN BY SULLIVAN ENGINEERING, INC.					BID DATE	
	BID PREPARED BY:					4/12/2022	

4/12/2022

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2009-2010

4/12/2022

CONSTRUCTION ESTIMATE						
COUNTY	WILLIAMSON					
PROJ. NO.	22-002					
PROJ. LIMITS	2022 - 2023 Annual Paving Contract					
DESIGN BY SULLIVAN ENGINEERING, INC.	BID DATE					
BID PREPARED BY:	4/12/2022					
FOOTNOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.	UNIT PRICE	AMOUNT
	740-11.03	TEMPORARY SEDIMENT TUBE 18 INCH (TO BE USED FOR EROSION CONTROL OF "V-DITCH", AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT SHALL BE AT THE CONTRACTORS EXPENSE.)	L.F.	500	\$0.01	\$5.00
8	795-09.09	RELOCATE/RECONNECT EXISTING WATER METERS	EACH	20	\$0.01	\$0.20
10	795-09.09 (A)	ADJUST HEIGHT OF EXISTING WATER METERS	EACH	20	\$0.01	\$0.20
	795-12.20	ADJUSTMENT OF EXISTING WATER VALVE BOXES	EACH	40	\$450.00	\$18,000.00
	797-07.63	REPLACE MANHOLE CASTING	EACH	0	\$0.01	\$0.00
16	801-01	SEEDING (WITH MULCH)	UNIT	200	\$5.00	\$1,000.00
	801-03	WATER (SEEDING & SODDING)	M.G.	100	\$1.00	\$100.00
16	803-01	SODDING (NEW SOD)	S.Y.	1,500	\$7.00	\$10,500.00
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	5,000	\$0.01	\$50.00
SUBTOTAL ROADWAY BASE BID						\$3,904,085.50

THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT						
	202-03.01	REMOVAL & DISPOSAL OF ASPHALT PAVEMENT	S.Y.	250	\$30.00	\$7,500.00
	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	200	\$10.00	\$2,000.00
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	20	\$10.00	\$200.00
	209-08.03	TEMPORARY FILTER BARRIER (WITHOUT BACKING)	L.F.	500	\$5.00	\$2,500.00
	303-01	MINERAL AGGREGATE TYPE A BASE GRADING D	TON	375	\$25.00	\$9,375.00
1	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	2	\$0.01	\$0.02
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	9	\$0.01	\$0.09
1, 12	411-01.07	ACS MIX (PG64-22) GRADING "E" SHOULDER	TON	150	\$135.00	\$20,250.00
3, 4	607-00(A)	6" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-00(B)	8" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-01(A)	12" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
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3, 4	607-03.30	18" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2009-2010

4/12/2022

CONSTRUCTION ESTIMATE				
COUNTY				
PROJ. NO.	WILLIAMSON			
PROJ. LIMITS	22-002			
DESIGN BY SULLIVAN ENGINEERING, INC.	2022 - 2023 Annual Paving Contract			
BID PREPARED BY:	???		BID DATE	4/12/2022
FOOTNOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.
5, 21	701-02.01	CONCRETE HANDICAP RAMP (RETROFIT, 8-INCH DEPTH, CLASS "A" W/FIBER MESH, DETECTABLE WARNINGS)	EACH	4
16	801-01	SEEDING (WITH MULCH)	UNIT	10
	801-03	WATER (SEEDING & SODDING)	M.G.	5
16	803-01	SODDING (NEW SOD)	S.Y.	350
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	150
		SUBTOTAL PARK BASE BID		
				\$51,905.11
		TOTAL BASE BID		
				\$3,955,990.61

4/12/2022

Unit Prices have been computed in accordance with paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the Contract Documents. Proposed prices will remain valid for all areas, regardless of size and at all times within the contract period.

- 6.01** Bidder agrees begin work within fourteen (14) days after written notification of the acceptance of this Bid for each and every work order issued under this contract. Each and every project issued shall have a mutually agreed upon date of substantial completion, and completed and ready for final payment in accordance with paragraph 14.07.B of the General Conditions within thirty (30) days of that date. The contractor further agrees that if work is not initiated and completed within the mutually agreed upon construction schedule the owner reserves the privilege to impose liquidated damages in accordance with Section 4.03 of the "Standard form of Agreement Between Owner and Contractor on the Basis of Stipulated Price".
- 6.02** On-Call Services - The bidder agrees that forces shall be able to respond, mobilize and initiate construction activities on request to specific short notice (24 hours) and emergency projects within the City of Brentwood.
- 6.03** All unit cost contained within this contract shall include all necessary charges for mobilization of equipment, materials and man power for a complete installation of the services required.
- 6.04** The bidder agrees to coordinate with the City of Brentwood 72 hours in advance of anticipated interruptions to utility service; operations which are loud or noisy; and operations which will generate disturbing quantities of structure born noise or vibrations such as jack hammering or core drilling.
- 6.05** The Bidder agrees that all repaving work issued on or before October 1st shall be completed by November 1st, unless, prior arrangements have been made with the City of Brentwood Public Works Director a minimum of two weeks prior to the scheduled completion date.
- 6.06** The Bidder shall submit to the City of Brentwood Public Works Director a traffic control plan for the roadways within each project area a minimum of 48 hours prior to initiating work.
- 6.07** The Bidder shall submit to the City of Brentwood Public Works Director an erosion control plan for the graded areas within each project a minimum of 48 hours prior to initiating work.
- 6.08** Bidder accepts the provisions of the Agreement as to liquidated damages as penalty in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.
- 6.09** Measurement and Payment of quantities shall be in accordance with the Standard Specifications of the Tennessee Department of Transportation Dated: January 1, 2015 and additional specifications and special provisions contained in the construction documents.
- 6.10** Contract unit prices shall be for a one-year period (FY23, July 1, 2022 – June 30, 2023), at which time the City of Brentwood Public Works Director may elect to extend the contract for four additional one-year periods (FY24 (July 1, 2023-June 30, 2024, FY25 (July 1, 2024-June 30, 2025, FY26 (July 1, 2025-June 30, 2026, FY27 (July 1, 2026-June 30, 2027). Provided the Bidder agrees to the extension, further agreeing that all original unit price bids will be increased or decreased in accordance with the **Consumer Price Index**.

6.11 Bid documents set forth in the contract shall remain in force for the duration of time as necessary until a time in which it is no longer applicable. A separate bond shall **not** be required for each individual work order issued. However, the initial bond as required at the inception of this contract shall remain in force for the duration of the contract.

7.01 The following documents are attached to and made a condition of this Bid:

- A. Required Bid security;
- B. A tabulation of all Subcontractors, Suppliers [and other] individuals and entities required to be identified in this Bid;
- C. Required bidder qualifications statement with supporting data; and

8.01 The terms used in this Bid with initial capital letters have the meanings indicated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

SUBMITTED on APRIL 12, 2022

State Contractor License No. 50045

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____ (SEAL)
(Individual's signature)

Doing business as: _____

Business address: _____

Phone No.: _____ FAX No.: _____

A Partnership

Partnership Name: FOUR STAR PAVING LLC (SEAL)

By: [Signature]
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): Robert Londermilk

Business address: 1441 Elm Hill Pike

Nashville, TN 37210

Phone No.: 615-627-2901 FAX No.: 615-627-2906

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(CORPORATE SEAL)

Attest _____
(Signature of Corporate Secretary)

Business address: _____

Phone No.: _____ FAX No.: _____

Date of Qualification to do business is _____.

A Joint Venture

Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone No.: _____ FAX No.: _____

Joint Venturer Name: _____ (SEAL)

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Business address: _____

Phone No.: _____ FAX No.: _____

Phone and FAX Number, and Address for receipt of official communications:

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Drug-Free Workplace: Contractor's Affidavit

- A) The Tennessee General Assembly has enacted the Drug-Free Workplace Law, 50-9-101 through 50-9-113, Tennessee Code Annotated (TCA) to require employers contracting with state agencies or units of local government to prepare affidavits certifying compliance with the Drug-Free Workplace Program.
- B) The statute applies to all employers with no less than five (5) employees receiving pay who contract with the state or any local government to provide construction services. Each such employer must submit an affidavit stating that the employer has in place a program for a drug-free workplace that complies with T.C.A. 50-9-101-113. The statute forbids any local government from entering into any contract or awarding any contract for construction services with any employer who has not provided the affidavit of compliance.
- C) An Employer under this amendment is defined to be any private company or corporation. The definition does not include any unit of local government or any utility.
- D) Any employer who is found to have violated this provision will be prohibited from contracting with any other local government or state agency until the employer can prove it is in compliance with all the requirements of the Drug-Free Workplace Program. Each additional violation imposes longer time periods of prohibition against contracting with a governmental entity against an employer, up to a period of one year.
- E) The employer's affidavit stating that its program provides for a drug-free workplace absolves the local government of any further responsibility for the employer's compliance or lack of compliance with the requirements of the drug-free workplace program.
- F) Affidavit must be attached to bid form upon submission.

DRUG AND ALCOHOL TESTING REQUIREMENTS:

The City of Brentwood has a drug and alcohol testing program for its employees. The program subjects employees and certain applicants, after an offer of employment has been extended, to testing as follows:

Type of Testing	Drug Testing	Alcohol Testing
Pre-Employment	CDL*, POLICE, FIRE, DISPATCH	N/A
Transfer	CDL, POLICE, FIRE, DISPATCH	N/A
Post-Accident	ALL	ALL
Reasonable Suspicion	ALL	ALL
Random	CDL, POLICE, FIRE, DISPATCH	CDL
Return-To-Duty	ALL	ALL
Annual Physical	POLICE, FIRE	N/A

* CDL – Commercial Driver’s License

More information concerning the City’s drug and alcohol testing program may be obtained from the Human Resources Department at (615) 371-0060.

Pursuant to *Tennessee Code Annotated* §§ 50-9-113** and 50-9-114, bids or proposals for construction services submitted to the City of Brentwood must include an affidavit attesting that the bidder or proposer has in effect, at the time of submittal, a drug-free workplace program that complies with Title 50, Chapter 9, *Tennessee Code Annotated*; and further, that the bidding entity’s drug and alcohol testing program is operated pursuant to requirements at least as stringent at those of the program operated by the City of Brentwood, as described herein.

** *T.C.A.* § 50-9-113 applies to employers with no less than five employees.

STATE OF TENNESSEE DRUG-FREE WORKPLACE AFFIDAVIT
COUNTY OF Davidson OF PRIME BIDDER

NOW COMES AFFIANT, who being duly sworn, deposes and says:

- 1) He/She is the principal officer for:
 - a) Contractor; Four Star Paving LLC
 - b) Address: 1441 Elm Hill Pike
 - c) City, State: Nashville, TN;
- 2) That the bidding entity has submitted a bid to the City of Brentwood for the project titled "Roadway Repairs and Improvements Fiscal Year 2022 - 2023, Brentwood, Tennessee, Project No. 22-002";
- 3) That Affiant certifies that the bidding entity has in effect, at the time of submission of its bid to perform the construction referred to above, a drug-free workplace program that complies with Title 50, Chapter 9, Tennessee Code Annotated; and further, that the bidding entity's drug and alcohol testing program is operated pursuant to requirements at least as stringent at those of the program operated by the City of Brentwood, as described in the construction specifications.
- 4) That this affidavit is made on personal knowledge.

Further Affiant saith not.

CMG Maynor
AFFIANT

SUBSCRIBED AND SWORN TO before me this 13 day of April, 2022

Mary Johnson
NOTARY PUBLIC

My commission expires: 5/2/22



BID BOND**BIDDER (Name and Address):****Four Star Paving LLC****1441 Elm Hill Pike****Nashville, TN 37210****SURETY (Name and Address of Principal Place of Business):****Fidelity and Deposit Company of Maryland****1299 Zurich Way****Schaumburg, IL 60196****OWNER (Name and Address):**

City of Brentwood

ATTN. Mr. Todd Hoppenstedt, Director of Public Works

P.O. Box 788

1750 General George Patton Drive

Brentwood, TN 37027

BID**PROJECT (Brief Description Including Location):****Contract:** General Construction**Project:** Roadway Repairs and Improvements in the City of Brentwood for fiscal Year 2022 - 2023.**OWNER's Contract No.** _____**ENGINEER's Contract No.** 22-002

Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

1. The contractor shall supply all labor, materials and equipment necessary for street repair projects within the City of Brentwood.
2. This project is to be constructed under the Standard Specifications of the Tennessee Department of Transportation Dated: January 1, 2021 and additional specifications and special provisions contained in the construction documents.
3. The cost of this project shall be based on a unit price bid.

BONDBOND NUMBER: **N/A**DATE (Not later than Bid due date): **April 12, 2022**PENAL SUM: **Five Percent of Amount of Attached Bid**

(Words)

5%

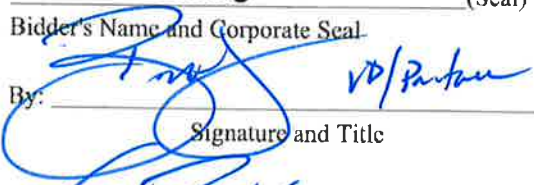
(Figures)

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER**Four Star Paving LLC**

(Seal)

Bidder's Name and Corporate Seal

By: 

Signature and Title

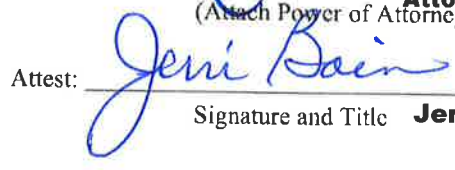
Attest: 

Signature and Title

SURETY**Fidelity and Deposit Company
of Maryland**

(Seal)

Surety's Name and Corporate Seal

By: Signature and Title **Mark Neal,**(Attach Power of Attorney) **Attorney-in-Fact**Attest: Signature and Title **Jerri Bain**

- Note: (1) Above addresses are to be used for giving required notice.
 (2) Any singular reference to Bidder, Surety, OWNER or other party shall be considered plural where applicable.

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by **Robert D. Murray, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Frank E. NEAL, III, Mark NEAL, Brent W. NEAL, Thomas NEAL and Jerri BAIN of Nashville, Tennessee**, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

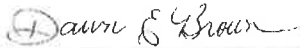
The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 6th day of January, A.D. 2022.

ATTEST:
**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**



By: **Robert D. Murray**
Vice President



By: **Dawn E. Brown**
Secretary

**State of Maryland
County of Baltimore**

On this 6th day of January, A.D. 2022, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Robert D. Murray, Vice President and Dawn E. Brown, Secretary** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.



Constance A. Dunn, Notary Public
My Commission Expires: July 9, 2023



A Present commitments
\$25,000,000 Backlog

B. Brentwood Streets
Franklin Streets
Forrest Hills Streets

C Brentwood — Todd Hopenshead
Franklin — Derrick M'Cond
Forrest Hills — Brad Bivens

D see ATTACHED

E 3 paving crews

G see ATTACHED

H see ATTACHED

I currently in approval process

DOCUMENT 00450

LIST OF SUBCONTRACTORS

Here with is the list of subcontractors referenced in the bid submitted by:

(Bidder).....Four Star Paving LLC.....

(Owner) City of Brentwood, Tennessee

Dated.....4-12-22.....and which is an integral part of the Bid Form.

For any task or item of work performed in the execution of this contract valued at or above \$5,000, performed or provided by General Contractor or any Subcontractor. Typical items of work noted below but may not be all-inclusive and are to be as needed by Bidder:

Item of Work	DBE/\$ Amount	Subcontractor name, address license number, expiration date of registration, and license classification
Grading		
Drainage		
Asphaltic Paving		
Water Line		
Traffic Control		
Erosion Control		

Item of Work	DBE/\$ Amount	Subcontractor name, address license number, expiration date of registration, and license classification
Pavement Markings		
Permanent Signing		
Signals		STANSELL Electric
Electrical		"
Seed		McFALL Seed & Sod
Sod		McFALL Seed & Sod
Asphalt Milling		JONES BROS
Concrete Flat Work		Michael Moody
Concrete Curb		"
Guardrail		LO INC

2022 - 2023 Annual Contract

City of Brentwood

Williamson Co., Tennessee

Project No. 22-002

Item of Work	DBE/\$ Amount	Subcontractor name, address license number, expiration date of registration, and license classification
--------------	---------------	---

Adjust
Utility

CK MASONRY

State of Tennessee

373859

12438512

BOARD FOR LICENSING CONTRACTORS

CONTRACTOR

FOUR STAR PAVING, LLC

This is to certify that all requirements of the State of Tennessee have been met.

ID NUMBER: 50045

LIC STATUS: ACTIVE

EXPIRATION DATE: January 31, 2023

UNLIMITED: HRA-B; HRA-E.3; MU-D



IN-1313

DEPARTMENT OF
COMMERCE AND INSURANCE

BOARD				PSI						
ORD F750XL-WATER TRK				4DSFA102A5S013581						
OWER CURBER				3FRKF75E9SV144030	H501123		Yoder	Wilson Bank & Trust		
ESTL-PS LOWBOY (R ONLY)			JJ	440XL-060531064		DEPRECIATED OUT (2009)	POWER CURBER	NONE		
ORD F-750XLWATER TRUCK				1E92936916E111285	Q29369	T859946	Power Equipment	WBT Financial	PAID	
ORD F-750XLWATER TRUCK				3FRWF75E17V394280	H426902		United Truck & Equip	All-Points-Capital	PD OFF	
N-N PIN TRAILER (UTILITY)				4DSUA12277S017597	T860192	J-1-N		None		
VNA PAC ROLLER				65820367			ASC Const Equipment			
ORD F650	WHITE			3FRNF65YXSV143044	H427031		NONE			
ORD S-DTY F-350	WHITE			1FTWW30YX8EC97843		Alexandar Ford	Alter-Moreña Corp	PD OFF		
EROY ROLLER				400-49523			Notrax	Diversified Fin-Ser-LLC	PD OFF	
VINIUS SPREADER			Model -	#R-600-C, #6C05445-serial #			None	WBT #1	PD OFF	same loan
OD DUMP TRUCK	WHITE		JACKIE	1NKDXEEX7J194484	153311		Kenworth	WBT #2	PD OFF	same loan
N/T800 LOWBOY	WHITE			1KKDD40X491248435	H116014		Kenworth	None? (WBT, etc.) #3	PD OFF	same loan
N/T370 SER TRK	WHITE		BOBBY TOMON	2NKH1N7X79M253617	H606734		Kenworth	None		
LE FORKLIFT	YELLOW			A875B31037B			Total Material Handling	None		
AT 928GZ WHEEL LOADER	YELLOW		s/n	CAT0928GKDDID02779			Ritchie Bros. (on-line)	WBT(WELLS FARGO)		
ENWORTH TRACTOR (TRUCK ONLY)	WHITE		JJ	1KKDD40X1C1302104	H115897		MHC	Wells Fargo Equip Fin Inc	PD OFF	
ORD TRK F-150	BLACK		MARK GILLIAM	1FTFW1ET4CFA17905	76H1582		CROWN FORD	WBT		

ALLER		SKID LOADER	4MNF81821C1000536			Nashville Tractor & Equip	None		
JOHN DEERE 326D SKID R	YELLOW	SKID LOADER				TRIGREEN	None		
LEEROY ROLLERW/KUBOTA		ROLLER	SER #49351			W I CLARK COMPANY			
0 LEEROY ASP ROLLER	YELLOW	ROLLER	SER#47108			BAC PAVING CO INC			
EC RUBBER TIRE PAVER RP-			S/N RP-170X180			SIGNATURE			
quvama Saw	3/28/2013		S/N 001315546001		\$11,721.60	A & M			
C 7K 7X18+2 BUMPER	BLACK	TRAILER	1179GU2020CL799789		\$4,788.00	BI'S TRAILER'S LLC			
JOHN Deere 326D skid steer	YELLOW		1170326DMLCGJ31053		\$42,840.00	TRIGREEN			
AT 308C CR EXCAVATOR	YELLOW		S/N KCK02117		\$57,860.00	WOODS EQUIPMENT			
UJIC HAMMER- LLER			3X80023		\$12,462.43	Thompson Machinery			
ANAPAC CA250D ROLLER			10000108V0D007805		\$83,540.00	ATLAS COPCO	ATLAS COPCO		
AT GRADER			R9S00261		\$353,486.08	Thompson Machinery	CAT FINANCIAL SERV		
TRAILER			1179GU2024EL799796	US34076	\$5,002.00	BI'S TRAILER'S LLC			
6 P CURBER	YELLOW		57C06-14-0832352		\$240,883.50	POWER CURBER	SIGNATURE FIN		
LEERE 326E SKID STEER			1170326DAACGZ22079 model 74105-551, installation kit, 84705-10, SN84705-10F, TWO (2) GPS RECEIVERS MS992C, SN:12641115P, 1264116SP, RADIO SNR921, SN:23141792SQ, BASE STATION SPS855, SN:5417R00861, GPS ROVER SPS985, SN: 5420F65506, DATA COLLECTOR TSC3, SN:RSZEC48804		\$31,110.00	TRIGREEN EQUIPMENT	SIGNATURE FIN		
E ENGINE SYSTEM					\$75,595.45	SITECH	SIGNATURE FIN		
AT MOTOR GRADER		STEVIE JOHNSON	ON9FD0125		\$355,088.21	THOMPSON MACHINERY	CAT FINANCIAL SERV		

ORD F350 1-8-15	WHITE	TOMMY MOFIELD	1FT8W3A62FEC27403	20528H2	\$37,227.45	MID-TENN FORD	SIGNATURE FIN		
ORD F350 1-8-15	WHITE	WINDELL THOMPSON	1FT8W3A64FEC27404	20532H2	\$37,227.45	MID-TENN FORD	SIGNATURE FIN		
ORD F350 1-8-15	WHITE	RON BIRDWELL	1FD8W3G79FEC27407	20543H2	\$42,682.87	MID-TENN FORD	SIGNATURE FIN		
ORD F350 1-8-15	WHITE	STEVIE JOHNSON	1FD8W3GTOFEC27408	20531H2	\$42,682.87	MID-TENN FORD	SIGNATURE FIN		
ORD F350 1-8-15	WHITE	BRIAN JEFFERSON	1FD8W3G7FEC27406	20545H2	\$42,682.87	MID-TENN FORD	SIGNATURE FIN		
ORD F350 1-8-15	WHITE	RYAN HALLMAN	1FD8W3G72FEC27409	20533H2	\$42,682.87	MID-TENN FORD	SIGNATURE FIN		
ORD F350 1-8-15	WHITE	TODD VICKERS	1FT8W3A60FEC27402	20529H2	\$37,227.45	MID-TENN FORD	SIGNATURE FIN		
ORD F350 1-8-15	WHITE	JASON JARRELL	1FT8W3A66FEC27405	20530H2	\$37,227.45	MID-TENN FORD	SIGNATURE FIN		
ORD F350 1-8-15	MECHANIC TRUCK	BRANDON ALLEN	1FD0X5G78FEB64662	H33006	\$113,512.88	CHEROKEE TRUCK EQUIP	SIGNATURE FIN		
ORD F350 1-8-15			901D20901064		\$60,706.16	NORTRAX	SIGNATURE FIN		
ORD F350 1-8-15		STEVIE JOHNSON	74105172A		\$1,735.00	SITECH			
ORD F350 1-8-15		STEVIE JOHNSON	74705258		\$1,184.00	SITECH			
ORD F350 1-8-15		STEVIE JOHNSON	333410115W		\$13,067.08	SITECH			
ORD F350 1-8-15			IHTMMMAANZ7H450267	H508261	\$13,500.00	TUF SOLUTIONS			
ORD F350 1-8-15			3HAZZMMN5G1428651		\$99,273.00	E. D. ETNYRE & CO			
ORD F350 1-8-15	CAT 12M3 MOTOR GR		N9F00473		\$341,806.91	THOMPSON MACH	PAID IN FULL		
ORD F350 1-8-15	BROOM		409555		\$53,534.18	POWER EQUIPMENT	WILSON BANK		
ORD F350 1-8-15	DISTRIBUTOR		55365	H607404	\$87,000.00	CALVIN GROUP	WILSON BANK		

400 ROLLER	ROLLER		54086		\$19,000.00	PITTMAN TRACTOR	WILSON BANK		
NATIONAL 4300 ROAD OR DT466	DISTRIBUTOR		1H1TMMAN87H 505 269		\$21,540.00	GAMBLE MOTOR CO	WILSON BANK		
500	TRUCK	SPARE	3CGJN6D5HG542455	2309H14	\$22,317.94	ROCKIE WILLIAMS			
--150 PLATINUM	TRUCK	MIKE MAYNARD	1FTFW1EF6HFA89086		\$54,803.91	MID-TENN FORD			
V BOARD S/N #10743	ARROW BOARD		S/N 10743		\$3,878.38	ROADSAFE			
Y TRAILER MODEL A (17-135)	TRAILER	SCOTT	4SODK5336H1003700	748631 PERI	\$55,854.00	TRAILBOSS TRAILERS			
PILLAR 308E MINI ATOR			GBJ01091		\$58,306.50	RITCHIE BROS			
400S COMPACTION			91106		\$30,000.00	PITTMAN TRACTOR			
R	A	SCOTT	1T9GUZ026H1799805	U752160	\$4,895.00	BU'S TRAILER			
IR		SCOTT	1NPPXGGGG40D481457	H112529					
--150 SUPERCREW	TRUCK	Kevin	1FTFW1EF7HKD77503	3264H14		MID-TENN FORD			
--150 SUPERCREW	TRUCK	Jacob Norrod	1FTFW1EF0HKD77502		\$39,981.69	MID-TENN FORD			
M VHP MOTOR GRADER	GRADER		89F00991		\$99,750.00	J.M. WOOD AUCTION			
EEERE SKID STEER 229358	SKID LOADER		1T0332GMC6F302494		\$63,430.53	TRI-GREEN			
LEEBOY ROLLER	LEEBOY ROLLER		400-82915		\$40,000.00	THE W.I. CLARK CO			
--150	TRUCK	BRANDON ALLEN	1FTFW1ES0JMD26163		\$47,837.43	MID TENN FORD			
--150 SUPERCREW	TRUCK	CLINT	1FTFW1EG1JFC03577		\$48,361.15	MID-TENN FORD			
TUNER WATER TRUCK	WATER TRUCK		3ALACWDTSEDFP6451		\$55,940.00	LEDWELL			

EPD 4W	EXPEDITION	ROBERT	1FMUJ2AT8JEAZ610Z			MID-TENN FORD			
R1350	BROOM		405211		\$20,500.00	J.M. WOOD AUCTION			
6 UT ROVER WITH TSC3 DATA CTOR WITH RADIO AND LOCK POLE	TRAILER		1T9GU20291L799786 ROVER MODEL SPS986 RD SPS986001, SERIAL 5813F01502 - TRIMBLE MODEL TSC3 ID #TSC3-125, SERIAL		\$29,585.00	SITECH			
PLANNER PC3068	PLANNER		PCT01792		\$19,943.31	THOMPSON			
TEC 190E	PAVER		RP190EXA035		\$286,305.00	roadtec			
	ASPHALT PAVER		376011						
iller	SKID STEER LOADER		DTB02168						
ditional	DOZER/SPREADER		2510						
l-Rand	ROLLER		170606						
	ROLLER		660470						
	ROLLER		K05275672						
let	4 DOOR		1GNFC13037R332174						
let	PICK UP		1GCACYCG8HF135784						
let	PICK UP		1GC2CUEGXFZ109132						
let	PICK UP		1GCEC19V37Z176693						
let	PICK UP		1GCI C33D16FZ03609						
Built	TRAILER		4MMNFB2225F1000811						

Shore	TRAILER		545N1TD25FB002699						
Mo	TRAILER		00001						
Mo	TRAILER		00002						
BK	INFRARED ASPHALT RECYCLER								
Illar	18" MILLING HEAD								
Top Equipment									
oy TRAILER	60-TON TR-AXLE LOW BOY PAYER SPECIAL								
F750	FEL5696 FORD F750		1FDWF7DEKGDAA00996	H459958	62630.00	TRAILBOSS			
oy 400T #85623			85623		67645.00	PRICHARD AUTO CO			
R CURBER	2018 POWER CURBER 5700-C W ACCESSORIES		57C08-18-1232658		31150.00	BLANCHARD CAT			
AT 12M2 VHP PLUS R GRADER	MOTOR GRADER 12M3 2014 CAT 12M2 VHP PLUS MOTOR GRADER		N9F01042 CA1T0012MCR9S00345		286893.50	POWER CURBER			
ID STEER	JOHN DEERE 332G SKID STEER 272960		1T0332GMHKE349269		315345.48	THOMPSON MACH			
PAC CA250 II ROLLER	DYNAPAC CA250 II ROLLER, - VIBRATORY, 84"		10000108L0A008540		123330.30	RITCHIE BROS			
PLANET	FORD F-750 XL SUPER DUTY ASPHALT DISTRIBUTOR		3FRXKF1JXBV686096		64280.00	TRI-GREEN			
					45317.56	J.M. Wood Auction			
					78290.00	IRON PLANET			
	GPS FOR CURB AND GUTTER MACHINE		26171011SW		41676.43	SITECH			
	Robots for Curb & Gutter				122249.96	SITECH			
	GPS SYSTEM FOR GRADER 268				53405.94	SITECH			
	BASE ROVER AND TSC7 DATA				41012.35	SITECH			
R	CB10 ROLLER		NPP00138		140767.53	THOMPSON	WILSON BANK		
	FORD F-150 WHITE	JASON	1FTFW1E5XKFC32432		44363.37	MID-TENN FORD	PAID		
	EQUINOX	SPARE	1GNALAE6FZ140691 SPARE		9467.04	MID-TENN FORD			
	XLT SUPERCREW	HUNTER	1FTFW1E58JFA07663		34998.19	INTEGRITY AUTO SALES			

L 84705-10	ID # 84705-10Z	JACOBS GRADER	#84705-10Z		4000.00	SITECH			
ROL BX MODEL CB460	ID# CB460-225	JACOBS GRADER	#24791101SW		7833.00	SITECH			
L MS995C	ID# MS995CJ56	JACOBS GRADER	2039J5185Y		12181.00	SITECH			
L MS995C	ID# MS995CJ57	JACOBS GRADER	#2039J5195Y		12181.00	SITECH			
L AS400P	AS400P-01	JACOBS GRADER	#0849J516R5		1615.00	SITECH			
L SNR930C	ID #SNR930394	JACOBS GRADER	#2049J017SQ		3000.00	SITECH			
STATION MODEL SPS885	SPS855266	JACOBS GRADER	5839R31614		11700.00	SITECH			
ER BASE STATION MODEL 5	ID# SPS855316	JACOBS GRADER	5927R31946		11700.00	SITECH			
DE 4000 SERIES CUMMINS T4	PAVER		RP-170E-4090		368,835.11	ROADTEC			
Y GRADER	F-150 WHITE	DAVID VAUGHN	1FTFW1E5SLFA99690		47441.57	MID TENN FORD			
	LB 685C		685-133289		85000.00	W.I. CLARK CO			
ORTH T800 DUMP	DUMP		1NKDI40X9KJ217202		143900	J.M. WOOD AUCTION			
ORTH T800 DUMP	DUMP		1NKDI40X5KJ217200		143900	J.M. WOOD AUCTION			
	F-150	ZACH WRIGHT	1FTFW1E4LFA07251		46092.86	MID-TENN FORD			
E CRT350	BROOM		408940 BLADE CAB		32007.15	J.M. WOOD AUCTION			
SS6B	ROLLER-VIBRATORY, 84" SMOOTH DRUM, COMPACTION CONTROL, CANOPY		L8H01192		79655.33	J.M. WOOD AUCTION			
	TRA VAN	TODD	1FTBR1DG5LKA83929		46373.85	MID-TENN FORD			
STEER 332G			1T0332GMAMF391845		68051.75	MEADE EQUIPMENT			
F-150	SILVER	STEVIE	1FTFW1E53MFAS4673		52576.64	MID-TENN FORD			
F-150	WHITE	RAY H	1FTFW1E61MFAS4672		51824.32	MID-TENN FORD			
		MIKEY MARTIN	1FT8W3AN2MEC72376		42688.09	MID-TENN FORD			
CAT 420F2 BACKHOE OPS, GP LOADER ET, STICK CONTROLS.			CATD420FPHWC01119		59000.00	PITTMAN TRACTOR CO			
F-150	Green	Todd Vickers	1FTFW1E62MKE56000		51786.47	MID-TENN FORD			
SPS SHEET									
SPS SHEET									
SPS SHEET									
SPS SHEET									
SPS SHEET									
F-550H SERVICE TRUCK	White		1FTDF5H1T0KECA0296		100,000	KNOXVILLE RUBBER & GASKET			

[illegible]

NOTICE TO PROCEED

Dated: _____

TO: Four Star Paving, LLC
(BIDDER)

ADDRESS: Four Star Paving, LLC
C/O Mr. Mike Maynard
1441 Elm Hill Pike
Nashville, TN 37210

Contract: Roadway Repairs & Improvements Fiscal Year 2022 - 2023

Project: General Construction

ENGINEER's Contract No. 22-002

You are notified that the Contract Times under the above contract will commence to run on _____, 2022. By that date, you are to start performing your obligations under the Contract Documents. Substantial Completion shall be in accordance with Article 4 of the Agreement.

Before you may start any Work at the Site, paragraph 2.05.C of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

City of Brentwood
(OWNER)

By: _____
(AUTHORIZED SIGNATURE)

(TITLE)

Copy to ENGINEER



SULLIVAN ENGINEERING, INC.

317 MAIN STREET, SUITE 201
FRANKLIN, TN. 37064
(615) 642-5822

April 14, 2022

City of Brentwood, TN
C/o Mr. Todd Hoppenstedt, Director of Public Works
P.O. Box 788
Brentwood, TN 37027

RE: Contract: General Construction

Project: Roadway Repairs and Improvements in the City of Brentwood for fiscal Year 2022-2023.

Engineer's Contract No. 22-002

Dear Todd,

On Tuesday, April 12, 2022 at 2:30 P.M. bids were received at Brentwood City Hall and read allowed, said documents for Roadway Repairs and Improvements, Fiscal Year 2022-2023. Prior to opening the bids two (2) contractors had obtained construction documents for bidding this work. All contractors returned their bid package, which have been reviewed for errors, omissions or irregularities in accordance with the contract documents. Bids received are as follows:

NAME	BONDING COMPANY	BID
Four Star Paving, LLC	Fidelity & Deposit Company of Maryland	\$3,955,990.61
Sessions Paving Co.	Berkley Insurance Company	\$4,114,179.51

Four Star Paving, LLC. is low bidder having met all bidding requirements. Mr. Mike Maynard, Four Star Paving, LLC will be overseeing construction efforts for the Roadway Repairs and Improvements, Fiscal Year 2022-2023 contract. I have contacted Mr. Maynard about performance of this contract concerning the current workload of Four Star Paving, LLC. Mr. Maynard, has assured me that Four Star Paving, LLC will make available the necessary work force, and equipment to meet the schedule set forth in the construction documents. Having reviewed Four Star Paving, LLC bid package it appears to meet all of the requirements stated in the "Instruction to Bidders"; therefore, SEI considers their bid as acceptable for this project, and recommend' s the contract be awarded to Four Star Paving, LLC. A copy of the Bid Tabulation and Construction Contract has been attached for your review.



Upon approval by the City Commissioners and Mayor, our staff will issue a package to Four Star Paving, LLC. This packet will include the contract, performance bond, and insurance requirements, which need to be signed and executed. Execution of the aforementioned packet typically takes between three to five working days. After we receive acceptable paper work, the "Notice to Proceed" can be issued.

As always, it has been a pleasure to service the City of Brentwood, and please call if you have any questions.

Sincerely,

SULLIVAN ENGINEERING INCORPORATED

Paul Collins

Paul Collins

Enclosures

CC:

Mr. Mr. Kirk Bednar, Brentwood City Manager

Ms. Karen Harper, Brentwood City Treasurer

Ms. Kristen Corn, Brentwood City Attorney

Mr. Mike Maynard, Four Star Paving, LLC

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2019-2020

[illegible]

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2019-2020

FOOTNOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.		Four Star			Sessions Paving Co., Inc.	
						UNIT PRICE	AMOUNT		UNIT PRICE	AMOUNT
	604-07.02	RETAINING WALL (CLASS "A" CONCRETE, 6" to 12" IN HEIGHT)	L.F.	750		\$27.00	\$20,250.00		\$75.00	\$56,250.00
20	604-07.75	RESTORATION OF REINFORCED EARTHWALLS	S.F.	1,000		\$10.00	\$10,000.00		\$75.00	\$75,000.00
3, 4	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400		\$0.01	\$4.00		\$0.01	\$4.00
3, 4	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400		\$0.01	\$4.00		\$0.01	\$4.00
3, 4	607-06.02	30" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400		\$0.01	\$4.00		\$0.01	\$4.00
3, 4	607-07.02	36" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400		\$0.01	\$4.00		\$0.01	\$4.00
3, 4	607-03.30	18" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400		\$0.01	\$4.00		\$0.01	\$4.00
3, 4	607-05.30	24" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400		\$0.01	\$4.00		\$0.01	\$4.00
3, 4	607-06.30	30" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400		\$0.01	\$4.00		\$0.01	\$4.00
3, 4	607-07.30	36" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400		\$0.01	\$4.00		\$0.01	\$4.00
	611-01.20	ADJUSTMENT OF MANHOLE COVERS & FRAMES	EACH	40		\$450.00	\$18,000.00		\$900.00	\$36,000.00
18	611-03.04	GRAY IRON CASTINGS (CATCHBASIN)	LB.	4,380		\$0.01	\$43.80		\$0.01	\$43.80
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	200		\$0.01	\$2.00		\$0.01	\$2.00
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	1,000		\$0.01	\$10.00		\$0.01	\$10.00
	611-07.03	STRUCTURAL STEEL (PIPE ENDWALLS)	LB.	500		\$0.01	\$5.00		\$0.01	\$5.00
	611-07.54	PRE-CAST HEADWALL (CROSS DRAIN 18 IN @ 3:1	EACH	20		\$0.01	\$0.20		\$0.01	\$0.20
	611-07.57	PRE-CAST HEADWALL (CROSS DRAIN 24 IN @ 3:1	EACH	20		\$0.01	\$0.20		\$0.01	\$0.20
	611-07.60	PRE-CAST HEADWALL (CROSS DRAIN 30 IN @ 3:1	EACH	20		\$0.01	\$0.20		\$0.01	\$0.20
	611-07.63	PRE-CAST HEADWALL (CROSS DRAIN 36 IN	EACH	20		\$0.01	\$0.20		\$0.01	\$0.20
	611-09.01	ADJUSTMENT OF EXISTING CATCHBASIN GRATES & FRAMES	EACH	40		\$450.00	\$18,000.00		\$500.00	\$20,000.00
18	611-12.01	CATCHBASINS, TYPE 12, DEPTH 0' - 4' (D-CB-12P, D-CB-12RA, & D-CBB-12A)	EACH	5		\$0.01	\$0.05		\$500.00	\$2,500.00
	611-12.01 (A)	CATCHBASINS, ADJUSTMENT TYPE 12, DEPTH +/- 1'	PER FT	1		\$1,000.00	\$1,000.00		\$750.00	\$750.00
18	611-14.01	CATCHBASINS, TYPE 14, DEPTH 0' - 4' (D-CB-14P, D-CB-14RB & D-CBB-12A)	EACH	5		\$0.01	\$0.05		\$500.00	\$2,500.00
	611-14.01 (A)	CATCHBASINS, ADJUSTMENT TYPE 14, DEPTH +/- 1'	PER FT	1		\$1,000.00	\$1,000.00		\$750.00	\$750.00
5, 21	701-01.01	CONCRETE SIDEWALK (4-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	10,000		\$8.00	\$80,000.00		\$8.50	\$85,000.00
5, 21	701-01.01 (A)	CONCRETE SIDEWALK (8-INCH DEPTH FOR RADIUS RETURNS, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	10,000		\$0.01	\$100.00		\$0.01	\$100.00
5, 21	701-01.06	PEBBLE FINISH CONCRETE SIDEWALK (4-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	2,000		\$0.01	\$20.00		\$0.01	\$20.00
5, 21	701-01.07	EXPOSED AGGREGATE CONCRETE DRIVEWAY (4-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500		\$0.01	\$15.00		\$0.01	\$15.00
5, 21	701-01.07 (A)	EXPOSED AGGREGATE CONCRETE DRIVEWAY (6-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500		\$0.01	\$15.00		\$0.01	\$15.00
5, 21	701-02	CONCRETE DRIVEWAY (4-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500		\$0.01	\$15.00		\$0.01	\$15.00
5, 21	701-02 (A)	CONCRETE DRIVEWAY (6-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500		\$0.01	\$15.00		\$0.01	\$15.00
5, 21	701-02.01	CONCRETE HANDICAP RAMP (RETROFIT, 8-INCH DEPTH, CLASS "A" W/FIBER MESH, DETECTABLE WARNINGS)	EACH	50		\$1,500.00	\$75,000.00		\$2,000.00	\$100,000.00

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2019-2020

FOOTNOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.		Four Star			Sessions Paving Co., Inc.	
						UNIT PRICE	AMOUNT		UNIT PRICE	AMOUNT
5, 21	701-02 .02	CONCRETE DRIVEWAY (8-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500		\$0.01	\$15.00		\$0.01	\$15.00
5, 21	701-02.07 (B)	EXPOSED AGGREGATE CONCRETE DRIVEWAY (8-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500		\$0.01	\$15.00		\$0.01	\$15.00
6, 21	702-01	CONCRETE CURB, (TURN DOWN - TO BE USED AS DIRECTED)	L.F.	1,500		\$26.00	\$39,000.00		\$0.01	\$15.00
6, 21	702-01.01	EXTRUDED SLOPING CURB (NEW INSTALLATION W/RUBBERIZED EXPANSION JOINT, GREATER THAN 300' Section, RP-MC-2)	L.F.	7,500		\$0.01	\$75.00		\$0.01	\$75.00
6, 21	702-01.01 (A)	EXTRUDED SLOPING CURB (REMOVAL AND REPAIR INSTALLATION LESS THAN 300' SECTION W/RUBBERIZED EXPANSION JOINT, RP-MC-2)	L.F.	2,500		\$28.00	\$70,000.00		\$25.00	\$62,500.00
	702-01.02	CONCRETE CURB, (12"-TO BE USED AS DIRECTED AT RADIUS RETURNS)	L.F.	200		\$25.00	\$5,000.00		\$0.01	\$2.00
6, 21	702-03	CONCRETE COMBINED CURB & GUTTER (NEW INSTALLATION W/RUBBERIZED EXPANSION JOINT, GREATER THAN 300' SECTION, RP-NMC-10)	L.F.	5,000		\$0.01	\$50.00		\$0.01	\$50.00
6, 21	702-03 (A)	CONCRETE COMBINED CURB & GUTTER (REMOVAL AND REPAIR INSTALLATION LESS THAN 300' SECTION W/RUBBERIZED EXPANSION JOINT, RP-NMC-10)	L.F.	500		\$60.00	\$30,000.00		\$0.01	\$5.00
	920-12.01	RUBBERIZED EXPANSION JOINT (ASTM D-1751-97)	L.F.	1,000		\$0.01	\$10.00		\$0.01	\$10.00
19	705-01.04	METAL BEAM GUARD FENCE	L.F.	200		\$125.00	\$25,000.00		\$125.00	\$25,000.00
	705-02.02	SINGLE GUARDRAIL (TYPE 2, NEW INSTALLATION	L.F.	250		\$60.00	\$15,000.00		\$60.00	\$15,000.00
	705-04.09	EARTH PAD FOR TYPE 38 GR END TREATMENT	EACH	1		\$2,500.00	\$2,500.00		\$2,500.00	\$2,500.00
	705-06.20	TAN ENERGY ABSORBING TERMINAL (MASH TL3	EACH	1		\$5,500.00	\$5,500.00		\$5,500.00	\$5,500.00
	705-06.30	GUARDRAIL TERMINAL (MASH TL2	EACH	1		\$4,500.00	\$4,500.00		\$4,500.00	\$4,500.00
	705-12.11	GUARDRAIL STEEL POST TYPE 2 (8 FT.)	L.F.	125		\$80.00	\$10,000.00		\$80.00	\$10,000.00
	705-06.10	GR TERMINAL TRAILING END (TYPE 13) MASH TL-	EACH	2		\$2,600.00	\$5,200.00		\$2,600.00	\$5,200.00
	706-02.01	GUARDRAIL (REMOVE & RESET)	L.F.	500		\$30.00	\$15,000.00		\$30.00	\$15,000.00
	710-02	AGGREGATE UNDERDRAINS (WITH 4 IN. PIPE)	L.F.	250		\$0.01	\$2.50		\$0.01	\$2.50
	710-04	FILTER CLOTH UNDERDRAIN (WITH PIPE)	L.F.	250		\$0.01	\$2.50		\$0.01	\$2.50
7	712-04.01	FLEXIBLE DRUMS (CHANNELIZING	EACH	1		\$150.00	\$150.00		\$150.00	\$150.00
7	712-04.10	TEMPORARY FLEXIBLE TUBULAR DELINEATOR	EACH	1		\$150.00	\$150.00		\$150.00	\$150.00
7	712-05.01	WARNING LIGHTS (TYPE A)	EACH	1		\$125.00	\$125.00		\$150.00	\$150.00
7	712-05.03	WARNING LIGHTS (TYPE C)	EACH	1		\$125.00	\$125.00		\$150.00	\$150.00
7	712-06	SIGNS (CONSTRUCTION)	S.F.	1		\$25.00	\$25.00		\$30.00	\$30.00
	730-12.02(A)	CONDUIT 2" DIAMETER, (PVC, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250		\$0.01	\$2.50		\$0.01	\$2.50
	730-12.02(B)	CONDUIT 2" DIAMETER, (PVC, INCLUDES SOD TRENCH REPAIR)	L.F.	250		\$0.01	\$2.50		\$0.01	\$2.50
	730-12.03(A)	CONDUIT 3" DIAMETER, (PVC, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250		\$0.01	\$2.50		\$0.01	\$2.50
	730-12.03(B)	CONDUIT 3" DIAMETER, (PVC, INCLUDES SOD TRENCH REPAIR)	L.F.	250		\$0.01	\$2.50		\$0.01	\$2.50
	730-12.08(A)	CONDUIT 2" DIAMETER (RGS, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250		\$0.01	\$2.50		\$0.01	\$2.50
	730-12.08(B)	CONDUIT 2" DIAMETER (RGS, INCLUDES SOD TRENCH REPAIR)	L.F.	250		\$0.01	\$2.50		\$0.01	\$2.50

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2019-2020

FOOTNOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.		Four Star			Sessions Paving Co., Inc.	
						UNIT PRICE	AMOUNT		UNIT PRICE	AMOUNT
	730-12.09(A)	CONDUIT 3" DIAMETER (RGS, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250		\$0.01	\$2.50		\$0.01	\$2.50
	730-12.09(B)	CONDUIT 3" DIAMETER (RGS, INCLUDES SOD TRENCH REPAIR)	L.F.	250		\$0.01	\$2.50		\$0.01	\$2.50
	730-12.13	CONDUIT 2" DIAMETER (JACKED OR BORED)	L.F.	100		\$0.01	\$1.00		\$0.01	\$1.00
	730-12.14	CONDUIT 3" DIAMETER (JACK AND BORE)	L.F.	100		\$0.01	\$1.00		\$0.01	\$1.00
	740-11.03	TEMPORARY SEDIMENT TUBE 18 INCH (TO BE USED FOR EROSION CONTROL OF "V-DITCH", AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT SHALL BE AT THE CONTRACTORS EXPENSE.)	L.F.	500		\$0.01	\$5.00		\$0.01	\$5.00
8	795-09.09	RELOCATE/RECONNECT EXISTING WATER METERS	EACH	20		\$0.01	\$0.20		\$0.01	\$0.20
10	795-09.09 (A)	ADJUST HEIGHT OF EXISTING WATER METERS	EACH	20		\$0.01	\$0.20		\$0.01	\$0.20
	795-12.20	ADJUSTMENT OF EXISTING WATER VALVE BOXES	EACH	40		\$450.00	\$18,000.00		\$900.00	\$36,000.00
	797-07.63	REPLACE MANHOLE CASTING	EACH	0		\$0.01	\$0.00		\$0.00	\$0.00
16	801-01	SEEDING (WITH MULCH)	UNIT	200		\$5.00	\$1,000.00		\$20.00	\$4,000.00
	801-03	WATER (SEEDING & SODDING)	M.G.	100		\$1.00	\$100.00		\$1.00	\$100.00
16	803-01	SODDING (NEW SOD)	S.Y.	1,500		\$7.00	\$10,500.00		\$8.00	\$12,000.00
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	5,000		\$0.01	\$50.00		\$0.01	\$50.00
SUB-TOTAL ROADWAY BASE BID							\$3,904,085.50			\$4,052,949.40
FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.		UNIT PRICE	AMOUNT		UNIT PRICE	AMOUNT
	202-03.01	REMOVAL & DISPOSAL OF ASPHALT PAVEMENT	S.Y.	250		\$30.00	\$7,500.00		\$30.00	\$7,500.00
	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	200		\$10.00	\$2,000.00		\$15.00	\$3,000.00
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	20		\$10.00	\$200.00		\$20.00	\$400.00
	209-08.03	TEMPORARY FILTER BARRIER (WITHOUT BACKING	L.F.	500		\$5.00	\$2,500.00		\$4.00	\$2,000.00
	303-01	MINERAL AGGREGATE TYPE A BASE GRADING I	TON	375		\$25.00	\$9,375.00		\$25.00	\$9,375.00
1	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC	TON	2		\$0.01	\$0.02		\$0.01	\$0.02
	402-02	AGGREGATE FOR COVER MATERIAL (PC	TON	9		\$0.01	\$0.09		\$0.01	\$0.09
1, 12	411-01.07	ACS MIX (PG64-22) GRADING "E" SHOULDER	TON	150		\$135.00	\$20,250.00		\$160.00	\$24,000.00
3, 4	607-00(A)	6" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20		\$10.00	\$200.00		\$15.00	\$300.00
3, 4	607-00(B)	8" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20		\$10.00	\$200.00		\$15.00	\$300.00
3, 4	607-01(A)	12" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20		\$10.00	\$200.00		\$15.00	\$300.00
3, 4	607-02 (A)	15" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20		\$10.00	\$200.00		\$15.00	\$300.00
3, 4	607-03.30	18" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20		\$10.00	\$200.00		\$15.00	\$300.00
5, 21	701-02.01	CONCRETE HANDICAP RAMP (RETROFIT, 8-INCH DEPTH, CLASS "A" W/FIBER MESH, DETECTABLE WARNINGS	EACH	4		\$1,500.00	\$6,000.00		\$2,500.00	\$10,000.00
16	801-01	SEEDING (WITH MULCH)	UNIT	10		\$5.00	\$50.00		\$20.00	\$200.00
	801-03	WATER (SEEDING & SODDING)	M.G.	5		\$1.00	\$5.00		\$1.00	\$5.00
16	803-01	SODDING (NEW SOD)	S.Y.	350		\$6.50	\$2,275.00		\$8.00	\$2,800.00
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	150		\$5.00	\$750.00		\$3.00	\$450.00
SUBTOTAL PARK BASE BID							\$51,905.11			\$61,230.11

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2019-2020

						Four Star		Sessions Paving Co., Inc.		
FOOTNOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.		UNIT PRICE	AMOUNT		UNIT PRICE	AMOUNT
TOTAL BASE BID							\$3,955,990.61			\$4,114,179.51
		BONDING COMPANY				Fidelity & Deposit Company of Maryland			Berkley Insurance Company	
FOOTNOTES										
(1) UNIT COST IS ARE SUBJECT TO ADJUSTMENT PER TDOT'S SPECIAL PROVISION 109B, PRICE ADJUSTMENT FOR BITUMINOUS MATERIAL										
(2) COLD PLANE OPERATIONS SHALL BE BASED ON AN AVERAGE DEPTH OF ZERO TO THREE INCHES OVER THE ENTIRE AREA. AREAS TO BE COLD PLANNED SHALL BE RESURFACED WITHIN 30 DAYS OF COMPLETION OF THAT SECTION OF ROADWAY UNLESS AN AUTHORIZED REPRESENTATIVE OF THE CITY OF BRENTWOOD HAS OBTAINED PRIOR APPROVAL										
(3) ALL EXCAVATION FOR STORM DRAINAGE PIPE SHALL BE CONSIDERED UNCLASSIFIED MATERIAL AT A DEPTH OF PIPE DIAMETER PLUS 3 FEET.										
(4) UNIT COST INCLUDES BEDDING MATERIAL IN ACCORDANCE WITH TDOT STANDARD DRAWING D-PB-1 AND D-PB-2.										
(5) UNIT PRICE BID INCLUDES EXCAVATION, 4" STONE BEDDING, RUBBERIZED EXPANSION MATERIAL (ASTM D-1751-97), TOPSOIL BACKFILL, 2-FOOT SOD STRIP ON EACH SIDE AND ALL APPURTENANCES TO COMPLETE THE WORK										
(6) UNIT PRICE BID INCLUDES EXCAVATION, STONE BEDDING, RUBBERIZED EXPANSION MATERIAL (ASTM D-1751-97), TOPSOIL BACKFILL, 2-FOOT SOD STRIP, AND ALL APPURTENANCES TO COMPLETE THE WORK.										
(7) TO BE USED AS DIRECTED BY THE BRENTWOOD PUBLIC WORKS DIRECTOR OR AUTHORIZED REPRESENTATIVE.										
(8) INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR REMOVAL OF EXISTING WATER SERVICE METER ASSEMBLY AND INSTALLING AT NEWLY IDENTIFIED LOCATION.										
(9) TO BE USED FOR ADDITIONAL PIPE BEDDING MATERIAL AS DIRECTED BY THE PUBLIC WORKS DIRECTOR OR AUTHORIZED REPRESENTATIVE.										
(10) INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR REMOVAL OF EXISTING WATER METER BOX AND ADJUSTING TO MATCH ADJOINING GRADE										

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2019-2020

						Four Star		Sessions Paving Co., Inc.		
FOOTNOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.		UNIT PRICE	AMOUNT		UNIT PRICE	AMOUNT
(11) COORDINATE WITH CITY OF BRENTWOOD SPECIAL PROVISION CB-111, DECEMBER 28, 2018										
(12) RESURFACING OF EXISTING TRAILS VARIES FROM 8 TO 10 FEET. NEW TRAIL CONSTRUCTION SHALL BE A MINIMUM OF 10 FEET IN WIDTH.										
(13) UNIT PRICE BID INCLUDES ALL EQUIPMENT, MATERIALS AND LABOR FOR REPAIR OF AN ASPHALT SURFACE. UNIT PRICE INCLUDES UP TO 126 SF OF SURFACE AREA AND A 4 HOUR ON SITE VISIT, WHICH MAY INCLUDE MULTIPLE LOCATIONS.										
(14) INFRARED PAVEMENT REPAIR USES AN INFRARED HEATING UNIT TO HEAT IN-PLACE ASPHALT TO SOFTEN IT TO A WORKABLE STATE, THEN NEW ASPHALT CAN BE ADDED WHICH FUSES SEAMLESSLY TO THE OLD. THE CONTRACTOR WILL BE COMPENSATED ON A LUMP SUM BASIS PER FOUR HOUR INCREMENT WITH AN AVERAGE REPAIR OF 120 SQUARE FEET WHICH MAY INCLUDE MULTIPLE SITES. THE STEP-BY-STEP PROCESS FOR POTHOLE REPAIR USING A										
	a.	SWEEP AND DRY THE AREA.								
	b.	POSITION THE INFRARED HEATING ARRAY OVER THE POTHOLE FOR SEVEN TO 10 MINUTES.								
	c.	REMOVE THE HEATER AND RAKE THE SOFTENED (350 DEGREE) ASPHALT.								
	d.	MIX IN A REJUVENATOR TO REPLENISH LIGHT OILS THAT HAVE OXIDIZED AWAY.								
	e.	ADD A SMALL AMOUNT OF FRESH ASPHALT AND GRADE IT TO LEVEL WITH A LUTE.								
	f.	USE A VIBRATORY ROLLER TO COMPACT AND FUSE THE PATCH WITH THE SURROUNDING PAVEMENT								
	g.	12-MONTH WARRANTY ON REPAIRED AREA.								
	h.	TIME BEGINS UPON ARRIVAL TO FIRST JOBSITE AND ENDS UPON DEPARTURE FROM FINAL JOB.								

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2019-2020

FOOTNOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.		Four Star			Sessions Paving Co., Inc.	
						UNIT PRICE	AMOUNT		UNIT PRICE	AMOUNT
	i.	TRAFFIC CONTROL INCLUDED								
(15) REJUVENATING SCRUB SEAL										
	a.	PREP AND CLEAN ASPHALT FROM DIRT, DEBRIS, AND VEGETATION, WHICH MAY REQUIRE PRESSURE WASHING								
	b.	SEALER WILL NOT BOND TO SEVERE OIL ON ASPHALT DAMAGE								
(16) SEED AND SOD SHALL BE PER TDOT SECTION 918.01. THE ONLY ALLOWABLE MIXTURE WILL BE LIMITED TO TABLE 918.01-1 GROUP A (FEBRUARY 1 – JULY 1) AND TABLE 918.01-4 GROUP C (AUGUST 1 – DECEMBER 1).										
(17) COORDINATE WITH CITY OF BRENTWOOD SPECIAL PROVISION CB-112, DECEMBER 31, 2018.										
(18) CURB IRON TO HAVE A SOLID BACK. THE CONTRACTOR MAY SUBSTITUTE NEENAH R-3067V OR APPROVED EQUAL HAVING A SOLID BACK. TOP OF CATCHBASIN MAY REQUIRE MINOR MODIFICATIONS TO ACCOMMODATE THE NEENAH R-3067V SOLID BACK CASTING.										
(19) ATTACHMENT TO TOP DECK OF BOX/SLAB.										
(20) UNIT COST DOES NOT INCLUDE PREPARATION OR SUBMITTAL OF NECESSARY PERMITS. UNIT PRICE BID IS FOR WALL HEIGHTS 6 FEET OR LESS, INCLUSIVE OF COFFER DAMS (IF REQUIRED), CLEARING, SITE PREPARATION, STRIP/PLACE TOPSOIL, EXCAVATION, BACKFILL AND ALL OTHER ITEMS NECESSARY FOR A COMPLETED WALL SYSTEM. EROSION CONTROL FEATURES, OTHER THAN COFFER DAMS, WILL BE PAID FOR SEPARATELY.										

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2019-2020

FOOTNOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.		Four Star			Sessions Paving Co., Inc.	
						UNIT PRICE	AMOUNT		UNIT PRICE	AMOUNT
		(21) BEGIN WORK WITHIN FOURTEEN (14) DAYS AFTER WRITTEN NOTIFICATION OF THE WORK ORDER ISSUED UNDER THIS CONTRACT. EACH AND EVERY WORK ORDER ISSUED SHALL HAVE A MUTUALLY AGREED UPON DATE OF SUBSTANTIAL COMPLETION, AND ALL WORK SHALL BE COMPLETED AND READY FOR FINAL PAYMENT IN ACCORDANCE WITH PARAGRAPH 14.07.B OF THE GENERAL CONDITIONS. THE CONTRACTOR FURTHER AGREES THAT IT								
		(22) UNIT PRICE BID INCLUDES PRIOR INSTALLATION OF THE SEAL COAT, CLEANING OF ALL SURFACES TO BE SEALED BY SWEEPING WITH A MOTORIZED BROOM TO REMOVE ANY LOOSE MATERIAL. CLEAN DEPRESSIONS AND CRACKS NOT REACHED BY THE POWER BROOM USING HAND BROOMS OR PRESSURIZED AIR. DEPENDING ON SEVERITY OF THE CRACK ADDITIONAL ROUTING MAY BE REQUIRED AS DIRECTED BY THE CITY OR AUTHORIZED REPRESENTATIVE								
		(23) COLD PLANE OPERATIONS SHALL BE BASED ON AN AVERAGE DEPTH OF THREE TO FIVE INCHES OVER THE ENTIRE AREA. AREAS TO BE COLD PLANNED SHALL BE RESURFACED WITHIN 30 DAYS OF COMPLETION OF THAT SECTION OF ROADWAY UNLESS AN AUTHORIZED REPRESENTATIVE OF THE CITY OF BRENTWOOD HAS OBTAINED PRIOR APPROVAL								
GENERAL NOTES (ALL ITEMS)										
		(1) WORKING HOURS WILL BE FROM 7:00 AM UNTIL DARK MONDAY THROUGH SATURDAY. NO WORK WILL BE ALLOWED ON SUNDAY UNLESS IT HAS BEEN CLASSIFIED AS AN EMERGENCY AND APPROVED BY THE DIRECTOR OF PUBLIC WORKS.								
		(2) AN INITIAL WORK ORDER IS TENTATIVELY SCHEDULED TO BE ISSUED ON JUNE 1, 2022. ONCE A CONTRACT HAS BEEN ISSUED, ON OR ABOUT JULY 1, 2022 ALL DOCUMENTS FROM THAT POINT, FORWARD WILL SENT TO THE ATTENTION OF MR. TODD HOPPENSTEDT, BRENTWOOD DIRECTOR OF PUBLIC WORKS.								

CITY OF BRENTWOOD
ROADWAY REPAIRS AND IMPROVEMENTS
2019-2020

FOOTNOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.		Four Star			Sessions Paving Co., Inc.	
						UNIT PRICE	AMOUNT		UNIT PRICE	AMOUNT
(3) BONDS WILL BE REQUIRED AS NOTED IN THE CONTRACT DOCUMENTS. HOWEVER, BONDS WILL NOT BE REQUIRED FOR INDIVIDUAL WORK ORDERS ISSUED. A RETAINER WILL NOT BE WITHHELD FROM EACH WORK ORDER ISSUED.										
(4) UNIT PRICE BID FOR ALL ITEMS SHALL INCLUDE ALL MOBILIZATION AND LAYOUT FOR A COMPLETE SYSTEM INCLUSIVE OF ALL WATER QUALITY, EROSION, AND TRAFFIC CONTROL MEASURE INCLUSIVE OF PERMIT PREPARATION TO COMPLY WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. PERMIT APPLICATION FEES SHALL BE REIMBURSED BY THE CITY OF BRENTWOOD.										
(5) MEASUREMENT AND PAYMENT OF QUANTITIES SHALL BE IN ACCORDANCE WITH THE STANDARD AND SUPPLEMENTAL SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED: JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE CONSTRUCTION DOCUMENTS.										
(6) ALL ITEMS WITHIN THIS CONTRACT INCLUDE INSTALLATION OF NECESSARY TRAFFIC AND EROSION CONTROL IN THE UNIT PRICE BID, IN ACCORDANCE WITH CITY REQUIREMENTS. TEMPORARY LANE LINE AND SPECIALTY MARKINGS WILL NOT BE REQUIRED AND SHALL BE THE RESPONSIBILITY OF THE CITY OF BRENTWOOD.										
(7) TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 104 SCOPE OF WORK, ARTICLE 104.02 CHANGES IN PLANS OR IN CHARACTER OF CONSTRUCTION, SUB-SECTION C HAS BEEN DELETED AND NOT APPLICABLE TO THIS CONTRACT.										
(8) PAYMENT FOR THE TOP TWO LAYERS OF ASPHALT ON MAINLINE AND SIDE ROAD PAVING SHALL BE BASED ON THE RATE OF APPLICATION NOTED ON THE PAVING SCHEDULE WITH A TOLERANCE OF 1/4" +/- . AN AVERAGE COMPACTED THICKNESS SHALL BE DETERMINED BASED ON CORE SAMPLES OBTAINED IN ACCORDANCE SPECIAL PROVISION 407DE "TEST STRIPS." ALL QUANTITY OUTSIDE THE TOLERANCE RANGE SHALL NOT BE PAID BY THE OWNER AND SHALL BE										

NOTICE OF AWARD

Dated: _____

TO: Four Star Paving, LLC
(BIDDER)

ADDRESS: Four Star Paving, LLC
C/O Mr. Mike Maynard
1441 Elm Hill Pike
Nashville, TN 37210

Contract: Roadway Repairs & Improvements Fiscal Year 2022 - 2023

Project: General Construction

ENGINEER's Contract No. 22-002

You are notified that your Bid dated April 12, 2022 for the above Contract has been accepted.
You are the apparent Successful Bidder and have been awarded the Contract for Roadway Repairs and Improvements, Fiscal Year 2022 – 2023 as described in the construction documents.

UNIT PRICE WORK

CONSTRUCTION ESTIMATE						
FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	202-03	REMOVAL & DISPOSAL OF RIGID PAVEMENT	S.Y.	2,500	\$0.01	\$25.00
	202-03.01	REMOVAL & DISPOSAL OF ASPHALT PAVEMENT	S.Y.	5,000	\$24.00	\$120,000.00
	202-08.10	REMOVAL & DISPOSAL OF EXISTING CURB (EXTRUDED & CURB/GUTTER)	L.F.	3,000	\$0.01	\$30.00
	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	2,000	\$0.01	\$20.00
	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	500	\$0.01	\$5.00
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	500	\$0.01	\$5.00
	209-08.03	TEMPORARY FILTER BARRIER (WITHOUT BACKING), (AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND	L.F.	500	\$0.01	\$5.00

EJCDC No. 1910-22 (1996 Edition)

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CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
		REPLACEMENT SHALL BE AT THE CONTRACTORS EXPENSE.)				
	209-08.06	ENHANCED SILT FENCE CHECK (TRAPEZOIDAL), DEPTH, OR AS DIRECTED BY THE ENGINEER, AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT SHALL BE AT THE CONTRACTORS EXPENSE.)	EACH	5	\$100.00	\$500.00
	303-01	MINERAL AGGREGATE TYPE A BASE GRADING D	TON	5,000	\$5.00	\$25,000.00
9	303-10.04	MINERAL AGGREGATE (SIZE #9)	TONS	500	\$0.01	\$5.00
1	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	2,500	\$70.00	\$175,000.00
1	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	5,000	\$72.00	\$360,000.00
1	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	28	\$0.01	\$0.28
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	112	\$0.01	\$1.12
1	403-02.01	TRACKLESS TACK COAT (TC)	TON	10	\$1,100.00	\$11,000.00
15	405-03.01	PM REJUVENATING SCRUB SEAL	S.Y	1,300	\$0.01	\$13.00
13, 14	407-02.14	ASPHALT PAVEMENT REPAIR (INFRARED)	L.S.	5	\$1,100.00	\$5,500.00
1	411-01.11	ACS MIX (PG64-22) GRADING "E" ROADWAY	TON	6,000	\$125.00	\$750,000.00
1, 11	411-01.11 (SH)	SPEED HUMP ACS MIX (PG64-22) GRADING "E"	EACH	1	\$4,000.00	\$4,000.00
1, 17	411-01.12 (ST)	SPEED TABLE ACS MIX (PG64-22) GRADING "E"	EACH	1	\$7,000.00	\$7,000.00
1	411-03.07	ACS MIX (PG64-22) THIN LIFT ASPHALT	TON	500	\$88.00	\$44,000.00
1	411-03.10	ACS MIX(PG76-22) GRADING D	TON	6,000	\$130.00	\$780,000.00
1	411-03.11	ACS MIX(PG76-22) GRADING E ROADWAY	TON	6,000	\$130.00	\$780,000.00
1	411-03.12	ACS MIX (PG64-22) THIN LIFT D ASPHALT	TON	2,000	\$130.00	\$260,000.00
2	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	11,250	\$5.00	\$56,250.00
23	415-01.02 (A)	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	3,750	\$8.00	\$30,000.00

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CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
22	502-08.01	RESEALING JOINTS (HOT POURED ELASTIC)	S.F.	8,000	\$0.01	\$80.00
20	604-07.01	RETAINING WALL (REINFORCED EARTH, "MSE")	S.F.	1,000	\$10.00	\$10,000.00
	604-07.01	RETAINING WALL (CLASS "A" CONCRETE, NOT TO EXCEED 24" IN HEIGHT)	L.F.	200	\$25.00	\$5,000.00
	604-07.02	RETAINING WALL (CLASS "A" CONCRETE, 6" to 12" IN HEIGHT)	L.F.	750	\$27.00	\$20,250.00
20	604-07.75	RESTORATION OF REINFORCED EARTH WALLS	S.F.	1,000	\$10.00	\$10,000.00
3, 4	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-06.02	30" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-07.02	36" CONCRETE PIPE CULVERT (CLASS III)	L.F.	400	\$0.01	\$4.00
3, 4	607-03.30	18" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
3, 4	607-05.30	24" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
3, 4	607-06.30	30" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
3, 4	607-07.30	36" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	400	\$0.01	\$4.00
	611-01.20	ADJUSTMENT OF MANHOLE COVERS & FRAMES	EACH	40	\$450.00	\$18,000.00
18	611-03.04	GRAY IRON CASTINGS (CATCHBASIN)	LB.	4,380	\$0.01	\$43.80
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	200	\$0.01	\$2.00
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	1,000	\$0.01	\$10.00
	611-07.03	STRUCTURAL STEEL (PIPE ENDWALLS)	LB.	500	\$0.01	\$5.00
	611-07.54	PRE-CAST HEADWALL (CROSS DRAIN 18 IN @ 3;1)	EACH	20	\$0.01	\$0.20
	611-07.57	PRE-CAST HEADWALL (CROSS DRAIN 24 IN @ 3;1)	EACH	20	\$0.01	\$0.20
	611-07.60	PRE-CAST HEADWALL (CROSS DRAIN 30 IN @ 3;1)	EACH	20	\$0.01	\$0.20
	611-07.63	PRE-CAST HEADWALL (CROSS DRAIN 36 IN)	EACH	20	\$0.01	\$0.20

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CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	611-09.01	ADJUSTMENT OF EXISTING CATCHBASIN GRATES & FRAMES	EACH	40	\$450.00	\$18,000.00
18	611-12.01	CATCHBASINS, TYPE 12, DEPTH 0' - 4' (D-CB-12P, D-CB-12RA, & D-CBB-12A)	EACH	5	\$0.01	\$0.05
	611-12.01 (A)	CATCHBASINS, ADJUSTMENT TYPE 12, DEPTH +/- 1'	PER FT	1	\$1,000.00	\$1,000.00
18	611-14.01	CATCHBASINS, TYPE 14, DEPTH 0' - 4' (D-CB-14P, D-CB-14RB & D-CBB-12A)	EACH	5	\$0.01	\$0.05
	611-14.01 (A)	CATCHBASINS, ADJUSTMENT TYPE 14, DEPTH +/- 1'	PER FT	1	\$1,000.00	\$1,000.00
5, 21	701-01.01	CONCRETE SIDEWALK (4-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	10,000	\$8.00	\$80,000.00
5, 21	701-01.01 (A)	CONCRETE SIDEWALK (8-INCH DEPTH FOR RADIUS RETURNS, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	10,000	\$0.01	\$100.00
5, 21	701-01.06	PEBBLE FINISH CONCRETE SIDEWALK (4-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	2,000	\$0.01	\$20.00
5, 21	701-01.07	EXPOSED AGGREGATE CONCRETE DRIVEWAY (4-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-01.07 (A)	EXPOSED AGGREGATE CONCRETE DRIVEWAY (6-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02	CONCRETE DRIVEWAY (4-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02 (A)	CONCRETE DRIVEWAY (6-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02.01	CONCRETE HANDICAP RAMP (RETROFIT, 8-INCH DEPTH, CLASS "A" W/FIBER MESH, DETECTABLE WARNINGS)	EACH	50	\$1,500.00	\$75,000.00
5, 21	701-02.02	CONCRETE DRIVEWAY (8-INCH DEPTH, CLASS "A" W/FIBER MESH, BROOM FINISH)	S.F.	1,500	\$0.01	\$15.00
5, 21	701-02.07 (B)	EXPOSED AGGREGATE CONCRETE DRIVEWAY (8-INCH DEPTH, CLASS "A" W/FIBER MESH)	S.F.	1,500	\$0.01	\$15.00
6, 21	702-01	CONCRETE CURB, (TURN DOWN - TO BE USED AS DIRECTED)	L.F.	1,500	\$26.00	\$39,000.00
6, 21	702-01.01	EXTRUDED SLOPING CURB (NEW INSTALLATION W/RUBBERIZED EXPANSION JOINT, GREATER THAN 300' Section, RP-MC-2)	L.F.	7,500	\$0.01	\$75.00
6, 21	702-01.01 (A)	EXTRUDED SLOPING CURB (REMOVAL AND REPAIR INSTALLATION LESS THAN 300' SECTION W/RUBBERIZED EXPANSION JOINT, RP-MC-2)	L.F.	2,500	\$28.00	\$70,000.00
	702-01.02	CONCRETE CURB, (12"-TO BE USED AS DIRECTED AT RADIUS RETURNS)	L.F.	200	\$25.00	\$5,000.00

EJCDC No. 1910-22 (1996 Edition)

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CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
6, 21	702-03	CONCRETE COMBINED CURB & GUTTER (NEW INSTALLATION W/RUBBERIZED EXPANSION JOINT, GREATER THAN 300' SECTION, RP-NMC-10)	L.F.	5,000	\$0.01	\$50.00
6, 21	702-03 (A)	CONCRETE COMBINED CURB & GUTTER (REMOVAL AND REPAIR INSTALLATION LESS THAN 300' SECTION W/RUBBERIZED EXPANSION JOINT, RP-NMC-10)	L.F.	500	\$60.00	\$30,000.00
	920-12.01	RUBBERIZED EXPANSION JOINT (ASTM D-1751-97)	L.F.	1,000	\$0.01	\$10.00
19	705-01.04	METAL BEAM GUARD FENCE	L.F.	200	\$125.00	\$25,000.00
	705-02.02	SINGLE GUARDRAIL (TYPE 2, NEW INSTALLATION)	L.F.	250	\$60.00	\$15,000.00
	705-04.09	EARTH PAD FOR TYPE 38 GR END TREATMENT	EACH	1	\$2,500.00	\$2,500.00
	705-06.20	TAN ENERGY ABSORBING TERMINAL (MASH TL3)	EACH	1	\$5,500.00	\$5,500.00
	705-06.30	GUARDRAIL TERMINAL (MASH TL2)	EACH	1	\$4,500.00	\$4,500.00
	705-12.11	GUARDRAIL STEEL POST TYPE 2 (8 FT.)	L.F.	125	\$80.00	\$10,000.00
	705-06.10	GR TERMINAL TRAILING END (TYPE 13) MASH TL-3	EACH	2	\$2,600.00	\$5,200.00
	706-02.01	GUARDRAIL (REMOVE & RESET)	L.F.	500	\$30.00	\$15,000.00
	710-02	AGGREGATE UNDERDRAINS (WITH 4 IN. PIPE)	L.F.	250	\$0.01	\$2.50
	710-04	FILTER CLOTH UNDERDRAIN (WITH PIPE)	L.F.	250	\$0.01	\$2.50
7	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	1	\$150.00	\$150.00
7	712-04.10	TEMPORARY FLEXIBLE TUBULAR DELINEATOR	EACH	1	\$150.00	\$150.00
7	712-05.01	WARNING LIGHTS (TYPE A)	EACH	1	\$125.00	\$125.00
7	712-05.03	WARNING LIGHTS (TYPE C)	EACH	1	\$125.00	\$125.00
7	712-06	SIGNS (CONSTRUCTION)	S.F.	1	\$25.00	\$25.00
	730-12.02(A)	CONDUIT 2" DIAMETER, (PVC, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.02(B)	CONDUIT 2" DIAMETER, (PVC, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.03(A)	CONDUIT 3" DIAMETER, (PVC, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50

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CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	730-12.03(B)	CONDUIT 3" DIAMETER, (PVC, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.08(A)	CONDUIT 2" DIAMETER (RGS, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.08(B)	CONDUIT 2" DIAMETER (RGS, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.09(A)	CONDUIT 3" DIAMETER (RGS, INCLUDES ASPHALT OR CONCRETE TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.09(B)	CONDUIT 3" DIAMETER (RGS, INCLUDES SOD TRENCH REPAIR)	L.F.	250	\$0.01	\$2.50
	730-12.13	CONDUIT 2" DIAMETER (JACKED OR BORED)	L.F.	100	\$0.01	\$1.00
	730-12.14	CONDUIT 3" DIAMETER (JACK AND BORE)	L.F.	100	\$0.01	\$1.00
	740-11.03	TEMPORARY SEDIMENT TUBE 18 INCH (TO BE USED FOR EROSION CONTROL OF "V-DITCH", AFTER THE INITIAL INSTALLATION ALL COST ASSOCIATED WITH REPAIR, MAINTENANCE AND REPLACEMENT SHALL BE AT THE CONTRACTORS EXPENSE.)	L.F.	500	\$0.01	\$5.00
8	795-09.09	RELOCATE/RECONNECT EXISTING WATER METERS	EACH	20	\$0.01	\$0.20
10	795-09.09 (A)	ADJUST HEIGHT OF EXISTING WATER METERS	EACH	20	\$0.01	\$0.20
	795-12.20	ADJUSTMENT OF EXISTING WATER VALVE BOXES	EACH	40	\$450.00	\$18,000.00
	797-07.63	REPLACE MANHOLE CASTING	EACH	0	\$0.01	\$0.00
16	801-01	SEEDING (WITH MULCH)	UNIT	200	\$5.00	\$1,000.00
	801-03	WATER (SEEDING & SODDING)	M.G.	100	\$1.00	\$100.00
16	803-01	SODDING (NEW SOD)	S.Y.	1,500	\$7.00	\$10,500.00
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	5,000	\$0.01	\$50.00
SUB-TOTAL ROADWAY BASE BID						\$3,904,085.50
FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	202-03.01	REMOVAL & DISPOSAL OF ASPHALT PAVEMENT	S.Y.	250	\$30.00	\$7,500.00
	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	200	\$10.00	\$2,000.00

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CONSTRUCTION ESTIMATE

FOOTNOTES	ITEM NO.	THE FOLLOWING ITEMS ARE TO BE USED BY BRENTWOOD PARKS DEPARTMENT	UNIT	QTY.	UNIT PRICE	AMOUNT
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	20	\$10.00	\$200.00
	209-08.03	TEMPORARY FILTER BARRIER (WITHOUT BACKING)	L.F.	500	\$5.00	\$2,500.00
	303-01	MINERAL AGGREGATE TYPE A BASE GRADING D	TON	375	\$25.00	\$9,375.00
1	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	2	\$0.01	\$0.02
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	9	\$0.01	\$0.09
1, 12	411-01.07	ACS MIX (PG64-22) GRADING "E" SHOULDER	TON	150	\$135.00	\$20,250.00
3, 4	607-00(A)	6" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-00(B)	8" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-01(A)	12" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-02 (A)	15" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
3, 4	607-03.30	18" PIPE CULVERT (HIGH-DENSITY POLYETHYLENE (HDPE), AASHTO M294, TYPE S)	L.F.	20	\$10.00	\$200.00
5, 21	701-02.01	CONCRETE HANDICAP RAMP (RETROFIT, 8-INCH DEPTH, CLASS "A" W/FIBER MESH, DETECTABLE WARNINGS)	EACH	4	\$1,500.00	\$6,000.00
16	801-01	SEEDING (WITH MULCH)	UNIT	10	\$5.00	\$50.00
	801-03	WATER (SEEDING & SODDING)	M.G.	5	\$1.00	\$5.00
16	803-01	SODDING (NEW SOD)	S.Y.	350	\$6.50	\$2,275.00
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	150	\$5.00	\$750.00
SUB-TOTAL PARK BASE BID						\$51,905.11
TOTAL PROJECT COST					\$3,955,990.61	

FOOTNOTES

(1) UNIT COST IS ARE SUBJECT TO ADJUSTMENT PER TDOT'S SPECIAL PROVISION 109B, PRICE ADJUSTMENT FOR BITUMINOUS MATERIAL

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- (2) COLD PLANE OPERATIONS SHALL BE BASED ON AN AVERAGE DEPTH OF ZERO TO THREE INCHES OVER THE ENTIRE AREA. AREAS TO BE COLD PLANNED SHALL BE RESURFACED WITHIN 30 DAYS OF COMPLETION OF THAT SECTION OF ROADWAY UNLESS AN AUTHORIZED REPRESENTATIVE OF THE CITY OF BRENTWOOD HAS OBTAINED PRIOR APPROVAL.
- (3) ALL EXCAVATION FOR STORM DRAINAGE PIPE SHALL BE CONSIDERED UNCLASSIFIED MATERIAL AT A DEPTH OF PIPE DIAMETER PLUS 3 FEET.
- (4) UNIT COST INCLUDES BEDDING MATERIAL IN ACCORDANCE WITH TDOT STANDARD DRAWING D-PB-1 AND D-PB-2.
- (5) UNIT PRICE BID INCLUDES EXCAVATION, 4" STONE BEDDING, RUBBERIZED EXPANSION MATERIAL (ASTM D-1751-97), TOPSOIL BACKFILL, 2-FOOT SOD STRIP ON EACH SIDE AND ALL APPURTENANCES TO COMPLETE THE WORK
- (6) UNIT PRICE BID INCLUDES EXCAVATION, STONE BEDDING, RUBBERIZED EXPANSION MATERIAL (ASTM D-1751-97), TOPSOIL BACKFILL, 2-FOOT SOD STRIP, AND ALL APPURTENANCES TO COMPLETE THE WORK.
- (7) TO BE USED AS DIRECTED BY THE BRENTWOOD PUBLIC WORKS DIRECTOR OR AUTHORIZED REPRESENTATIVE.
- (8) INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR REMOVAL OF EXISTING WATER SERVICE METER ASSEMBLY AND INSTALLING AT NEWLY IDENTIFIED LOCATION.
- (9) TO BE USED FOR ADDITIONAL PIPE BEDDING MATERIAL AS DIRECTED BY THE PUBLIC WORKS DIRECTOR OR AUTHORIZED REPRESENTATIVE.
- (10)
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR REMOVAL OF EXISTING WATER METER BOX AND ADJUSTING TO MATCH ADJOINING GRADE
- (11) COORDINATE WITH CITY OF BRENTWOOD SPECIAL PROVISION CB-111, DECEMBER 28, 2018
- (12) RESURFACING OF EXISTING TRAILS VARIES FROM 8 TO 10 FEET. NEW TRAIL CONSTRUCTION SHALL BE A MINIMUM OF 10 FEET IN WIDTH.
- (13) UNIT PRICE BID INCLUDES ALL EQUIPMENT, MATERIALS AND LABOR FOR REPAIR OF AN ASPHALT SURFACE. UNIT PRICE INCLUDES UP TO 126 SF OF SURFACE AREA AND A 4 HOUR ON SITE VISIT, WHICH MAY INCLUDE MULTIPLE LOCATIONS.
- (14) INFRARED PAVEMENT REPAIR USES AN INFRARED HEATING UNIT TO HEAT IN-PLACE ASPHALT TO SOFTEN IT TO A WORKABLE STATE, THEN NEW ASPHALT CAN BE ADDED WHICH FUSES SEAMLESSLY TO THE OLD. THE CONTRACTOR WILL BE COMPENSATED ON A LUMP SUM BASIS PER FOUR HOUR INCREMENT WITH AN AVERAGE REPAIR OF 120 SQUARE FEET WHICH MAY INCLUDE MULTIPLE SITES. THE STEP-BY-STEP PROCESS FOR POTHOLE REPAIR USING A TRUCK-MOUNTED INFRARED PAVEMENT HEATER IS:
- a. SWEEP AND DRY THE AREA.
 - b. POSITION THE INFRARED HEATING ARRAY OVER THE POTHOLE FOR SEVEN TO 10 MINUTES.
 - c. REMOVE THE HEATER AND RAKE THE SOFTENED (350 DEGREE) ASPHALT.
 - d. MIX IN A REJUVENATOR TO REPLENISH LIGHT OILS THAT HAVE OXIDIZED AWAY.
 - e. ADD A SMALL AMOUNT OF FRESH ASPHALT AND GRADE IT TO LEVEL WITH A LUTE.
 - f. USE A VIBRATORY ROLLER TO COMPACT AND FUSE THE PATCH WITH THE SURROUNDING PAVEMENT.
 - g. 12-MONTH WARRANTY ON REPAIRED AREA.
 - h. TIME BEGINS UPON ARRIVAL TO FIRST JOBSITE AND ENDS UPON DEPARTURE FROM FINAL JOB.
 - i. TRAFFIC CONTROL INCLUDED
- (15) REJUVENATING SCRUB SEAL

a. PREP AND CLEAN ASPHALT FROM DIRT, DEBRIS, AND VEGETATION, WHICH MAY REQUIRE PRESSURE WASHING

b. SEALER WILL NOT BOND TO SEVERE OIL ON ASPHALT DAMAGE

(16) SEED AND SOD SHALL BE PER TDOT SECTION 918.01. THE ONLY ALLOWABLE MIXTURE WILL BE LIMITED TO TABLE 918.01-1 GROUP A (FEBRUARY 1 – JULY 1) AND TABLE 918.01-4 GROUP C (AUGUST 1 – DECEMBER 1).

(17) COORDINATE WITH CITY OF BRENTWOOD SPECIAL PROVISION CB-112, DECEMBER 31, 2018.

(18) CURB IRON TO HAVE A SOLID BACK. THE CONTRACTOR MAY SUBSTITUTE NEENAH R-3067V OR APPROVED EQUAL HAVING A SOLID BACK. TOP OF CATCHBASIN MAY REQUIRE MINOR MODIFICATIONS TO ACCOMMODATE THE NEENAH R-3067V SOLID BACK CASTING.

(19) ATTACHMENT TO TOP DECK OF BOX/SLAB.

(20) UNIT COST DOES NOT INCLUDE PREPARATION OR SUBMITTAL OF NECESSARY PERMITS. UNIT PRICE BID IS FOR WALL HEIGHTS 6 FEET OR LESS, INCLUSIVE OF COFFER DAMS (IF REQUIRED), CLEARING, SITE PREPARATION, STRIP/PLACE TOPSOIL, EXCAVATION, BACKFILL AND ALL OTHER ITEMS NECESSARY FOR A COMPLETED WALL SYSTEM. EROSION CONTROL FEATURES, OTHER THAN COFFER DAMS, WILL BE PAID FOR SEPARATELY.

(21) BEGIN WORK WITHIN FOURTEEN (14) DAYS AFTER WRITTEN NOTIFICATION OF THE WORK ORDER ISSUED UNDER THIS CONTRACT. EACH AND EVERY WORK ORDER ISSUED SHALL HAVE A MUTUALLY AGREED UPON DATE OF SUBSTANTIAL COMPLETION, AND ALL WORK SHALL BE COMPLETED AND READY FOR FINAL PAYMENT IN ACCORDANCE WITH PARAGRAPH 14.07.B OF THE GENERAL CONDITIONS. THE CONTRACTOR FURTHER AGREES THAT IF WORK IS NOT INITIATED AND COMPLETED WITHIN THE MUTUALLY AGREED UPON CONSTRUCTION SCHEDULE THE OWNER RESERVES THE OPTION TO IMPOSE LIQUIDATED DAMAGES IN ACCORDANCE WITH SECTION 4.03 OF THE "STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR ON THE BASIS OF STIPULATED PRICE".

(22) UNIT PRICE BID INCLUDES PRIOR INSTALLATION OF THE SEAL COAT, CLEANING OF ALL SURFACES TO BE SEALED BY SWEEPING WITH A MOTORIZED BROOM TO REMOVE ANY LOOSE MATERIAL. CLEAN DEPRESSIONS AND CRACKS NOT REACHED BY THE POWER BROOM USING HAND BROOMS OR PRESSURIZED AIR. DEPENDING ON SEVERITY OF THE CRACK ADDITIONAL ROUTING MAY BE REQUIRED AS DIRECTED BY THE CITY OR AUTHORIZED REPRESENTATIVE. MATERIAL TO BE COORDINATED WITH TDOT SPECIFICATION 905.05.

(23) COLD PLANE OPERATIONS SHALL BE BASED ON AN AVERAGE DEPTH OF THREE TO FIVE INCHES OVER THE ENTIRE AREA. AREAS TO BE COLD PLANNED SHALL BE RESURFACED WITHIN 30 DAYS OF COMPLETION OF THAT SECTION OF ROADWAY UNLESS AN AUTHORIZED REPRESENTATIVE OF THE CITY OF BRENTWOOD HAS OBTAINED PRIOR APPROVAL.

GENERAL NOTES (ALL ITEMS)

(1) WORKING HOURS WILL BE FROM 7:00 AM UNTIL DARK MONDAY THROUGH SATURDAY. NO WORK WILL BE ALLOWED ON SUNDAY UNLESS IT HAS BEEN CLASSIFIED AS AN EMERGENCY AND APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

(2) AN INITIAL WORK ORDER IS TENTATIVELY SCHEDULED TO BE ISSUED ON JUNE 1, 2022. ONCE A CONTRACT HAS BEEN ISSUED, ON OR ABOUT JULY 1, 2022 ALL DOCUMENTS FROM THAT POINT, FORWARD WILL SENT TO THE ATTENTION OF MR. TODD HOPPENSTEDT, BRENTWOOD DIRECTOR OF PUBLIC WORKS.

(3) BONDS WILL BE REQUIRED AS NOTED IN THE CONTRACT DOCUMENTS. HOWEVER, BONDS WILL NOT BE REQUIRED FOR INDIVIDUAL WORK ORDERS ISSUED. A RETAINER WILL NOT BE WITHHELD FROM EACH WORK ORDER ISSUED.

(4) UNIT PRICE BID FOR ALL ITEMS SHALL INCLUDE ALL MOBILIZATION AND LAYOUT FOR A COMPLETE SYSTEM INCLUSIVE OF ALL WATER QUALITY, EROSION, AND TRAFFIC CONTROL MEASURE INCLUSIVE OF PERMIT PREPARATION TO COMPLY WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. PERMIT APPLICATION FEES SHALL BE REIMBURSED BY THE CITY OF BRENTWOOD.

(5) MEASUREMENT AND PAYMENT OF QUANTITIES SHALL BE IN ACCORDANCE WITH THE STANDARD AND SUPPLEMENTAL SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED: JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE CONSTRUCTION DOCUMENTS.

(6) ALL ITEMS WITHIN THIS CONTRACT INCLUDE INSTALLATION OF NECESSARY TRAFFIC AND EROSION CONTROL IN THE UNIT PRICE BID, IN ACCORDANCE WITH CITY REQUIREMENTS. TEMPORARY LANE LINE AND SPECIALTY MARKINGS WILL NOT BE REQUIRED AND SHALL BE THE RESPONSIBILITY OF THE CITY OF BRENTWOOD.

(7) TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 104 SCOPE OF WORK, ARTICLE 104.02 CHANGES IN PLANS OR IN CHARACTER OF CONSTRUCTION, SUB-SECTION C HAS BEEN DELETED AND NOT APPLICABLE TO THIS CONTRACT.

(8) PAYMENT FOR THE TOP TWO LAYERS OF ASPHALT ON MAINLINE AND SIDE ROAD PAVING SHALL BE BASED ON THE RATE OF APPLICATION NOTED ON THE PAVING SCHEDULE WITH A TOLERANCE OF 1/4"±. AN AVERAGE COMPACTED THICKNESS SHALL BE DETERMINED BASED ON CORE SAMPLES OBTAINED IN ACCORDANCE SPECIAL PROVISION 407DEN "TEST STRIPS." ALL QUANTITY OUTSIDE THE TOLERANCE RANGE SHALL NOT BE PAID BY THE OWNER AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR

Total of All Unit Prices:

Three Million Nine Hundred Fifty Five Thousand Nine Hundred Ninety Dollars and 61/100 Cents

(WORDS)

\$3,955,990.61

(DOLLARS)

Four (4) copies of each of the proposed Contract Documents and Drawings accompany this Notice of Award. Additional sets of drawings and specifications are available upon request.

You must comply with the following conditions precedent within 15 days of the date you receive this Notice of Award.

1. Deliver to the OWNER four (4) fully executed counterparts of the Contract Documents. Each of the Contract Documents must bear your signature where indicated.
2. Deliver with the executed Contract Documents the Contract security (Bonds) as specified in the Instructions to Bidders (Article 20) and General Conditions (paragraph 5.01).
3. (List other conditions precedent). N/A

Failure to comply with these conditions within the time specified will entitle OWNER to consider your Bid in default, to annul this Notice of Award and to declare your Bid security forfeited.

Within ten days after you comply with the above conditions, OWNER will return to you one fully executed counterpart of the Contract Documents.

City of Brentwood
(OWNER)

By: _____
(AUTHORIZED SIGNATURE)

(TITLE)

Copy to Engineer

NOTICE TO PROCEED

Dated: _____

TO: Four Star Paving, LLC
(BIDDER)

ADDRESS: Four Star Paving, LLC
C/O Mr. Mike Maynard
1441 Elm Hill Pike
Nashville, TN 37210

Contract: Roadway Repairs & Improvements Fiscal Year 2022 - 2023

Project: General Construction

ENGINEER's Contract No. 22-002

You are notified that the Contract Times under the above contract will commence to run on _____, 2022. By that date, you are to start performing your obligations under the Contract Documents. Substantial Completion shall be in accordance with Article 4 of the Agreement.

Before you may start any Work at the Site, paragraph 2.05.C of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

City of Brentwood
(OWNER)

By: _____
(AUTHORIZED SIGNATURE)

(TITLE)

Copy to ENGINEER

Brentwood City Commission Agenda

Meeting Date: 05/09/2022

Resolution 2022-49 - Acquisition of an Easement for the Arden Woods Sewer Station
Abandonment Project

Submitted by: Chris Milton, Water & Sewer

Department: Water & Sewer

Information

Subject

Resolution 2022-49 - Acquisition of an Easement for the Arden Woods Sewer Station
Abandonment Project.

Background

The Water Services Department's Capital Improvements Program includes funding the abandonment of the City's Arden Woods sewer pumping station and provides for upgrades to the Scales School sewer pumping station. The project scope includes installing approximately 1,500 feet of gravity sewer pipe from the existing Arden Woods sewer station along Fisher Court and connecting to an existing sewer line located near the front of the school, near Murray Lane right-of-way.

To complete the abandonment of the Arden Woods station, a small section of the new gravity sewer line will need to be located on the adjacent parcel at 6402 Fisher Ct., which will require the City to negotiate a permanent and temporary construction easement from the owner. Additionally, the upgrades planned for the Scales School pumping station will require the station site be expanded to accommodate new equipment, including a generator and controls. In regard to easements associated with the section of gravity line routed across the school property, this portion of sewer line is currently owned and maintained by the Williamson County School Board as a private service line. The City has proposed to take over ownership and maintenance of the sewer line to accommodate the abandonment of the Arden Woods station project. In 2017, as a condition of an interlocal agreement between the City and Williamson County Schools (WCS) for aid in funding improvements for Brentwood High and Middle School campuses, WCS agreed to grant the City the needed easements to accommodate this section of sewer line at no additional compensation. However, the interlocal agreement did not specifically address the station site easement and therefore staff believes authorization to negotiate this easement is appropriate.

Accordingly, staff is requesting authorization for the Mayor, City Manager and City Attorney to move forward with negotiations for the acquisition of easements for this sewer facilities project. Attached is a site map for your reference. Please contact Chris Milton, should you have any questions.

Staff Recommendation

Staff recommends approval.

Fiscal Impact**Attachments**

Resolution 2022-49

Site Map

RESOLUTION 2022-49

**A RESOLUTION OF THE CITY OF BRENTWOOD, TENNESSEE AUTHORIZING
THE MAYOR, CITY MANAGER AND CITY ATTORNEY FOR THE CITY OF
BRENTWOOD TO NEGOTIATE FOR, OR TO INSTITUTE EMINENT DOMAIN
PROCEEDINGS AND/OR TO INSTITUTE OR INTERVENE IN ANY OTHER
NECESSARY LEGAL ACTIONS FOR THE ACQUISITION OF EASEMENTS
NECESSARY FOR THE ARDEN WOODS SEWER STATION ABANDONMENT
PROJECT**

WHEREAS, the capital improvements program includes funding the abandonment of the City's Arden Woods sewer pump station and upgrades to the Scales School sewer pumping station; and

WHEREAS, such improvements are necessary to the health, safety and welfare of area residents; and

WHEREAS, the City of Brentwood, under its charter, has the legal authority to condemn property, real or personal, or any easement or interest therein, whether within or without the City, for present or future public use, and the conditions may require the City of Brentwood to exercise this legal right.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF BRENTWOOD, TENNESSEE, AS FOLLOWS:

SECTION 1. That the Mayor, City Manager and City Attorney for the City of Brentwood be and they are hereby authorized to negotiate for, or to institute eminent domain proceedings and/or to institute or intervene in any other necessary legal actions for the acquisition of easements necessary for the Arden Woods sewer station abandonment project.

SECTION 2. That this resolution shall take effect from and after its passage, the general welfare of the City of Brentwood, Williamson County, Tennessee requiring it.

MAYOR

Rhea E. Little, III

ADOPTED: _____

Approved as to form:

RECORDER

Holly Earls

CITY ATTORNEY

Kristen L. Corn



Gravity Sewer
Line Extension

Easement Location #1

Easement Location #2
at Pump Station Site

6424

6418

6416

6414

6410

6408

6409

6407

6405

6403

6401

WATERFORD DR

6399

531

6407

FISCHER CT

526

524

523

6392

6402

6406

504

510

6412

509

6416

6433

6452A

6452

6456

6441

6439

6437

6413

6417

6440

6413

6430

Easement Location #2
at Pump Station Site

Easement Location #1

Gravity Sewer
Line Extension

Brentwood City Commission Agenda

Meeting Date: 05/09/2022

Approval of Recommended Roadway Repairs and Improvements List for FY 2023

Submitted by: Todd Hoppenstedt, Public Works

Department: Public Works

Information

Subject

Approval of Recommended Roadway Repairs and Improvements List for FY 2023.

Background

Attached is a list of City of Brentwood maintained street segments recommended for repair and improvement in FY 2023. The list is mostly prepared using data from the Commission-approved contract with StreetScan for a video assessment of all City streets which was conducted in October 2021, with data provided to Public Works in January 2022. In addition, staff physically evaluates the top priorities each year to further refine the list. We consider pavement condition, traffic type, traffic volume, speed limit, current maintenance demands, drainage concerns, reports of failures, and any plans for known upcoming utility work that may impact these streets before preparing the recommended list.

The proposed FY 2023 budget for Roadway Repairs and Improvements is \$2,600,000 comprised of \$800,000 from the General Fund and \$1,800,000 from the State Street Aid Fund. The attached list of street segments represents the highest priorities at this time, except for some streets that are intentionally delayed until upcoming utility work has been completed. As work progresses through the year, staff will continually review actual project costs to determine what additional work can be added to the contract in order to optimize the use of available funds. In addition to the full-width paving list, there will be many smaller patches and curb repairs added throughout the fiscal year. The list currently represents only about 82% of the available budget. The remaining 18% contingency is being retained to provide the flexibility to address any curb repairs, manhole/valve box adjustments, or failures like settlement, shoving, and pavement buckles. Additionally, the contingency protects against any fluctuations in the TDOT bituminous cost index throughout the course of the year.

Staff Recommendation

Staff recommends the approval of the FY 2023 Paving List.

Please direct any questions to the Public Works Director.

Fiscal Impact

Attachments

Recommended Paving List FY 2023

GIS ID #	Street	Limits
SP_54_72	Montclair Blvd	Moore's to roundabout
SP_54_55	Forsyth Park Drive	Roundabout
SP_54_69	Forsyth Park Drive	Roundabout to Richborough Park Drive
SP_54_54	Burnham Park Drive	Richborough Park Drive to Roundabout
SP_54_66	Knightsbridge Park Close	Richborough Park Drive to Cul-de-sac
SP_54_57	Richborough Park Drive	Surrey Drive to Cul-de-sac
SP_54_68	Claybrook Park Drive	Forsyth Park to Cul-de-sac
SP_54_56	Lockinver Park Drive	Roundabout to Cul-de-sac
SP_54_65	Danforth Park Close	Lochinver Park Drive to Cul-de-sac
SP_54_53	Surrey Drive	Northern Cul-de-sac to 1735 Surrey Drive
SP_54_51	Saddle Ct.	Carriage Hills to Cul-de-sac
SP_54_48	Harness Ct.	Carriage Hills to Cul-de-sac
SP_12_21	Wellesley Way	Landmark Pl to Eastern Cul-de-sac
SP_12_22	Wellesley Way	Landmark Pl to Western Cul-de-sac
SP_8_19	Landmark Place	Maryland Way to Cul-de-sac
SP_12_20	Atrium Court	Wellesley Way to Cul-de-sac
SP_8_18	Courtyard Drive	Wellesley Way to Landmark Place S/B
SP_8_22	Courtyard Drive	Wellesley Way to Landmark Place N/B
SP_12_112	Foxborough Square	Foxland Drive to Roundabout
SP_12_113	Foxborough Square	Roundabout to Foxland Drive
SP_12_111	Foxborough Square	Roundabout
SP_12_109	Foxborough Square E.	Roundabout to roundabout
SP_12_110	Foxborough Square N.	Roundabout to roundabout
	Upon Completion of Water Line Replacement Project	
SP_11_4	Old Smyrna Road	Wilson Pike to Cul-de-sac
SP_11_91	Old Smyrna Road	Wilson Pike to Jones Parkway
SP_11_13	Ford Drive	Old Smyrna Road to Davis Drive
SP_29_50	Carondelet Place	Davis Drive To Shenandoah Drive
SP_11_93	Carondelet Place	Davis Drive to Wilson Pike
SP_29_54	Hood Place	Wilson Pike to Davis Drive
SP_29_55	Hood Place	Davis Drive to Cul-de-sac
SP_29_51	Davis Drive	Old Smyrna Road to 616 Davis Drive
SP_29_59	Shenandoah Drive	Ford Drive to 618 Shenandoah Drive

Brentwood City Commission Agenda

Meeting Date: 05/09/2022

Approval to purchase a Network Data Storage Backup Solution from Pure Storage

Submitted by: Sarah VanWormer, Technology

Department: Technology

Information

Subject

Approval to purchase a Network Data Storage Backup Solution from Pure Storage

Background

The City of Brentwood's current network storage arrays were implemented four and a half years ago. The current storage solution has not met expectations as they relate to recovery times, speed, and expansion. For example, in the event of a disaster requiring full restoration of network data, our current solution takes 1-2 weeks to bring up backups.

In anticipation of the scheduled replacement/upgrade of the network storage arrays as programmed in the Equipment Replacement Fund, Technology staff researched various options. As a result of this research, the Pure Storage solution was identified as the preferred solution. The Pure Storage solution will allow the City to restore backups in a few hours, and the solution also has enhanced Cybersecurity features that do not exist in our current solution. One of these features is the inability to delete backups. Pure Storage has a required validation process that must be completed prior to deletion, reducing the risk of a hacker getting into the network and deleting backup without staff knowledge. Another benefit of this solution is the ease of implementation which is projected at approximately half a day. The proposal price for this solution under the State of Tennessee NASPO purchasing cooperative includes implementation, training, support monitors, and three years of service and maintenance.

Staff Recommendation

Staff is recommending approval to purchase the Pure Storage Network Data Storage solution from Presidio for the total amount of \$451,379.28. This purchase will be made pursuant to the State of Tennessee NASPO purchasing cooperative.

Fiscal Impact

Amount : \$451,379.28

Source of Funds: Equipment Replacement Fund

Account Number: Multiple

Fiscal Impact:

The total cost of the equipment (\$221,662.24) and support/maintenance (\$229,757.04) is \$451,379.28. The support/maintenance component of the quote is an annual fee of \$76,585.68, which has the benefit of locking in pricing over that timeframe. The City will pay a total of \$298,207.92 in Year 1, and \$76,585.68 each in Years 2 and 3.

Approximately \$350,000 have accumulated in the Equipment Replacement Fund for replacement of the network storage, and this purchase is proposed in the draft FY 2023 Annual Budget. An additional \$100,000 is proposed to be transferred at FYE 2022 from General Fund excess revenues to cover the difference between actual replacement costs and what has accumulated to-date.

Attachments

Pure Storage Quote

NASPO Contract

TO: City of Brentwood
Dan Harrison
5211 Maryland Way
Brentwood, TN 37027

dan.harrison@brentwoodtn.gov
(p) 615-371-7000

FROM: Presidio Networked Solutions
Eddie Orfale
12 Cadillac Drive
Suite 130
Brentwood, TN 37027

eorfale@presidio.com
(p) +1.407.641.0550

BILL TO: City of Brentwood
Accounts Payable Michelle
PO BOX 788
Brentwood, TN 37024

Michele.kramer@brentwoodtn.gov
(p) (615) 371-7000

SHIP TO: City of Brentwood
Dan Harrison
5211 Maryland Way
Brentwood, TN 37027

Dan.Harrison@brentwoodtn.gov
(p) 615-371-2221

Customer#: CITYO509

Contract Vehicle: Tennessee (City of Franklin) Pure Storage MNWNC-125 TN#

Account Manager: Jeff Hodges

Inside Sales Rep: Eddie Orfale

Title: City of Brentwood - Pure Storage

#	Part #	Description	Unit Price	Qty	Ext Price
PROD X20					
1	FA-X20R3-ETH-63TB-45/18- EMEZZ	Pure Storage FlashArray X20R3-ETH-63TB-45/18-EMEZZ	\$97,722.24	1.0000	\$97,722.24
2	FA-X20R3-63TB 1MO,ADV,GOLD	FA-X20R3-63TB 1 Month Evergreen Gold Subscription, NBD Delivery, 24/7 Support	\$1,889.07	36.0000	\$68,006.52
Total (PROD X20):					\$165,728.76
PROD X20					
3	FA-X20R3-ETH-63TB-45/18- EMEZZ	Pure Storage FlashArray X20R3-ETH-63TB-45/18-EMEZZ	\$0.00	1.0000	\$0.00
4	FA-X20R3-63TB 1MO,ADV,GOLD	FA-X20R3-63TB 1 Month Evergreen Gold Subscription, NBD Delivery, 24/7 Support	\$1,889.07	36.0000	\$68,006.52
Total (PROD X20):					\$68,006.52
PROD //C40					
5	FA-C40R3-ETH-247TB-247/0	Pure Storage FlashArray C40R3-ETH-247TB-247/0	\$123,900.00	1.0000	\$123,900.00
6	FA-C40R3-247TB 1MO,ADV,GOLD	FA-C40R3-247TB 1 Month Evergreen Gold Subscription, NBD Delivery, 24/7 Support	\$1,302.00	36.0000	\$46,872.00
Total (PROD //C40):					\$170,772.00
PROD //C40					
7	FA-C40R3-ETH-247TB-247/0	Pure Storage FlashArray C40R3-ETH-247TB-247/0	\$0.00	1.0000	\$0.00
8	FA-C40R3-247TB 1MO,ADV,GOLD	FA-C40R3-247TB 1 Month Evergreen Gold Subscription, NBD Delivery, 24/7 Support	\$1,302.00	36.0000	\$46,872.00
Total (PROD //C40):					\$46,872.00
			Sub Total:	\$451,379.28	
			Grand Total:	\$451,379.28	

**QUOTE:****2001721026416-03**

DATE:

04/21/2022

PAGE:

2 of 2

This quote is governed by Terms and Conditions of NASPO ValuePoint Pure Storage Contract MNWNC-125 TN#

Quote valid for 30 days from date shown above.

Pursuant to this contract your PO must reflect the following contract:
NASPO ValuePoint Pure Storage Contract MNWNC-125TN#

Tax ID# 58-1667655; Size Business: Large; CAGE Code: 0KD05; DUNS#15-405-0959

Credit: Net 30 days (all credit terms subject to prior Presidio credit department approval)

Delivery: FOB Terms Destination

PARTICIPATING ADDENDUM
NASPO ValuePoint COOPERATIVE PURCHASING PROGRAM
Computer Equipment
Administered by the State of Minnesota (hereinafter "Lead State")

MASTER AGREEMENT
Master Agreement No: MNWNC-125
Pure Storage
(hereinafter "Contractor")
And
City of Brentwood
(hereinafter "Participating Entity")

1. Scope: This addendum allows for purchase of the following Computer Equipment and Services: Band 5: Storage led by the State of Minnesota along with a multi-state sourcing team for use by purchasing entities authorized to utilize this contract.

The original solicitation contains the requirements and definitions establishing the Product Bands allowed on the Master Agreement. The Master Agreement identifies the bands awarded to the Contract Vendor. The configuration limits and restrictions for the Master Agreement are provided with revisions identified by each Participating Entity placing orders under this Participating Addendum.

2. Participation: Use of this NASPO ValuePoint cooperative contract by all departments under the authority of City of Brentwood, TN are eligible to procure under this Participating Addendum.

3. Order of Precedence:

1. This Participating Addendum
2. Minnesota NASPO ValuePoint Master Agreement No. MNWNC-125
3. The Solicitation including all Addendums; and
4. Contract Vendor's response to the Solicitation

These documents shall be read to be consistent and complementary. Any conflict among these documents shall be resolved by giving priority to these documents in the order listed above. Contract Vendor terms and conditions that apply to this Master Agreement are only those that are expressly accepted by the Participating Entity and must be in writing and attached to the Master Agreement as an Exhibit or Attachment. No other terms and conditions shall apply, including terms and conditions listed in the Contract Vendor's response to the Solicitation, or terms listed or referenced on the Contract Vendor's website, in the Contract Vendor quotation/sales order or in similar documents subsequently provided by the Contract Vendor. The solicitation language prevails unless a mutually agreed exception has been negotiated. These documents shall be read to be consistent and complementary. Any conflict among these documents shall be resolved by giving priority to these documents in the order listed above. Contract Vendor terms and conditions that apply to this Master Agreement are only those that are expressly accepted by the Participating Entity and must be in writing and

attached to the Master Agreement as an Exhibit or Attachment. No other terms and conditions shall apply, including terms and conditions listed in the Contract Vendor's response to the Solicitation, or terms listed or referenced on the Contract Vendor's website, in the Contract Vendor quotation/sales order or in similar documents subsequently provided by the Contract Vendor. The solicitation language prevails unless a mutually agreed exception has been negotiated.

4. Participating Entity Modifications or Additions to Master Agreement:

A. Approval of this Participating Addendum by City of Brentwood will extend to any subsequent addendums/amendments of this executed Participating Addendum.

B. Purchases are authorized only if a Purchase Order is issued in advance of the transaction. Purchase orders under this Participating Addendum shall be issued to an Authorized Reseller identified in Attachment 1. A Purchase Order must indicate that the ordering agency has sufficient funds available to pay for the purchase. Such a Purchase Order is to be provided to the Authorized Reseller by the ordering agency. The Participating Entity will not be liable for payment for any purchases made by its employees without appropriate purchase authorization issued by a Purchasing Agent. If the Authorized Reseller provides goods or services without a signed Purchase Order, it does so at its own risk and expense.

C. NONDISCRIMINATION: The Contractor warrants and represents that all of its employees are treated equally during employment without regard to race, color, religion, disability, sex, age, national origin, ancestry, marital status, familial status, sexual orientation, gender identity and expression, or genetic information.

5. Primary Contacts: The primary contact individuals for this Participating Addendum are as follows (or their named successors):

Contractor:

Name	Kim Bradbury, Sr. Director Public Sector Contracts
Address	650 Castro Street, Ste. 260, Mountain View, CA 94041
Telephone	301-717-9968
Fax	410-414-2117
E-mail	kim.bradbury@purestorage.com

Participating Entity:

Name	
Address	
Cell	
Office	
E-mail	

6. Partner Utilization: Each Entity represented by NASPO ValuePoint participating in this Master Agreement independently have the option of utilizing partners. Only partners approved by this Participating Entity may be deployed. The participating Entity will define

the process to add and remove partners and may define the partner's role in their participating addendum. The Contractor's partners' participation will be in accordance with the terms and conditions set forth in the aforementioned Master Agreement. Approved partners shall have the authority to issue quotes, accept purchase order, issue invoices and receive payments in their own name on behalf of the Contractor. Approved partners are listed in Attachment 1.

7. Terms. The Participating Entity is agreeing to the terms of the Master Agreement only to the extent the terms are not in conflict with applicable law.

8. Orders: Any Order placed by a Participating Entity or Purchasing Entity for a Product and/or Service available from this Master Agreement shall be deemed to be a sale under (and governed by the prices and other terms and conditions) of the Master Agreement unless the parties to the Order agree in writing that another contract or agreement applies to such Order.

IN WITNESS WHEREOF, the parties have executed this Addendum as of the date of execution by both parties below.

Participating Entity: City of Brentwood	Contractor: Pure Storage, Inc.
By:	By:
Name:	Name: Michael Wiseman
Title:	Title: VP, Americas Public Sector
Date:	Date: 6/29/2021

Attachment 1
Approved Partners

Pure Storage Authorized Reseller	Point of Contact	Email	Phone
Presidio Networked Solutions Group, LLC	Jeff Hodges	jhodges@presidio.com	(615) 866-5762
Sirius Computer Solutions, Inc.	Phyllis (PJ) Byrd	Phyllis.byrd@siriuscom.com	(210) 369-8000

Brentwood City Commission Agenda**Meeting Date:** 05/09/2022

Approval to purchase ammunition for the Police Department

Submitted by: Richard Hickey, Police**Department:** Police**Information****Subject**

Approval to purchase ammunition for the Police Department from Gulf States Distributors under Tennessee Statewide Contract #331

Background

In the last several months, international supply chain disruptions have created backlogs in many industries in the United States. Ammunition manufactures have been impacted by the increase in demand for their products and supply chain issues in manufacturing their products. As a result, long lead times have developed in the delivery of ammunition. Currently, manufacturers are unable to estimate delivery dates of orders. As of April 15, the Police Department has not received its full order of ammunition that was placed in July 2021. To ensure the Police Department can meet the State of Tennessee mandatory annual training requirements with firearms, we must have ammunition. It is important that the City recognize the long delivery times associated with items such as ammunition and order these items well in advance, even if the items are not budgeted for the current fiscal year.

Staff requests approval to pre-order all the ammunition for the Police Department being proposed in the FY 2023 draft annual budget. A delivery date for this order cannot be estimated. This order will include:

Quantity	Description	Mfg. Part number	Unit price	Total
8 cases	Speer Gold Dot G2 147 gr bonded 9mm	54226	\$420.00	\$3,360.00
20 cases	Speer Gold Dot .223 REM 55 gr bonded SP	24446	\$295.00	\$5,900.00
118 cases	Speer Lawman 147 gr FMJ 9mm	53620	\$245.00	\$28,910.00
80 cases	Federal American Eagle .223 REM 55 gr FMJ	AE223	\$219.00	\$17,520.00
				\$55,690.00

The total for this order is \$55,690.00

Staff Recommendation

Staff recommends approval of this advance order of ammunition, budgeted for in the proposed FY 2023 Police Operating Budget, from Gulf States Distributors under Tennessee Statewide Contract #331.

Fiscal Impact

Amount : \$55,690.00

Source of Funds: Police Operating Budget

Account Number: 110-42100-83270

Fiscal Impact:

Funds for this purchase will come from the FY2023 Police Operating Budget.

Attachments

Purchase Order & Pricing

State Contract



City of Brentwood

Requisition and Purchase Order Form

Date: 04/15/2022

Department: Police

To be delivered to: Capt. Alan Hardcastle

Deliver by (date): 10/15/2022

Vendor Name: Gulf States Distributors

Contact Person: Geanie Trammell

Vendor Address: 6000 E. Shirley Lane
Montgomery, AL 36117

Phone Number: 1-800-223-7869

Special Instructions: _____

QTY	DESCRIPTION	ACCOUNT CODE	UNIT PRICE	AMOUNT
8	54226 Speer Gold Dot G2 147 gr. bonded 9mm	110-42100-83270	\$420.00	\$3360.00
20	24446 Speer Gold Dot .223 Rem 55 gr. bonded SP	110-42100-83270	\$295.00	\$5900.00
118	53620 Speer Lawman 147 gr. FMJ 9mm	110-42100-83270	\$245.00	\$28910.00
80	AE223 Federal American Eagle .223 Rem 55 gr. FMJ	110-42100-83270	\$219.00	\$17520.00

Total **\$55,690.00**

OTHER QUOTES

Vendor Name	Contact Person	Address	Phone Number	Total Bid

If no other quotes were received, provide an explanation below.

- ☐ Available only from a single vendor
- ☐ Recurring, routine purchase - quotes have been taken within the last twelve months
- ☒ Other - provide full explanation below

Comments: All items are on TN state contract and available only from Gulf States Distributors.

Submitted by: _____
Signature

Approved by: _____
Department Head

To: _____

PO Number: _____

Please enter our order for the above-referenced articles or services at the prices and quantities shown and in conformance with all instructions, specifications, and conditions stated to herein.

Approved by: _____
Signature

Date: _____

City Manager: _____
Signature

Date: _____

Shipping Address: 5211 Maryland Way, Brentwood, TN 37027

Billing Address: PO Box 788, Brentwood, TN 37027



**STATE OF TENNESSEE, DEPARTMENT OF GENERAL SERVICES
CENTRAL PROCUREMENT OFFICE**

Statewide Contract Issued to:

Gulf State Distributors
6000 E Shirley Ln

Montgomery, AL 36117

Vendor ID: 0000001318

Contract Number: 0000000000000000000055311

Title: SWC 331 Ammunition

Start Date : July 14, 2017 End Date: July 13, 2022

Is this contract available to local government agencies in addition to State agencies?: Yes

Authorized Users. This Contract establishes a source or sources of supply for all Tennessee State Agencies. "Tennessee State Agency" refers to the various departments, institutions, boards, commissions, and agencies of the executive branch of government of the State of Tennessee with exceptions as addressed in Tenn. Comp. R. & Regs. 0690-03-01-.01. The Contractor shall provide all goods or services and deliverables as required by this Contract to all Tennessee State Agencies. The Contractor shall make this Contract available to the following entities, who are authorized to and who may purchase off of this Statewide Contract ("Authorized Users"):

- a. all Tennessee State governmental entities (this includes the legislative branch; judicial branch; and, commissions and boards of the State outside of the executive branch of government);
- b. Tennessee local governmental agencies;
- c. members of the University of Tennessee or Tennessee Board of Regents systems;
- d. any private nonprofit institution of higher education chartered in Tennessee; and,
- e. any corporation which is exempted from taxation under 26 U.S.C. Section 501(c)(3), as amended, and which contracts with the Department of Mental Health and Substance Abuse to provide services to the public (Tenn. Code Ann. § 33-2-1001).

These Authorized Users may utilize this Contract by purchasing directly from the Contractor according to their own procurement policies and procedures. The State is not responsible or

liable for the transactions between the Contractor and Authorized Users.

Note: If "no", attach exemption request addressed to the Central Procurement Officer.

Contract Contact Information:

State of Tennessee
Department of General Services, Central Procurement Office
Contract Administrator: Joshua Polk
3rd Floor, William R Snodgrass, Tennessee Tower
312 Rosa L. Parks Avenue
Nashville, TN 37243-1102
Phone: 615-360-4460
Email: Joshua.Polk@tn.gov
Fax: 615-741-0684

Line Information

Line 1

Item ID: 1000120199

Ammunition, Shells, Shotgun: 12 Gauge, #8, plastic case, loaded with 1.125 ounces of #8 shot. Powder equivalent minimum of 2.75 drams, 2.75 inch length, 25 rounds per box. pricing per 1,000 rounds.

Unit of Measure: TH

Vendor Item/Part #: TGL12#8

Manufacturer Item #: TGL12#8

Unit Price: \$ 396

Line 2

Item ID: 1000120201

Ammunition, Shells, Shotgun: 12 Gauge, #9, plastic case. Loaded with 1.125 oz. of #9 shot. Powder equivalent to 2.75 drams, 2.75 inch length, 25 rounds per box, min. 200 max. 500 rounds per case. pricing per 1,000 rounds.

Unit of Measure: TH

Vendor Item/Part #: TGL12#9

Manufacturer Item #: TGL12#9

Unit Price: \$ 396

Line 3

Item ID: 1000120196

Ammunition, Shells, Shotgun: 20 Gauge, plastic case, loaded 7/8 ounce of #9 shot. Powder equivalent minimum of 2.5drams, 2.75 inch length. Twenty five rounds per box. Min. 200 max. 500 rounds per case. pricing per 1,000 rounds.

Unit of Measure: TH

Vendor Item/Part #: TGL20#9

Manufacturer Item #: TG20#9

Unit Price: \$ 396

Line 4

Item ID: 1000120205

Ammunition, cartridges, .22 caliber long rifle, standard velocity bullet with brass cartridge case, weight 40 grains, style lead or copper plated.100 each per box, pricing is per 1000 rounds.

Unit of Measure: TH

Vendor Item/Part #: AE5022

Manufacturer Item #: AE5022

Unit Price: \$ 55.80

Line 5

Item ID: 1000120210

Ammunition, cartridges, Rifle, .223 Remington. 55 grain semi jacketed Soft Point with brass cartridge case. 20 rounds per box. Min. 200 max. 500 rounds per case. priced at 1,000 rounds.

Unit of Measure: TH

Vendor Item/Part #: T223A

Manufacturer Item #: R223R1

Unit Price: \$ 490

Line 6

Item ID: 1000120217

Ammunition, .357 SIG, 125 grain hot bonded, brass jacket. Water-resistant primer. 50 per box, Min. 500 max. 1000 rounds per case. pricing per 1000 rounds.

Unit of Measure: TH

Vendor Item/Part #: 53918

Manufacturer Item #: 53918

Unit Price: \$ 385

Line 7

Item ID: 1000120219

Ammunition, .357 caliber SIG, 125 grain, full metal jacket. 50 per box, 200 min. 1000 max. rounds per case. No reloads or remanufactured will be accepted. pricing per 1000 rounds.

Unit of Measure: TH

Vendor Item/Part #: 53919

Manufacturer Item #: L357S1

Unit Price: \$ 340

Line 8

Item ID: 1000120220

Ammunition, 410 Gauge, 2.5inch length, #9 shot powder dram equivalent max. 25 rounds per box. Min. 200 max. 1000 rounds per case. pricing per 1,000 rounds.

Unit of Measure: TH

Vendor Item/Part #: T412#9

Manufacturer Item #: STS4109

Unit Price: \$ 312

Line 9

Item ID: 1000143111

Ammunition, Handgun, .380 ACP, 95 grain full metal jacket bullet.

Unit of Measure: TH

Vendor Item/Part #: 53608

Manufacturer Item #: 53608

Unit Price: \$ 295

Line 10

Item ID: 1000142237

Ammunition, Handgun, 9mm Luger + P, 124 to 127 grain, premium jacketed hollow point bullet.

Unit of Measure: TH

Vendor Item/Part #: P9HST3

Manufacturer Item #: RA9124TP

Unit Price: \$ 375

Line 11

Item ID: 1000143116

Ammunition, Handgun, 9mm Luger, 147 grain, full metal jacket.

Unit of Measure: TH

Vendor Item/Part #: 53620

Manufacturer Item #: 53620

Unit Price: \$ 245

Line 12

Item ID: 1000143117

Ammunition, Handgun, 9mm Luger, 147 grain, premium jacketed, hollow point bullet.

Unit of Measure: TH

Vendor Item/Part #: P9HST2

Manufacturer Item #: P9HST4

Unit Price: \$ 375

Line 13

Item ID: 1000143118

**Discontinued* Ammunition, Handgun, .45 ACP, 185 grain, premium bonded jacket, hollow point bullet.*

Unit of Measure: TH

Vendor Item/Part #: 53964

Manufacturer Item #: 53964

Unit Price: \$ 352

Line 14

Item ID: 1000142230

Ammunition, Rifle .308, 168 grain, Premium jacketed,? boat tail hollow point bullet.

Unit of Measure: TH

Vendor Item/Part #: GM308M-500

Manufacturer Item #: RM308W7

Unit Price: \$ 930

Line 15

Item ID: 1000142231

Ammunition, Rifle, 5.56 NATO, 55 Grain, FMJ, Do Not use in Rifles chambered for.233.

Unit of Measure: TH

Vendor Item/Part #: XM193

Manufacturer Item #: XM193

Unit Price: \$ 438

Line 16

Item ID: 1000142232

**Discontinued* Ammunition, Rifle, 5.56 NATO, 62 Grain, FMJ, Not use in Rifles chambered for.233.*

Unit of Measure: TH

Vendor Item/Part #: XM855CS

Manufacturer Item #: XM855CS

Unit Price: \$ 331.5

Line 17

Item ID: 1000142235

Ammunition, Rifle, 7.62 NATO, 168 grain, FMJ, open tip bullet.

Unit of Measure: TH

Vendor Item/Part #: A76251M1A

Manufacturer Item #: A76251M1A

Unit Price: \$ 745

Line 18

Item ID: 1000143110

Ammunition, Rifle .22LR, 37 to 40 grain, copper plated, round nose bullet.

Unit of Measure: TH

Vendor Item/Part #: 710

Manufacturer Item #: 1522

Unit Price: \$ 47.52

Line 19

Item ID: 1000179164

Ammunition, cartridges, Rifle, .223 Remington, 55 grain boat tail Hollow Points with brass cartridge case. 20 rounds per box. Min. 200 max. 500 rounds per case. priced at 1,000 rounds.

Unit of Measure: TH

Vendor Item/Part #: T223E

Manufacturer Item #:

Unit Price: \$ 590

Line 20

Item ID: 1000179165

Ammunition, Handgun, 9mm Luger, Force on Force Marking Rd, Green, 500/Case

Unit of Measure: TH

Vendor Item/Part #: FF9G2

Manufacturer Item #:

Unit Price: \$ 518

Line 21

Item ID: 1000179166

Ammunition, Handgun, 9mm Luger, Force on Force Marking Rd, White, 500/Case

Unit of Measure: CS

Vendor Item/Part #: FF9W2

Manufacturer Item #:

Unit Price: \$ 478

Line 22

Item ID: 1000179167

Ammunition, Handgun, 9mm Luger, Force on Force Marking Rd, Red, 500/Case

Unit of Measure: TH

Vendor Item/Part #: FF9R2

Manufacturer Item #:

Unit Price: \$ 518

Line 23

Item ID: 1000179168

Ammunition, Handgun, 9mm Luger, Force on Force Marking Rd, Blue, 500/Case

Unit of Measure: TH

Vendor Item/Part #: FF9B2

Manufacturer Item #:

Unit Price: \$ 518

Line 24

Item ID: 1000179169

Ammunition, Handgun, 9mm Luger, Force on Force Marking Rd, Yellow, 500/Case

Unit of Measure: TH

Vendor Item/Part #: FF9Y2

Manufacturer Item #:

Unit Price: \$ 518

Line 25

Item ID: 1000179170

Ammunition, Handgun, 9mm Luger, Force on Force Marking Rd, Non-Marking, 500/Case

Unit of Measure: TH

Vendor Item/Part #: FF9NM2

Manufacturer Item #:

Unit Price: \$ 578

Line 26

Item ID: 1000179171

Ammunition, Handgun, 9mm Luger, Force on Force Marking Rd, Blank, 500/Case

Unit of Measure: TH

Vendor Item/Part #: FF9BLK2

Manufacturer Item #:

Unit Price: \$ 558

Line 27

Item ID: 1000179172

Ammunition, Rifle, 5.56 NATO, Force on Force Marking Rd, Green, 500/Case

Unit of Measure: TH

Vendor Item/Part #: FF556G1

Manufacturer Item #:

Unit Price: \$ 620

Line 28

Item ID: 1000179173

Ammunition, Rifle, 5.56 NATO, Force on Force Marking Rd, White, 500/Case

Unit of Measure: CS

Vendor Item/Part #: FF556W1

Manufacturer Item #:

Unit Price: \$ 550

Line 29

Item ID: 1000179174

Ammunition, Rifle, 5.56 NATO, Force on Force Marking Rd, Red, 500/Case

Unit of Measure: TH

Vendor Item/Part #: FF556R1

Manufacturer Item #:

Unit Price: \$ 620

Line 30

Item ID: 1000179175

Ammunition, Rifle, 5.56 NATO, Force on Force Marking Rd, Blue, 500/Case

Unit of Measure: TH

Vendor Item/Part #: FF556B1

Manufacturer Item #:

Unit Price: \$ 620

Line 31

Item ID: 1000179176

Ammunition, Rifle, 5.56 NATO, Force on Force Marking Rd, Yellow, 500/Case

Unit of Measure: TH

Vendor Item/Part #: FF556Y1

Manufacturer Item #:

Unit Price: \$ 620

Line 32

Item ID: 1000179177

Ammunition, Rifle, 5.56 NATO, Force on Force Marking Rd, Non-Marking, 500/Case

Unit of Measure: CS

Vendor Item/Part #: FF556NM1

Manufacturer Item #:

Unit Price: \$ 550

Line 33

Item ID:

APCAT - Percentage off Law Enforcement Catalog ; Federal, Speer, Hornady 12 to 47% (see Usage Instructions for Catalog)

Unit of Measure: TH

Vendor Item/Part #:

Manufacturer Item #:

Unit Price: \$ 0

APPROVED: _____ BY: _____
CHIEF PROCUREMENT OFFICER PURCHASING AGENT DATE

Brentwood City Commission Agenda

Meeting Date: 05/09/2022

Ordinance 2022-05 -- An Ordinance Proposing the Rezoning of 5.62 +/- Acres Located in the NE Quadrant of Maryland Way and Brentwood Blvd

Submitted by: Jeff Dobson, Planning & Codes

Department: Planning & Codes

Information

Subject

The attached ordinance requests consideration of the proposed rezoning of ≈ 5.62 acres of land located in the northeast quadrant of the intersection of Maryland Way and Brentwood Boulevard. The requested change is from the C-1 (Commercial -- Office) zoning district to the C-2 (Commercial -- Retail) zoning district.

Background

Ordinance 2022-05 requests the rezoning of ≈ 5.62 acres located in the NE quadrant of the intersection of Maryland Way and Brentwood Boulevard. The requested change is from the C-1 zoning district to the C-2 zoning district. The surrounding properties are zoned C-1, C-2, and SI-3. The subject property is immediately across Maryland Way from Maryland Way Park. The address is 2 Maryland Way.

The subject property includes some of the oldest buildings constructed in Maryland Farms having been completed around 1974. Historically, the three buildings were referred to as "OB" (Office Building) 1, 2 and 3. Now they are called EastPark 1, 2 and 3. All three buildings include three stories each. EastPark 1 and 2 are included as part of the rezoning request, while EastPark 3 is not.

The building areas are summarized in the following table.

BUILDING NAME	AREA (SF)
EastPark One-- (OB 1)	32,437
EastPark Two -- (OB 2)	87,917
EastPark Three -- (OB 3)	83,008

The rezoning plan proposes the demolition of EastPark One, which includes an area of $\approx 32,437$ square feet. According to the owner, the building has become functionally obsolete and is no longer considered feasible or efficient to continue to maintain for office uses. The EastPark Two building is under renovation and will remain.

In addition to the EastPark One demolition, the submitted plan proposes a mixed use project that will include the construction of a four-story, 120-room hotel and a 6,000 sq. ft. restaurant with an

outdoor patio seating/dining area having an additional area of 1,000 sq. ft. The restaurant will be located at the corner of Maryland Way and Brentwood Boulevard. Tenants for the hotel and restaurant have not yet been selected. The parking lots will also be reconfigured as a result of the new uses.

City staff and staff from Neel-Shaffer met with the developers' representative to design the scope for a traffic impact study. Additionally, a shared parking analysis has been provided. The TIS and the shared parking analysis have been forwarded to Mr. Greg Judy with Neel-Shaffer Inc., who assists staff in the review of the submitted TIS. The applicant will pay for the Neel-Shaffer review per the requirements of Section 50-29(b) of the Municipal Code.

Please note that the submitted site plan is not binding as with an OSRD Development Plan. The plan is meant to provide an idea of how the site may develop in the future. If the rezoning is approved, the property owner will present a plan that complies with all applicable technical requirements of the Zoning Ordinance to the Planning Commission for review and approval. The plans would also address grading and stormwater issues associated with the redevelopment of the property. As part of the plan, the applicant will also provide a pedestrian access plan that includes a crosswalk across Brentwood Boulevard and sidewalks in accordance with the requirements of the Subdivision Regulations. There are no sidewalks on either frontage of the property.

TRAFFIC IMPACTS

A Traffic Impact Study (TIS) was provided as part of the initial request for annexation of the property. A copy of the TIS was forwarded to Mr. Greg Judy with Neel-Shaffer Inc., who assists staff in the review of the submitted TIS. Mr. Judy is in the process of conducting his review, however, the complete review will not be available until after first reading of the ordinance. The applicant will pay for the Neel-Shaffer review per the requirements of Section 50-29(b) of the Municipal Code.

The TIS recommends the following improvements be incorporated into the design of the project.

Brentwood Boulevard and Driveways A & B

- Driveways A & B should continue to operate with a minimum of one entering lane and one exiting lane.
- The westbound approach of Driveway A should continue to be stop-controlled.

Maryland Way and Driveway C

- Driveway C should continue to operate with a minimum of one entering lane and one exiting lane.
- The southbound approach of Driveway C should continue to be stop-controlled.

Travel Demand Management

- Off-peak loading and deliveries for the restaurant development should be encouraged to minimize impacts to traffic operations.

Additional Recommendations

- As part of the construction of the project, all internal and external driveway connections should be designed such that the departure sight triangles, as specified by AASHTO, will be clear of all sight obstructions, including landscaping, existing vegetation, monument signs/walls, fences, etc.

Based on the analyses conducted, no further recommendations are presented for the proposed EastPark development.

Additionally, a Shared Parking Study was provided as part of the submittal. The purpose of the study is to determine the minimum number of parking spaces required to accommodate the proposed mixed use development at peak periods. Since the site includes a mix of land uses, the peak parking demand for each use will not occur at the same time.

Section 78-454 of the zoning ordinance includes the following minimum parking requirements based on the proposed land uses.

<i>LAND USE</i>	<i>AREA</i>	<i>PARKING REQUIRED</i>	<i># OF SPACES REQUIRED</i>
OFFICE	168,180 SF	1 SPACE/300 SF	561
HOTEL	120 ROOMS	1 SPACE/ROOM + 1 SPACE PER EMPLOYEE ON MAX. SHIFT	130
RESTAURANT*	7,000 SF	1 SPACE/100 SF GROSS	70
<i>* Note that the restaurant patio area is also calculated at 1 space/ 100 sf</i>			
TOTAL			761

Note that the area as shown in the table above includes the existing third office building (OB3) as part of the study. The OB3 building is included as part of the shared parking study, but is not part of the area proposed for rezoning. The study determined April to be the peak month, while the hourly peak demand is expected to be 11:00 a.m. in April. According to the study, the projected parking demand for the mixed use development that includes a hotel may be reduced 41% on weekdays and 31% on weekends.

<i>DEVELOPMENT</i>	<i>PEAK PARKING DEMAND</i>	
	<i>WEEKDAY</i>	<i>WEEKEND</i>
EASTPARK	600 SPACES	597 SPACES

As shown in the first table above a total of 761 parking spaces would be required if shared parking was not considered. The shared parking analysis would reduce the total spaces required from 761 to 600 (161 spaces), a reduction of approximately 21%.

SEWER IMPACTS

City consultants conducted an evaluation of the existing sewer to determine if the system would

have adequate capacity to receive requested flows from the proposed development.

<i>USE</i>	<i>AREA</i>	<i>GPD</i>	<i>TOTAL (GPD)</i>
Hotel	120 rooms	75	9,000
Existing Office Bldg.	88,000	8,800	8,800
Restaurant (6,000 sf w/1,000 patio) -- 200 seats (Est.)	7,000	8,000	8,000
TOTAL			25,800

Based on the evaluation models, the local impact of the proposed development on Brentwood's receiving sewer is negligible based on predicted levels during both dry and wet weather conditions. However, resulting surcharge in the downstream trunk sewer is predicted that will need to be addressed separately from this project. It is assumed that the master plan recommendations will be implemented to address surcharging in the trunk sewer as appropriate.

The review of the plan will track along the following revised schedule.

<i>HEARING SCHEDULE</i>	
<i>May 9, 2022</i>	Board of Commissioners -- First Reading of Ordinance 2022-05 Rezoning Property to C-2
<i>May 26, 2022</i>	Required Community Meeting -- TENTATIVE
<i>June 6, 2022</i>	Planning Commission -- Review & Recommendation of Ordinance 2022-05
<i>June 13, 2022</i>	Board of Commissioners -- Public Hearing of Ordinance 2022-05
<i>June 27, 2022</i>	Board of Commissioners -- Second and Final Reading of Ordinance 2022-05

Should you have any questions or require additional information, please contact the Planning and Codes Director.

Staff Recommendation

Staff has reviewed the proposed request for rezoning and the associated plans and found that they comply with the applicable provisions of the Zoning Ordinance for consideration by the Board of Commissioners.

Previous Commission Action

On April 8, 2022, the property owner deferred consideration of the request from the April 11, 2022 City Commission agenda to allow City staff and consultants to finalize sewer modeling numbers. The request was tentatively placed on the May 9, 2022, regular agenda.

Fiscal Impact

Attachments

Ordinance 2022-05

Attachment B - Concept Plan

Owners Affidavit

Statement of Owners Interest

TIS Study Intersections -- EastPark

EastPark TIS

EastPark Shared Parking Study

Sewer Capacity Evaluation

EastPark Utility Capacity Memo -- Kimley-Horn

ORDINANCE 2022-05

AN ORDINANCE OF THE CITY OF BRENTWOOD, TENNESSEE TO AMEND THE ZONING ORDINANCE, SAME BEING CHAPTER 78 OF THE CODE OF ORDINANCES OF THE CITY OF BRENTWOOD, BY CHANGING THE PRESENT ZONING CLASSIFICATION ON CERTAIN PROPERTY LOCATED IN THE NORTH EAST QUADRANT OF THE INTERSECTION OF MARYLAND WAY AND BRENTWOOD BOULEVARD FROM THE C-1 (COMMERCIAL -- OFFICE) ZONING DISTRICT TO THE C-2 (COMMERCIAL -- RETAIL) ZONING DISTRICT, SAID PROPERTY BEING MORE SPECIFICALLY DESCRIBED IN THE PROPERTY DESCRIPTION ATTACHED HERETO AND MADE A PART OF THIS ORDINANCE BY REFERENCE, AND SHOWN ON THE MAP ATTACHED HERETO AND MADE A PART OF THIS ORDINANCE BY REFERENCE; AND TO AMEND THE OFFICIAL ZONING MAP ACCORDINGLY

SECTION 1. That the present zoning classification for certain property located in the northeastern quadrant of the intersection of Maryland Way and Brentwood Boulevard from the C-1 (Commercial – Office) zoning district to the C-2 (Commercial – Retail) zoning district, said property being more particularly described in the property description attached hereto as Attachment A, and being more particularly shown on Attachment B, said attachments being made a part of this ordinance by reference.

SECTION 2. That the official zoning map be and the same is hereby amended accordingly.

SECTION 3. That this ordinance shall take effect from and after its final passage, or fifteen days after its first passage, whichever occurs later, the general welfare of the City of Brentwood, Williamson County, Tennessee, requiring it.

PASSED: 1st reading _____ 2nd reading _____ PUBLIC HEARING Notice published in: <u>Williamson A.M.</u> Date of publication: _____ Date of hearing: _____	PLANNING COMMISSION _____ NOTICE OF PASSAGE Notice published in: _____ Date of publication: _____ EFFECTIVE DATE _____
---	--

MAYOR Rhea E. Little III

RECORDER Holly Earls

Approved as to form:

CITY ATTORNEY Kristen L. Corn

ATTACHMENT A
ORDINANCE 2022-05

EASTPARK OFFICE BUILDING 1

BEING A PARCEL OF LAND LYING IN THE FIFTEENTH CIVIL DISTRICT, CITY OF BRENTWOOD, WILLIAMSON COUNTY, TENNESSEE. SAID PARCEL IS LOCATED ON THE EASTERLY RIGHT-OF-WAY OF BRENTWOOD BOULEVARD, SOUTH 07 DEGREES 39 MINUTES 53 SECONDS WEST, 425.26 FEET FROM THE NORTHERLY MARGIN OF THOROUGHbred LANE AND BEING MORE PARTICULARLY DESCRIBED , BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT AN IRON ROD (OLD) IN THE EASTERLY RIGHT-OF-WAY OF BRENTWOOD BOULEVARD AT THE SOUTHWEST CORNER OF HIGHWOODS/FORSYTH LIMITED PARTNERSHIP OF RECORD IN DEED BOOK 1384, PAGE 774, R.O.W.C. (REGISTER'S OFFICE FOR WILLIAMSON COUNTY), AND BEING THE NORTHWEST CORNER OF THE HEREIN DESCRIBED PROPERTY;

THENCE, LEAVING SAID RIGHT-OF-WAY WITH SAID HIGHWOODS/FORSYTH LIMITED PARTNERSHIP, SOUTH 82 DEGREES 09 MINUTES 37 SECONDS EAST, 354.54 FEET TO A TACK IN LEAD (OLD) IN THE WESTERLY LINE OF SUN LIFE ASSURANCE COMPANY OF CANADA OF RECORD IN DEED BOOK 1783, PAGE 685, R.O.W.C. AND SHOWN AS LOT 62 ON THE PLAN ENTITLED "RESUBDIVISION OF MARYLAND FARMS, SECTION 52", OF RECORD IN PLAT BOOK 25, PAGE 41, R.O.W.C.

THENCE, WITH SAID LOT 62, SOUTH 07 DEGREES 51 MINUTES 24 SECONDS WEST, 208.71 FEET TO A P.K. NAIL (OLD) IN THE NORTHERLY LINE OF HIGHWOODS/FORSYTH LIMITED PARTNERSHIP OF RECORD IN DEED BOOK 1384, PAGE 774, R.O.W.C.;

THENCE, WITH SAID HIGHWOODS/FORSYTH LIMITED PARTNERSHIP FOR THE NEXT THREE CALLS:

- 1) NORTH 82 DEGREES 02 MINUTES 57 SECONDS WEST, 164.98 FEET TO AN IRON ROD (OLD);
- 2) SOUTH 07 DEGREES 39 MINUTES 14 SECONDS WEST, 110.00 FEET TO AN IRON ROD (OLD);
- 3) NORTH 82 DEGREES 01 MINUTES 52 SECONDS WEST, 188.91 FEET TO AN IRON ROD (NEW) IN THE EASTERLY RIGHT-OF-WAY OF BRENTWOOD BOULEVARD.

THENCE, WITH SAID RIGHT-OF-WAY, NORTH 07 DEGREES 40 MINUTES 12 SECONDS EAST, 317.96 FEET TO THE POINT OF BEGINNING AND CONTAINING 94,576 SQUARE FEET OR **2.17** ACRES MORE OR LESS.

THIS DESCRIPTION IS IN ACCORDANCE WITH AN ALTA/ACSM LAND TITLE SURVEY PERFORMED BY RAGAN SMITH ASSOCIATES, 315 WOODLAND STREET, NASHVILLE, TN. 37206. PH(615)244-8591, ON AUGUST 21, 2008, BY TED J. STEVENSON II, RLS

NUMBER 2136. PROJECT NUMBER 78-063 WORK ORDER 7155. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE COORDINATE SYSTEM OF 1983 OBTAINED THROUGH G.P.S. (GLOBAL POSITIONING SYSTEM) OBSERVATION.

EASTPARK OFFICE BUILDING 2

BEING A PARCEL OF LAND LYING IN THE FIFTEENTH CIVIL DISTRICT, CITY OF BRENTWOOD, WILLIAMSON COUNTY, TENNESSEE. SAID PARCEL IS LOCATED IN THE NORTHEAST QUADRANT OF THE INTERSECTION OF BRENTWOOD BOULEVARD AND MARYLAND WAY AND BEING MORE PARTICULARLY DESCRIBED , BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT AN IRON ROD (OLD) IN THE NORTHERLY RIGHT-OF-WAY OF MARYLAND WAY AT THE SOUTHWESTERLY CORNER OF SUN LIFE ASSURANCE COMPANY OF CANADA OF RECORD IN DEED BOOK 1783, PAGE 685, R.O.W.C. (REGISTER'S OFFICE FOR WILLIAMSON COUNTY) AND SHOWN AS LOT 62 ON THE PLAN ENTITLED "RESUBDIVISION OF MARYLAND FARMS, SECTION 52", OF RECORD IN PLAT BOOK 25, PAGE 41, R.O.W.C., AND BEING THE SOUTHEAST CORNER OF THE HEREIN DESCRIBED PROPERTY;

THENCE, WITH SAID RIGHT-OF-WAY, WITH A CURVE CONCAVE TO THE LEFT WITH A DELTA ANGLE OF 18 DEGREES 54 MINUTES 19 SECONDS, WITH A RADIUS OF 1285.00 FEET, WITH AN ARC LENGTH OF 424.00 FEET, WITH A CHORD BEARING OF SOUTH 74 DEGREES 02 MINUTES 39 SECONDS WEST, 422.07 FEET TO AN IRON ROD (OLD);

THENCE, NORTH 74 DEGREES 33 MINUTES 02 SECONDS WEST, 79.56 FEET TO AN IRON ROD (OLD) IN THE EASTERLY RIGHT-OF-WAY OF BRENTWOOD BOULEVARD;

THENCE, WITH SAID RIGHT-OF-WAY, WITH A CURVE CONCAVE TO THE RIGHT WITH A DELTA ANGLE OF 38 DEGREES 05 MINUTES 20 SECONDS, WITH A RADIUS OF 150.36 FEET, WITH AN ARC LENGTH OF 99.96 FEET, WITH A CHORD BEARING OF NORTH 11 DEGREES 21 MINUTES 03 SECONDS WEST, 98.13 FEET TO AN IRON ROD (OLD);

THENCE, NORTH 07 DEGREES 40 MINUTES 12 SECONDS EAST, 209.90 FEET TO AN IRON ROD (NEW) AT THE SOUTHWEST CORNER OF HIGHWOODS/FORSYTH LIMITED PARTNERSHIP OF RECORD IN DEED BOOK 1384, PAGE 774, R.O.W.C. ;

THENCE, LEAVING SAID RIGHT-OF-WAY WITH SAID HIGHWOODS/FORSYTH LIMITED PARTNERSHIP FOR THE NEXT THREE CALLS:

- 1) SOUTH 82 DEGREES 01 MINUTES 52 SECONDS EAST, 188.91 FEET TO AN IRON ROD (OLD);
- 2) NORTH 07 DEGREES 39 MINUTES 14 SECONDS EAST, 110.00 FEET TO AN IRON ROD (OLD);
- 3) SOUTH 82 DEGREES 02 MINUTES 57 SECONDS EAST, 164.98 FEET TO P.K.

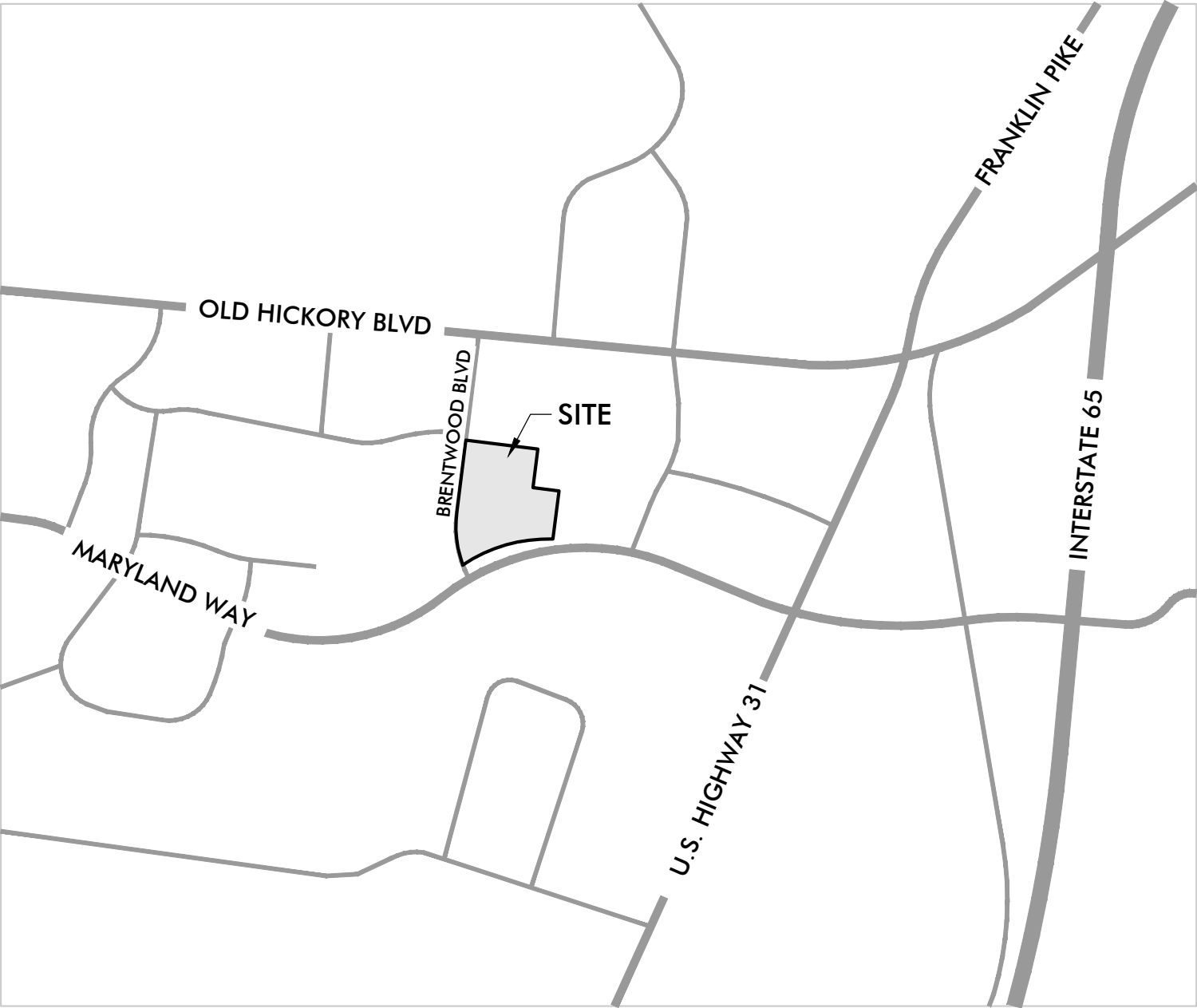
NAIL (OLD) IN THE WESTERLY LINE OF SAID LOT 62;

THENCE, WITH SAID LOT 62, SOUTH 82 DEGREES 02 MINUTES 57 SECONDS EAST, 144.86 FEET TO AN IRON ROD (OLD);

THENCE, CONTINUING WITH SAID LOT 62, SOUTH 07 DEGREES 56 MINUTES 42 SECONDS WEST, 251.78 FEET TO THE POINT OF BEGINNING AND CONTAINING 150,072 SQUARE FEET OR **3.45** ACRES MORE OR LESS

THIS DESCRIPTION IS IN ACCORDANCE WITH AN ALTA/ACSM LAND TITLE SURVEY PERFORMED BY RAGAN SMITH ASSOCIATES, 315 WOODLAND STREET, NASHVILLE, TN. 37206. PH(615)244-8591, ON AUGUST 21, 2008, BY TED J. STEVENSON II, RLS NUMBER 2136. PROJECT NUMBER 78-063 WORK ORDER 7155. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE COORDINATE SYSTEM OF 1983 OBTAINED THROUGH G.P.S. (GLOBAL POSITIONING SYSTEM) OBSERVATION.

EASTPARK
RE-ZONING APPLICATION
TAX MAP 011A
PARCEL 00600, GROUP D
ADDRESS: 1-2 MARYLAND WAY
COB # XXXX
BRENTWOOD, WILLIAMSON CO., TN



SITE LOCATION MAP
N.T.S.

SHEET INDEX:	Sheet Number	Initial Submittal
COVER	C0.0	03-22-2022
EXISTING CONDITIONS PLAN	L1.0	03-22-2022
REZONING PLAN	L1.1	03-22-2022
CONCEPT SITE PLAN	L1.2	03-22-2022
ILLUSTRATIVE CONCEPT PLAN	L1.3	03-22-2022
3D BUILDING MASSING STUDY	L1.4	03-22-2022

EXISTING ZONING: C-1 - COMMERCIAL OFFICE
PROPOSED ZONING: C-2 - COMMERCIAL RETAIL

DEVELOPER
BOYLE.

Boyle Nashville LLC
2000 Meridian Blvd.
Suite 250
Franklin, TN 37067
Contact: Jeff Haynes
615.550.5578
jhaynes@boyle.com

LANDSCAPE ARCHITECT
/ APPLICANT
KV+D
KISER VOGGRIN DESIGN

Kiser+Vogrin Design
5005 Meridian Blvd
Suite 100
Franklin, TN 37067
Contact: Gary Vogrin
615.708.0567
gary@kiservogrin.com

CIVIL ENGINEER
Kimley»Horn

Kimley-Horn Assoc.
10 Lea Avenue, Suite 400,
Nashville, TN 37210
Contact: Mary McGowan
615.800.4004
mary.mcgowan@kimley-horn.com

TRAFFIC ENGINEER
KCI
TECHNOLOGIES

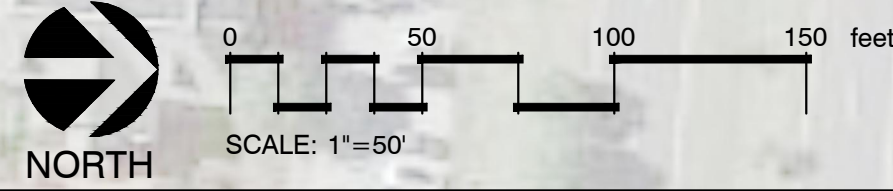
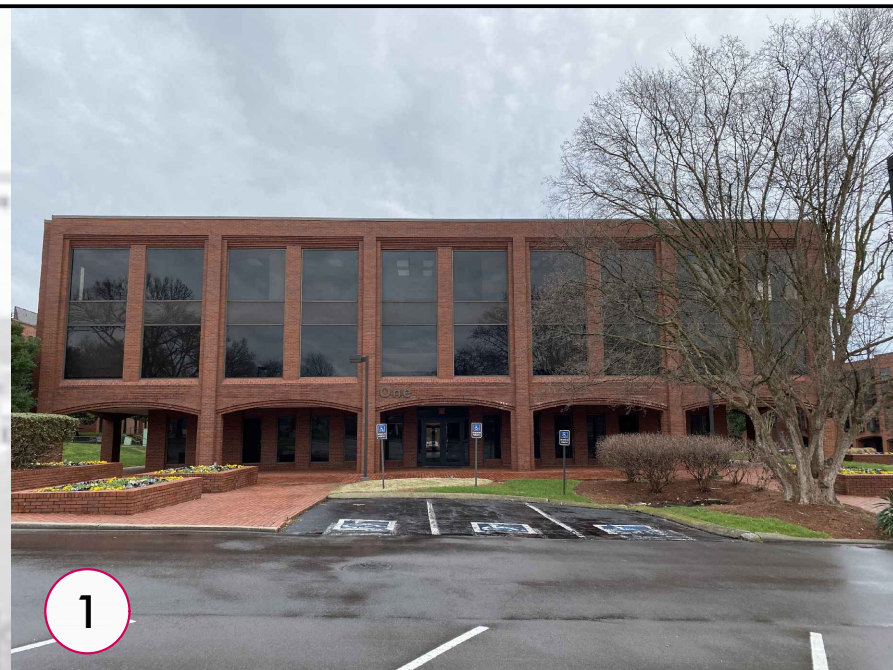
KCI Technologies
500 11th Avenue North Suite 290
Nashville, TN 37203
Contact: Beth Ostrowski
615.559.0155
beth.ostrowski@kci.com

KVD PROJECT# : 22007
COB # : XXXX
Sheet #:

C0.0

DATE: 03-22-2022

NOT FOR CONSTRUCTION

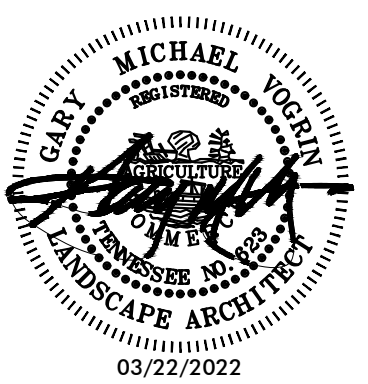


OLD HICKORY BLVD

OLD HICKORY BLVD

Kimley»Horn
10 Lea Avenue, Suite 400,
Nashville, TN 37210
Main: 615.564.2701
Fax: 615.564.2702
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KV+D
5005 Madison Blvd, Ste. 100
Franklin, TN 37067
Main: 615.708.0567
www.kiservogrin.com
KISER VOGGRIN DESIGN



EASTPARK
MARYLAND FARMS
BRENTWOOD PROJECT # TBD
BRENTWOOD, WILLIAMSON COUNTY, TN

NO.	DATE	BY

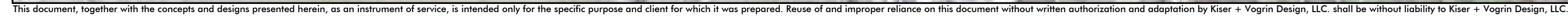
DESIGNED BY: GV
DRAWN BY: YZ
CHECKED BY: GV
DATE: 03/22/2022

KVD PROJECT NO.
22007

DRAWING TITLE:

**EXISTING
CONDITIONS**

SHEET NUMBER
L1.0

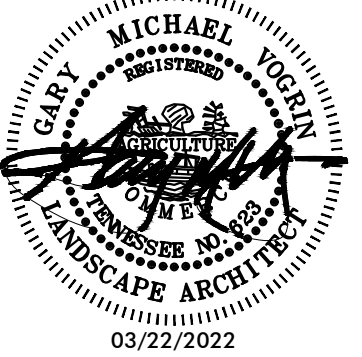


Kimley»»Horn
10 Lea Avenue, Suite 400,
Nashville, TN 37210
Main: 615.562.2701
www.kimley-horn.com

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5015 Mecklenburg Blvd., Ste. 100
Franklin, TN 37067
Main: 615.708.0567
www.kiservogrin.com

KISER VOGGRIN DESIGN



EASTPARK
MARYLAND FARMS
BRENTWOOD PROJECT # TBD
BRENTWOOD, WILLIAMSON COUNTY, TN

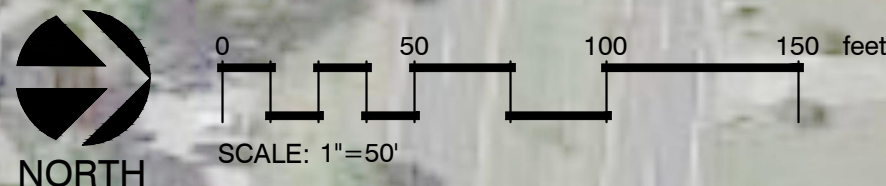
REVISIONS		DATE	BY
NO.			
DESIGNED BY:		GV	
DRAWN BY:		YZ	
CHECKED BY:		GV	
DATE:		03/22/2022	

KVD PROJECT NO. 22007
DRAWING TITLE: CONCEPT SITE PLAN

SHEET NUMBER

L1.2

PARKING DATA
REQUIRED PARKING SPACES: ± 629
PROVIDED PARKING SPACES: 645
***NOTE: REFER TO SHARED PARKING STUDY**





EASTPARK PLANNING & REZONING

ILLUSTRATIVE CONCEPT PLAN

BOYLE
Kimley»Horn

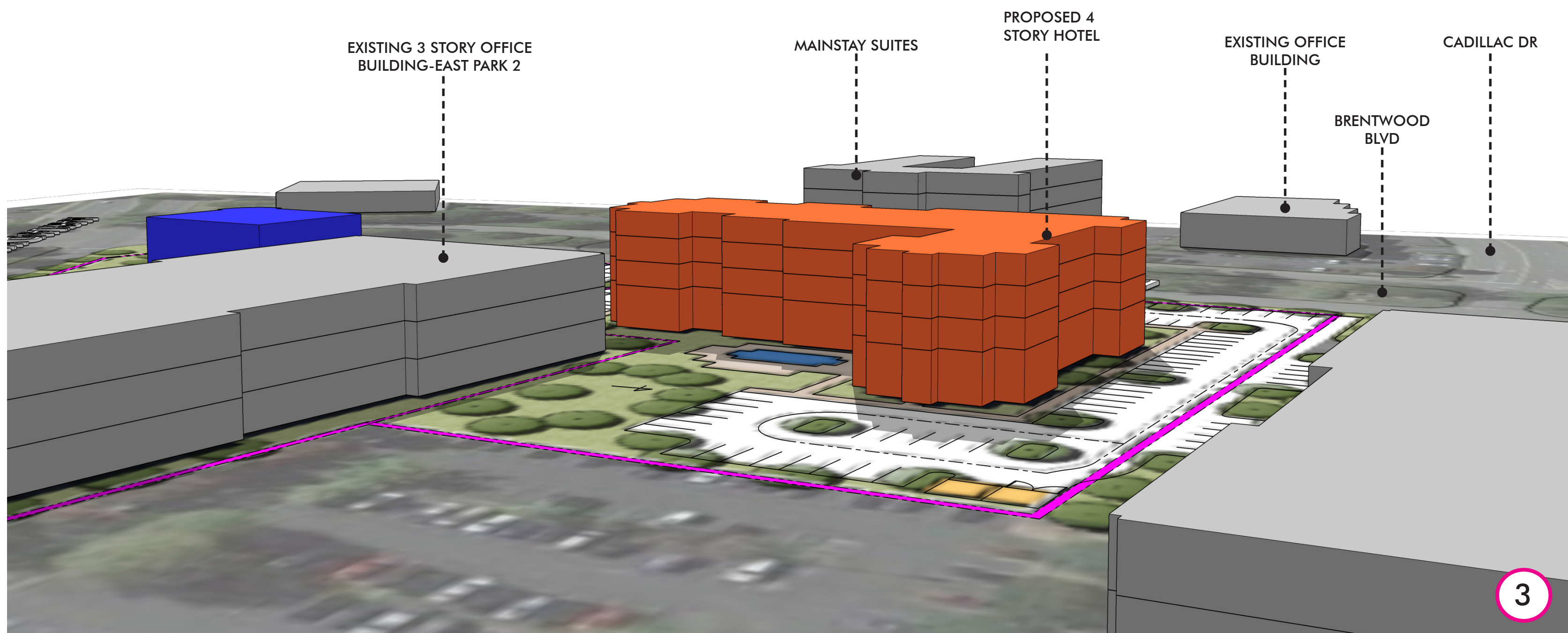
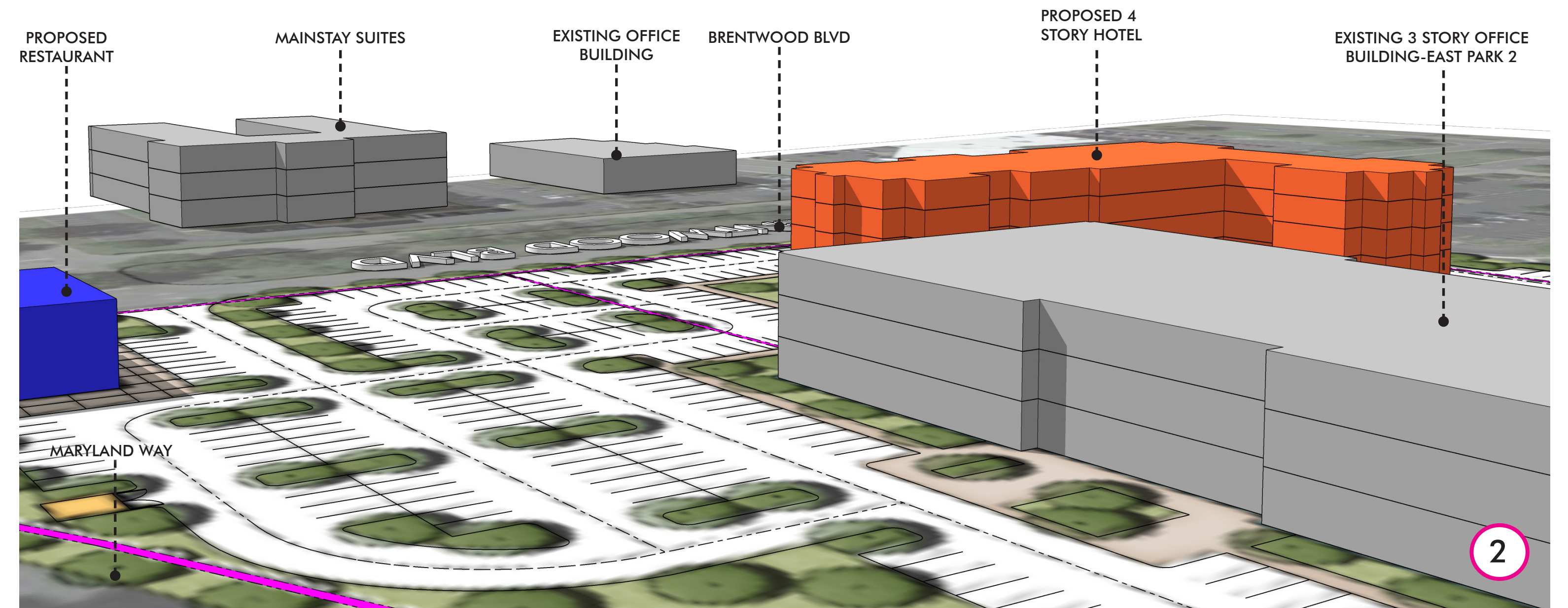
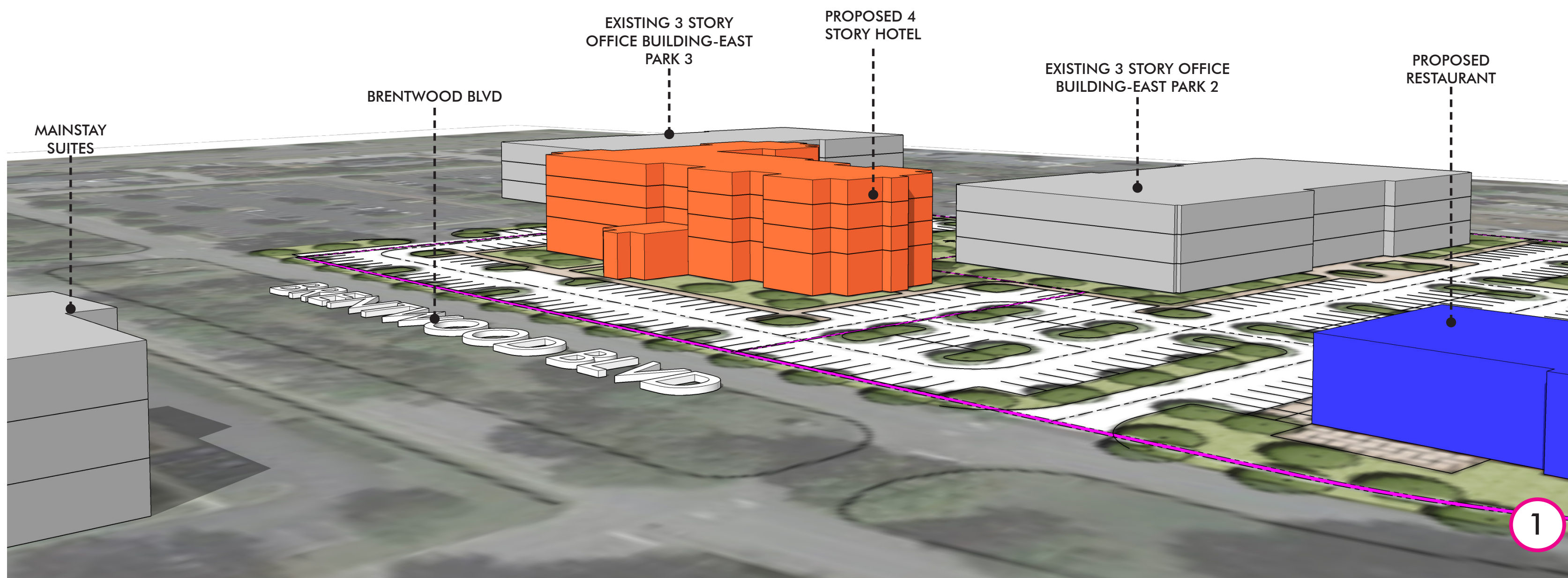
KV+D
KISER VOGGRIN DESIGN

0 50 100 150
SCALE: 1"=50'

MAR 22, 2022



L1.3



EASTPARK PLANNING & REZONING

3D BUILDING MASSING STUDY

BOYLE
Kimley»Horn

KV+D
KISER VOGGIN DESIGN

DISCLAIMER:
The drawing shown is conceptual and for reference and illustrative purposes. This drawing can change and/or be revised at any time without prior notification and should not be relied upon as a final representation of the final built project.

MAR 22, 2022

Owner Affidavit



OWNER AFFIDAVIT
City of Brentwood, Tennessee

We/I Eastpark General Partnership
(Please print name/names in full)
being duly sworn, depose and say(s) that (I am)/(We are) the owner(s) of
the property as described as:

Map 11A, Group D, Parcel 6.00
(Property Parcel/Tax ID Number)
and located at:

1 Maryland Way, Brentwood, TN 37027
(Street Address)
am fully aware of the request for development approval in the City of
Brentwood, Tennessee. Furthermore, (I)/ (we) hereby appoint

KVD, LLC - Gary Vogrin
(Please print name/names in full)
to act as my/our authorized agent on my/our behalf on all matters
pertaining to the processing and obtaining the application with the exception
of legal documents for recording purposes.

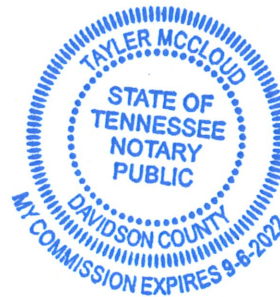
[Signature]
Signature
2000 Meridian Blvd Ste. 250
Property Owner Mailing Address
Franklin, TN 37067
City, State & Zip

Subscribed and sworn to before me this

10th day of March, 2022.

Taylor McCloud
Notary Public

My Commission Expires: 9. 6. 22





Project: EastPark Rezoning

KVD Project #: 22007

Date: 03.22.22

RE: Statement of Interest

EastPark General Partnership which is the owner of the EastPark Office Complex has been in the process of renovating the existing buildings on the campus over the past few years, but their intention is to rezone the parcel which contains building 1 and building 2 and to re-envision the site into a mixed-use project incorporating a 4-story hotel and 1-story restaurant into the existing 3 story office building campus and benefit from the shared parking of these 3 program uses. To allow for the proposed hotel use, the central existing office building 1 is to be demolished while building 2 is to remain. Office building 1 was one of the first buildings constructed within the Maryland Farm business development in 1977 and is in a state of functional obsolescence.

Project #892200721 (East Park TIS)



Study Intersections:

1. Maryland Way and Brentwood Boulevard
2. Brentwood Boulevard and Juris Lane / Existing Access 1
3. Brentwood Boulevard and Cadillac Drive / Existing Access 2
4. Brentwood Boulevard and Thoroughbred Lane
5. Old Hickory Boulevard and Brentwood Boulevard
6. Maryland Way and Existing Access 3

Data Collection Times:

- Weekday AM Peak (7-9 AM)
- Weekday PM Peak (4-6 PM)



TRAFFIC IMPACT STUDY

EAST PARK
BRENTWOOD, TENNESSEE



PREPARED FOR:
KISER VOGRIN DESIGN
APRIL 2022

**TRAFFIC IMPACT STUDY
EAST PARK
BRENTWOOD, TENNESSEE**

PREPARED FOR:
KISER VOGRIN DESIGN



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EXECUTIVE SUMMARY

Project Description

The proposed East Park development is located along the corner of Maryland Way and Brentwood Boulevard in Brentwood, Tennessee. According to the developer, the proposed development approximately includes a hotel with 120 rooms and 7,000 square feet of high-turnover (sit-down) restaurant. Access to the development is planned to be provided by three existing driveways, two on Brentwood Boulevard and one on Maryland Way. The purpose of this study is to analyze the access plan and the traffic impacts associated with this proposed development.

Data Collection

In order to provide data for the traffic impact analysis, manual traffic counts were conducted at the following intersections:

1. Maryland Way and Brentwood Boulevard (signalized)
2. Brentwood Boulevard and Juris Lane/Driveway A (unsignalized)
3. Brentwood Boulevard and Cadillac Drive/Driveway B (unsignalized)
4. Brentwood Boulevard and Thoroughbred Lane (unsignalized)
5. Old Hickory Boulevard and Brentwood Boulevard/Private Drive (signalized)
6. Maryland Way and Driveway C (unsignalized)

Specifically, Marr Traffic conducted the traffic counts from 7:00 – 9:00 AM and 4:00 – 6:00 PM on a typical weekday in March 2022 while local schools were in session. From the counts, it was determined that the peak hours of traffic flow for the majority of the study intersections occurred from 8:00 – 9:00 AM and 4:15 – 5:15 PM.

Projection of Future Traffic Volumes

In order to account for the traffic growth prior to the completion of the proposed project, background traffic volumes were established. Then, the estimated total project-generated traffic volumes for the proposed development were added to the background peak hour traffic volumes in order to obtain the total projected peak hour traffic volumes for the study area intersections.

Conclusions and Recommendations

The analyses presented in this study indicate that the impacts of the proposed project on the existing street network will be manageable by providing the recommendations below. These specific recommendations will provide safe and efficient traffic operations within the study area following the completion of the proposed project. The recommendations are as follows:

Brentwood Boulevard and Driveway A

- Driveway A should continue to operate with a minimum of one entering lane and one exiting lane.
- The westbound approach of Driveway A should continue to be stop-controlled.

Brentwood Boulevard and Driveway B

- Driveway B should continue to operate with a minimum of one entering lane and one exiting lane.
- The westbound approach of Driveway B should continue to be stop-controlled.

Maryland Way and Driveway C

- Driveway C should continue to operate with a minimum of one entering lane and one exiting lane.
- The southbound approach of Driveway C should continue to be stop-controlled.

Travel Demand Management

- Off-peak loading and deliveries for the restaurant development should be encouraged to minimize impacts to traffic operations.

Additional Recommendations

- As part of the construction of the project, all internal and external driveway connections should be designed such that the departure sight triangles, as specified by AASHTO, will be clear of all sight obstructions, including landscaping, existing vegetation, monument signs/walls, fences, etc.

In summary, based on the analyses conducted, no further recommendations are presented for the proposed East Park development.

1. INTRODUCTION AND PROJECT DESCRIPTION

The purpose of this study is to analyze the traffic impacts and access plan associated with the proposed East Park development located along the corner of Maryland Way and Brentwood Boulevard in Brentwood, Tennessee. According to the developer, the proposed development approximately includes a hotel with 120 rooms and 7,000 square feet of high-turnover (sit-down) restaurant. Furthermore, the project site includes two existing office buildings that will remain open, and one office building that will be removed.

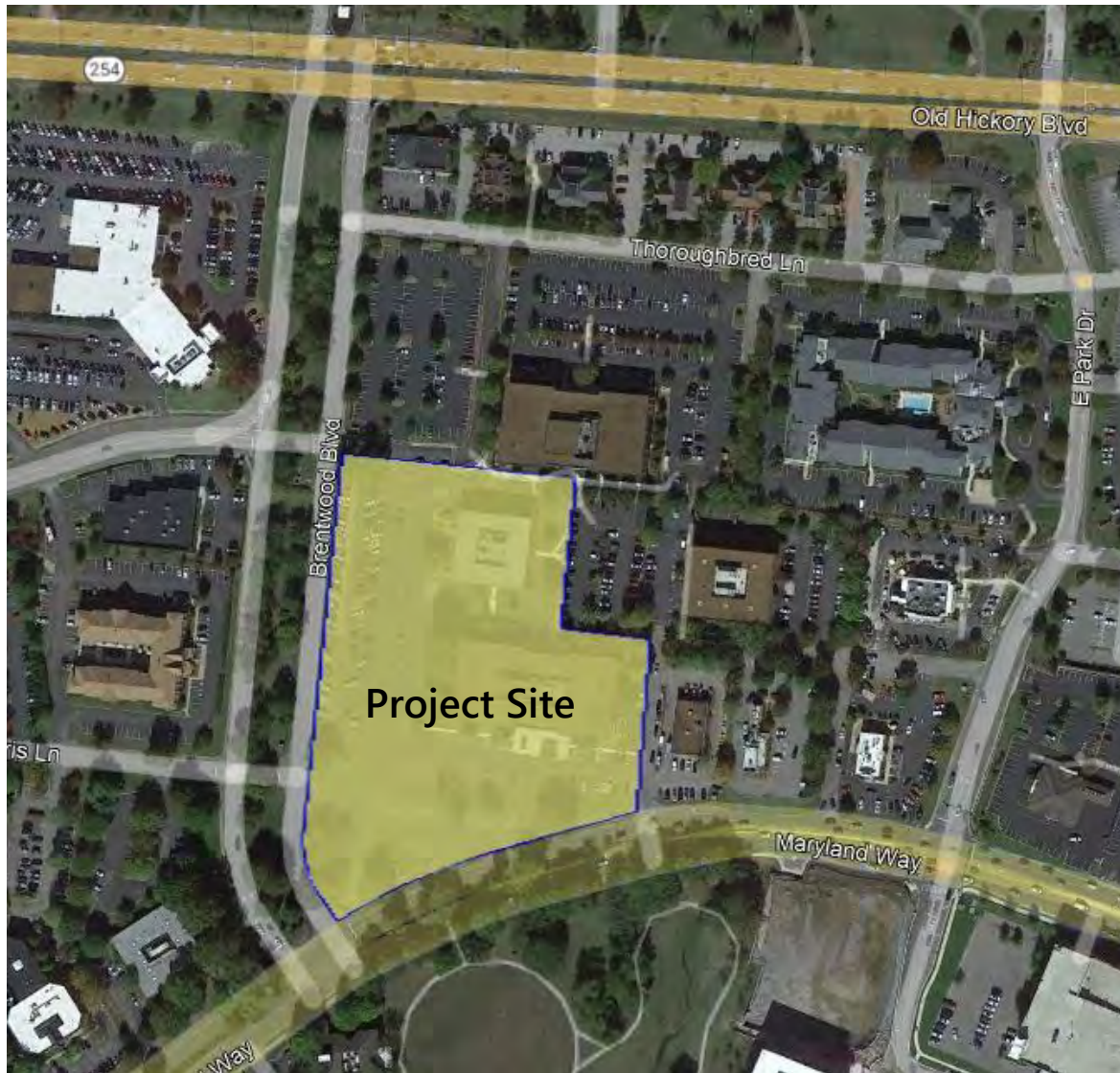
As shown by Figure 1, the property is located along the corner of Maryland Way and Brentwood Boulevard south of the intersection of Old Hickory Boulevard and Brentwood Boulevard/Private Drive. The property is currently zoned C-1 (Commercial Office) but is intended to be rezoned to C-2 (Commercial Retail). The proposed development is within an area that is characterized by low to medium-density land uses. The property is generally bounded on the north by commercial land uses, on the west by Brentwood Boulevard, on the south by Maryland Way, and on the east by commercial land uses.

The current site plan for the East Park development is shown in Appendix A. Based on this site plan, proposed vehicular access for the development is planned to be provided by three existing driveways, two on Brentwood Boulevard and one on Maryland Way. Existing surface parking is planned to accommodate the proposed development.

In this study, the current operating characteristics of the adjacent roadways and intersections in the vicinity of the project site are evaluated. The expected trips generated by the proposed development are determined and distributed to the roadway network. The adjacent roadways and intersections are then reevaluated to determine the anticipated traffic impacts of the project. Finally, recommendations are presented, including roadway improvements and/or traffic control improvements that are needed to accommodate the expected traffic.

The scope of work for this study, as described above, was determined via a scoping meeting between KCI Technologies, the developer, and the City of Brentwood on March 31, 2022. The scoping meeting notes are included in Appendix B.

FIGURE 1. LOCATION OF THE PROJECT SITE



Location of the Project Site
(Not to Scale)

Figure 1.

2. EXISTING CONDITIONS

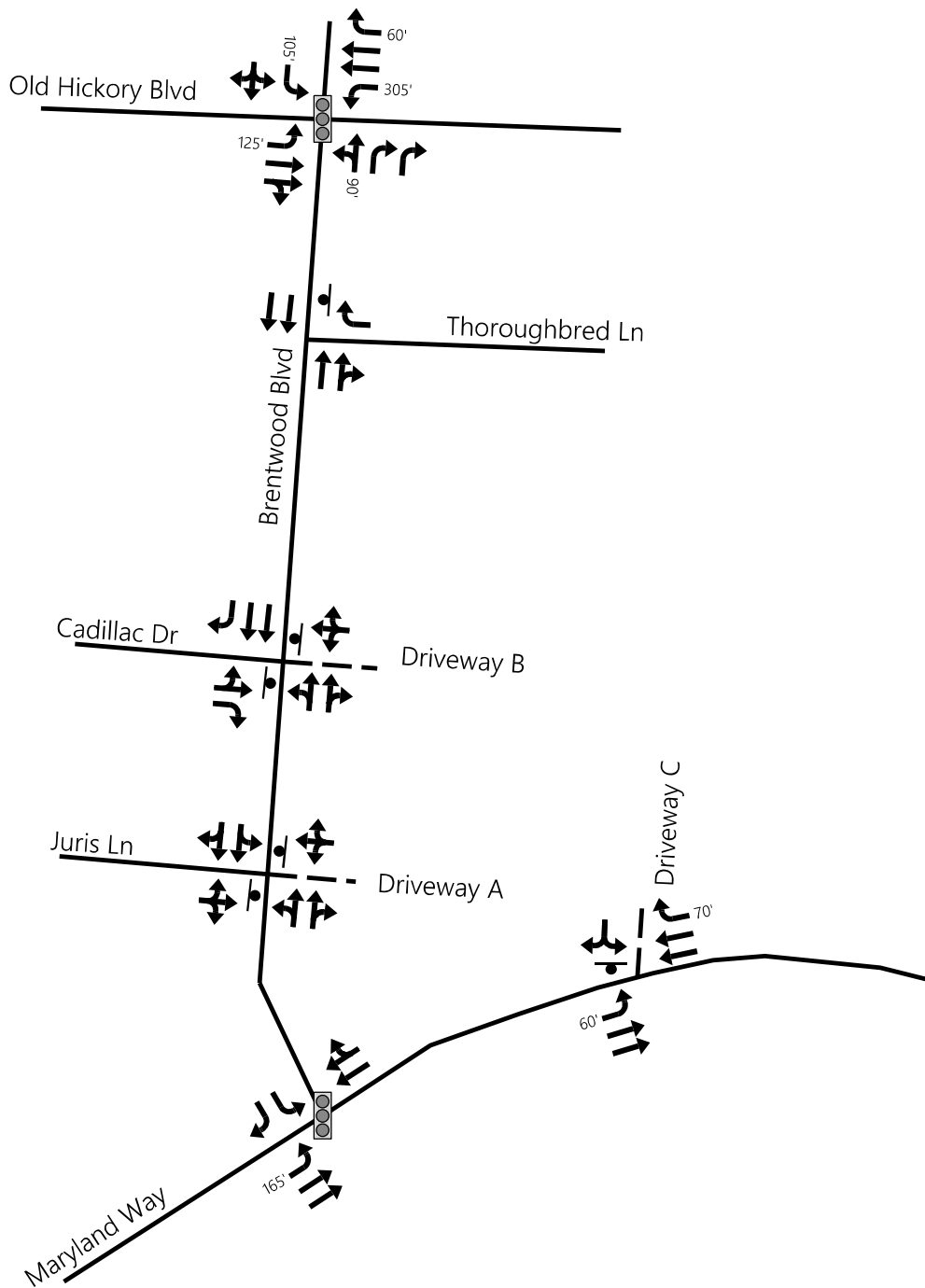
2.1 Existing Roadway Network

Local access to the site will be provided by Old Hickory Boulevard, Maryland Way, Brentwood Boulevard, Cadillac Drive, Thoroughbred Lane, and Juris Lane. A field inventory of the study network was conducted. The roadway classifications were obtained from the Tennessee Department of Transportation (TDOT) *Functional Classification System*. If no speed limit is posted, Brentwood's current *Code of Ordinances* sets the maximum speed limit for a road in an urban district as 30 mph in the absence of a posted speed limit. A description of these roadways within the project vicinity is presented in Table 1.

TABLE 1. DESCRIPTION OF STUDY ROADWAYS

ROADWAY NAME	DIRECTION	NUMBER OF LANES			TDOT CLASSIFICATION	POSTED SPEED LIMIT (mph)
		EB/NB	WB/SB	TWLT		
Old Hickory Blvd	East-West	2	2	--	Principal Arterial on the National Highway System	45
Maryland Way	East-West	2	2	--	Minor Arterial	40
Brentwood Blvd	North-South	2	2	--	Major Collector	30
Cadillac Dr	East-West	2	2	--	Local	30
Thoroughbred Ln	East-West	1	1	--	Local	Not Posted
Juris Ln	East-West	1	1	--	Local	Not Posted

The study area includes six existing intersections. The existing laneage at the study intersections is illustrated in Figure 2.



Existing Laneage
(Not to Scale)

Figure 2.

2.2 Existing Pedestrian Infrastructure

Sidewalk is currently provided on the south side Old Hickory Boulevard and the south side of Maryland Way. Sidewalk is also provided on the east side of Brentwood Boulevard between Thoroughbred Lane and Cadillac Drive, on the west side of Brentwood Boulevard between Cadillac Drive and Maryland Way, and on the north and south side of Cadillac Drive.

A detailed inventory of the pedestrian infrastructure at the study intersections is presented in Table 2A and Table 2B.

TABLE 2A. PEDESTRIAN INFRASTRUCTURE INVENTORY - CORNER

INTERSECTION	INFRASTRUCTURE	North Leg East Side	North Leg West Side	South Leg East Side	South Leg West Side	East Leg North Side	East Leg South Side	West Leg North Side	West Leg South Side
Maryland Way and Brentwood Blvd	Detectable Warning Mat			--	--				✓
	ADA Ramp		✓	--	--			✓	✓
Brentwood Blvd and Juris Ln/Driveway A	Detectable Warning Mat							✓	✓
	ADA Ramp		✓		✓			✓	✓
Brentwood Blvd and Cadillac Dr/Driveway B	Detectable Warning Mat	✓				✓		✓	✓
	ADA Ramp	✓	✓		✓	✓		✓	✓
Brentwood Blvd and Thoroughbred Ln	Detectable Warning Mat			✓			✓	--	--
	ADA Ramp			✓			✓	--	--
Old Hickory Blvd and Brentwood Blvd/Private Dr	Detectable Warning Mat				✓				✓
	ADA Ramp				✓				✓
Maryland Way and Driveway C	Detectable Warning Mat			--	--				
	ADA Ramp			--	--				
✓ – Pedestrian Infrastructure Currently Available									

TABLE 2B. PEDESTRIAN INFRASTRUCTURE INVENTORY - LEG

INTERSECTION	INFRASTRUCTURE	North	South	East	West
Maryland Way and Brentwood Blvd	Crosswalk		--		✓
	Signal Head		--		
Brentwood Blvd and Juris Ln/Driveway A	Crosswalk				
	Signal Head	--	--	--	--
Brentwood Blvd and Cadillac Dr/Driveway B	Crosswalk				
	Signal Head	--	--	--	--
Brentwood Blvd and Thoroughbred Ln	Crosswalk				--
	Signal Head	--	--	--	--
Old Hickory Blvd and Brentwood Blvd/Private Dr	Crosswalk				
	Signal Head				
Maryland Way and Driveway C	Crosswalk		--		
	Signal Head	--	--	--	--
✓ – Pedestrian Infrastructure Currently Available					

2.3 Existing Bicycle and Transit Facilities

According to the City of Brentwood, within the vicinity of the project site, none of the roadways are classified as shared roadways or bikeways. Additionally, the project site does not have access to any transit routes within a quarter mile.

2.4 Existing Traffic Volumes

In order to provide data for the traffic impact analysis, traffic counts were conducted at the following intersections:

1. Maryland Way and Brentwood Boulevard (signalized)
2. Brentwood Boulevard and Juris Lane/Driveway A (unsignalized)
3. Brentwood Boulevard and Cadillac Drive/Driveway B (unsignalized)
4. Brentwood Boulevard and Thoroughbred Lane (unsignalized)
5. Old Hickory Boulevard and Brentwood Boulevard/Private Drive (signalized)
6. Maryland Way and Driveway C (unsignalized)

Specifically, Marr Traffic conducted the traffic counts from 7:00 – 9:00 AM and 4:00 – 6:00 PM on a typical weekday in March 2022 while local schools were in session. From

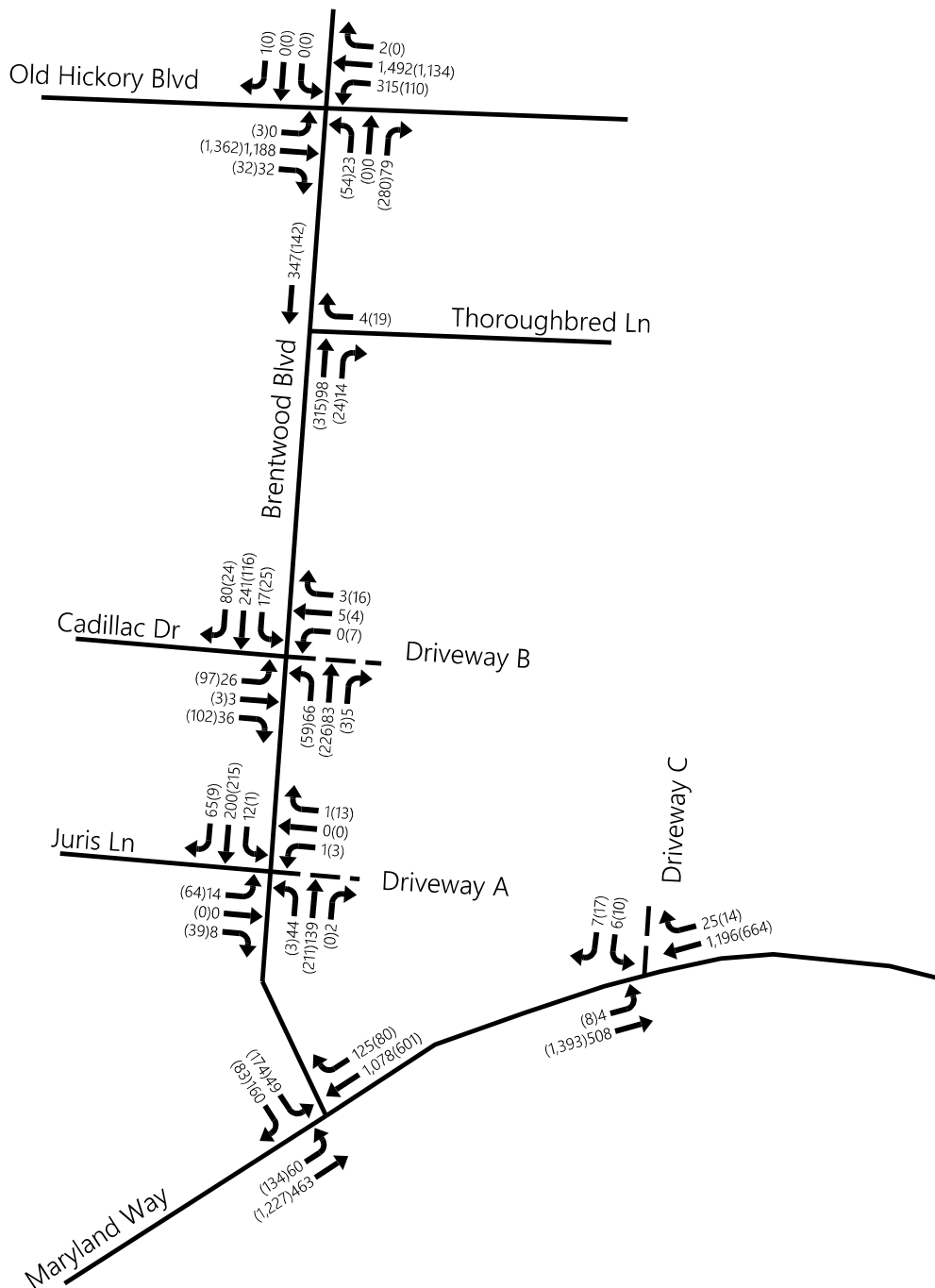
the counts, it was determined that the peak hours of traffic flow for the majority of the study intersections occurred from 8:00 – 9:00 AM and 4:15 – 5:15 PM.

The existing peak hour turning movement volumes are presented in Figure 3. It should be noted that the traffic volumes shown along Brentwood Boulevard have been balanced. A detailed summary of the traffic counts is included in Appendix C.

In addition to the above information, average daily traffic volumes were obtained from the TDOT. There are three TDOT count stations located in the vicinity of the project site. The count station locations and annual average daily traffic (AADT) in 2020 are shown in Table 3. Additional TDOT Count Station data is included in Appendix D.

TABLE 3. TDOT COUNT STATION DATA

ROADWAY	LOCATION	STATION NO.	2020 AADT (vpd)
Old Hickory Blvd	Northeast of the Project Site; Between Franklin Pk and E Park Dr	132	47,988
Brentwood Blvd	North of the Project Site; Between Old Hickory Blvd and Cadillac Dr	574	7,591
Brentwood Blvd	West of the Project Site; Between Cadillac Dr and Juris Ln	181	3,902



XXX - AM Peak Hour
Traffic Volumes
(XXX) - PM Peak Hour
Traffic Volumes



Existing Peak Hour Traffic Volumes

(Not to Scale)

Figure 3.

2.5 Existing Traffic Operations

To determine the current operation of the study intersections, capacity analyses were performed for the AM and PM peak hours. The capacity calculations were performed according to the methods outlined in the *Highway Capacity Manual*, 6th Edition. However, it should be noted that due to the limitations of HCM 6th Edition regarding intersections with non-NEMA phasing, some of the signalized intersections were analyzed using HCM 2000 methodologies. The capacity analyses result in the determination of a Level of Service (LOS) for an intersection. The LOS is a concept used to describe how well an intersection or roadway operates. LOS A is the best, while LOS F is the worst. LOS D is typically considered as the minimum acceptable LOS for an intersection in an urbanized area. For stop-controlled intersections, a LOS is presented for each critical turning movement. For signalized intersections, a LOS is presented for the overall intersection. Table 4 presents the descriptions of LOS for signalized and unsignalized intersections.

TABLE 4. DESCRIPTIONS OF LEVEL OF SERVICE

LEVEL OF SERVICE	DESCRIPTION	UNSIGNALIZED CONTROL DELAY (sec/veh)	SIGNALIZED CONTROL DELAY (sec/veh)
A	Little or no delay	≤ 10.0	≤ 10.0
B	Short traffic delay	>10 and ≤ 15	>10 and ≤ 20
C	Average traffic delay	>15 and ≤ 25	>20 and ≤ 35
D	Long traffic delay	>25 and ≤ 35	>35 and ≤ 55
E	Very long traffic delay	>35 and ≤ 50	>55 and ≤ 80
F	Extreme traffic delay	> 50.0	> 80.0

Source: *Highway Capacity Manual*, 6th Edition

Signal timing sheets for the signalized study intersections were obtained from the City of Brentwood and utilized in the analyses. The signal timing sheets are included in Appendix E.

The results of the capacity analyses for the existing conditions at the study intersections are presented in Table 5. As shown, all intersections and critical movements operate at LOS D or better in the AM and PM peak hours.

Capacity analyses worksheets are included in Appendix F.

TABLE 5. EXISTING PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE (Average Delay in sec/veh)	
		AM PEAK	PM PEAK
Maryland Way and Brentwood Blvd	Overall Intersection	B (19.5)	B (14.3)
Brentwood Blvd and Juris Ln/Driveway A (Northbound Side)	Eastbound Approach	B (10.3)	A (9.8)
	Westbound Approach	A (9.6)	A (9.3)
Brentwood Blvd and Juris Ln/Driveway A (Southbound Side)	Eastbound Approach	B (10.3)	B (10.8)
	Westbound Approach	B (11.5)	B (10.4)
Brentwood Blvd and Cadillac Dr/Driveway B (Northbound Side)	Eastbound Approach	B (10.5)	B (12.3)
	Westbound Approach	A (9.8)	B (10.2)
Brentwood Blvd and Cadillac Dr/Driveway B (Southbound Side)	Eastbound Through	B (11.2)	B (11.0)
	Eastbound Right-Turn	A (9.2)	A (9.1)
	Westbound Approach	B (11.7)	B (10.8)
Brentwood Blvd and Thoroughbred Ln	Westbound Approach	A (8.6)	A (9.5)
Old Hickory Blvd and Brentwood Blvd/Private Dr ¹	Overall Intersection	B (15.9)	B (13.7)
Maryland Way and Driveway C	Eastbound Left-Turn	B (12.0)	A (9.2)
	Southbound Approach	D (28.7)	C (22.7)
Note: 1 - HCM 2000 methods were used due to the incompatibility with NEMA phasing, which is not supported by HCM 6 th Edition methods.			

3. BACKGROUND TRAFFIC VOLUMES

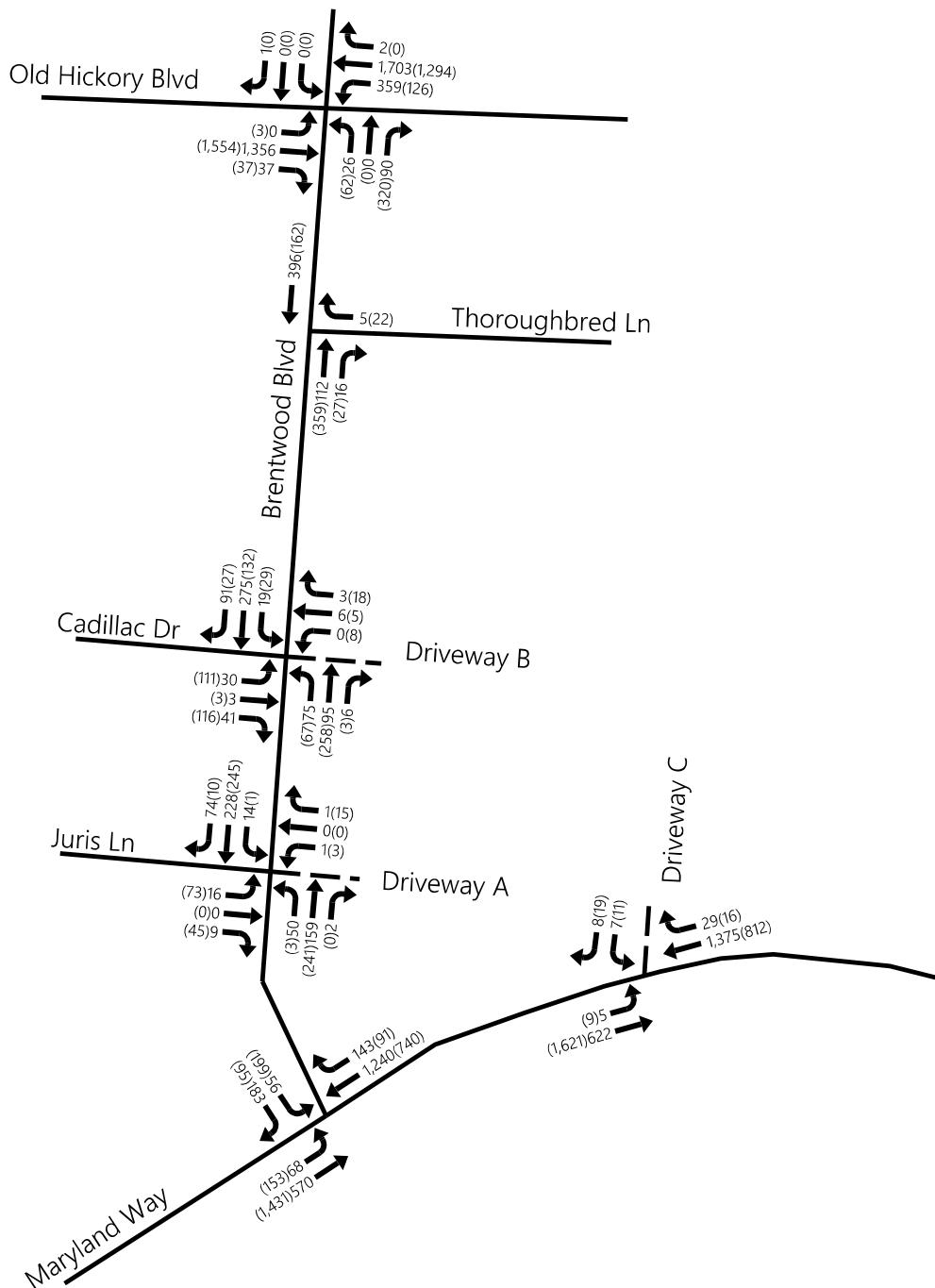
3.1 Establishing Background Volumes

In order to account for the traffic growth prior to the completion of the proposed project, background traffic volumes were established. For the purposes of this traffic study, the proposed development was assumed to be completed by the year 2025, which is a 3-year horizon. Historical daily traffic volumes were obtained from the three TDOT count stations located in the vicinity of the project site. Since 2017, the combined traffic at these three TDOT count stations has increased by an average of 3.24% per year. The TDOT count station data is included in Appendix D.

A growth factor was applied to the existing peak hour traffic volumes to account for background growth for the future conditions. Due to future re-development in the area that is expected, but has not yet been approved, a more conservative growth factor compared to the TDOT count station was utilized for the analyses. The existing peak hour traffic volumes at the study intersections were increased by 4.5% per year for three years to account for anticipated background traffic growth within the study area.

Additionally, site-specific background traffic volumes from one development were included in the analyses. According to information provided by the City of Brentwood, the remaining parcels of the Hill Center development include approximately 166,000 square feet of office and retail space. The Hill Center development is located at the southwestern corner of the intersection of Maryland Way and Franklin Road. After review of the original masterplan traffic impact study, it was determined that approximately 20% of the traffic generated by the development would be oriented to the west on Maryland Way. The trip generation calculations and traffic assignment figure for the background development is included in Appendix G.

The background peak hour traffic volumes for horizon year 2025 are presented in Figure 4. These volumes represent the peak hour traffic that is expected to be on the roadway in 2025 even if the proposed East Park development is not completed.



XXX - AM Peak Hour
Traffic Volumes
(XXX) - PM Peak Hour
Traffic Volumes



Background Peak Hour Traffic Volumes

(Not to Scale)

Figure 4.

3.2 Background Traffic Operations

To determine the operation of the study area intersections under background conditions, capacity analyses were performed for the AM and PM peak hours. The analyses for the background conditions were based on the same lane configurations and signal timings as the existing conditions.

As shown in Tables 6A and 6B, under background conditions, the capacity analyses indicate that the operational performances of the critical movements at the study intersections are generally expected to continue to operate at the same level of service as under existing conditions or continue to operate at LOS D or better in the AM and PM peak hours with the following exception:

- Maryland Way and Driveway C
 - The southbound approach is expected to deteriorate from LOS D to LOS E in the AM peak hour.
 - It should be noted that these levels of service are common for stop-controlled, low-volume approaches to high-volume arterials such as Maryland Way.

Capacity analyses worksheets are included in Appendix F.

TABLE 6A. BACKGROUND AM PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE (Average Delay in sec/veh)	
		EXISTING	BACKGROUND
Maryland Way and Brentwood Blvd	Overall Intersection	B (19.5)	C (23.6)
Brentwood Blvd and Juris Ln/Driveway A (Northbound Side)	Eastbound Approach	B (10.3)	B (10.5)
	Westbound Approach	A (9.6)	A (9.8)
Brentwood Blvd and Juris Ln/Driveway A (Southbound Side)	Eastbound Approach	B (10.3)	B (10.6)
	Westbound Approach	B (11.5)	B (12.0)
Brentwood Blvd and Cadillac Dr/Driveway B (Northbound Side)	Eastbound Approach	B (10.5)	B (10.8)
	Westbound Approach	A (9.8)	B (10.1)
Brentwood Blvd and Cadillac Dr/Driveway B (Southbound Side)	Eastbound Through	B (11.2)	B (11.6)
	Eastbound Right-Turn	A (9.2)	A (9.4)
	Westbound Approach	B (11.7)	B (12.3)
Brentwood Blvd and Thoroughbred Ln	Westbound Approach	A (8.6)	A (8.7)
Old Hickory Blvd and Brentwood Blvd/Private Dr ¹	Overall Intersection	B (15.9)	C (21.6)
Maryland Way and Driveway C	Eastbound Left-Turn	B (12.0)	B (13.4)
	Southbound Approach	D (28.7)	E (40.7)
Note: 1 - HCM 2000 methods were used due to the incompatibility with NEMA phasing, which is not supported by HCM 6 th Edition methods.			

TABLE 6B. BACKGROUND PM PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE (Average Delay in sec/veh)	
		EXISTING	BACKGROUND
Maryland Way and Brentwood Blvd	Overall Intersection	B (14.3)	B (15.8)
Brentwood Blvd and Juris Ln/Driveway A (Northbound Side)	Eastbound Approach	A (9.8)	B (10.0)
	Westbound Approach	A (9.3)	A (9.4)
Brentwood Blvd and Juris Ln/Driveway A (Southbound Side)	Eastbound Approach	B (10.8)	B (11.2)
	Westbound Approach	B (10.4)	B (10.7)
Brentwood Blvd and Cadillac Dr/Driveway B (Northbound Side)	Eastbound Approach	B (12.3)	B (13.3)
	Westbound Approach	B (10.2)	B (10.6)
Brentwood Blvd and Cadillac Dr/Driveway B (Southbound Side)	Eastbound Through	B (11.0)	B (11.4)
	Eastbound Right-Turn	A (9.1)	A (9.2)
	Westbound Approach	B (10.8)	B (11.1)
Brentwood Blvd and Thoroughbred Ln	Westbound Approach	A (9.5)	A (9.7)
Old Hickory Blvd and Brentwood Blvd/Private Dr ¹	Overall Intersection	B (13.7)	B (15.6)
Maryland Way and Driveway C	Eastbound Left-Turn	A (9.2)	A (9.9)
	Southbound Approach	C (22.7)	D (33.0)
Note: 1 - HCM 2000 methods were used due to the incompatibility with NEMA phasing, which is not supported by HCM 6 th Edition methods.			

4. IMPACTS

4.1 Trip Generation

A traffic generation process was used to estimate the amount of traffic expected to be generated by the proposed East Park development. Factors for the trip generation were taken from ITE's *Trip Generation*, 11th Edition. According to the developer, the proposed development approximately includes a hotel with 120 rooms and 7,000 square feet of high-turnover (sit-down) restaurant. It should be noted that approximately 32,437 square feet of office space will be removed as part of the project. In an effort to be conservative, the trips generated by this office space were not removed. The new trips generated by the hotel and restaurant land uses were added directly to the existing volumes that enter/exit the site.

Reductions were applied to the base trip generation to account for internal capture.

Data presented in the ITE publication, *Trip Generation Handbook*, show that developments containing multiple land uses will commonly have internal trips. A process was used to estimate the number of internal trips that can be expected between land uses based on methodology presented in NCHRP Report 684, "Enhancing Internal Trip Capture Estimation for Mixed-Use Developments." The methodology contained in the NCHRP Report expands on ITE's methodology, including additional land uses and supporting data. The internal trip reduction process resulted in the following internal capture rate estimates:

- 5.1% internal capture rate for the daily trip generation,
- 4.9% internal capture rate for entering trips in the AM peak hour,
- 6.1% internal capture rate for exiting trips in the AM peak hour,
- 4.3% internal capture rate for entering trips in the PM peak hour, and
- 5.4% internal capture rate for exiting trips in the PM peak hour.

Table 7 presents the daily, AM and PM peak hour trip generation for the proposed development. As shown in Table 7, the proposed development can be expected to generate approximately 1,538 new vehicle trips per day. The AM and PM peak hour trip generations will equal approximately 114 and 126 new trips, respectively. These trips represent the new traffic that will be generated by the proposed East Park development. The calculations for trip generation are included in Appendix H.

TABLE 7. DEVELOPMENT TRIP GENERATION

LAND USE	SIZE	DAILY TRAFFIC	GENERATED TRAFFIC			
			AM PEAK		PM PEAK	
			Enter	Exit	Enter	Exit
Hotel (LUC 310)	120 rooms	877	30	23	36	35
High-Turnover (Sit-Down) Restaurant (LUC 932)	7 k.s.f.	750	37	30	38	25
SUBTOTAL		1,627	67	53	74	60
			120		134	
<i>Internal Trips Reduction</i>		-89	-3	-3	-4	-4
NEW TRIPS		1,538	64	50	70	56
			114		126	

Source: *Trip Generation*, 11th Edition

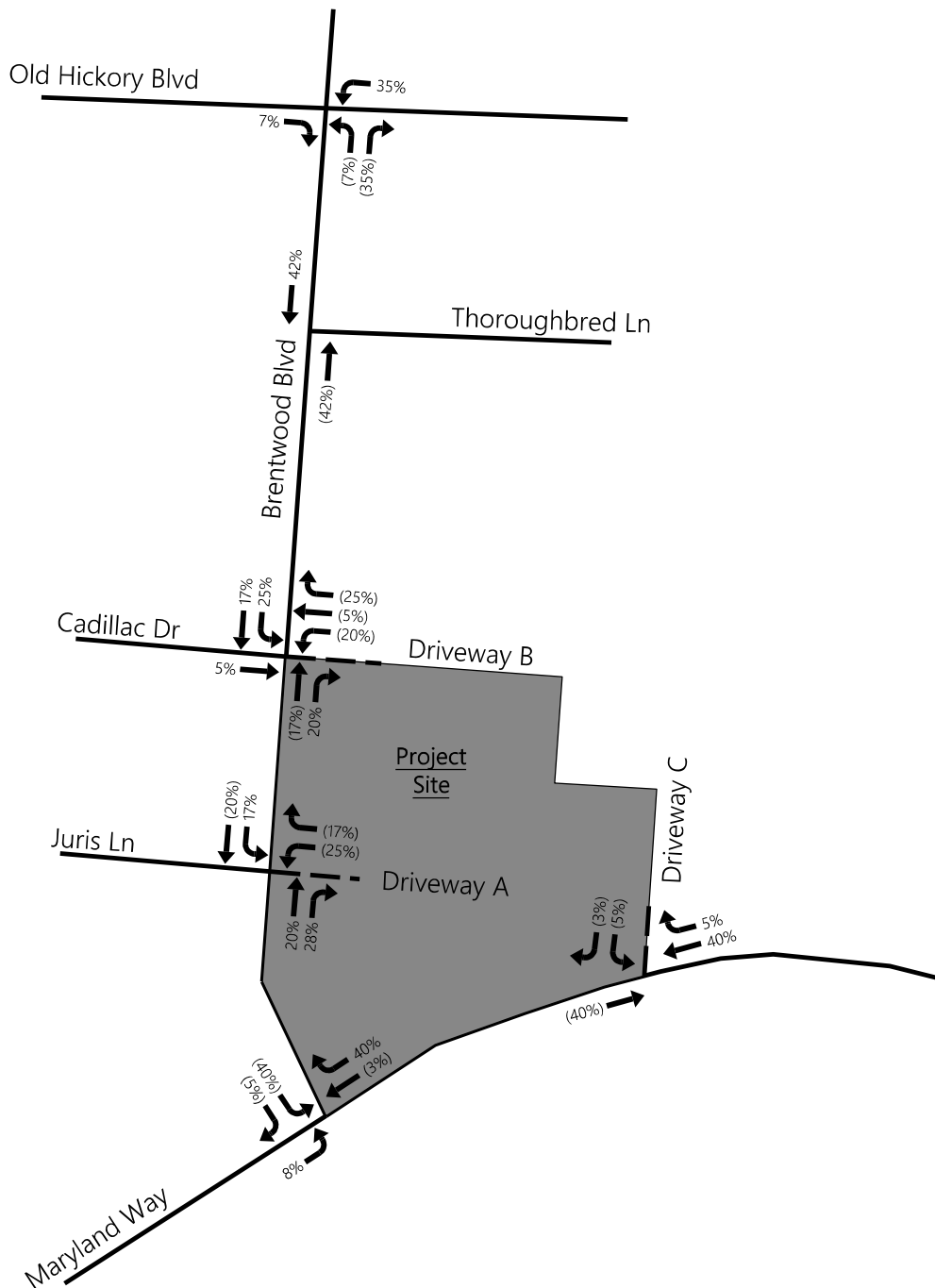
4.2 Trip Distribution and Traffic Assignment

A directional distribution of traffic generated by the proposed project was established based on the proposed access, the existing roadway network, and the existing travel patterns developed from the existing peak hour traffic counts. As previously discussed, access to the development is planned to be provided by three existing driveways, two on Brentwood Boulevard and one on Maryland Way.

The directional distribution for the proposed development is shown in Figure 5. As shown in the figure,

- approximately 45% of the traffic generated by the development will be oriented to the east on Maryland Way,
- 35% to the east on Old Hickory Boulevard,
- 8% to the west on Maryland Way,
- 7% to the west on Old Hickory Boulevard, and
- 5% to the west on Cadillac Drive.

Based on the directional distribution, the project-generated traffic for the AM and PM peak hour was assigned to the roadway network. The traffic assignment for the proposed development is shown in Figure 6.



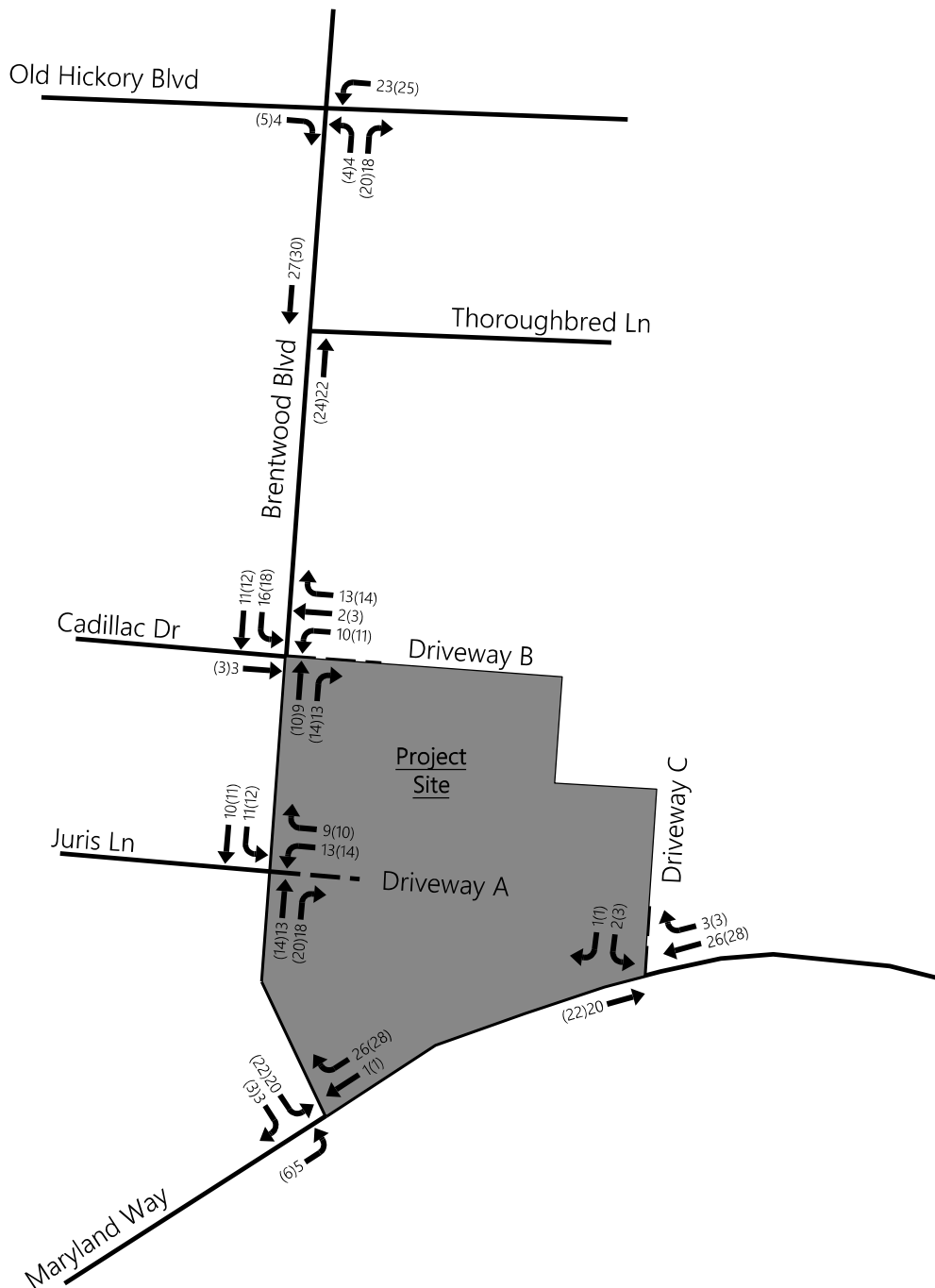
XX% - Enter
(XX%) - Exit



Distribution of Peak Hour Traffic Volumes
Generated by the Project Site

(Not to Scale)

Figure 5.



XXX - AM Peak Hour
Traffic Volumes
(XXX) - PM Peak Hour
Traffic Volumes



Assignment of Peak Hour Traffic Volumes
Generated by the Project Site

(Not to Scale)

Figure 6.

4.3 Capacity / Level of Service Analyses

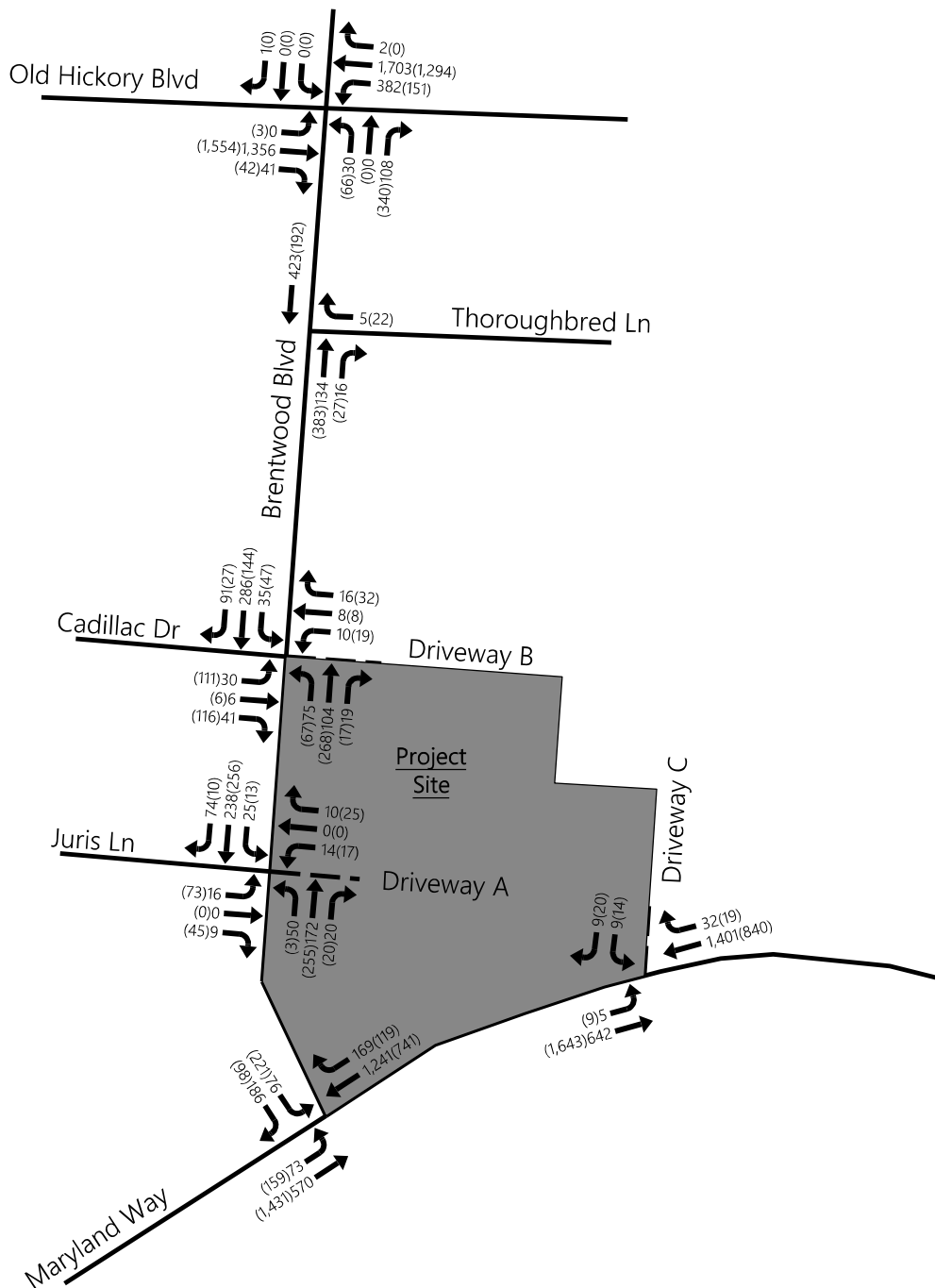
The total site-generated traffic volumes were added to the background peak hour traffic volumes for the proposed development in order to obtain the total projected traffic volumes for the study intersections. Figure 7 presents the total projected AM and PM peak hour traffic volumes expected at the completion of the proposed development.

Capacity analyses were performed in order to determine the impact of the project on the study intersections. These capacity analyses were also used to evaluate the need for roadway and traffic control improvements at the intersections studied. The capacity calculations were performed according to the methods outlined in the *Highway Capacity Manual*, 6th Edition. The results of the capacity analyses for the projected conditions at the study area intersections are presented in Tables 8A and 8B. For the analyses, the intersection configurations and signal timings were the same as the existing and background conditions.

As shown in Tables 8A and 8B, under projected conditions, the capacity analyses indicate that the operational performances of the critical movements at the study intersections are generally expected to continue to operate at the same level of service as under background conditions or continue to operate at LOS D or better in the AM and PM peak hours, with the following exception:

- Maryland Way and Driveway C
 - The southbound approach is expected to deteriorate from LOS D to LOS E in the PM peak hour.
 - It should be noted that these levels of service are common for stop-controlled, low-volume approaches to high-volume arterials such as Maryland Way.

Capacity analyses worksheets are included in Appendix F.



XXX - AM Peak Hour
Traffic Volumes
(XXX) - PM Peak Hour
Traffic Volumes



Total Projected Peak Hour Traffic Volumes
(Not to Scale)

Figure 7.

TABLE 8A. PROJECTED AM PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE (Average Delay in sec/veh)		
		EXISTING	BACKGROUND	PROJECTED
Maryland Way and Brentwood Blvd	Overall Intersection	B (19.5)	C (23.6)	C (24.7)
Brentwood Blvd and Juris Ln/Driveway A (Northbound Side)	Eastbound Approach	B (10.3)	B (10.5)	B (11.1)
	Westbound Approach	A (9.6)	A (9.8)	B (10.3)
Brentwood Blvd and Juris Ln/Driveway A (Southbound Side)	Eastbound Approach	B (10.3)	B (10.6)	B (10.8)
	Westbound Approach	B (11.5)	B (12.0)	B (12.1)
Brentwood Blvd and Cadillac Dr/Driveway B (Northbound Side)	Eastbound Approach	B (10.5)	B (10.8)	B (11.4)
	Westbound Approach	A (9.8)	B (10.1)	B (10.0)
Brentwood Blvd and Cadillac Dr/Driveway B (Southbound Side)	Eastbound Through	B (11.2)	B (11.6)	B (12.1)
	Eastbound Right-Turn	A (9.2)	A (9.4)	A (9.4)
	Westbound Approach	B (11.7)	B (12.3)	B (13.0)
Brentwood Blvd and Thoroughbred Ln	Westbound Approach	A (8.6)	A (8.7)	A (8.8)
Old Hickory Blvd and Brentwood Blvd/Private Dr ¹	Overall Intersection	B (15.9)	C (21.6)	C (23.8)
Maryland Way and Driveway C	Eastbound Left-Turn	B (12.0)	B (13.4)	B (13.7)
	Southbound Approach	D (28.7)	E (40.7)	E (47.0)
Note: 1 - HCM 2000 methods were used due to the incompatibility with NEMA phasing, which is not supported by HCM 6 th Edition methods.				

TABLE 8B. PROJECTED PM PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE (Average Delay in sec/veh)		
		EXISTING	BACKGROUND	PROJECTED
Maryland Way and Brentwood Blvd	Overall Intersection	B (14.3)	B (15.8)	B (17.3)
Brentwood Blvd and Juris Ln/Driveway A (Northbound Side)	Eastbound Approach	A (9.8)	B (10.0)	B (10.7)
	Westbound Approach	A (9.3)	A (9.4)	B (10.1)
Brentwood Blvd and Juris Ln/Driveway A (Southbound Side)	Eastbound Approach	B (10.8)	B (11.2)	B (11.5)
	Westbound Approach	B (10.4)	B (10.7)	B (11.0)
Brentwood Blvd and Cadillac Dr/Driveway B (Northbound Side)	Eastbound Approach	B (12.3)	B (13.3)	B (14.8)
	Westbound Approach	B (10.2)	B (10.6)	B (11.1)
Brentwood Blvd and Cadillac Dr/Driveway B (Southbound Side)	Eastbound Through	B (11.0)	B (11.4)	B (12.0)
	Eastbound Right-Turn	A (9.1)	A (9.2)	A (9.3)
	Westbound Approach	B (10.8)	B (11.1)	B (12.1)
Brentwood Blvd and Thoroughbred Ln	Westbound Approach	A (9.5)	A (9.7)	A (9.8)
Old Hickory Blvd and Brentwood Blvd/Private Dr ¹	Overall Intersection	B (13.7)	B (15.6)	B (17.5)
Maryland Way and Driveway C	Eastbound Left-Turn	A (9.2)	A (9.9)	A (10.0)
	Southbound Approach	C (22.7)	D (33.0)	E (40.0)
Note: 1 - HCM 2000 methods were used due to the incompatibility with NEMA phasing, which is not supported by HCM 6 th Edition methods.				

5. ANALYSIS OF SITE PLAN

5.1 Site Access Review

According to the information provided by the developer, the proposed East Park development approximately includes a hotel with 120 rooms and 7,000 square feet of high-turnover (sit-down) restaurant. Furthermore, the project site includes two existing office buildings that will remain open, and one office building that will be removed.

Access to the development is planned to be provided via three existing driveways, two on Brentwood Boulevard and one on Maryland Way.

5.2 Lane Warrant Analysis

Study intersections were evaluated for the need to provide a right-turn lane based on the projected traffic volumes during the AM and PM peak hours. This analysis was based on the procedures outlined in *Evaluating Intersection Improvements* (NCHRP 457). The result of this analysis is presented in Table 9.

TABLE 9. RIGHT-TURN LANE ANALYSIS

INTERSECTION	APPROACH	AM PEAK	PM PEAK
Brentwood Blvd and Driveway A	NB	NO	NO
Brentwood Blvd and Driveway B	NB	NO	NO

The study intersections were evaluated for the need to provide a two-lane approach based on the projected traffic volumes during the AM and PM peak hours. This analysis was based on the procedures outlined in *Evaluating Intersection Improvements: An Engineering Study Guide* (NCHRP 457) Figure 2-4. The result of this analysis is presented in Table 10.

TABLE 10. TWO-LANE MINOR APPROACH ANALYSIS

INTERSECTION	APPROACH	AM PEAK	PM PEAK
Brentwood Blvd and Driveway A	WB	NO	NO
Brentwood Blvd and Driveway B	WB	NO	NO
Maryland Way and Driveway C	SB	NO	NO

All warrant analyses are included in Appendix I.

6. RECOMMENDATIONS

The analyses presented in this study indicate that the impacts of the proposed project on the existing street network will be manageable by providing the recommendations below. The recommendations are as follows:

Brentwood Boulevard and Driveway A

- Driveway A should continue to operate with a minimum of one entering lane and one exiting lane.
- The westbound approach of Driveway A should continue to be stop-controlled.

Brentwood Boulevard and Driveway B

- Driveway B should continue to operate with a minimum of one entering lane and one exiting lane.
- The westbound approach of Driveway B should continue to be stop-controlled.

Maryland Way and Driveway C

- Driveway C should continue to operate with a minimum of one entering lane and one exiting lane.
- The southbound approach of Driveway C should continue to be stop-controlled.

Travel Demand Management

- Off-peak loading and deliveries for the restaurant development should be encouraged to minimize impacts to traffic operations.

Additional Recommendations

- As part of the construction of the project, all internal and external driveway connections should be designed such that the departure sight triangles, as specified by AASHTO, will be clear of all sight obstructions, including landscaping, existing vegetation, monument signs/walls, fences, etc.

In summary, based on the analyses conducted, no further recommendations are presented for the proposed East Park development.

APPENDICES

APPENDIX A
PRELIMINARY SITE PLAN

APPENDIX B
SCOPING NOTES

APPENDIX C
DETAILED TURNING MOVEMENT COUNTS

APPENDIX D
TDOT COUNT DATA

APPENDIX E
SIGNAL TIMING

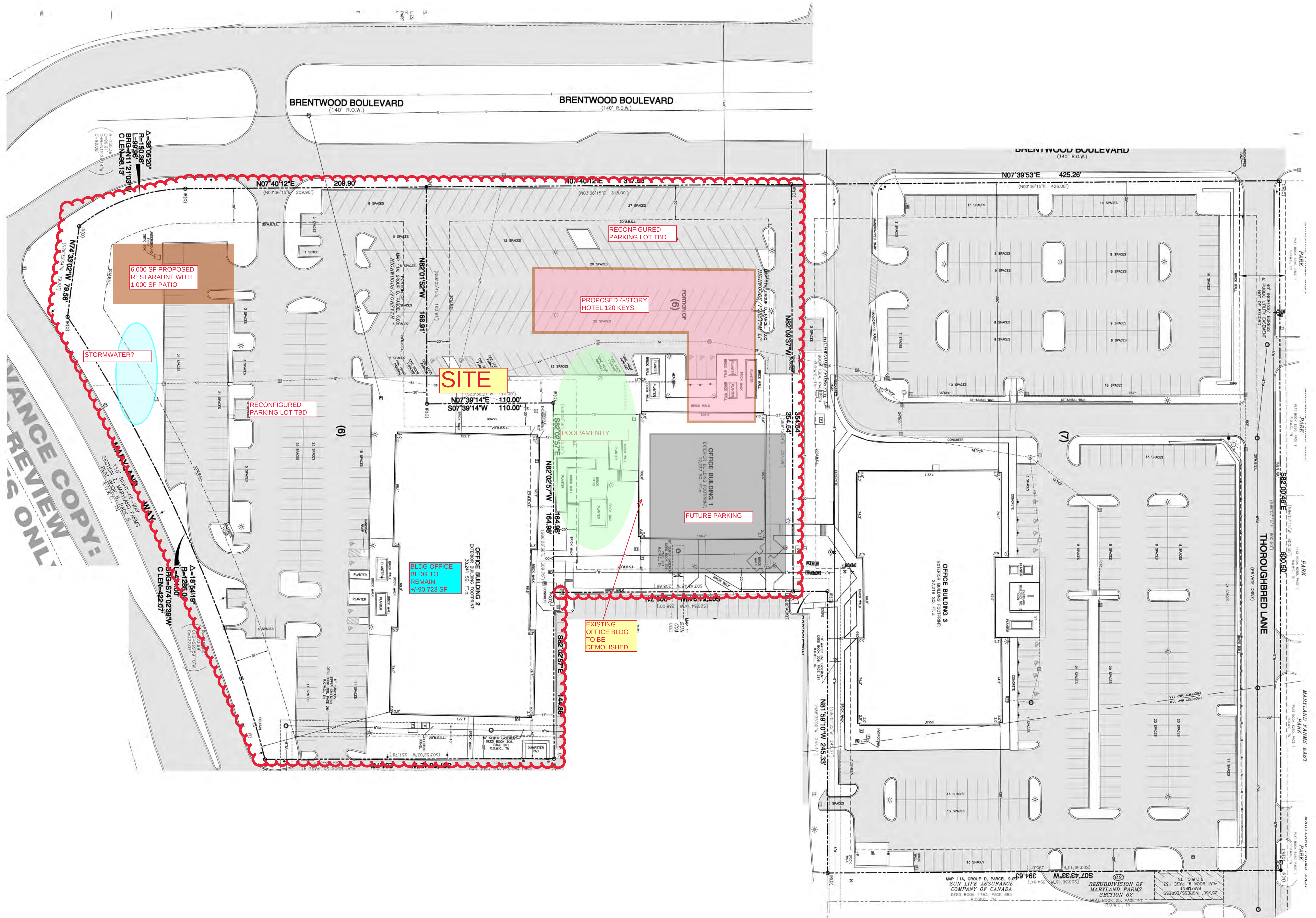
APPENDIX F
CAPACITY ANALYSES

APPENDIX G
BACKGROUND DEVELOPMENTS

APPENDIX H
TRIP GENERATION CALCULATIONS

APPENDIX I
WARRANT ANALYSIS

**APPENDIX A
PRELIMINARY SITE PLAN**



Site Plan
EAST PARK
BRENTWOOD, WILLIAMSON COUNTY, TN.

**APPENDIX B
SCOPING NOTES**

Tyler Fosnes

From: Tyler Fosnes
Sent: Tuesday, April 5, 2022 3:17 PM
To: Dobson, Jeff; Greg Judy; Christopher Wood; Gary Vogrin
Subject: RE: EastPark Rezoning
Attachments: Distribution.pdf; Trip Gen Calcs Hotel.pdf; Trip Gen Calcs Restaurant.pdf; Study Intersections - East Park Rezoning.pdf

All,

I'm emailing to document our scoping meeting last week. The following points were discussed:

- The project site includes three existing office buildings of the following sizes: 32,437 s.f., 87,917 s.f., and 80,267 s.f.
- The proposed plan is to remove the 32,437 s.f. office building and construct a 120 room hotel and a 7,000 s.f. restaurant.
- In an effort to be conservative and to be cautious against possible overestimates of trips generated by ITE, the analyses will **not** include removing existing trips to account for the removal of the office building. Instead, the new trips generated by the hotel and restaurant land uses will be added directly to existing + background traffic volumes utilizing the site access points.
- A background growth rate will be developed based on TDOT count stations to account for ambient traffic growth. Furthermore, the City will provide KCI with the square footages for the planned Hill Center development to be included in background traffic volumes. Additionally, the Maryland Way YMCA project is in the early stages of development at this time. Therefore, in lieu of site-specific traffic volumes, this proposed development will be considered and incorporated into the ambient growth rate for background conditions.
- The study area will include the proposed study intersections shown on the attached Intersection Location map.
- The projected horizon year for the development is expected to be 2025.
- A shared parking study will be prepared for the overall East Park site to verify that sufficient parking capacity is supplied.

I've also attached the trip generation calculation sheets and distribution figure for your review. Please let me know if you have any questions or comments.

Jeff, can you please send the square footages for the Hill Center development at your convenience?

Thanks,

Tyler Fosnes
KCI TECHNOLOGIES, INC.
o: 615.370.8410 | f: 615.370.8455

From: Dobson, Jeff <jeff.dobson@brentwoodtn.gov>
Sent: Thursday, March 24, 2022 3:18 PM
To: Greg Judy <greg.judy@neel-schaffer.com>; Christopher Wood <chris@kiservogrin.com>; Gary Vogrin <gary@kiservogrin.com>; Tyler Fosnes <Tyler.Fosnes@kci.com>
Subject: [External Email] FW: EastPark Rezoning

APPENDIX C DETAILED TURNING MOVEMENT COUNTS

Classified Turn Movement Count || All vehicles



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Brentwood, TN

Site 1 of 6

Brentwood Blvd
Maryland Way (West)
Maryland Way (East)

Date

Wednesday, March 2, 2022

Lat/Long

36.033912°, -86.794946°

Weather

Fair
62°F

0700 - 0900 (Weekday 2h Session) (03-02-2022)

All vehicles

TIME
0700 - 0715
0715 - 0730
0730 - 0745
0745 - 0800
Hourly Total
0800 - 0815
0815 - 0830
0830 - 0845
0845 - 0900
Hourly Total
Grand Total
Approach %
Intersection %
PHF

Southbound				Eastbound				Westbound				
Brentwood Blvd				Maryland Way (West)				Maryland Way (East)				
Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
11	19	0	30	9	60	0	69	218	12	0	230	329
8	19	0	27	16	85	0	101	303	13	0	316	444
10	25	0	35	13	130	0	143	249	20	0	269	447
9	36	0	45	11	149	0	160	302	24	0	326	531
38	99	0	137	49	424	0	473	1072	69	0	1141	1751
8	39	0	47	17	101	0	118	306	30	0	336	501
13	41	0	54	9	118	0	127	284	23	0	307	488
15	37	0	52	19	127	0	146	239	34	0	273	471
14	43	0	57	15	117	1	133	241	38	0	279	469
50	160	0	210	60	463	1	524	1070	125	0	1195	1929
88	259	0	347	109	887	1	997	2142	194	0	2336	3680
25.36	74.64	0.00	-	10.93	88.97	0.10	-	91.70	8.30	0.00	-	
2.39	7.04	0.00	9.43	2.96	24.10	0.03	27.09	58.21	5.27	0.00	63.48	
0.75	0.93	0.00	0.92	0.74	0.83	0.00	0.86	0.92	0.82	0.00	0.92	0.94

1600 - 1800 (Weekday 2h Session) (03-02-2022)

All vehicles

TIME
1600 - 1615
1615 - 1630
1630 - 1645
1645 - 1700
Hourly Total
1700 - 1715
1715 - 1730
1730 - 1745
1745 - 1800
Hourly Total
Grand Total
Approach %
Intersection %
PHF

Southbound				Eastbound				Westbound				
Brentwood Blvd				Maryland Way (West)				Maryland Way (East)				
Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
42	21	0	63	23	280	0	303	152	32	0	184	550
36	13	0	49	27	275	1	303	136	20	1	157	509
40	21	0	61	35	323	0	358	158	20	0	178	597
44	25	0	69	28	283	1	312	131	17	0	148	529
162	80	0	242	113	1161	2	1276	577	89	1	667	2185
51	24	0	75	44	344	0	388	167	23	0	190	653
39	25	0	64	25	314	0	339	136	17	0	153	556
34	28	0	62	35	283	0	318	136	14	0	150	530
40	19	0	59	25	217	0	242	128	15	0	143	444
164	96	0	260	129	1158	0	1287	567	69	0	636	2183
326	176	0	502	242	2319	2	2563	1144	158	1	1303	4368
64.94	35.06	0.00	-	9.44	90.48	0.08	-	87.80	12.13	0.08	-	
7.46	4.03	0.00	11.49	5.54	53.09	0.05	58.68	26.19	3.62	0.02	29.83	
0.85	0.95	0.00	0.90	0.75	0.92	0.25	0.90	0.89	0.84	0.00	0.88	0.89

Classified Turn Movement Count || All vehicles



Brentwood, TN

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Site 2 of 6

Brentwood Blvd (South)

Brentwood Blvd (North)

Juris Ln

Driveway

Date

Wednesday, March 2, 2022

Lat/Long

36.034733°, -86.795233°

Weather

Fair

62°F

0700 - 0900 (Weekday 2h Session) (03-02-2022)

All vehicles

	Northbound					Southbound					Eastbound					Westbound					
	Brentwood Blvd (South)					Brentwood Blvd (North)					Juris Ln					Driveway					
TIME	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	Int Total
0700 - 0715	2	17	1	0	20	1	27	8	1	37	1	0	0	0	1	0	0	0	0	0	58
0715 - 0730	4	24	0	0	28	1	27	9	0	37	1	0	0	0	1	0	0	0	0	0	66
0730 - 0745	8	26	0	0	34	2	36	10	0	48	1	0	1	0	2	0	0	0	0	0	84
0745 - 0800	6	28	0	0	34	2	45	9	0	56	2	0	1	0	3	0	0	0	0	0	93
Hourly Total	20	95	1	0	116	6	135	36	1	178	5	0	2	0	7	0	0	0	0	0	301
0800 - 0815	14	32	0	0	46	2	43	20	0	65	4	0	2	0	6	0	0	1	0	1	118
0815 - 0830	8	24	1	0	33	3	56	14	0	73	4	0	2	0	6	0	0	0	0	0	112
0830 - 0845	10	42	1	1	54	5	45	14	0	64	1	0	2	0	3	0	0	0	0	0	121
0845 - 0900	12	41	0	0	53	2	55	17	0	74	5	0	2	0	7	1	0	0	0	1	135
Hourly Total	44	139	2	1	186	12	199	65	0	276	14	0	8	0	22	1	0	1	0	2	486
Grand Total	64	234	3	1	302	18	334	101	1	454	19	0	10	0	29	1	0	1	0	2	787
Approach %	21.19	77.48	0.99	0.33	-	3.96	73.57	22.25	0.22	-	65.52	0.00	34.48	0.00	-	50.00	0.00	50.00	0.00	-	
Intersection %	8.13	29.73	0.38	0.13	38.37	2.29	42.44	12.83	0.13	57.69	2.41	0.00	1.27	0.00	3.68	0.13	0.00	0.13	0.00	0.25	
PHF	0.79	0.83	0.50	0.25	0.86	0.60	0.89	0.81	0.00	0.93	0.70	0.00	1.00	0.00	0.79	0.25	0.00	0.25	0.00	0.50	0.90

1600 - 1800 (Weekday 2h Session) (03-02-2022)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Brentwood Blvd (South)					Brentwood Blvd (North)					Juris Ln					Driveway					
	Left 2.1	Thru 2.2	Right 2.3	U-Turn 2.4	App Total	Left 2.5	Thru 2.6	Right 2.7	U-Turn 2.8	App Total	Left 2.9	Thru 2.10	Right 2.11	U-Turn 2.12	App Total	Left 2.13	Thru 2.14	Right 2.15	U-Turn 2.16	App Total	
1600 - 1615	6	45	2	0	53	0	50	1	1	52	22	1	13	0	36	3	0	5	0	8	149
1615 - 1630	1	45	0	0	46	0	44	2	0	46	17	0	4	0	21	0	0	2	0	2	115
1630 - 1645	1	58	0	0	59	0	50	2	1	53	18	0	10	0	28	0	0	2	0	2	142
1645 - 1700	0	42	0	0	42	0	56	2	1	59	13	0	13	0	26	2	0	2	0	4	131
Hourly Total	8	190	2	0	200	0	200	7	3	210	70	1	40	0	111	5	0	11	0	16	537
1700 - 1715	1	66	0	1	68	1	65	2	0	68	15	0	12	0	27	1	0	6	0	7	170
1715 - 1730	2	38	1	0	41	0	50	1	0	51	13	0	9	0	22	1	0	1	0	2	116
1730 - 1745	1	50	0	0	51	0	54	2	0	56	7	0	6	0	13	3	0	1	0	4	124
1745 - 1800	2	38	0	0	40	0	51	1	0	52	14	0	5	0	19	0	0	2	0	2	113
Hourly Total	6	192	1	1	200	1	220	6	0	227	49	0	32	0	81	5	0	10	0	15	523
Grand Total	14	382	3	1	400	1	420	13	3	437	119	1	72	0	192	10	0	21	0	31	1060
Approach %	3.50	95.50	0.75	0.25	-	0.23	96.11	2.97	0.69	-	61.98	0.52	37.50	0.00	-	32.26	0.00	67.74	0.00	-	
Intersection %	1.32	36.04	0.28	0.09	37.74	0.09	39.62	1.23	0.28	41.23	11.23	0.09	6.79	0.00	18.11	0.94	0.00	1.98	0.00	2.92	
PHF	0.50	0.77	0.25	0.25	0.77	0.25	0.85	0.88	0.50	0.85	0.82	0.00	0.85	0.00	0.92	0.50	0.00	0.46	0.00	0.54	0.82

Classified Turn Movement Count || All vehicles



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Brentwood, TN

Site 3 of 6

Brentwood Blvd (South)

Brentwood Blvd (North)

Cadillac Dr

Driveway

Date

Wednesday, March 2, 2022

Weather

Fair

62°F

Lat/Long

36.036118°, -86.795011°

0700 - 0900 (Weekday 2h Session) (03-02-2022)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Brentwood Blvd (South)					Brentwood Blvd (North)					Cadillac Dr					Driveway					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0700 - 0715	11	8	0	0	19	2	26	20	0	48	4	1	8	0	13	1	0	0	0	1	81
0715 - 0730	8	16	1	0	25	0	31	16	0	47	3	1	7	0	11	2	1	0	0	3	86
0730 - 0745	9	18	1	0	28	1	43	24	0	68	1	1	6	0	8	1	0	0	0	1	105
0745 - 0800	17	13	0	0	30	4	49	18	0	71	6	4	7	0	17	0	3	0	0	3	121
Hourly Total	45	55	2	0	102	7	149	78	0	234	14	7	28	0	49	4	4	0	0	8	393
0800 - 0815	15	20	3	0	38	2	61	21	0	84	8	1	4	0	13	0	3	0	0	3	138
0815 - 0830	11	13	1	1	26	4	63	23	0	90	3	0	7	0	10	0	0	0	0	0	126
0830 - 0845	17	27	0	0	44	3	48	19	0	70	4	2	15	0	21	0	1	1	0	2	137
0845 - 0900	22	23	1	0	46	8	65	17	0	90	11	0	10	0	21	0	1	1	0	2	159
Hourly Total	65	83	5	1	154	17	237	80	0	334	26	3	36	0	65	0	5	2	0	7	560
Grand Total	110	138	7	1	256	24	386	158	0	568	40	10	64	0	114	4	9	2	0	15	953
Approach %	42.97	53.91	2.73	0.39	-	4.23	67.96	27.82	0.00	-	35.09	8.77	56.14	0.00	-	26.67	60.00	13.33	0.00	-	
Intersection %	11.54	14.48	0.73	0.10	26.86	2.52	40.50	16.58	0.00	59.60	4.20	1.05	6.72	0.00	11.96	0.42	0.94	0.21	0.00	1.57	
PHF	0.74	0.77	0.42	0.25	0.84	0.53	0.91	0.87	0.00	0.93	0.59	0.38	0.60	0.00	0.77	0.00	0.42	0.50	0.00	0.58	0.88

1600 - 1800 (Weekday 2h Session) (03-02-2022)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Brentwood Blvd (South)					Brentwood Blvd (North)					Cadillac Dr					Driveway					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
1600 - 1615	14	58	0	0	72	8	24	12	0	44	22	1	23	0	46	4	1	5	0	10	172
1615 - 1630	12	44	1	1	58	4	22	7	0	33	22	1	23	0	46	1	0	2	0	3	140
1630 - 1645	14	67	0	0	81	7	28	6	0	41	24	0	23	0	47	1	2	6	0	9	178
1645 - 1700	14	49	0	0	63	7	31	4	0	42	21	1	26	0	48	2	1	3	0	6	159
Hourly Total	54	218	1	1	274	26	105	29	0	160	89	3	95	0	187	8	4	16	0	28	649
1700 - 1715	18	67	2	0	87	7	35	7	0	49	26	1	30	0	57	3	1	1	0	5	198
1715 - 1730	8	43	0	0	51	4	25	12	0	41	14	0	27	0	41	1	0	1	0	2	135
1730 - 1745	15	44	0	0	59	3	31	4	0	38	15	1	24	0	40	0	1	2	0	3	140
1745 - 1800	9	44	0	0	53	3	30	4	0	37	10	0	20	0	30	1	2	2	0	5	125
Hourly Total	50	198	2	0	250	17	121	27	0	165	65	2	101	0	168	5	4	6	0	15	598
Grand Total	104	416	3	1	524	43	226	56	0	325	154	5	196	0	355	13	8	22	0	43	1247
Approach %	19.85	79.39	0.57	0.19	-	13.23	69.54	17.23	0.00	-	43.38	1.41	55.21	0.00	-	30.23	18.60	51.16	0.00	-	-
Intersection %	8.34	33.36	0.24	0.08	42.02	3.45	18.12	4.49	0.00	26.06	12.35	0.40	15.72	0.00	28.47	1.04	0.64	1.76	0.00	3.45	-
PHF	0.81	0.85	0.38	0.25	0.83	0.89	0.83	0.86	0.00	0.84	0.89	0.75	0.85	0.00	0.87	0.58	0.50	0.50	0.00	0.64	0.85

Classified Turn Movement Count || All vehicles



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Brentwood, TN

Site 4 of 6

Brentwood Blvd (South)
Brentwood Blvd (North)

Thoroughbred Ln

Date

Wednesday, March 2, 2022

Lat/Long

36.037061°, -86.794698°

Weather

Fair
62°F

0700 - 0900 (Weekday 2h Session) (03-02-2022)

All vehicles

TIME	Northbound			Southbound		
	Brentwood Blvd (South)			Brentwood Blvd (North)		
	Thru 4.1	Right 4.2	App Total	Thru 4.3	App Total	
0700 - 0715	12	1	13	57	57	
0715 - 0730	14	1	15	50	50	
0730 - 0745	19	2	21	73	73	
0745 - 0800	16	5	21	71	71	
Hourly Total	61	9	70	251	251	
0800 - 0815	25	2	27	91	91	
0815 - 0830	17	3	20	92	92	
0830 - 0845	25	3	28	72	72	
0845 - 0900	31	6	37	92	92	
Hourly Total	98	14	112	347	347	
Grand Total	159	23	182	598	598	
Approach %	87.36	12.64	-	100.00	-	
Intersection %	20.23	2.93	23.16	76.08	76.08	
PHF	0.79	0.58	0.76	0.94	0.94	

Westbound			
Thoroughbred Ln			
	Right 4.4	App Total	Int Total
	0	0	70
	0	0	65
	1	1	95
	1	1	93
	2	2	323
	0	0	118
	2	2	114
	2	2	102
	0	0	129
	4	4	463
	6	6	786
	100.00	-	
	0.76	0.76	
	0.50	0.50	0.90

1600 - 1800 (Weekday 2h Session) (03-02-2022)

All vehicles

TIME	Northbound			Southbound		
	Brentwood Blvd (South)			Brentwood Blvd (North)		
	Thru 4.1	Right 4.2	App Total	Thru 4.3	App Total	
1600 - 1615	69	10	79	39	39	
1615 - 1630	70	5	75	31	31	
1630 - 1645	88	6	94	31	31	
1645 - 1700	71	6	77	35	35	
Hourly Total	298	27	325	136	136	
1700 - 1715	85	7	92	45	45	
1715 - 1730	55	6	61	35	35	
1730 - 1745	59	2	61	31	31	
1745 - 1800	51	4	55	37	37	
Hourly Total	250	19	269	148	148	
Grand Total	548	46	594	284	284	
Approach %	92.26	7.74	-	100.00	-	
Intersection %	60.09	5.04	65.13	31.14	31.14	
PHF	0.89	0.86	0.90	0.79	0.79	

Westbound			
Thoroughbred Ln			
	Right 4.4	App Total	Int Total
	5	5	123
	6	6	112
	5	5	130
	4	4	116
	20	20	481
	4	4	141
	6	6	102
	3	3	95
	1	1	93
	14	14	431
	34	34	912
	100.00	-	
	3.73	3.73	
	0.79	0.79	0.88

Classified Turn Movement Count || All vehicles



Brentwood, TN

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Site 5 of 6

Brentwood Blvd (South)
Brentwood Blvd (North)
TN-254 Old Hickory Blvd (West)
TN-254 Old Hickory Blvd (East)

Date

Wednesday, March 2, 2022

Weather

Fair
62°F

Lat/Long

36.037743°, -86.794751°

0700 - 0900 (Weekday 2h Session) (03-02-2022)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Brentwood Blvd (South)					Brentwood Blvd (North)					TN-254 Old Hickory Blvd (West)					TN-254 Old Hickory Blvd (East)					
	Left 5.1	Thru 5.2	Right 5.3	U-Turn 5.4	App Total	Left 5.5	Thru 5.6	Right 5.7	U-Turn 5.8	App Total	Left 5.9	Thru 5.10	Right 5.11	U-Turn 5.12	App Total	Left 5.13	Thru 5.14	Right 5.15	U-Turn 5.16	App Total	
0700 - 0715	0	0	12	0	12	0	0	0	0	0	0	193	3	0	196	55	361	0	0	416	624
0715 - 0730	2	0	14	0	16	0	0	0	0	0	0	257	2	1	260	49	401	0	1	451	727
0730 - 0745	4	0	16	0	20	0	0	0	0	0	0	272	6	0	278	68	408	0	0	476	774
0745 - 0800	1	0	15	0	16	0	0	1	0	1	0	321	9	0	330	64	395	0	0	459	806
Hourly Total	7	0	57	0	64	0	0	1	0	1	0	1043	20	1	1064	236	1565	0	1	1802	2931
0800 - 0815	4	0	20	0	24	0	0	1	0	1	0	315	8	0	323	85	345	1	0	431	779
0815 - 0830	5	0	14	0	19	0	0	0	0	0	0	254	9	0	263	81	389	0	0	470	752
0830 - 0845	6	0	21	0	27	0	0	0	0	0	0	331	5	0	336	65	363	0	0	428	791
0845 - 0900	8	0	24	0	32	0	0	0	0	0	0	288	9	0	297	81	395	1	0	477	806
Hourly Total	23	0	79	0	102	0	0	1	0	1	0	1188	31	0	1219	312	1492	2	0	1806	3128
Grand Total	30	0	136	0	166	0	0	2	0	2	0	2231	51	1	2283	548	3057	2	1	3608	6059
Approach %	18.07	0.00	81.93	0.00	-	0.00	0.00	100.00	0.00	-	0.00	97.72	2.23	0.04	-	15.19	84.73	0.06	0.03	-	
Intersection %	0.50	0.00	2.24	0.00	2.74	0.00	0.00	0.03	0.00	0.03	0.00	36.82	0.84	0.02	37.68	9.04	50.45	0.03	0.02	59.55	
PHF	0.67	0.00	0.83	0.00	0.80	0.00	0.00	0.50	0.00	0.50	0.00	0.92	0.86	0.00	0.93	0.87	0.94	0.25	0.00	0.95	0.97

1600 - 1800 (Weekday 2h Session) (03-02-2022)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Brentwood Blvd (South)					Brentwood Blvd (North)					TN-254 Old Hickory Blvd (West)					TN-254 Old Hickory Blvd (East)					
	Left 5.1	Thru 5.2	Right 5.3	U-Turn 5.4	App Total	Left 5.5	Thru 5.6	Right 5.7	U-Turn 5.8	App Total	Left 5.9	Thru 5.10	Right 5.11	U-Turn 5.12	App Total	Left 5.13	Thru 5.14	Right 5.15	U-Turn 5.16	App Total	
1600 - 1615	11	0	63	1	75	0	0	0	0	0	0	348	9	0	357	28	243	1	0	272	704
1615 - 1630	12	0	65	1	78	0	0	0	0	0	0	363	9	0	372	21	257	0	0	278	728
1630 - 1645	19	0	74	0	93	0	0	0	0	0	0	330	5	1	336	25	295	0	0	320	749
1645 - 1700	12	0	63	0	75	0	0	0	0	0	0	323	9	1	333	26	290	0	0	316	724
Hourly Total	54	0	265	2	321	0	0	0	0	0	0	1364	32	2	1398	100	1085	1	0	1186	2905
1700 - 1715	10	0	79	0	89	0	0	0	0	0	0	346	8	1	355	37	293	0	0	330	774
1715 - 1730	14	0	49	0	63	0	0	0	0	0	0	321	7	0	328	28	297	0	0	325	716
1730 - 1745	6	0	54	0	60	0	0	0	0	0	0	298	3	1	302	29	232	0	0	261	623
1745 - 1800	7	0	44	0	51	0	0	0	0	0	0	316	9	0	325	28	227	0	0	255	631
Hourly Total	37	0	226	0	263	0	0	0	0	0	0	1281	27	2	1310	122	1049	0	0	1171	2744
Grand Total	91	0	491	2	584	0	0	0	0	0	0	2645	59	4	2708	222	2134	1	0	2357	5649
Approach %	15.58	0.00	84.08	0.34	-	0.00	0.00	0.00	0.00	-	0.00	97.67	2.18	0.15	-	9.42	90.54	0.04	0.00	-	
Intersection %	1.61	0.00	8.69	0.04	10.34	0.00	0.00	0.00	0.00	0.00	0.00	46.82	1.04	0.07	47.94	3.93	37.78	0.02	0.00	41.72	
PHF	0.70	0.00	0.89	0.25	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.86	0.75	0.94	0.74	0.96	0.00	0.00	0.94	0.96

Classified Turn Movement Count || All vehicles

Brentwood, TN



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Site 6 of 6

Date

Wednesday, March 2, 2022

Weather

Fair

62°F

Driveway

Maryland Way (West)

Maryland Way (East)

Lat/Long

36.034398°, -86.793231°

0700 - 0900 (Weekday 2h Session) (03-02-2022)

All vehicles

TIME	Southbound				Eastbound				Westbound				Int Total
	Driveway				Maryland Way (West)				Maryland Way (East)				
	Left 6.1	Right 6.2	U-Turn 6.3	App Total	Left 6.4	Thru 6.5	U-Turn 6.6	App Total	Thru 6.7	Right 6.8	U-Turn 6.9	App Total	
0700 - 0715	1	3	0	4	1	71	0	72	226	1	0	227	303
0715 - 0730	0	5	0	5	1	91	0	92	308	2	0	310	407
0730 - 0745	0	1	0	1	2	140	0	142	267	2	0	269	412
0745 - 0800	1	2	0	3	2	156	0	158	322	5	1	328	489
Hourly Total	2	11	0	13	6	458	0	464	1123	10	1	1134	1611
0800 - 0815	3	0	0	3	0	107	0	107	338	5	0	343	453
0815 - 0830	2	1	0	3	1	130	0	131	308	7	0	315	449
0830 - 0845	1	1	0	2	3	139	0	142	274	9	0	283	427
0845 - 0900	0	5	0	5	0	132	0	132	276	4	0	280	417
Hourly Total	6	7	0	13	4	508	0	512	1196	25	0	1221	1746
Grand Total	8	18	0	26	10	966	0	976	2319	35	1	2355	3357
Approach %	30.77	69.23	0.00	-	1.02	98.98	0.00	-	98.47	1.49	0.04	-	
Intersection %	0.24	0.54	0.00	0.77	0.30	28.78	0.00	29.07	69.08	1.04	0.03	70.15	
PHF	0.58	0.50	0.00	0.92	0.50	0.85	0.00	0.85	0.92	0.72	0.25	0.92	0.93

1600 - 1800 (Weekday 2h Session) (03-02-2022)

All vehicles

TIME	Southbound				Eastbound				Westbound					Int Total
	Driveway				Maryland Way (West)				Maryland Way (East)					
	Left 6.1	Right 6.2	U-Turn 6.3	App Total	Left 6.4	Thru 6.5	U-Turn 6.6	App Total	Thru 6.7	Right 6.8	U-Turn 6.9	App Total		
1600 - 1615	3	0	0	3	4	319	0	323	186	2	1	189	515	
1615 - 1630	1	6	0	7	2	309	0	311	153	8	0	161	479	
1630 - 1645	3	3	0	6	3	364	0	367	177	2	1	180	553	
1645 - 1700	3	3	0	6	1	327	0	328	149	2	1	152	486	
Hourly Total	10	12	0	22	10	1319	0	1329	665	14	3	682	2033	
1700 - 1715	3	5	0	8	2	393	0	395	185	2	0	187	590	
1715 - 1730	5	3	0	8	1	345	0	346	150	4	0	154	508	
1730 - 1745	4	2	0	6	5	313	0	318	144	3	0	147	471	
1745 - 1800	3	0	0	3	2	255	0	257	138	1	0	139	399	
Hourly Total	15	10	0	25	10	1306	0	1316	617	10	0	627	1968	
Grand Total	25	22	0	47	20	2625	0	2645	1282	24	3	1309	4001	
Approach %	53.19	46.81	0.00	-	0.76	99.24	0.00	-	97.94	1.83	0.23	-		
Intersection %	0.62	0.55	0.00	1.17	0.50	65.61	0.00	66.11	32.04	0.60	0.07	32.72		
PHF	0.70	0.70	0.00	0.88	0.58	0.91	0.00	0.91	0.89	0.63	0.50	0.90	0.91	

APPENDIX D TDOT COUNT DATA

TDOT AADT DATA

Station	132	574	181
Route	Old Hickory Blvd	Brentwood Blvd	Brentwood Blvd
Location	Northeast of the Project Site; Between Franklin Pk and E Park Dr	North of the Project Site; Between Old Hickory Blvd and Cadillac Dr	West of the Project Site; Between Cadillac Dr and Juris Ln
County	Davidson	Davidson	Williamson
2020	47,988	7,591	3,902
2019	39,237	8,351	7,344
2018	40,050	7,926	6,615
2017	40,358	6,396	7,305
2016	42,349	6,333	6,339
2015	38,754	6,270	6,850
2014	36,380	6,406	6,259
2013	39,502	6,294	6,197
2012	38,140	6,255	6,662
2011	38,872	6,954	6,591
2010	37,240	6,354	6,653
2009	37,270	6,635	6,744
2008	38,449	7,091	7,358

APPENDIX E SIGNAL TIMING

Sequence 13

Ring 1	1	2	3	4	9	10	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.

Sequence 14

Ring 1	2	1	3	4	10	9	13	14	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.

Sequence 15

Ring 1	1	2	4	3	9	10	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.

Sequence 16

Ring 1	2	1	4	3	10	9	14	13	.	.	.	.	.	.	.	.
Ring 2	6	5	8	7	12	11	16	15	.	.	.	.	.	.	.	.

Phases In Use/Exclusive Ped (MM) 1-2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Phases In Use	X	X		X		X										
Exclusive Ped																

Phase Compatibility
(MM) 1-1-2

Phase	
n/a	Barrier Mode

Phase and Overlap Descriptions

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	EBLT	WB		SB		EB										
Overlap	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Description																

Administration (MM) 1-7-1

Enable Controller/Cabinet No
 Interlock CRC
 CRC (16 bit) CA06
 Enable Automatic Backup No
 to Datakey

Brentwood, TN



MOVING TRAFFIC FORWARD

Maryland Way @ Brentwood Blvd. - 172.16.202.121 - Econolite Type - ASC/3

Controller Timing Plan (MM) 2-1

Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	EBLT	WB		SB		EB										
Min Green	5	10	5	7	5	10	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	18	0	0	0	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	18	0	0	0	0	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	2.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	20	40	0	25	35	40	0	0	35	35	35	35	35	35	35	35
Max2	0	0	0	0	0	0	0	0	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	2.5	2.5	1.0	2.5	1.0	2.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Brentwood, TN



MOVING TRAFFIC FORWARD

Maryland Way @ Brentwood Blvd. - 172.16.202.121 - Econolite Type - ASC/3

Coordination Pattern Data

Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	140	Std (COS)	9	Offsets In	Seconds
Offset Value	13s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	0		
Actuated Walk	No	Sequence	0		
Rest					
Phase	No	Action Plan	1		
Reservice					
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	EBLT	WB		SB		EB										
Splits (Split Pat 1)	19	99	0	22	0	118	0	0	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	140s	118s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall																
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Function Outputs																

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	120	Std (COS)	17	Offsets In	Seconds
Offset Value	53s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase					
Reservice	No	Action Plan	2		
Max Select	None	Force Off	None		

[illegible]

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	93s	0s	0s

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand	0	Split Demand	0	Crossing Arterial	0
Pat 1	0	Pat 2	0	Pat	0

[illegible]

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	150	Std (COS)	25	Offsets In	Seconds
Offset Value	67s	Dwell/Add Time	0		
Actuated Coord	No	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase					
Reservice	No	Action Plan	3		
Max Select	None	Force Off	None		

[illegible]

[illegible]

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	150s	115s	0s	0s

Misc. Data

Veh Perm 1 0 Veh Perm 2 0 Veh Perm 2 Disp 0

Split Demand Pat 1	Split Demand Pat 2	Crossing Arterial Pat
0	0	0

Split Pattern

[illegible]

Brentwood, TN



MOVING TRAFFIC FORWARD

Maryland Way @ Brentwood Blvd. - 172.16.202.121 - Econolite Type - ASC/3

Time Base Day Plan/Schedule**Day Plan (MM) 5-3****Day Plan #1**

Event	Action Plan	Start Time
1	99	00:00
2	99	06:00
3	1	06:30
4	5	09:15
5	2	11:15
6	7	13:30
7	3	15:00
8	5	18:00
9	99	20:00
10	99	23:00

Day Plan #2

Event	Action Plan	Start Time
1	99	00:00
2	99	06:00
3	6	09:00
4	7	11:00
5	6	18:00
6	99	19:00
7	99	23:00

Day Plan #3

Event	Action Plan	Start Time
1	99	00:00
2	99	06:00
3	5	10:30
4	99	17:00
5	99	23:00

INTERSECTION NUMBER:

4680

ZONE:

1

INTERSECTION:

OHB & BRENTWOOD BLVD

INSTALLATION DATE:

PROGRAMMED BY:

NOTES:

OLA = 1+4

CONTROLLER PROGRAMMING



ASC3/2100 SERIES & COBALT

ADDRESS:

SWITCH:

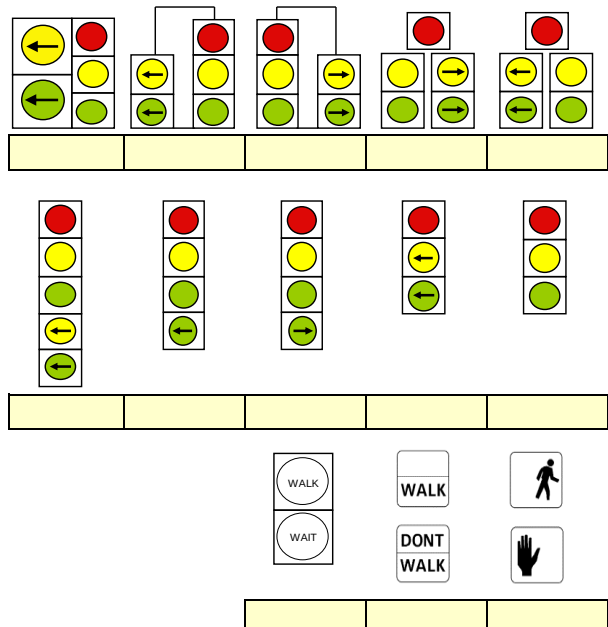
TIME BY PHASE (SEC) & FUNCTIONS

PHASE	1	2	3	4	5	6	7	8
PHASE IN USE	X	X	X	X	X	X		
MIN GREEN	5	25	5	5	5	25		
DLY GRN								
WALK								
PED CLR								
VEH EXT	2.5	3.0	2.5	2.5	2.5	3.0		
MAX 1	25	45	25	15	25	45		
MAX 2	20	60	40	60	20	60		
MAX 3								
DYM MAX								
DYM STP								
YELLOW	4.0	4.5	3.5	3.5	4.0	4.5		
RED CLR	3.0	2.5	3.5	3.5	3.0	2.5		
TIME B4 GAP RED								
CARS WT								
STPTDUC								
TTREDUC								
MIN GAP								
NON ACT 1								
DUAL ENTRY								
REST IN WALK								
LOCK DET								
VE RCALL								
PD RCALL								
MX RCALL		X				X		

CONTROLLER OPTIONS

PHASE	1	2	3	4	5	6	7	8
START UP		X				X		
UCF LAST								
UCF EXIT								
SIM. GAP								
MIN RED REVERT		UCF OVERRIDE HOLD				PRE-EMPT OVERRIDES STOP TIME		
RED REVERT TIME		UCF TEST A OR B						
AUTO PED CLEAR		PASSAGE SEQUENTIAL						
START UP FLASH		ENABLE SIM. GAP						
START UP INTERVAL	G	ENHANCED PED OPERATION						
START UP ALL RED		EXT. START OVERRIDES						
FLASH	DOES NOT FLASH							
FREE								
SPECIAL								

SIGNAL DISPLAYS



INTERSECTION NUMBER: **4680**ZONE: **1**INTERSECTION: **OHB & BRENTWOOD BLVD**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: _____

DETECTOR & OLAP PROGRAMMING



ASC3/2100 SERIES & COBALT

DETECTION DATA

PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOOPS	X			X	X											
VIDEO			X													

DETECTOR ASSIGNMENTS

DETECTOR	1	2	3	4	5	6	7	8
DETECTOR 1	X							
DETECTOR 2		X						
DETECTOR 3			X					
DETECTOR 4				X				
DETECTOR 5					X			
DETECTOR 6						X		
DETECTOR 7				X				
DETECTOR 8								X

DETECTOR MODES & TIMING

DETECTOR	DETECTOR MODE	DELAY TIME	STRETCH/ STOP BAR
1			
2			
3			
4		8.0	
5			
6			
7			
8			

OVERLAPS

PHASE	1	2	3	4	5	6	7	8	TYPE	LAG GRN	YEL	RED
OLA												
OLB												
OLC												
OLD												
PED OLA												
PED OLB												
PED OLC												
PED OLD												



INTERSECTION NUMBER:

4680

ZONE:

1

COORDINATION PROGRAMMING



ASC3/2100 SERIES & COBALT

INTERSECTION:

OHB & BRENTWOOD BLVD

INSTALLATION DATE:

PROGRAMMED BY:

NOTES:

COORD/SPLIT TABLE

PHASE	CYCLE LENGTH	OFFSET	1	2	3	4	5	6	7	8
PATTERN 1	140	41	34	75	15	16	15	94		
PATTERN 2	120	47	25	65	15	15	15	75		
PATTERN 3	150	29	28	84	15	23	15	97		
PATTERN 4										
PATTERN 5	120	46	22	68	15	15	15	75		
PATTERN 6	90	52	18	42	15	15	15	45		
PATTERN 7	120	28	22	66	15	17	15	73		
PATTERN 8										
PATTERN 9										
PATTERN 10										
PATTERN 11										
PATTERN 12										

BACKUP PREVENT

TMGIBKUP	1	2	3	4	5	6	7	8
1								
2	X							
3								
4								
5								
6					X			
7								
8								

COORD OPTIONS

FUNCTION	
MANUAL PATTERN	AUTO
ECPI COORD	YES
SYSTEM SOURCE	TBC
SYSTEM FORMAT	PTN
SPLITS IN	SECONDS
OFFSET IN	SECONDS
TRANSITION	SMOOTH
MAX SELECT	MAX INH
DWELL/ADD TIME	0
ENABLE MAN SYNC	NO
DELAY COORD WK-LZ	NO
FORCE OFF	FLOAT
OFFSET REF	YIELD
CAL USE PED TM	NO
PED RECALL	NO
PED RESERVE	NO
LOCAL ZERO OVRD	NO
FO ADD INI GRN	NO
RE-SYNC COUNT	0
MULTISYNC	NO

PHASE REVERSAL

PATTERN	MODE	PHASES	
		LEAD	LAG
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

COORD. PHASES

PATTERN	PHASES TO BE COORD	
1	2	6
2	2	6
3	2	6
4	2	6
5	2	6
6	2	6
7	2	6
8	2	6
9	2	6
10	2	6
11	2	6
12	2	6

INTERSECTION
NUMBER: **4680**

ZONE: **1**

INTERSECTION: **OHB & BRENTWOOD BLVD**

INSTALLATION DATE: _____

PROGRAMMED BY: _____

NOTES: Action Plan 98 = FREE MAX 2
Action Plan 99 = FREE
Action Plan 100 = FLASH

TIME CLOCK PROGRAMMING



ASC3/2100 SERIES & COBALT

SCHEDULE PLAN

SCHEDULE	SUN 1	MON 2	TUE 3	WED 4	THU 5	FRI 6	SAT 7
1	3	1	1	1	1	1	2
2							
3							
4							
5							

DAYLIGHT SAVINGS

	MONTH	W-O-M
SPRING	3	2
FALL	11	1

COMMANDED ACTION

CKT	SYM	ON/OFF/TOD

TIME DEPENDENT SYNC REF

CYCLE	HH:MM
1	
2	
3	
4	
5	
6	
SYNC REF	

DAY PLAN EVENTS

SCHEDULE	HH:MM	PATTERN	CODE
1	06:30	1	1
1	10:00	5	5
1	11:15	2	2
1	15:00	3	3
1	19:00	6	6
1	22:00	254	99
2	08:00	5	5
2	13:00	7	7
2	18:00	6	6
2	20:00	254	99
3	08:00	5	5
3	13:00	7	7
3	16:00	6	6
3	19:00	254	99

TOD ACTION PLAN

ACTN	1	2	3	4	5	6	7	8	9	10	11	12	13	98	99	100
PATT	1	2	3	4	5	6	7				11	12		254	254	255
MAX 2														X		
SPC FCT																
AUX FCT																

APPENDIX F CAPACITY ANALYSES

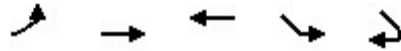
EXISTING CONDITIONS CAPACITY ANALYSES

Queues

1: Maryland Way & Brentwood Blvd

East Park TIS

Existing AM



Lane Group	EBL	EBT	WBT	SEL	SER
Lane Group Flow (vph)	65	503	1308	53	174
v/c Ratio	0.20	0.17	0.49	0.39	0.62
Control Delay	3.8	2.6	7.8	63.9	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	3.8	2.6	7.8	63.9	23.4
Queue Length 50th (ft)	8	37	224	48	48
Queue Length 95th (ft)	19	60	314	m76	m122
Internal Link Dist (ft)		1063	451	268	
Turn Bay Length (ft)	165				
Base Capacity (vph)	393	2940	2653	195	329
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.17	0.49	0.27	0.53

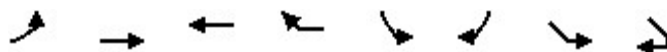
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary

1: Maryland Way & Brentwood Blvd

East Park TIS
Existing AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR	SEL	SER
Lane Configurations								
Traffic Volume (veh/h)	60	463	1078	125	0	0	49	160
Future Volume (veh/h)	60	463	1078	125	0	0	49	160
Initial Q (Qb), veh	0	0	0	0			0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00			1.00	1.00
Work Zone On Approach		No	No				No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870			1870	1870
Adj Flow Rate, veh/h	65	503	1172	136			53	174
Peak Hour Factor	0.92	0.92	0.92	0.92			0.92	0.92
Percent Heavy Veh, %	2	2	2	2			2	2
Cap, veh/h	343	2830	2301	266			197	175
Arrive On Green	0.03	0.80	0.72	0.72			0.11	0.11
Sat Flow, veh/h	1781	3647	3302	371			1781	1585
Grp Volume(v), veh/h	65	503	648	660			53	174
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1803			1781	1585
Q Serve(g_s), s	1.2	4.7	22.7	22.9			3.8	15.4
Cycle Q Clear(g_c), s	1.2	4.7	22.7	22.9			3.8	15.4
Prop In Lane	1.00			0.21			1.00	1.00
Lane Grp Cap(c), veh/h	343	2830	1274	1293			197	175
V/C Ratio(X)	0.19	0.18	0.51	0.51			0.27	0.99
Avail Cap(c_a), veh/h	443	2830	1274	1293			197	175
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00			1.00	1.00
Uniform Delay (d), s/veh	6.6	3.4	8.8	8.8			57.1	62.2
Incr Delay (d2), s/veh	0.1	0.1	1.5	1.4			1.0	65.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.4	8.3	8.5			1.8	9.4
Unsig. Movement Delay, s/veh								
LnGrp Delay(d),s/veh	6.7	3.5	10.3	10.3			58.1	127.6
LnGrp LOS	A	A	B	B			E	F
Approach Vol, veh/h		568	1308				227	
Approach Delay, s/veh		3.9	10.3				111.3	
Approach LOS		A	B				F	
Timer - Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.1	106.9		22.0		118.0		
Change Period (Y+Rc), s	6.5	6.5		6.5		6.5		
Max Green Setting (Gmax), s	12.5	92.5		15.5		111.5		
Max Q Clear Time (g_c+l1), s	3.2	24.9		17.4		6.7		
Green Ext Time (p_c), s	0.0	19.6		0.0		5.3		

Intersection Summary

HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th TWSC
2: Brentwood Blvd & Juris Ln/Driveway A

East Park TIS
Existing AM

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			↰↱				
Traffic Vol, veh/h	14	12	0	0	1	1	44	139	2	0	0	0
Future Vol, veh/h	14	12	0	0	1	1	44	139	2	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	108	125	7984
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	13	0	0	1	1	48	151	2	0	0	0

Major/Minor	Minor2		Minor1		Major1						
Conflicting Flow All	172	249	-	-	248	77	0	0	0		
Stage 1	0	0	-	-	248	-	-	-	-		
Stage 2	172	249	-	-	0	-	-	-	-		
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-		
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-		
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-		
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-		
Pot Cap-1 Maneuver	775	653	0	0	653	968	-	-	-		
Stage 1	-	-	0	0	700	-	-	-	-		
Stage 2	813	699	0	0	-	-	-	-	-		
Platoon blocked, %								-	-		
Mov Cap-1 Maneuver	773	653	-	-	653	968	-	-	-		
Mov Cap-2 Maneuver	773	653	-	-	653	-	-	-	-		
Stage 1	-	-	-	-	700	-	-	-	-		
Stage 2	811	699	-	-	-	-	-	-	-		

Approach	EB		WB		NB		
HCM Control Delay, s	10.3		9.6				
HCM LOS	B		A				

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	713	780
HCM Lane V/C Ratio	-	-	-	0.04	0.003
HCM Control Delay (s)	-	-	-	10.3	9.6
HCM Lane LOS	-	-	-	B	A
HCM 95th %tile Q(veh)	-	-	-	0.1	0

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱						↰↱	
Traffic Vol, veh/h	0	14	8	1	44	0	0	0	0	12	200	65
Future Vol, veh/h	0	14	8	1	44	0	0	0	0	12	200	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	9	1	48	0	0	0	0	13	217	71
Major/Minor	Minor2		Minor1				Major2					
Conflicting Flow All	-	279	144	142	314	-				0	0	0
Stage 1	-	279	-	0	0	-				-	-	-
Stage 2	-	0	-	142	314	-				-	-	-
Critical Hdwy	-	6.54	6.94	7.54	6.54	-				4.14	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-				-	-	-
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-				2.22	-	-
Pot Cap-1 Maneuver	0	628	877	814	600	0				-	-	-
Stage 1	0	678	-	-	-	0				-	-	-
Stage 2	0	-	-	846	655	0				-	-	-
Platoon blocked, %											-	-
Mov Cap-1 Maneuver	-	628	877	791	600	-				-	-	-
Mov Cap-2 Maneuver	-	628	-	791	600	-				-	-	-
Stage 1	-	678	-	-	-	-				-	-	-
Stage 2	-	-	-	819	655	-				-	-	-
Approach	EB		WB				SB					
HCM Control Delay, s	10.3		11.5									
HCM LOS	B		B									
Minor Lane/Major Mvmt	EBLn1WBLn1		SBL	SBT	SBR							
Capacity (veh/h)	700 603		-	-	-							
HCM Lane V/C Ratio	0.034 0.081		-	-	-							
HCM Control Delay (s)	10.3 11.5		-	-	-							
HCM Lane LOS	B B		-	-	-							
HCM 95th %tile Q(veh)	0.1 0.3		-	-	-							

HCM 6th TWSC
4: Brentwood Blvd & Cadillac Dr/Driveway B

East Park TIS
Existing AM

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			1			4				
Traffic Vol, veh/h	26	20	0	0	5	3	66	83	5	0	0	0
Future Vol, veh/h	26	20	0	0	5	3	66	83	5	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1082898432	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	22	0	0	5	3	72	90	5	0	0	0

Major/Minor	Minor2		Minor1		Major1						
Conflicting Flow All	192	239	-	-	237	48	0	0	0		
Stage 1	0	0	-	-	237	-	-	-	-		
Stage 2	192	239	-	-	0	-	-	-	-		
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-		
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-		
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-		
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-		
Pot Cap-1 Maneuver	750	661	0	0	663	1011	-	-	-		
Stage 1	-	-	0	0	708	-	-	-	-		
Stage 2	791	706	0	0	-	-	-	-	-		
Platoon blocked, %								-	-		
Mov Cap-1 Maneuver	743	661	-	-	663	1011	-	-	-		
Mov Cap-2 Maneuver	743	661	-	-	663	-	-	-	-		
Stage 1	-	-	-	-	708	-	-	-	-		
Stage 2	782	706	-	-	-	-	-	-	-		

Approach	EB	WB	NB
HCM Control Delay, s	10.5	9.8	
HCM LOS	B	A	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
Capacity (veh/h)	-	-	-	705 761
HCM Lane V/C Ratio	-	-	-	0.071 0.011
HCM Control Delay (s)	-	-	-	10.5 9.8
HCM Lane LOS	-	-	-	B A
HCM 95th %tile Q(veh)	-	-	-	0.2 0

HCM 6th TWSC
5: Brentwood Blvd & Cadillac Dr/Driveway B

East Park TIS
Existing AM

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖						↖↑	↗
Traffic Vol, veh/h	0	29	36	0	71	0	0	0	0	17	241	80
Future Vol, veh/h	0	29	36	0	71	0	0	0	0	17	241	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	-	-	-	-	-	-	85
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	32	39	0	77	0	0	0	0	18	262	87

Major/Minor	Minor2		Minor1		Major2		
Conflicting Flow All	-	298	131	183	298	-	0 0 0
Stage 1	-	298	-	0	0	-	- - -
Stage 2	-	0	-	183	298	-	- - -
Critical Hdwy	-	6.54	6.94	7.54	6.54	-	4.14 - -
Critical Hdwy Stg 1	-	5.54	-	-	-	-	- - -
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-	- - -
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-	2.22 - -
Pot Cap-1 Maneuver	0	613	894	761	613	0	- - 0
Stage 1	0	666	-	-	-	0	- - 0
Stage 2	0	-	-	801	666	0	- - 0
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	613	894	699	613	-	- - -
Mov Cap-2 Maneuver	-	613	-	699	613	-	- - -
Stage 1	-	666	-	-	-	-	- - -
Stage 2	-	-	-	730	666	-	- - -

Approach	EB		WB		SB		
HCM Control Delay, s	10.1		11.7				
HCM LOS	B		B				

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	SBL	SBT
Capacity (veh/h)	613	894	613	-	-
HCM Lane V/C Ratio	0.051	0.044	0.126	-	-
HCM Control Delay (s)	11.2	9.2	11.7	-	-
HCM Lane LOS	B	A	B	-	-
HCM 95th %tile Q(veh)	0.2	0.1	0.4	-	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	98	14	0	0
Future Vol, veh/h	0	4	98	14	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	1083488256	
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	107	15	0	0

Major/Minor	Minor1	Major1
Conflicting Flow All	-	61
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	-	6.94
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	-	3.32
Pot Cap-1 Maneuver	0	991
Stage 1	0	-
Stage 2	0	-
Platoon blocked, %		-
Mov Cap-1 Maneuver	-	991
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-

Approach	WB	NB
HCM Control Delay, s	8.6	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBRWBLn1
Capacity (veh/h)	-	991
HCM Lane V/C Ratio	-	0.004
HCM Control Delay (s)	-	8.6
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	0

Queues

East Park TIS

7: Brentwood Blvd & Old Hickory Blvd & Private Dr

Existing AM



Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	1326	342	1622	2	25	86	1
v/c Ratio	0.58	0.75	0.52	0.00	0.29	0.12	0.02
Control Delay	17.6	30.6	4.2	0.0	76.5	7.2	65.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	30.6	4.2	0.0	76.5	7.2	65.0
Queue Length 50th (ft)	364	134	163	0	23	0	1
Queue Length 95th (ft)	584	277	381	0	56	21	7
Internal Link Dist (ft)	778		1004		161		195
Turn Bay Length (ft)		305		60			
Base Capacity (vph)	2298	497	3142	1421	113	779	85
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.69	0.52	0.00	0.22	0.11	0.01
Intersection Summary							

HCM Signalized Intersection Capacity Analysis

7: Brentwood Blvd & Old Hickory Blvd & Private Dr

East Park TIS
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1188	32	315	1492	2	23	0	79	0	0	1
Future Volume (vph)	0	1188	32	315	1492	2	23	0	79	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Lane Util. Factor		0.95		1.00	0.95	1.00		1.00	0.88		0.95	
Frt		1.00		1.00	1.00	0.85		1.00	0.85		0.85	
Flt Protected		1.00		0.95	1.00	1.00		0.95	1.00		1.00	
Satd. Flow (prot)		3525		1770	3539	1583		1770	2787		1504	
Flt Permitted		1.00		0.12	1.00	1.00		0.95	1.00		1.00	
Satd. Flow (perm)		3525		230	3539	1583		1770	2787		1504	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1291	35	342	1622	2	25	0	86	0	0	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	69	0	0	0
Lane Group Flow (vph)	0	1326	0	342	1622	2	0	25	17	0	1	0
Turn Type	pm+pt	NA		pm+pt	NA	Prot	Split	NA	custom	Split	NA	
Protected Phases	5	2		1	6	6	4	4		3	3	
Permitted Phases	2			6					4			
Actuated Green, G (s)		82.9		113.1	113.1	113.1		4.8	28.0		1.1	
Effective Green, g (s)		82.9		113.1	113.1	113.1		4.8	28.0		1.1	
Actuated g/C Ratio		0.59		0.81	0.81	0.81		0.03	0.20		0.01	
Clearance Time (s)		7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Vehicle Extension (s)		3.0		2.5	3.0	3.0		2.5	2.5		2.5	
Lane Grp Cap (vph)		2087		441	2859	1278		60	696		11	
v/s Ratio Prot		0.38		c0.13	0.46	0.00		c0.01	0.00		c0.00	
v/s Ratio Perm				c0.50					0.00			
v/c Ratio		0.64		0.78	0.57	0.00		0.42	0.02		0.09	
Uniform Delay, d1		18.7		28.2	4.8	2.6		66.2	45.0		69.0	
Progression Factor		1.00		1.00	1.00	1.00		1.07	1.01		1.00	
Incremental Delay, d2		1.5		8.0	0.8	0.0		3.4	0.0		2.6	
Delay (s)		20.2		36.2	5.6	2.6		74.5	45.3		71.6	
Level of Service		C		D	A	A		E	D		E	
Approach Delay (s)		20.2			10.9			51.9			71.6	
Approach LOS		C			B			D			E	
Intersection Summary												
HCM 2000 Control Delay			15.9				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			140.0				Sum of lost time (s)			28.0		
Intersection Capacity Utilization			76.7%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

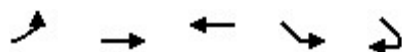
Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	508	1196	25	6	7
Future Vol, veh/h	4	508	1196	25	6	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	70	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	552	1300	27	7	8
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1327	0	-	0	1584	650
Stage 1	-	-	-	-	1300	-
Stage 2	-	-	-	-	284	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	516	-	-	-	99	412
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	739	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	516	-	-	-	98	412
Mov Cap-2 Maneuver	-	-	-	-	98	-
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	739	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		28.7		
HCM LOS	D					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	516	-	-	-	166	
HCM Lane V/C Ratio	0.008	-	-	-	0.085	
HCM Control Delay (s)	12	-	-	-	28.7	
HCM Lane LOS	B	-	-	-	D	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

Queues

East Park TIS

1: Maryland Way & Brentwood Blvd

Existing PM

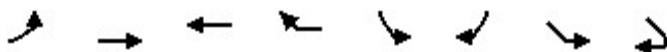


Lane Group	EBL	EBT	WBT	SEL	SER
Lane Group Flow (vph)	146	1334	740	189	90
v/c Ratio	0.28	0.49	0.32	0.73	0.29
Control Delay	6.4	7.7	11.3	76.8	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.4	7.7	11.3	76.8	12.1
Queue Length 50th (ft)	32	227	148	171	0
Queue Length 95th (ft)	62	324	216	240	46
Internal Link Dist (ft)		1063	451	268	
Turn Bay Length (ft)	165				
Base Capacity (vph)	537	2714	2338	336	373
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.27	0.49	0.32	0.56	0.24
Intersection Summary					

HCM 6th Signalized Intersection Summary

1: Maryland Way & Brentwood Blvd

East Park TIS
Existing PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR	SEL	SER
Lane Configurations								
Traffic Volume (veh/h)	134	1227	601	80	0	0	174	83
Future Volume (veh/h)	134	1227	601	80	0	0	174	83
Initial Q (Qb), veh	0	0	0	0			0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00			1.00	1.00
Work Zone On Approach		No	No				No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870			1870	1870
Adj Flow Rate, veh/h	146	1334	653	87			189	90
Peak Hour Factor	0.92	0.92	0.92	0.92			0.92	0.92
Percent Heavy Veh, %	2	2	2	2			2	2
Cap, veh/h	567	2806	2241	298			221	196
Arrive On Green	0.04	0.79	0.71	0.71			0.12	0.12
Sat Flow, veh/h	1781	3647	3246	419			1781	1585
Grp Volume(v), veh/h	146	1334	368	372			189	90
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1795			1781	1585
Q Serve(g_s), s	3.2	19.0	11.3	11.3			15.6	7.9
Cycle Q Clear(g_c), s	3.2	19.0	11.3	11.3			15.6	7.9
Prop In Lane	1.00			0.23			1.00	1.00
Lane Grp Cap(c), veh/h	567	2806	1263	1276			221	196
V/C Ratio(X)	0.26	0.48	0.29	0.29			0.86	0.46
Avail Cap(c_a), veh/h	618	2806	1263	1276			338	301
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00			1.00	1.00
Uniform Delay (d), s/veh	5.5	5.3	7.9	7.9			64.4	61.0
Incr Delay (d2), s/veh	0.1	0.6	0.6	0.6			15.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.0	4.2	4.3			8.0	3.3
Unsig. Movement Delay, s/veh								
LnGrp Delay(d),s/veh	5.6	5.9	8.5	8.5			79.7	63.4
LnGrp LOS	A	A	A	A			E	E
Approach Vol, veh/h		1480	740				279	
Approach Delay, s/veh		5.9	8.5				74.5	
Approach LOS		A	A				E	
Timer - Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.8	113.1		25.1		124.9		
Change Period (Y+Rc), s	6.5	6.5		6.5		6.5		
Max Green Setting (Gmax), s	9.5	92.5		28.5		108.5		
Max Q Clear Time (g_c+l1), s	5.2	13.3		17.6		21.0		
Green Ext Time (p_c), s	0.1	7.7		1.0		22.8		

Intersection Summary

HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			↰↱				
Traffic Vol, veh/h	64	1	0	0	3	13	3	211	0	0	0	0
Future Vol, veh/h	64	1	0	0	3	13	3	211	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1081257984	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	1	0	0	3	14	3	229	0	0	0	0

Major/Minor	Minor2		Minor1		Major1					
Conflicting Flow All	122	235	-	-	235	115	0	0	0	
Stage 1	0	0	-	-	235	-	-	-	-	
Stage 2	122	235	-	-	0	-	-	-	-	
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-	
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-	
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-	
Pot Cap-1 Maneuver	840	664	0	0	664	916	-	-	-	
Stage 1	-	-	0	0	709	-	-	-	-	
Stage 2	869	709	0	0	-	-	-	-	-	
Platoon blocked, %								-	-	
Mov Cap-1 Maneuver	824	664	-	-	664	916	-	-	-	
Mov Cap-2 Maneuver	824	664	-	-	664	-	-	-	-	
Stage 1	-	-	-	-	709	-	-	-	-	
Stage 2	852	709	-	-	-	-	-	-	-	

Approach	EB	WB	NB
HCM Control Delay, s	9.8	9.3	
HCM LOS	A	A	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
Capacity (veh/h)	-	-	-	821 855
HCM Lane V/C Ratio	-	-	-	0.086 0.02
HCM Control Delay (s)	-	-	-	9.8 9.3
HCM Lane LOS	-	-	-	A A
HCM 95th %tile Q(veh)	-	-	-	0.3 0.1

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱						↱↱	
Traffic Vol, veh/h	0	64	39	3	3	0	0	0	0	1	215	9
Future Vol, veh/h	0	64	39	3	3	0	0	0	0	1	215	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	42	3	3	0	0	0	0	1	234	10

Major/Minor	Minor2		Minor1				Major2		
Conflicting Flow All	-	241	122	154	246	-	0	0	0
Stage 1	-	241	-	0	0	-	-	-	-
Stage 2	-	0	-	154	246	-	-	-	-
Critical Hdwy	-	6.54	6.94	7.54	6.54	-	4.14	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-	2.22	-	-
Pot Cap-1 Maneuver	0	659	906	798	655	0	-	-	-
Stage 1	0	705	-	-	-	0	-	-	-
Stage 2	0	-	-	833	701	0	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	-	659	906	699	655	-	-	-	-
Mov Cap-2 Maneuver	-	659	-	699	655	-	-	-	-
Stage 1	-	705	-	-	-	-	-	-	-
Stage 2	-	-	-	716	701	-	-	-	-

Approach	EB		WB		SB	
HCM Control Delay, s	10.8		10.4			
HCM LOS	B		B			

Minor Lane/Major Mvmt	EBLn1WBLn1		SBL	SBT	SBR
Capacity (veh/h)	735	676	-	-	-
HCM Lane V/C Ratio	0.152	0.01	-	-	-
HCM Control Delay (s)	10.8	10.4	-	-	-
HCM Lane LOS	B	B	-	-	-
HCM 95th %tile Q(veh)	0.5	0	-	-	-

HCM 6th TWSC
4: Brentwood Blvd & Cadillac Dr/Driveway B

East Park TIS
Existing PM

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			1			4				
Traffic Vol, veh/h	97	28	0	0	11	16	59	226	3	0	0	0
Future Vol, veh/h	97	28	0	0	11	16	59	226	3	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1082898432	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	105	30	0	0	12	17	64	246	3	0	0	0

Major/Minor	Minor2		Minor1		Major1						
Conflicting Flow All	257	377	-	-	376	125	0	0	0		
Stage 1	0	0	-	-	376	-	-	-	-		
Stage 2	257	377	-	-	0	-	-	-	-		
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-		
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-		
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-		
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-		
Pot Cap-1 Maneuver	675	553	0	0	554	902	-	-	-		
Stage 1	-	-	0	0	615	-	-	-	-		
Stage 2	725	614	0	0	-	-	-	-	-		
Platoon blocked, %								-	-		
Mov Cap-1 Maneuver	651	553	-	-	554	902	-	-	-		
Mov Cap-2 Maneuver	651	553	-	-	554	-	-	-	-		
Stage 1	-	-	-	-	615	-	-	-	-		
Stage 2	697	614	-	-	-	-	-	-	-		

Approach	EB		WB		NB		
HCM Control Delay, s	12.3		10.2				
HCM LOS	B		B				

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	
Capacity (veh/h)	-	-	-	626	718
HCM Lane V/C Ratio	-	-	-	0.217	0.041
HCM Control Delay (s)	-	-	-	12.3	10.2
HCM Lane LOS	-	-	-	B	B
HCM 95th %tile Q(veh)	-	-	-	0.8	0.1

HCM 6th TWSC
5: Brentwood Blvd & Cadillac Dr/Driveway B

East Park TIS
Existing PM

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖						↖↑	↗
Traffic Vol, veh/h	0	100	102	7	63	0	0	0	0	25	116	24
Future Vol, veh/h	0	100	102	7	63	0	0	0	0	25	116	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	-	-	-	-	-	-	85
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	109	111	8	68	0	0	0	0	27	126	26
Major/Minor	Minor2		Minor1				Major2					
Conflicting Flow All	-	180	63	172	180	-				0	0	0
Stage 1	-	180	-	0	0	-				-	-	-
Stage 2	-	0	-	172	180	-				-	-	-
Critical Hdwy	-	6.54	6.94	7.54	6.54	-				4.14	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-				-	-	-
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-				2.22	-	-
Pot Cap-1 Maneuver	0	713	988	775	713	0				-	-	0
Stage 1	0	749	-	-	-	0				-	-	0
Stage 2	0	-	-	813	749	0				-	-	0
Platoon blocked, %											-	
Mov Cap-1 Maneuver	-	713	988	608	713	-				-	-	-
Mov Cap-2 Maneuver	-	713	-	608	713	-				-	-	-
Stage 1	-	749	-	-	-	-				-	-	-
Stage 2	-	-	-	617	749	-				-	-	-
Approach	EB		WB				SB					
HCM Control Delay, s	10		10.8									
HCM LOS	B		B									
Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	SBL	SBT							
Capacity (veh/h)	713	988	701	-	-							
HCM Lane V/C Ratio	0.152	0.112	0.109	-	-							
HCM Control Delay (s)	11	9.1	10.8	-	-							
HCM Lane LOS	B	A	B	-	-							
HCM 95th %tile Q(veh)	0.5	0.4	0.4	-	-							

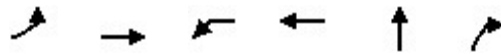
Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	19	315	24	0	0
Future Vol, veh/h	0	19	315	24	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	1083488256	
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	21	342	26	0	0
Major/Minor	Minor1		Major1			
Conflicting Flow All	-	184	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	827	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	827	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB		NB			
HCM Control Delay, s	9.5		0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT		NBRWBLn1			
Capacity (veh/h)	-		827			
HCM Lane V/C Ratio	-		0.025			
HCM Control Delay (s)	-		9.5			
HCM Lane LOS	-		A			
HCM 95th %tile Q(veh)	-		0.1			

Queues

East Park TIS

7: Brentwood Blvd & Old Hickory Blvd & Private Dr

Existing PM



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	3	1515	120	1233	59	304
v/c Ratio	0.01	0.58	0.40	0.41	0.51	0.48
Control Delay	3.3	11.2	6.1	4.3	81.1	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.3	11.2	6.1	4.3	81.1	16.7
Queue Length 50th (ft)	0	338	16	123	57	42
Queue Length 95th (ft)	2	504	32	276	105	86
Internal Link Dist (ft)		778		1004	161	
Turn Bay Length (ft)	125		305			
Base Capacity (vph)	405	2623	413	3012	188	820
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.58	0.29	0.41	0.31	0.37
Intersection Summary						

HCM Signalized Intersection Capacity Analysis

7: Brentwood Blvd & Old Hickory Blvd & Private Dr

East Park TIS
Existing PM

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	3	1362	32	110	1134	0	54	0	280	0	0
Future Volume (vph)	3	1362	32	110	1134	0	54	0	280	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	0.88		
Frt	1.00	1.00		1.00	1.00			1.00	0.85		
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)	1770	3527		1770	3539			1770	2787		
Flt Permitted	0.22	1.00		0.12	1.00			0.95	1.00		
Satd. Flow (perm)	419	3527		232	3539			1770	2787		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	1480	35	120	1233	0	59	0	304	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	188	0	0
Lane Group Flow (vph)	3	1515	0	120	1233	0	0	59	116	0	0
Turn Type	pm+pt	NA		pm+pt	NA	Prot	Split	NA	custom	Split	
Protected Phases	5	2		1	6	6	4	4	1	3	3
Permitted Phases	2			6					4		
Actuated Green, G (s)	111.1	110.1		127.3	119.3			8.7	18.9		
Effective Green, g (s)	111.1	110.1		127.3	119.3			8.7	18.9		
Actuated g/C Ratio	0.74	0.73		0.85	0.80			0.06	0.13		
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		
Lane Grp Cap (vph)	319	2588		301	2814			102	481		
v/s Ratio Prot	0.00	c0.43		c0.03	c0.35			c0.03	0.02		
v/s Ratio Perm	0.01			0.31					0.03		
v/c Ratio	0.01	0.59		0.40	0.44			0.58	0.24		
Uniform Delay, d1	5.1	9.3		7.2	4.8			68.9	59.1		
Progression Factor	1.00	1.00		1.00	1.00			0.99	0.93		
Incremental Delay, d2	0.0	1.0		0.6	0.5			6.4	0.2		
Delay (s)	5.1	10.3		7.9	5.3			74.4	55.4		
Level of Service	A	B		A	A			E	E		
Approach Delay (s)		10.3			5.5			58.5			0.0
Approach LOS		B			A			E			A
Intersection Summary											
HCM 2000 Control Delay	13.7			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio	0.61										
Actuated Cycle Length (s)	150.0			Sum of lost time (s)			28.0				
Intersection Capacity Utilization	66.4%			ICU Level of Service			C				
Analysis Period (min)	15										
c Critical Lane Group											

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	1393	664	14	10	17
Future Vol, veh/h	8	1393	664	14	10	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	70	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	1514	722	15	11	18
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	737	0	-	0	1497	361
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	775	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	865	-	-	-	113	636
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	415	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	865	-	-	-	112	636
Mov Cap-2 Maneuver	-	-	-	-	112	-
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	415	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		22.7		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	865	-	-	-	233	
HCM Lane V/C Ratio	0.01	-	-	-	0.126	
HCM Control Delay (s)	9.2	-	-	-	22.7	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.4	

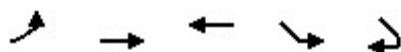
BACKGROUND CONDITIONS CAPACITY ANALYSES

Queues

East Park TIS

1: Maryland Way & Brentwood Blvd

Background AM



Lane Group	EBL	EBT	WBT	SEL	SER
Lane Group Flow (vph)	74	620	1503	61	199
v/c Ratio	0.28	0.21	0.57	0.43	0.65
Control Delay	5.2	2.9	9.2	61.8	28.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	2.9	9.2	61.8	28.6
Queue Length 50th (ft)	10	50	291	57	88
Queue Length 95th (ft)	22	77	405	m73	m123
Internal Link Dist (ft)		1063	451	268	
Turn Bay Length (ft)	165				
Base Capacity (vph)	336	2926	2637	195	346
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.21	0.57	0.31	0.58

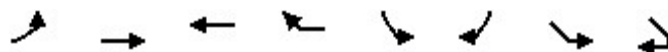
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

1: Maryland Way & Brentwood Blvd

East Park TIS
Background AM



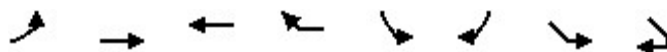
Movement	EBL	EBT	WBT	WBR	SBL	SBR	SEL	SER
Lane Configurations								
Traffic Volume (vph)	68	570	1240	143	0	0	56	183
Future Volume (vph)	68	570	1240	143	0	0	56	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.5				6.5	6.5
Lane Util. Factor	1.00	0.95	0.95				1.00	1.00
Frt	1.00	1.00	0.98				1.00	0.85
Flt Protected	0.95	1.00	1.00				0.95	1.00
Satd. Flow (prot)	1770	3539	3484				1770	1583
Flt Permitted	0.13	1.00	1.00				0.95	1.00
Satd. Flow (perm)	242	3539	3484				1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	620	1348	155	0	0	61	199
RTOR Reduction (vph)	0	0	0	0	0	0	0	178
Lane Group Flow (vph)	74	620	1503	0	0	0	61	21
Turn Type	pm+pt	NA	NA				Prot	Prot
Protected Phases	1	6	2				4	4
Permitted Phases	6							
Actuated Green, G (s)	115.8	115.8	104.7				11.2	11.2
Effective Green, g (s)	115.8	115.8	104.7				11.2	11.2
Actuated g/C Ratio	0.83	0.83	0.75				0.08	0.08
Clearance Time (s)	6.5	6.5	6.5				6.5	6.5
Vehicle Extension (s)	2.0	4.0	4.0				4.0	4.0
Lane Grp Cap (vph)	250	2927	2605				141	126
v/s Ratio Prot	0.01	c0.18	c0.43				c0.03	0.01
v/s Ratio Perm	0.23							
v/c Ratio	0.30	0.21	0.58				0.43	0.17
Uniform Delay, d1	5.7	2.5	7.8				61.4	60.1
Progression Factor	1.00	1.00	1.00				0.91	2.37
Incremental Delay, d2	0.2	0.2	0.9				2.1	0.6
Delay (s)	6.0	2.7	8.8				58.0	142.7
Level of Service	A	A	A				E	F
Approach Delay (s)		3.1	8.8		0.0		122.8	
Approach LOS		A	A		A		F	
Intersection Summary								
HCM 2000 Control Delay			19.2		HCM 2000 Level of Service			B
HCM 2000 Volume to Capacity ratio			0.56					
Actuated Cycle Length (s)			140.0		Sum of lost time (s)		19.5	
Intersection Capacity Utilization			65.1%		ICU Level of Service		C	
Analysis Period (min)			15					

c Critical Lane Group

HCM 6th Signalized Intersection Summary

1: Maryland Way & Brentwood Blvd

East Park TIS
Background AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR	SEL	SER
Lane Configurations								
Traffic Volume (veh/h)	68	570	1240	143	0	0	56	183
Future Volume (veh/h)	68	570	1240	143	0	0	56	183
Initial Q (Qb), veh	0	0	0	0			0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00			1.00	1.00
Work Zone On Approach		No	No				No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870			1870	1870
Adj Flow Rate, veh/h	74	620	1348	155			61	199
Peak Hour Factor	0.92	0.92	0.92	0.92			0.92	0.92
Percent Heavy Veh, %	2	2	2	2			2	2
Cap, veh/h	289	2830	2302	263			197	175
Arrive On Green	0.03	0.80	0.72	0.72			0.11	0.11
Sat Flow, veh/h	1781	3647	3307	367			1781	1585
Grp Volume(v), veh/h	74	620	742	761			61	199
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1804			1781	1585
Q Serve(g_s), s	1.4	6.0	28.5	29.0			4.4	15.5
Cycle Q Clear(g_c), s	1.4	6.0	28.5	29.0			4.4	15.5
Prop In Lane	1.00			0.20			1.00	1.00
Lane Grp Cap(c), veh/h	289	2830	1273	1292			197	175
V/C Ratio(X)	0.26	0.22	0.58	0.59			0.31	1.13
Avail Cap(c_a), veh/h	388	2830	1273	1292			197	175
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00			1.00	1.00
Uniform Delay (d), s/veh	8.4	3.5	9.7	9.7			57.3	62.2
Incr Delay (d2), s/veh	0.2	0.2	2.0	2.0			1.3	108.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.8	10.5	10.9			2.1	11.5
Unsig. Movement Delay, s/veh								
LnGrp Delay(d),s/veh	8.6	3.7	11.6	11.7			58.6	170.8
LnGrp LOS	A	A	B	B			E	F
Approach Vol, veh/h		694	1503				260	
Approach Delay, s/veh		4.2	11.7				144.4	
Approach LOS		A	B				F	
Timer - Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.2	106.8		22.0		118.0		
Change Period (Y+Rc), s	6.5	6.5		6.5		6.5		
Max Green Setting (Gmax), s	12.5	92.5		15.5		111.5		
Max Q Clear Time (g_c+l1), s	3.4	31.0		17.5		8.0		
Green Ext Time (p_c), s	0.0	25.1		0.0		6.8		

Intersection Summary

HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			1			4				
Traffic Vol, veh/h	16	14	0	0	1	1	50	159	2	0	0	0
Future Vol, veh/h	16	14	0	0	1	1	50	159	2	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	108	125	7984
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	15	0	0	1	1	54	173	2	0	0	0

Major/Minor	Minor2		Minor1		Major1						
Conflicting Flow All	195	283	-	-	282	88	0	0	0		
Stage 1	0	0	-	-	282	-	-	-	-		
Stage 2	195	283	-	-	0	-	-	-	-		
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-		
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-		
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-		
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-		
Pot Cap-1 Maneuver	747	625	0	0	625	953	-	-	-		
Stage 1	-	-	0	0	676	-	-	-	-		
Stage 2	788	676	0	0	-	-	-	-	-		
Platoon blocked, %								-	-		
Mov Cap-1 Maneuver	746	625	-	-	625	953	-	-	-		
Mov Cap-2 Maneuver	746	625	-	-	625	-	-	-	-		
Stage 1	-	-	-	-	676	-	-	-	-		
Stage 2	786	676	-	-	-	-	-	-	-		

Approach	EB	WB	NB
HCM Control Delay, s	10.5	9.8	
HCM LOS	B	A	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	684	755
HCM Lane V/C Ratio	-	-	-	0.048	0.003
HCM Control Delay (s)	-	-	-	10.5	9.8
HCM Lane LOS	-	-	-	B	A
HCM 95th %tile Q(veh)	-	-	-	0.1	0

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱						↰↱	
Traffic Vol, veh/h	0	16	9	1	50	0	0	0	0	14	228	74
Future Vol, veh/h	0	16	9	1	50	0	0	0	0	14	228	74
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	17	10	1	54	0	0	0	0	15	248	80
Major/Minor	Minor2		Minor1				Major2					
Conflicting Flow All	-	318	164	163	358	-				0	0	0
Stage 1	-	318	-	0	0	-				-	-	-
Stage 2	-	0	-	163	358	-				-	-	-
Critical Hdwy	-	6.54	6.94	7.54	6.54	-				4.14	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-				-	-	-
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-				2.22	-	-
Pot Cap-1 Maneuver	0	597	852	786	567	0				-	-	-
Stage 1	0	652	-	-	-	0				-	-	-
Stage 2	0	-	-	823	626	0				-	-	-
Platoon blocked, %											-	-
Mov Cap-1 Maneuver	-	597	852	760	567	-				-	-	-
Mov Cap-2 Maneuver	-	597	-	760	567	-				-	-	-
Stage 1	-	652	-	-	-	-				-	-	-
Stage 2	-	-	-	792	626	-				-	-	-
Approach	EB		WB				SB					
HCM Control Delay, s	10.6		12									
HCM LOS	B		B									
Minor Lane/Major Mvmt	EBLn1WBLn1		SBL	SBT	SBR							
Capacity (veh/h)	669 570		-	-	-							
HCM Lane V/C Ratio	0.041 0.097		-	-	-							
HCM Control Delay (s)	10.6 12		-	-	-							
HCM Lane LOS	B B		-	-	-							
HCM 95th %tile Q(veh)	0.1 0.3		-	-	-							

HCM 6th TWSC
4: Brentwood Blvd & Cadillac Dr/Driveway B

East Park TIS
Background AM

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			↰↱				
Traffic Vol, veh/h	30	22	0	0	6	3	75	95	6	0	0	0
Future Vol, veh/h	30	22	0	0	6	3	75	95	6	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1082898432	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	24	0	0	7	3	82	103	7	0	0	0

Major/Minor	Minor2		Minor1		Major1				
Conflicting Flow All	219	274	-	-	271	55	0	0	0
Stage 1	0	0	-	-	271	-	-	-	-
Stage 2	219	274	-	-	0	-	-	-	-
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	718	632	0	0	634	1000	-	-	-
Stage 1	-	-	0	0	684	-	-	-	-
Stage 2	763	682	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	710	632	-	-	634	1000	-	-	-
Mov Cap-2 Maneuver	710	632	-	-	634	-	-	-	-
Stage 1	-	-	-	-	684	-	-	-	-
Stage 2	753	682	-	-	-	-	-	-	-

Approach	EB		WB		NB		
HCM Control Delay, s	10.8		10.1				
HCM LOS	B		B				

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	
Capacity (veh/h)	-	-	-	675	722
HCM Lane V/C Ratio	-	-	-	0.084	0.014
HCM Control Delay (s)	-	-	-	10.8	10.1
HCM Lane LOS	-	-	-	B	B
HCM 95th %tile Q(veh)	-	-	-	0.3	0

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖						↖↑	↗
Traffic Vol, veh/h	0	33	41	0	81	0	0	0	0	19	275	91
Future Vol, veh/h	0	33	41	0	81	0	0	0	0	19	275	91
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	-	-	-	-	-	-	85
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	45	0	88	0	0	0	0	21	299	99

Major/Minor	Minor2		Minor1		Major2	
Conflicting Flow All	-	341	150	210	341	-
Stage 1	-	341	-	0	0	-
Stage 2	-	0	-	210	341	-
Critical Hdwy	-	6.54	6.94	7.54	6.54	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-
Pot Cap-1 Maneuver	0	580	870	729	580	0
Stage 1	0	637	-	-	-	0
Stage 2	0	-	-	773	637	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	580	870	659	580	-
Mov Cap-2 Maneuver	-	580	-	659	580	-
Stage 1	-	637	-	-	-	-
Stage 2	-	-	-	692	637	-

Approach	EB	WB	SB
HCM Control Delay, s	10.4	12.3	
HCM LOS	B	B	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	SBL	SBT
Capacity (veh/h)	580	870	580	-	-
HCM Lane V/C Ratio	0.062	0.051	0.152	-	-
HCM Control Delay (s)	11.6	9.4	12.3	-	-
HCM Lane LOS	B	A	B	-	-
HCM 95th %tile Q(veh)	0.2	0.2	0.5	-	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	112	16	0	0
Future Vol, veh/h	0	5	112	16	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	1083488256	
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	122	17	0	0

Major/Minor	Minor1	Major1
Conflicting Flow All	- 70	0 0
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	- 6.94	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	- 3.32	-
Pot Cap-1 Maneuver	0 978	-
Stage 1	0	-
Stage 2	0	-
Platoon blocked, %		-
Mov Cap-1 Maneuver	- 978	-
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-

Approach	WB	NB
HCM Control Delay, s	8.7	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBRWBLn1
Capacity (veh/h)	-	- 978
HCM Lane V/C Ratio	-	- 0.006
HCM Control Delay (s)	-	- 8.7
HCM Lane LOS	-	- A
HCM 95th %tile Q(veh)	-	- 0



Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	1514	390	1851	2	28	98	1
v/c Ratio	0.69	0.90	0.59	0.00	0.31	0.12	0.02
Control Delay	21.6	60.1	5.0	0.0	77.3	6.7	65.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	60.1	5.0	0.0	77.3	6.7	65.0
Queue Length 50th (ft)	476	257	214	0	25	0	1
Queue Length 95th (ft)	726	#476	494	0	60	22	7
Internal Link Dist (ft)	778		1004		161		195
Turn Bay Length (ft)		305		60			
Base Capacity (vph)	2200	435	3139	1420	113	790	85
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.90	0.59	0.00	0.25	0.12	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

7: Brentwood Blvd & Old Hickory Blvd & Private Dr

East Park TIS
Background AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1356	37	359	1703	2	26	0	90	0	0	1
Future Volume (vph)	0	1356	37	359	1703	2	26	0	90	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Lane Util. Factor		0.95		1.00	0.95	1.00		1.00	0.88		0.95	
Frt		1.00		1.00	1.00	0.85		1.00	0.85		0.85	
Flt Protected		1.00		0.95	1.00	1.00		0.95	1.00		1.00	
Satd. Flow (prot)		3525		1770	3539	1583		1770	2787		1504	
Flt Permitted		1.00		0.07	1.00	1.00		0.95	1.00		1.00	
Satd. Flow (perm)		3525		139	3539	1583		1770	2787		1504	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1474	40	390	1851	2	28	0	98	0	0	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	76	0	0	0
Lane Group Flow (vph)	0	1514	0	390	1851	2	0	28	22	0	1	0
Turn Type	pm+pt	NA		pm+pt	NA	Prot	Split	NA	custom	Split	NA	
Protected Phases	5	2		1	6	6	4	4		3	3	
Permitted Phases	2			6					4			
Actuated Green, G (s)		79.0		113.0	113.0	113.0		4.9	31.9		1.1	
Effective Green, g (s)		79.0		113.0	113.0	113.0		4.9	31.9		1.1	
Actuated g/C Ratio		0.56		0.81	0.81	0.81		0.04	0.23		0.01	
Clearance Time (s)		7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Vehicle Extension (s)		3.0		2.5	3.0	3.0		2.5	2.5		2.5	
Lane Grp Cap (vph)		1989		426	2856	1277		61	774		11	
v/s Ratio Prot		0.43		c0.18	0.52	0.00		c0.02	0.01		c0.00	
v/s Ratio Perm				c0.56					0.00			
v/c Ratio		0.76		0.92	0.65	0.00		0.46	0.03		0.09	
Uniform Delay, d1		23.3		42.4	5.5	2.6		66.3	42.0		69.0	
Progression Factor		1.00		1.00	1.00	1.00		1.07	1.00		1.00	
Incremental Delay, d2		2.8		24.0	1.2	0.0		3.9	0.0		2.6	
Delay (s)		26.1		66.4	6.6	2.6		74.9	42.2		71.6	
Level of Service		C		E	A	A		E	D		E	
Approach Delay (s)		26.1			17.0			49.5			71.6	
Approach LOS		C			B			D			E	
Intersection Summary												
HCM 2000 Control Delay			21.6				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			140.0				Sum of lost time (s)			28.0		
Intersection Capacity Utilization			84.2%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Edition methodology does not support more than 4 approaches.

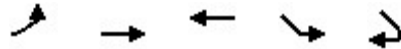
Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	622	1375	29	7	8
Future Vol, veh/h	5	622	1375	29	7	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	70	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	676	1495	32	8	9
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1527	0	-	0	1843	748
Stage 1	-	-	-	-	1495	-
Stage 2	-	-	-	-	348	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	432	-	-	-	67	355
Stage 1	-	-	-	-	172	-
Stage 2	-	-	-	-	686	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	432	-	-	-	66	355
Mov Cap-2 Maneuver	-	-	-	-	66	-
Stage 1	-	-	-	-	170	-
Stage 2	-	-	-	-	686	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		40.7		
HCM LOS	E					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	432	-	-	-	117	
HCM Lane V/C Ratio	0.013	-	-	-	0.139	
HCM Control Delay (s)	13.4	-	-	-	40.7	
HCM Lane LOS	B	-	-	-	E	
HCM 95th %tile Q(veh)	0	-	-	-	0.5	

Queues

East Park TIS

1: Maryland Way & Brentwood Blvd

Background PM

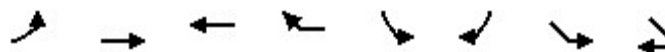


Lane Group	EBL	EBT	WBT	SEL	SER
Lane Group Flow (vph)	166	1555	903	216	103
v/c Ratio	0.38	0.58	0.39	0.77	0.31
Control Delay	8.0	9.5	13.0	77.1	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	9.5	13.0	77.1	10.0
Queue Length 50th (ft)	40	318	205	195	0
Queue Length 95th (ft)	70	417	275	253	41
Internal Link Dist (ft)		1063	451	268	
Turn Bay Length (ft)	165				
Base Capacity (vph)	448	2674	2293	336	384
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	0.58	0.39	0.64	0.27
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

1: Maryland Way & Brentwood Blvd

East Park TIS
Background PM



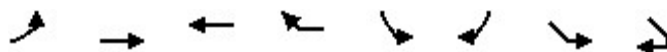
Movement	EBL	EBT	WBT	WBR	SBL	SBR	SEL	SER
Lane Configurations								
Traffic Volume (vph)	153	1431	740	91	0	0	199	95
Future Volume (vph)	153	1431	740	91	0	0	199	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.5				6.5	6.5
Lane Util. Factor	1.00	0.95	0.95				1.00	1.00
Frt	1.00	1.00	0.98				1.00	0.85
Flt Protected	0.95	1.00	1.00				0.95	1.00
Satd. Flow (prot)	1770	3539	3481				1770	1583
Flt Permitted	0.26	1.00	1.00				0.95	1.00
Satd. Flow (perm)	485	3539	3481				1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	166	1555	804	99	0	0	216	103
RTOR Reduction (vph)	0	0	0	0	0	0	0	87
Lane Group Flow (vph)	166	1555	903	0	0	0	216	16
Turn Type	pm+pt	NA	NA				Prot	Prot
Protected Phases	1	6	2				4	4
Permitted Phases	6							
Actuated Green, G (s)	113.4	113.4	98.8				23.6	23.6
Effective Green, g (s)	113.4	113.4	98.8				23.6	23.6
Actuated g/C Ratio	0.76	0.76	0.66				0.16	0.16
Clearance Time (s)	6.5	6.5	6.5				6.5	6.5
Vehicle Extension (s)	2.0	4.0	4.0				4.0	4.0
Lane Grp Cap (vph)	436	2675	2292				278	249
v/s Ratio Prot	0.02	c0.44	0.26				c0.12	0.01
v/s Ratio Perm	0.27							
v/c Ratio	0.38	0.58	0.39				0.78	0.07
Uniform Delay, d1	6.5	8.0	11.8				60.7	53.8
Progression Factor	1.00	1.00	1.00				0.97	0.85
Incremental Delay, d2	0.2	0.9	0.5				13.5	0.2
Delay (s)	6.7	8.9	12.3				72.3	45.9
Level of Service	A	A	B				E	D
Approach Delay (s)		8.7	12.3		0.0		63.8	
Approach LOS		A	B		A		E	
Intersection Summary								
HCM 2000 Control Delay			15.8				HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.65					
Actuated Cycle Length (s)			150.0				Sum of lost time (s)	19.5
Intersection Capacity Utilization			61.4%				ICU Level of Service	B
Analysis Period (min)			15					

c Critical Lane Group

HCM 6th Signalized Intersection Summary

1: Maryland Way & Brentwood Blvd

East Park TIS
Background PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR	SEL	SER
Lane Configurations								
Traffic Volume (veh/h)	153	1431	740	91	0	0	199	95
Future Volume (veh/h)	153	1431	740	91	0	0	199	95
Initial Q (Qb), veh	0	0	0	0			0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00			1.00	1.00
Work Zone On Approach		No	No				No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870			1870	1870
Adj Flow Rate, veh/h	166	1555	804	99			216	103
Peak Hour Factor	0.92	0.92	0.92	0.92			0.92	0.92
Percent Heavy Veh, %	2	2	2	2			2	2
Cap, veh/h	481	2752	2201	271			247	220
Arrive On Green	0.04	0.77	0.69	0.69			0.14	0.14
Sat Flow, veh/h	1781	3647	3278	392			1781	1585
Grp Volume(v), veh/h	166	1555	449	454			216	103
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1800			1781	1585
Q Serve(g_s), s	3.9	26.3	15.6	15.7			17.8	9.0
Cycle Q Clear(g_c), s	3.9	26.3	15.6	15.7			17.8	9.0
Prop In Lane	1.00			0.22			1.00	1.00
Lane Grp Cap(c), veh/h	481	2752	1228	1244			247	220
V/C Ratio(X)	0.34	0.57	0.37	0.37			0.87	0.47
Avail Cap(c_a), veh/h	523	2752	1228	1244			338	301
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00			1.00	1.00
Uniform Delay (d), s/veh	6.8	6.8	9.6	9.6			63.3	59.5
Incr Delay (d2), s/veh	0.2	0.8	0.8	0.8			18.8	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	8.7	6.0	6.1			9.4	3.8
Unsig. Movement Delay, s/veh								
LnGrp Delay(d),s/veh	7.0	7.6	10.4	10.4			82.1	61.7
LnGrp LOS	A	A	B	B			F	E
Approach Vol, veh/h		1721	903				319	
Approach Delay, s/veh		7.6	10.4				75.5	
Approach LOS		A	B				E	
Timer - Assigned Phs	1	2	4	6				
Phs Duration (G+Y+Rc), s	12.5	110.2	27.3	122.7				
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5				
Max Green Setting (Gmax), s	9.5	92.5	28.5	108.5				
Max Q Clear Time (g_c+l1), s	5.9	17.7	19.8	28.3				
Green Ext Time (p_c), s	0.1	10.3	1.0	30.5				

Intersection Summary

HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱			↰↱				
Traffic Vol, veh/h	73	1	0	0	3	15	3	241	0	0	0	0
Future Vol, veh/h	73	1	0	0	3	15	3	241	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	108	125	7984
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	1	0	0	3	16	3	262	0	0	0	0

Major/Minor	Minor2		Minor1		Major1							
Conflicting Flow All	139	268	-	-	268	131	0	0	0			
Stage 1	0	0	-	-	268	-	-	-	-			
Stage 2	139	268	-	-	0	-	-	-	-			
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-			
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-			
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-			
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-			
Pot Cap-1 Maneuver	818	637	0	0	637	894	-	-	-			
Stage 1	-	-	0	0	686	-	-	-	-			
Stage 2	850	686	0	0	-	-	-	-	-			
Platoon blocked, %								-	-			
Mov Cap-1 Maneuver	800	637	-	-	637	894	-	-	-			
Mov Cap-2 Maneuver	800	637	-	-	637	-	-	-	-			
Stage 1	-	-	-	-	686	-	-	-	-			
Stage 2	831	686	-	-	-	-	-	-	-			

Approach	EB		WB		NB		
HCM Control Delay, s	10		9.4				
HCM LOS	B		A				

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	797	838
HCM Lane V/C Ratio	-	-	-	0.101	0.023
HCM Control Delay (s)	-	-	-	10	9.4
HCM Lane LOS	-	-	-	B	A
HCM 95th %tile Q(veh)	-	-	-	0.3	0.1

HCM 6th TWSC
3: Brentwood Blvd & Juris Ln/Driveway A

East Park TIS
Background PM

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱						↰↱	
Traffic Vol, veh/h	0	73	45	3	3	0	0	0	0	1	245	10
Future Vol, veh/h	0	73	45	3	3	0	0	0	0	1	245	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	79	49	3	3	0	0	0	0	1	266	11

Major/Minor	Minor2		Minor1				Major2		
Conflicting Flow All	-	274	139	175	279	-	0	0	0
Stage 1	-	274	-	0	0	-	-	-	-
Stage 2	-	0	-	175	279	-	-	-	-
Critical Hdwy	-	6.54	6.94	7.54	6.54	-	4.14	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-	2.22	-	-
Pot Cap-1 Maneuver	0	632	884	771	628	0	-	-	-
Stage 1	0	682	-	-	-	0	-	-	-
Stage 2	0	-	-	810	678	0	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	632	884	658	628	-	-	-	-
Mov Cap-2 Maneuver	-	632	-	658	628	-	-	-	-
Stage 1	-	682	-	-	-	-	-	-	-
Stage 2	-	-	-	676	678	-	-	-	-

Approach	EB		WB		SB	
HCM Control Delay, s	11.2		10.7			
HCM LOS	B		B			

Minor Lane/Major Mvmt	EBLn1WBLn1		SBL	SBT	SBR
Capacity (veh/h)	709	643	-	-	-
HCM Lane V/C Ratio	0.181	0.01	-	-	-
HCM Control Delay (s)	11.2	10.7	-	-	-
HCM Lane LOS	B	B	-	-	-
HCM 95th %tile Q(veh)	0.7	0	-	-	-

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			1			4				
Traffic Vol, veh/h	111	32	0	0	13	18	67	258	3	0	0	0
Future Vol, veh/h	111	32	0	0	13	18	67	258	3	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1082898432	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	121	35	0	0	14	20	73	280	3	0	0	0

Major/Minor	Minor2		Minor1		Major1				
Conflicting Flow All	293	429	-	-	428	142	0	0	0
Stage 1	0	0	-	-	428	-	-	-	-
Stage 2	293	429	-	-	0	-	-	-	-
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	637	517	0	0	518	880	-	-	-
Stage 1	-	-	0	0	583	-	-	-	-
Stage 2	691	582	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	610	517	-	-	518	880	-	-	-
Mov Cap-2 Maneuver	610	517	-	-	518	-	-	-	-
Stage 1	-	-	-	-	583	-	-	-	-
Stage 2	659	582	-	-	-	-	-	-	-

Approach	EB		WB		NB		
HCM Control Delay, s	13.3		10.6				
HCM LOS	B		B				

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	
Capacity (veh/h)	-	-	-	586	681
HCM Lane V/C Ratio	-	-	-	0.265	0.049
HCM Control Delay (s)	-	-	-	13.3	10.6
HCM Lane LOS	-	-	-	B	B
HCM 95th %tile Q(veh)	-	-	-	1.1	0.2

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖						↖	↗
Traffic Vol, veh/h	0	114	116	8	72	0	0	0	0	29	132	27
Future Vol, veh/h	0	114	116	8	72	0	0	0	0	29	132	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	-	-	-	-	-	-	85
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	124	126	9	78	0	0	0	0	32	143	29

Major/Minor	Minor2		Minor1		Major2	
Conflicting Flow All	-	207	72	198	207	-
Stage 1	-	207	-	0	0	-
Stage 2	-	0	-	198	207	-
Critical Hdwy	-	6.54	6.94	7.54	6.54	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-
Pot Cap-1 Maneuver	0	689	975	743	689	0
Stage 1	0	729	-	-	-	0
Stage 2	0	-	-	785	729	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	689	975	557	689	-
Mov Cap-2 Maneuver	-	689	-	557	689	-
Stage 1	-	729	-	-	-	-
Stage 2	-	-	-	567	729	-

Approach	EB	WB	SB
HCM Control Delay, s	10.3	11.1	
HCM LOS	B	B	

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	SBL	SBT
Capacity (veh/h)	689	975	673	-	-
HCM Lane V/C Ratio	0.18	0.129	0.129	-	-
HCM Control Delay (s)	11.4	9.2	11.1	-	-
HCM Lane LOS	B	A	B	-	-
HCM 95th %tile Q(veh)	0.7	0.4	0.4	-	-

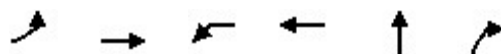
Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	22	359	27	0	0
Future Vol, veh/h	0	22	359	27	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	1083488256	
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	24	390	29	0	0
Major/Minor	Minor1		Major1			
Conflicting Flow All	-	210	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	796	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	796	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB		NB			
HCM Control Delay, s	9.7		0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT		NBRWBLn1			
Capacity (veh/h)	-		796			
HCM Lane V/C Ratio	-		0.03			
HCM Control Delay (s)	-		9.7			
HCM Lane LOS	-		A			
HCM 95th %tile Q(veh)	-		0.1			

Queues

East Park TIS

7: Brentwood Blvd & Old Hickory Blvd & Private Dr

Background PM



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	3	1729	137	1407	67	348
v/c Ratio	0.01	0.67	0.52	0.47	0.54	0.52
Control Delay	3.7	14.5	14.8	5.0	81.5	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.7	14.5	14.8	5.0	81.5	22.5
Queue Length 50th (ft)	1	463	19	158	65	71
Queue Length 95th (ft)	2	687	78	348	116	115
Internal Link Dist (ft)		778		1004	161	
Turn Bay Length (ft)	125		305			
Base Capacity (vph)	343	2565	360	2998	188	818
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.67	0.38	0.47	0.36	0.43
Intersection Summary						

HCM Signalized Intersection Capacity Analysis

7: Brentwood Blvd & Old Hickory Blvd & Private Dr

East Park TIS
Background PM

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	3	1554	37	126	1294	0	62	0	320	0	0
Future Volume (vph)	3	1554	37	126	1294	0	62	0	320	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	0.88		
Frt	1.00	1.00		1.00	1.00			1.00	0.85		
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)	1770	3527		1770	3539			1770	2787		
Flt Permitted	0.18	1.00		0.09	1.00			0.95	1.00		
Satd. Flow (perm)	342	3527		159	3539			1770	2787		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	1689	40	137	1407	0	67	0	348	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	171	0	0
Lane Group Flow (vph)	3	1729	0	137	1407	0	0	67	177	0	0
Turn Type	pm+pt	NA		pm+pt	NA	Prot	Split	NA	custom	Split	
Protected Phases	5	2		1	6	6	4	4	1	3	3
Permitted Phases	2			6					4		
Actuated Green, G (s)	108.6	107.6		126.7	118.7			9.3	21.4		
Effective Green, g (s)	108.6	107.6		126.7	118.7			9.3	21.4		
Actuated g/C Ratio	0.72	0.72		0.84	0.79			0.06	0.14		
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		
Lane Grp Cap (vph)	257	2530		264	2800			109	527		
v/s Ratio Prot	0.00	c0.49		c0.04	c0.40			c0.04	0.03		
v/s Ratio Perm	0.01			0.40					0.04		
v/c Ratio	0.01	0.68		0.52	0.50			0.61	0.33		
Uniform Delay, d1	5.8	11.8		15.5	5.4			68.6	57.9		
Progression Factor	1.00	1.00		1.00	1.00			0.98	0.93		
Incremental Delay, d2	0.0	1.5		1.3	0.6			8.5	0.3		
Delay (s)	5.8	13.3		16.7	6.1			76.0	54.2		
Level of Service	A	B		B	A			E	D		
Approach Delay (s)		13.3			7.0			57.7			0.0
Approach LOS		B			A			E			A
Intersection Summary											
HCM 2000 Control Delay	15.6			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio	0.71										
Actuated Cycle Length (s)	150.0			Sum of lost time (s)			28.0				
Intersection Capacity Utilization	72.8%			ICU Level of Service			C				
Analysis Period (min)	15										
c Critical Lane Group											

HCM 6th Edition methodology does not support more than 4 approaches.

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	1621	812	16	11	19
Future Vol, veh/h	9	1621	812	16	11	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	70	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	1762	883	17	12	21
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	900	0	-	0	1784	442
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	901	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	751	-	-	-	73	563
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	357	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	751	-	-	-	72	563
Mov Cap-2 Maneuver	-	-	-	-	72	-
Stage 1	-	-	-	-	360	-
Stage 2	-	-	-	-	357	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		33		
HCM LOS	D					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	751	-	-	-	161	
HCM Lane V/C Ratio	0.013	-	-	-	0.203	
HCM Control Delay (s)	9.9	-	-	-	33	
HCM Lane LOS	A	-	-	-	D	
HCM 95th %tile Q(veh)	0	-	-	-	0.7	

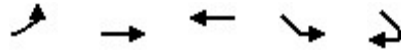
**PROJECTED CONDITIONS
CAPACITY ANALYSES**

Queues

East Park TIS

1: Maryland Way & Brentwood Blvd

Projected AM



Lane Group	EBL	EBT	WBT	SEL	SER
Lane Group Flow (vph)	79	620	1533	83	202
v/c Ratio	0.32	0.21	0.60	0.53	0.64
Control Delay	6.1	3.1	10.7	65.1	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	3.1	10.7	65.1	26.7
Queue Length 50th (ft)	11	54	321	77	86
Queue Length 95th (ft)	23	77	423	m95	m112
Internal Link Dist (ft)		1063	451	268	
Turn Bay Length (ft)	165				
Base Capacity (vph)	321	2895	2538	195	346
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.21	0.60	0.43	0.58

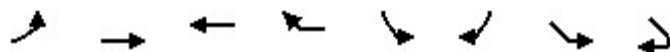
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

1: Maryland Way & Brentwood Blvd

East Park TIS
Projected AM



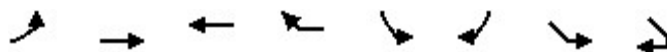
Movement	EBL	EBT	WBT	WBR	SBL	SBR	SEL	SER
Lane Configurations								
Traffic Volume (vph)	73	570	1241	169	0	0	76	186
Future Volume (vph)	73	570	1241	169	0	0	76	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.5				6.5	6.5
Lane Util. Factor	1.00	0.95	0.95				1.00	1.00
Frt	1.00	1.00	0.98				1.00	0.85
Flt Protected	0.95	1.00	1.00				0.95	1.00
Satd. Flow (prot)	1770	3539	3475				1770	1583
Flt Permitted	0.12	1.00	1.00				0.95	1.00
Satd. Flow (perm)	224	3539	3475				1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	620	1349	184	0	0	83	202
RTOR Reduction (vph)	0	0	0	0	0	0	0	176
Lane Group Flow (vph)	79	620	1533	0	0	0	83	26
Turn Type	pm+pt	NA	NA				Prot	Prot
Protected Phases	1	6	2				4	4
Permitted Phases	6							
Actuated Green, G (s)	114.5	114.5	102.2				12.5	12.5
Effective Green, g (s)	114.5	114.5	102.2				12.5	12.5
Actuated g/C Ratio	0.82	0.82	0.73				0.09	0.09
Clearance Time (s)	6.5	6.5	6.5				6.5	6.5
Vehicle Extension (s)	2.0	4.0	4.0				4.0	4.0
Lane Grp Cap (vph)	247	2894	2536				158	141
v/s Ratio Prot	0.01	c0.18	c0.44				c0.05	0.02
v/s Ratio Perm	0.25							
v/c Ratio	0.32	0.21	0.60				0.53	0.19
Uniform Delay, d1	6.9	2.8	9.1				60.9	59.0
Progression Factor	1.00	1.00	1.00				0.93	2.15
Incremental Delay, d2	0.3	0.2	1.1				2.9	0.6
Delay (s)	7.2	3.0	10.2				59.5	127.8
Level of Service	A	A	B				E	F
Approach Delay (s)		3.5	10.2		0.0		107.9	
Approach LOS		A	B		A		F	
Intersection Summary								
HCM 2000 Control Delay			19.4				HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.58					
Actuated Cycle Length (s)			140.0				Sum of lost time (s)	19.5
Intersection Capacity Utilization			65.9%				ICU Level of Service	C
Analysis Period (min)			15					

c Critical Lane Group

HCM 6th Signalized Intersection Summary

1: Maryland Way & Brentwood Blvd

East Park TIS
Projected AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR	SEL	SER
Lane Configurations								
Traffic Volume (veh/h)	73	570	1241	169	0	0	76	186
Future Volume (veh/h)	73	570	1241	169	0	0	76	186
Initial Q (Qb), veh	0	0	0	0			0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00			1.00	1.00
Work Zone On Approach		No	No				No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870			1870	1870
Adj Flow Rate, veh/h	79	620	1349	184			83	202
Peak Hour Factor	0.92	0.92	0.92	0.92			0.92	0.92
Percent Heavy Veh, %	2	2	2	2			2	2
Cap, veh/h	281	2830	2252	305			197	175
Arrive On Green	0.03	0.80	0.72	0.72			0.11	0.11
Sat Flow, veh/h	1781	3647	3238	426			1781	1585
Grp Volume(v), veh/h	79	620	758	775			83	202
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1794			1781	1585
Q Serve(g_s), s	1.5	6.0	29.6	30.3			6.1	15.5
Cycle Q Clear(g_c), s	1.5	6.0	29.6	30.3			6.1	15.5
Prop In Lane	1.00			0.24			1.00	1.00
Lane Grp Cap(c), veh/h	281	2830	1272	1284			197	175
V/C Ratio(X)	0.28	0.22	0.60	0.60			0.42	1.15
Avail Cap(c_a), veh/h	380	2830	1272	1284			197	175
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00			1.00	1.00
Uniform Delay (d), s/veh	8.9	3.5	9.8	9.9			58.1	62.2
Incr Delay (d2), s/veh	0.2	0.2	2.1	2.1			2.0	114.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.8	10.9	11.3			2.9	11.8
Unsig. Movement Delay, s/veh								
LnGrp Delay(d),s/veh	9.1	3.7	11.9	12.1			60.1	176.7
LnGrp LOS	A	A	B	B			E	F
Approach Vol, veh/h		699	1533				285	
Approach Delay, s/veh		4.3	12.0				142.7	
Approach LOS		A	B				F	
Timer - Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.3	106.7		22.0		118.0		
Change Period (Y+Rc), s	6.5	6.5		6.5		6.5		
Max Green Setting (Gmax), s	12.5	92.5		15.5		111.5		
Max Q Clear Time (g_c+I1), s	3.5	32.3		17.5		8.0		
Green Ext Time (p_c), s	0.0	25.9		0.0		6.8		

Intersection Summary

HCM 6th Ctrl Delay 24.7
HCM 6th LOS C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th TWSC
2: Brentwood Blvd & Driveway A

East Park TIS
Projected AM

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4				
Traffic Vol, veh/h	16	25	0	0	14	10	50	172	20	0	0	0
Future Vol, veh/h	16	25	0	0	14	10	50	172	20	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	108	125	7984
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	27	0	0	15	11	54	187	22	0	0	0

Major/Minor	Minor2		Minor1		Major1				
Conflicting Flow All	209	317	-	-	306	105	0	0	0
Stage 1	0	0	-	-	306	-	-	-	-
Stage 2	209	317	-	-	0	-	-	-	-
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	730	598	0	0	606	929	-	-	-
Stage 1	-	-	0	0	660	-	-	-	-
Stage 2	774	653	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	707	598	-	-	606	929	-	-	-
Mov Cap-2 Maneuver	707	598	-	-	606	-	-	-	-
Stage 1	-	-	-	-	660	-	-	-	-
Stage 2	747	653	-	-	-	-	-	-	-

Approach	EB		WB		NB		
HCM Control Delay, s	11.1		10.3				
HCM LOS	B		B				

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	636	709
HCM Lane V/C Ratio	-	-	-	0.07	0.037
HCM Control Delay (s)	-	-	-	11.1	10.3
HCM Lane LOS	-	-	-	B	B
HCM 95th %tile Q(veh)	-	-	-	0.2	0.1

HCM 6th TWSC
3: Brentwood Blvd & Juris Ln/Driveway A

East Park TIS
Projected AM

Intersection													
Int Delay, s/veh	2.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↰			↱						↰↱		
Traffic Vol, veh/h	0	16	9	14	50	0	0	0	0	25	238	74	
Future Vol, veh/h	0	16	9	14	50	0	0	0	0	25	238	74	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	17	10	15	54	0	0	0	0	27	259	80	
Major/Minor	Minor2		Minor1				Major2						
Conflicting Flow All	-	353	170	192	393	-				0	0	0	
Stage 1	-	353	-	0	0	-				-	-	-	
Stage 2	-	0	-	192	393	-				-	-	-	
Critical Hdwy	-	6.54	6.94	7.54	6.54	-				4.14	-	-	
Critical Hdwy Stg 1	-	5.54	-	-	-	-				-	-	-	
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-				-	-	-	
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-				2.22	-	-	
Pot Cap-1 Maneuver	0	571	844	750	542	0				-	-	-	
Stage 1	0	629	-	-	-	0				-	-	-	
Stage 2	0	-	-	791	604	0				-	-	-	
Platoon blocked, %											-	-	
Mov Cap-1 Maneuver	-	571	844	724	542	-				-	-	-	
Mov Cap-2 Maneuver	-	571	-	724	542	-				-	-	-	
Stage 1	-	629	-	-	-	-				-	-	-	
Stage 2	-	-	-	760	604	-				-	-	-	
Approach	EB		WB				SB						
HCM Control Delay, s	10.8		12.1										
HCM LOS	B		B										
Minor Lane/Major Mvmt	EBLn1WBLn1		SBL	SBT	SBR								
Capacity (veh/h)	646		574	-	-	-							
HCM Lane V/C Ratio	0.042		0.121	-	-	-							
HCM Control Delay (s)	10.8		12.1	-	-	-							
HCM Lane LOS	B		B	-	-	-							
HCM 95th %tile Q(veh)	0.1		0.4	-	-	-							

HCM 6th TWSC
4: Brentwood Blvd & Cadillac Dr/Driveway B

East Park TIS
Projected AM

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			1			4				
Traffic Vol, veh/h	30	41	0	0	18	16	75	104	19	0	0	0
Future Vol, veh/h	30	41	0	0	18	16	75	104	19	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1082898432	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	45	0	0	20	17	82	113	21	0	0	0

Major/Minor	Minor2		Minor1		Major1						
Conflicting Flow All	231	298	-	-	288	67	0	0	0		
Stage 1	0	0	-	-	288	-	-	-	-		
Stage 2	231	298	-	-	0	-	-	-	-		
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-		
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-		
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-		
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-		
Pot Cap-1 Maneuver	704	613	0	0	621	983	-	-	-		
Stage 1	-	-	0	0	672	-	-	-	-		
Stage 2	751	666	0	0	-	-	-	-	-		
Platoon blocked, %								-	-		
Mov Cap-1 Maneuver	675	613	-	-	621	983	-	-	-		
Mov Cap-2 Maneuver	675	613	-	-	621	-	-	-	-		
Stage 1	-	-	-	-	672	-	-	-	-		
Stage 2	716	666	-	-	-	-	-	-	-		

Approach	EB		WB		NB		
HCM Control Delay, s	11.4		10				
HCM LOS	B		B				

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	
Capacity (veh/h)	-	-	-	638	751
HCM Lane V/C Ratio	-	-	-	0.121	0.049
HCM Control Delay (s)	-	-	-	11.4	10
HCM Lane LOS	-	-	-	B	B
HCM 95th %tile Q(veh)	-	-	-	0.4	0.2

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖						↖↑	↗
Traffic Vol, veh/h	0	36	41	10	83	0	0	0	0	35	286	91
Future Vol, veh/h	0	36	41	10	83	0	0	0	0	35	286	91
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	-	-	-	-	-	-	85
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	39	45	11	90	0	0	0	0	38	311	99

Major/Minor	Minor2		Minor1		Major2		
Conflicting Flow All	-	387	156	251	387	-	0 0 0
Stage 1	-	387	-	0	0	-	- - -
Stage 2	-	0	-	251	387	-	- - -
Critical Hdwy	-	6.54	6.94	7.54	6.54	-	4.14 - -
Critical Hdwy Stg 1	-	5.54	-	-	-	-	- - -
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-	- - -
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-	2.22 - -
Pot Cap-1 Maneuver	0	546	862	682	546	0	- - 0
Stage 1	0	608	-	-	-	0	- - 0
Stage 2	0	-	-	731	608	0	- - 0
Platoon blocked, %	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	546	862	611	546	-	- - -
Mov Cap-2 Maneuver	-	546	-	611	546	-	- - -
Stage 1	-	608	-	-	-	-	- - -
Stage 2	-	-	-	649	608	-	- - -

Approach	EB		WB		SB		
HCM Control Delay, s	10.7		13				
HCM LOS	B		B				

Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	SBL	SBT
Capacity (veh/h)	546	862	552	-	-
HCM Lane V/C Ratio	0.072	0.052	0.183	-	-
HCM Control Delay (s)	12.1	9.4	13	-	-
HCM Lane LOS	B	A	B	-	-
HCM 95th %tile Q(veh)	0.2	0.2	0.7	-	-

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	134	16	0	0
Future Vol, veh/h	0	5	134	16	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	1083488256	
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	146	17	0	0

Major/Minor	Minor1	Major1
Conflicting Flow All	- 82	0 0
Stage 1	- -	- -
Stage 2	- -	- -
Critical Hdwy	- 6.94	- -
Critical Hdwy Stg 1	- -	- -
Critical Hdwy Stg 2	- -	- -
Follow-up Hdwy	- 3.32	- -
Pot Cap-1 Maneuver	0 961	- -
Stage 1	0 -	- -
Stage 2	0 -	- -
Platoon blocked, %		- -
Mov Cap-1 Maneuver	- 961	- -
Mov Cap-2 Maneuver	- -	- -
Stage 1	- -	- -
Stage 2	- -	- -

Approach	WB	NB
HCM Control Delay, s	8.8	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBRWBLn1
Capacity (veh/h)	- -	961
HCM Lane V/C Ratio	- -	0.006
HCM Control Delay (s)	- -	8.8
HCM Lane LOS	- -	A
HCM 95th %tile Q(veh)	- -	0

Queues

East Park TIS

7: Brentwood Blvd & Old Hickory Blvd & Private Dr

Projected AM



Lane Group	EBT	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	1519	415	1851	2	33	117	1
v/c Ratio	0.69	0.96	0.59	0.00	0.36	0.14	0.02
Control Delay	21.8	72.7	5.0	0.0	78.0	6.3	65.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.8	72.7	5.0	0.0	78.0	6.3	65.0
Queue Length 50th (ft)	483	290	220	0	30	0	1
Queue Length 95th (ft)	731	#532	494	0	67	24	7
Internal Link Dist (ft)	778		1004		161		195
Turn Bay Length (ft)		305		60			
Base Capacity (vph)	2196	433	3135	1418	113	808	85
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.96	0.59	0.00	0.29	0.14	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

7: Brentwood Blvd & Old Hickory Blvd & Private Dr

East Park TIS
Projected AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1356	41	382	1703	2	30	0	108	0	0	1
Future Volume (vph)	0	1356	41	382	1703	2	30	0	108	0	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Lane Util. Factor		0.95		1.00	0.95	1.00		1.00	0.88		0.95	
Frt		1.00		1.00	1.00	0.85		1.00	0.85		0.85	
Flt Protected		1.00		0.95	1.00	1.00		0.95	1.00		1.00	
Satd. Flow (prot)		3523		1770	3539	1583		1770	2787		1504	
Flt Permitted		1.00		0.07	1.00	1.00		0.95	1.00		1.00	
Satd. Flow (perm)		3523		137	3539	1583		1770	2787		1504	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1474	45	415	1851	2	33	0	117	0	0	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	90	0	0	0
Lane Group Flow (vph)	0	1519	0	415	1851	2	0	33	27	0	1	0
Turn Type	pm+pt	NA		pm+pt	NA	Prot	Split	NA	custom	Split	NA	
Protected Phases	5	2		1	6	6	4	4		3	3	
Permitted Phases	2			6					4			
Actuated Green, G (s)		78.9		112.9	112.9	112.9		5.0	32.0		1.1	
Effective Green, g (s)		78.9		112.9	112.9	112.9		5.0	32.0		1.1	
Actuated g/C Ratio		0.56		0.81	0.81	0.81		0.04	0.23		0.01	
Clearance Time (s)		7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Vehicle Extension (s)		3.0		2.5	3.0	3.0		2.5	2.5		2.5	
Lane Grp Cap (vph)		1985		425	2853	1276		63	776		11	
v/s Ratio Prot		0.43		c0.19	0.52	0.00		c0.02	0.01		c0.00	
v/s Ratio Perm				c0.60					0.00			
v/c Ratio		0.77		0.98	0.65	0.00		0.52	0.03		0.09	
Uniform Delay, d1		23.4		44.2	5.5	2.6		66.3	42.0		69.0	
Progression Factor		1.00		1.00	1.00	1.00		1.06	1.01		1.00	
Incremental Delay, d2		2.9		37.1	1.2	0.0		5.9	0.0		2.6	
Delay (s)		26.3		81.4	6.7	2.6		75.9	42.4		71.6	
Level of Service		C		F	A	A		E	D		E	
Approach Delay (s)		26.3			20.3			49.8			71.6	
Approach LOS		C			C			D			E	
Intersection Summary												
HCM 2000 Control Delay			23.8				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			140.0				Sum of lost time (s)			28.0		
Intersection Capacity Utilization			85.8%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Edition methodology does not support more than 4 approaches.

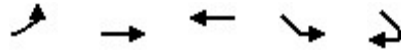
Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	642	1401	32	9	9
Future Vol, veh/h	5	642	1401	32	9	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	70	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	698	1523	35	10	10
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1558	0	-	0	1882	762
Stage 1	-	-	-	-	1523	-
Stage 2	-	-	-	-	359	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	421	-	-	-	63	347
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	677	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	421	-	-	-	62	347
Mov Cap-2 Maneuver	-	-	-	-	62	-
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	677	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		47		
HCM LOS	E					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	421	-	-	-	105	
HCM Lane V/C Ratio	0.013	-	-	-	0.186	
HCM Control Delay (s)	13.7	-	-	-	47	
HCM Lane LOS	B	-	-	-	E	
HCM 95th %tile Q(veh)	0	-	-	-	0.6	

Queues

1: Maryland Way & Brentwood Blvd

East Park TIS

Projected PM

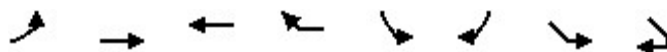


Lane Group	EBL	EBT	WBT	SEL	SER
Lane Group Flow (vph)	173	1555	934	240	107
v/c Ratio	0.41	0.59	0.42	0.82	0.30
Control Delay	8.8	10.1	13.9	78.0	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	10.1	13.9	78.0	8.6
Queue Length 50th (ft)	44	338	226	207	0
Queue Length 95th (ft)	72	417	288	272	37
Internal Link Dist (ft)		1063	451	268	
Turn Bay Length (ft)	165				
Base Capacity (vph)	428	2643	2247	336	387
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.59	0.42	0.71	0.28
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

1: Maryland Way & Brentwood Blvd

East Park TIS
Projected PM

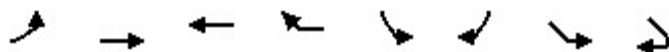


Movement	EBL	EBT	WBT	WBR	SBL	SBR	SEL	SER
Lane Configurations								
Traffic Volume (vph)	159	1431	741	119	0	0	221	98
Future Volume (vph)	159	1431	741	119	0	0	221	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5	6.5				6.5	6.5
Lane Util. Factor	1.00	0.95	0.95				1.00	1.00
Frt	1.00	1.00	0.98				1.00	0.85
Flt Protected	0.95	1.00	1.00				0.95	1.00
Satd. Flow (prot)	1770	3539	3466				1770	1583
Flt Permitted	0.25	1.00	1.00				0.95	1.00
Satd. Flow (perm)	461	3539	3466				1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	173	1555	805	129	0	0	240	107
RTOR Reduction (vph)	0	0	0	0	0	0	0	89
Lane Group Flow (vph)	173	1555	934	0	0	0	240	18
Turn Type	pm+pt	NA	NA				Prot	Prot
Protected Phases	1	6	2				4	4
Permitted Phases	6							
Actuated Green, G (s)	112.1	112.1	97.3				24.9	24.9
Effective Green, g (s)	112.1	112.1	97.3				24.9	24.9
Actuated g/C Ratio	0.75	0.75	0.65				0.17	0.17
Clearance Time (s)	6.5	6.5	6.5				6.5	6.5
Vehicle Extension (s)	2.0	4.0	4.0				4.0	4.0
Lane Grp Cap (vph)	416	2644	2248				293	262
v/s Ratio Prot	0.02	c0.44	0.27				c0.14	0.01
v/s Ratio Perm	0.29							
v/c Ratio	0.42	0.59	0.42				0.82	0.07
Uniform Delay, d1	7.2	8.5	12.7				60.4	52.8
Progression Factor	1.00	1.00	1.00				0.94	0.73
Incremental Delay, d2	0.2	1.0	0.6				16.9	0.1
Delay (s)	7.4	9.5	13.2				73.6	38.7
Level of Service	A	A	B				E	D
Approach Delay (s)		9.3	13.2		0.0		62.9	
Approach LOS		A	B		A		E	
Intersection Summary								
HCM 2000 Control Delay			16.7		HCM 2000 Level of Service			B
HCM 2000 Volume to Capacity ratio			0.66					
Actuated Cycle Length (s)			150.0		Sum of lost time (s)		19.5	
Intersection Capacity Utilization			62.6%		ICU Level of Service		B	
Analysis Period (min)			15					
c Critical Lane Group								

HCM 6th Signalized Intersection Summary

1: Maryland Way & Brentwood Blvd

East Park TIS
Projected PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR	SEL	SER
Lane Configurations								
Traffic Volume (veh/h)	159	1431	741	119	0	0	221	98
Future Volume (veh/h)	159	1431	741	119	0	0	221	98
Initial Q (Qb), veh	0	0	0	0			0	0
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00			1.00	1.00
Work Zone On Approach		No	No				No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870			1870	1870
Adj Flow Rate, veh/h	173	1555	805	129			240	107
Peak Hour Factor	0.92	0.92	0.92	0.92			0.92	0.92
Percent Heavy Veh, %	2	2	2	2			2	2
Cap, veh/h	460	2707	2072	332			270	240
Arrive On Green	0.04	0.76	0.68	0.68			0.15	0.15
Sat Flow, veh/h	1781	3647	3161	491			1781	1585
Grp Volume(v), veh/h	173	1555	466	468			240	107
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1782			1781	1585
Q Serve(g_s), s	4.3	27.8	17.3	17.3			19.8	9.2
Cycle Q Clear(g_c), s	4.3	27.8	17.3	17.3			19.8	9.2
Prop In Lane	1.00			0.28			1.00	1.00
Lane Grp Cap(c), veh/h	460	2707	1201	1204			270	240
V/C Ratio(X)	0.38	0.57	0.39	0.39			0.89	0.44
Avail Cap(c_a), veh/h	497	2707	1201	1204			338	301
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00			1.00	1.00
Uniform Delay (d), s/veh	7.7	7.6	10.7	10.7			62.4	57.9
Incr Delay (d2), s/veh	0.2	0.9	0.9	0.9			22.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	9.5	6.8	6.8			10.7	3.8
Unsig. Movement Delay, s/veh								
LnGrp Delay(d),s/veh	7.9	8.5	11.6	11.6			84.4	59.7
LnGrp LOS	A	A	B	B			F	E
Approach Vol, veh/h		1728	934				347	
Approach Delay, s/veh		8.4	11.6				76.8	
Approach LOS		A	B				E	
Timer - Assigned Phs	1	2		4			6	
Phs Duration (G+Y+Rc), s	12.9	107.9		29.3			120.7	
Change Period (Y+Rc), s	6.5	6.5		6.5			6.5	
Max Green Setting (Gmax), s	9.5	92.5		28.5			108.5	
Max Q Clear Time (g_c+l1), s	6.3	19.3		21.8			29.8	
Green Ext Time (p_c), s	0.1	10.9		0.9			30.3	

Intersection Summary

HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th TWSC
2: Brentwood Blvd & Driveway A

East Park TIS
Projected PM

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4				
Traffic Vol, veh/h	73	13	0	0	17	25	3	255	20	0	0	0
Future Vol, veh/h	73	13	0	0	17	25	3	255	20	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	108	125	7984
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	14	0	0	18	27	3	277	22	0	0	0

Major/Minor	Minor2		Minor1		Major1						
Conflicting Flow All	154	305	-	-	294	150	0	0	0		
Stage 1	0	0	-	-	294	-	-	-	-		
Stage 2	154	305	-	-	0	-	-	-	-		
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-		
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-		
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-		
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-		
Pot Cap-1 Maneuver	798	607	0	0	616	870	-	-	-		
Stage 1	-	-	0	0	668	-	-	-	-		
Stage 2	833	661	0	0	-	-	-	-	-		
Platoon blocked, %								-	-		
Mov Cap-1 Maneuver	756	607	-	-	616	870	-	-	-		
Mov Cap-2 Maneuver	756	607	-	-	616	-	-	-	-		
Stage 1	-	-	-	-	668	-	-	-	-		
Stage 2	785	661	-	-	-	-	-	-	-		

Approach	EB		WB		NB		
HCM Control Delay, s	10.7		10.1				
HCM LOS	B		B				

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	729	746
HCM Lane V/C Ratio	-	-	-	0.128	0.061
HCM Control Delay (s)	-	-	-	10.7	10.1
HCM Lane LOS	-	-	-	B	B
HCM 95th %tile Q(veh)	-	-	-	0.4	0.2

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱						↱↲	
Traffic Vol, veh/h	0	73	45	17	3	0	0	0	0	13	256	10
Future Vol, veh/h	0	73	45	17	3	0	0	0	0	13	256	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	79	49	18	3	0	0	0	0	14	278	11

Major/Minor	Minor2		Minor1		Major2	
Conflicting Flow All	-	312	145	207	317	-
Stage 1	-	312	-	0	0	-
Stage 2	-	0	-	207	317	-
Critical Hdwy	-	6.54	6.94	7.54	6.54	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-
Pot Cap-1 Maneuver	0	602	876	732	598	0
Stage 1	0	656	-	-	-	0
Stage 2	0	-	-	776	653	0
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	602	876	621	598	-
Mov Cap-2 Maneuver	-	602	-	621	598	-
Stage 1	-	656	-	-	-	-
Stage 2	-	-	-	644	653	-

Approach	EB	WB	SB
HCM Control Delay, s	11.5	11	
HCM LOS	B	B	

Minor Lane/Major Mvmt	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	684 617	-	-	-
HCM Lane V/C Ratio	0.188 0.035	-	-	-
HCM Control Delay (s)	11.5 11	-	-	-
HCM Lane LOS	B B	-	-	-
HCM 95th %tile Q(veh)	0.7 0.1	-	-	-

HCM 6th TWSC
4: Brentwood Blvd & Cadillac Dr/Driveway B

East Park TIS
Projected PM

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4				
Traffic Vol, veh/h	111	53	0	0	27	32	67	268	17	0	0	0
Future Vol, veh/h	111	53	0	0	27	32	67	268	17	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1082898432	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	121	58	0	0	29	35	73	291	18	0	0	0

Major/Minor	Minor2		Minor1		Major1				
Conflicting Flow All	306	455	-	-	446	155	0	0	0
Stage 1	0	0	-	-	446	-	-	-	-
Stage 2	306	455	-	-	0	-	-	-	-
Critical Hdwy	7.54	6.54	-	-	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	-	-	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	623	500	0	0	506	863	-	-	-
Stage 1	-	-	0	0	572	-	-	-	-
Stage 2	679	567	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	571	500	-	-	506	863	-	-	-
Mov Cap-2 Maneuver	571	500	-	-	506	-	-	-	-
Stage 1	-	-	-	-	572	-	-	-	-
Stage 2	618	567	-	-	-	-	-	-	-

Approach	EB		WB		NB		
HCM Control Delay, s	14.8		11.1				
HCM LOS	B		B				

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	
Capacity (veh/h)	-	-	-	546	652
HCM Lane V/C Ratio	-	-	-	0.326	0.098
HCM Control Delay (s)	-	-	-	14.8	11.1
HCM Lane LOS	-	-	-	B	B
HCM 95th %tile Q(veh)	-	-	-	1.4	0.3

Intersection												
Int Delay, s/veh	7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖						↖↑	↗
Traffic Vol, veh/h	0	117	116	19	75	0	0	0	0	47	144	27
Future Vol, veh/h	0	117	116	19	75	0	0	0	0	47	144	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	0	-	-	-	-	-	-	-	-	85
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	127	126	21	82	0	0	0	0	51	157	29
Major/Minor	Minor2		Minor1				Major2					
Conflicting Flow All	-	259	79	244	259	-				0	0	0
Stage 1	-	259	-	0	0	-				-	-	-
Stage 2	-	0	-	244	259	-				-	-	-
Critical Hdwy	-	6.54	6.94	7.54	6.54	-				4.14	-	-
Critical Hdwy Stg 1	-	5.54	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-				-	-	-
Follow-up Hdwy	-	4.02	3.32	3.52	4.02	-				2.22	-	-
Pot Cap-1 Maneuver	0	644	965	690	644	0				-	-	0
Stage 1	0	692	-	-	-	0				-	-	0
Stage 2	0	-	-	738	692	0				-	-	0
Platoon blocked, %											-	
Mov Cap-1 Maneuver	-	644	965	509	644	-				-	-	-
Mov Cap-2 Maneuver	-	644	-	509	644	-				-	-	-
Stage 1	-	692	-	-	-	-				-	-	-
Stage 2	-	-	-	524	692	-				-	-	-
Approach	EB		WB				SB					
HCM Control Delay, s	10.7		12.1									
HCM LOS	B		B									
Minor Lane/Major Mvmt	EBLn1	EBLn2	WBLn1	SBL	SBT							
Capacity (veh/h)	644	965	611	-	-							
HCM Lane V/C Ratio	0.197	0.131	0.167	-	-							
HCM Control Delay (s)	12	9.3	12.1	-	-							
HCM Lane LOS	B	A	B	-	-							
HCM 95th %tile Q(veh)	0.7	0.4	0.6	-	-							

Intersection

Int Delay, s/veh 0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	22	383	27	0	0
Future Vol, veh/h	0	22	383	27	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	1083488256	
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	24	416	29	0	0

Major/Minor	Minor1	Major1
Conflicting Flow All	- 223	0 0
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	- 6.94	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	- 3.32	-
Pot Cap-1 Maneuver	0 780	-
Stage 1	0	-
Stage 2	0	-
Platoon blocked, %		-
Mov Cap-1 Maneuver	- 780	-
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-

Approach	WB	NB
HCM Control Delay, s	9.8	0
HCM LOS	A	

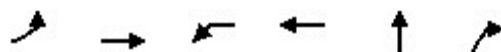
Minor Lane/Major Mvmt	NBT	NBRWBLn1
Capacity (veh/h)	-	- 780
HCM Lane V/C Ratio	-	- 0.031
HCM Control Delay (s)	-	- 9.8
HCM Lane LOS	-	- A
HCM 95th %tile Q(veh)	-	- 0.1

Queues

East Park TIS

7: Brentwood Blvd & Old Hickory Blvd & Private Dr

Projected PM



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR
Lane Group Flow (vph)	3	1735	164	1407	72	370
v/c Ratio	0.01	0.71	0.60	0.49	0.56	0.49
Control Delay	4.3	17.4	24.2	5.6	81.9	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.3	17.4	24.2	5.6	81.9	22.6
Queue Length 50th (ft)	1	502	40	162	69	80
Queue Length 95th (ft)	3	741	121	353	121	125
Internal Link Dist (ft)		778		1004	161	
Turn Bay Length (ft)	125		305			
Base Capacity (vph)	333	2441	348	2892	188	871
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.71	0.47	0.49	0.38	0.42
Intersection Summary						

HCM Signalized Intersection Capacity Analysis

7: Brentwood Blvd & Old Hickory Blvd & Private Dr

East Park TIS
Projected PM

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	3	1554	42	151	1294	0	66	0	340	0	0
Future Volume (vph)	3	1554	42	151	1294	0	66	0	340	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0			7.0	7.0		
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	0.88		
Frt	1.00	1.00		1.00	1.00			1.00	0.85		
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		
Satd. Flow (prot)	1770	3525		1770	3539			1770	2787		
Flt Permitted	0.19	1.00		0.08	1.00			0.95	1.00		
Satd. Flow (perm)	345	3525		145	3539			1770	2787		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	1689	46	164	1407	0	72	0	370	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	167	0	0
Lane Group Flow (vph)	3	1735	0	164	1407	0	0	72	203	0	0
Turn Type	pm+pt	NA		pm+pt	NA	Prot	Split	NA	custom	Split	
Protected Phases	5	2		1	6	6	4	4	1	3	3
Permitted Phases	2			6					4		
Actuated Green, G (s)	104.9	103.9		125.0	117.0			11.0	25.1		
Effective Green, g (s)	104.9	103.9		125.0	117.0			11.0	25.1		
Actuated g/C Ratio	0.70	0.69		0.83	0.78			0.07	0.17		
Clearance Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		
Vehicle Extension (s)	2.5	3.0		2.5	3.0			2.5	2.5		
Lane Grp Cap (vph)	250	2441		273	2760			129	596		
v/s Ratio Prot	0.00	c0.49		c0.06	c0.40			c0.04	0.03		
v/s Ratio Perm	0.01			0.44					0.04		
v/c Ratio	0.01	0.71		0.60	0.51			0.56	0.34		
Uniform Delay, d1	6.8	14.0		24.9	6.0			67.2	55.2		
Progression Factor	1.00	1.00		1.00	1.00			0.99	0.94		
Incremental Delay, d2	0.0	1.8		3.1	0.7			4.1	0.2		
Delay (s)	6.8	15.7		28.0	6.7			70.4	51.9		
Level of Service	A	B		C	A			E	D		
Approach Delay (s)		15.7			8.9			54.9			0.0
Approach LOS		B			A			D			A
Intersection Summary											
HCM 2000 Control Delay	17.5			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio	0.73										
Actuated Cycle Length (s)	150.0			Sum of lost time (s)			28.0				
Intersection Capacity Utilization	74.3%			ICU Level of Service			D				
Analysis Period (min)	15										
c Critical Lane Group											

HCM 6th Edition methodology does not support more than 4 approaches.

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	1643	840	19	14	20
Future Vol, veh/h	9	1643	840	19	14	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	70	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	1786	913	21	15	22

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	934	0	0 1826 457
Stage 1	-	-	- 913 -
Stage 2	-	-	- 913 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	729	-	- 68 551
Stage 1	-	-	- 352 -
Stage 2	-	-	- 352 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	729	-	- 67 551
Mov Cap-2 Maneuver	-	-	- 67 -
Stage 1	-	-	- 347 -
Stage 2	-	-	- 352 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	40
HCM LOS	E		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	729	-	-	-	139
HCM Lane V/C Ratio	0.013	-	-	-	0.266
HCM Control Delay (s)	10	-	-	-	40
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0	-	-	-	1

APPENDIX G BACKGROUND DEVELOPMENTS

TRIP GENERATION

Office

710 ITE Land Code

124.5 k.s.f.

Average Daily Traffic:

$$T = 10.84 * (X)$$

$$T = 10.84 * (124.5)$$

$$T = 1350$$

A.M. Peak Hour:

$$T = 1.52 * (X)$$

$$T = 1.52 * (124.5)$$

$$T = 189$$

Enter = 166 88%

Exit = 23 12%

P.M. Peak Hour:

$$T = 1.44 * (X)$$

$$T = 1.44 * (124.5)$$

$$T = 179$$

Enter = 30 17%

Exit = 149 83%

TRIP GENERATION

Strip Retail Plaza

822 ITE Land Code

41.5 k.s.f.

Average Daily Traffic:

$$T = 54.45 * (X)$$

$$T = 54.45 * (41.5)$$

$$T = 2260$$

A.M. Peak Hour:

$$T = 2.36 * (X)$$

$$T = 2.36 * (41.5)$$

$$T = 98$$

Enter = 59

60%

Exit = 39

40%

P.M. Peak Hour:

$$T = 6.59 * (X)$$

$$T = 6.59 * (41.5)$$

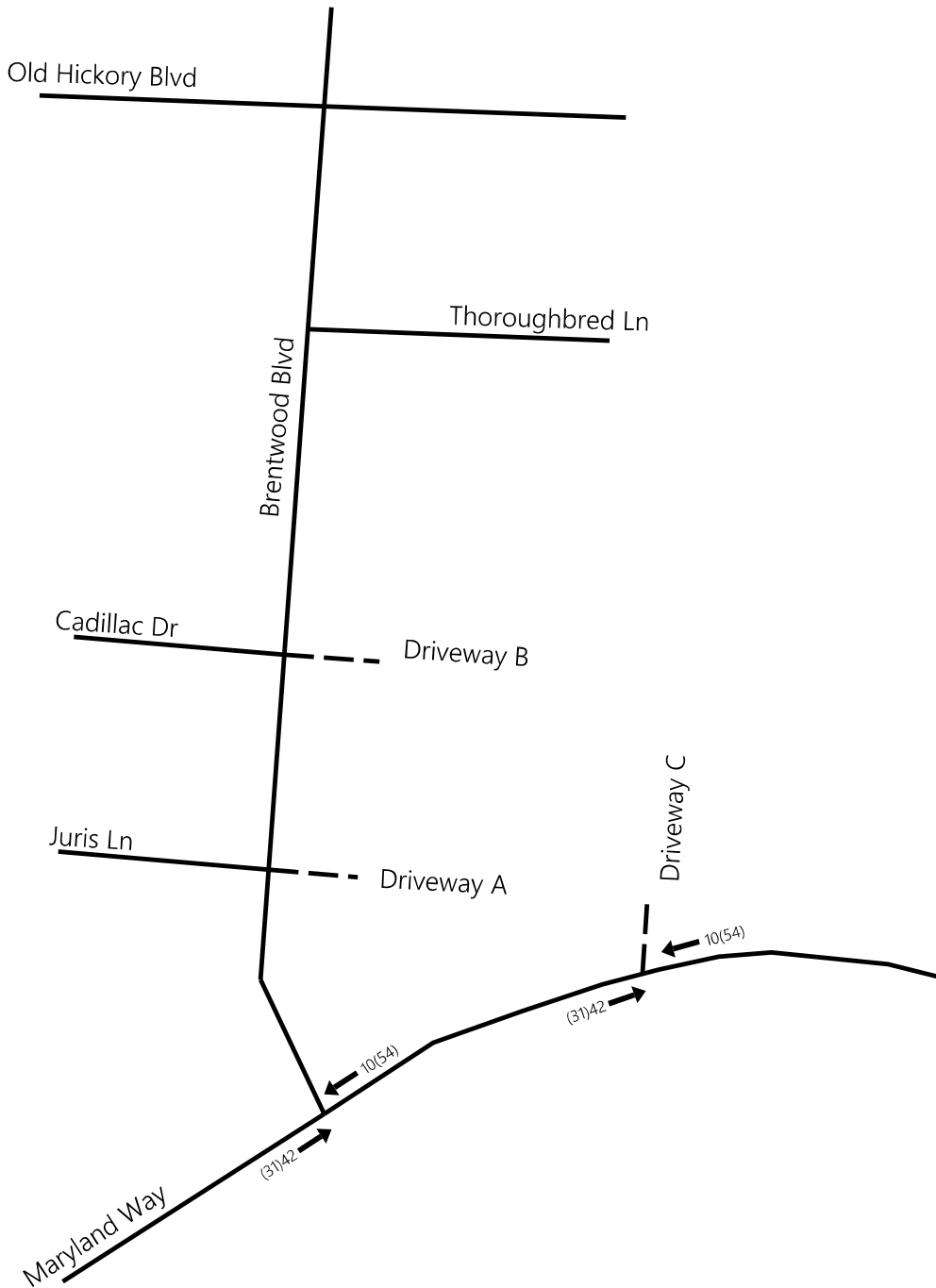
$$T = 273$$

Enter = 137

50%

Exit = 137

50%



XXX - AM Peak Hour
Traffic Volumes
(XXX) - PM Peak Hour
Traffic Volumes



Background Peak Hour Traffic Volumes
Generated by the Background Development (Hill Center)
(Not to Scale)

APPENDIX H TRIP GENERATION CALCULATIONS

TRIP GENERATION

Hotel

310 ITE Land Code

120 Rooms

Average Daily Traffic:

$$T = 10.84 * (X) - 423.51$$

$$T = 10.84 * (120) - 423.51$$

$$T = 877$$

A.M. Peak Hour:

$$T = 0.50 * (X) - 7.45$$

$$T = 0.50 * (120) - 7.45$$

$$T = 53$$

Enter = 30 56%

Exit = 23 44%

P.M. Peak Hour:

$$T = 0.59 * (X)$$

$$T = 0.59 * (120)$$

$$T = 71$$

Enter = 36 51%

Exit = 35 49%

TRIP GENERATION

High-Turnover (Sit-Down) Restaurant

932 ITE Land Code

7 k.s.f.

Average Daily Traffic:

$$T = 107.20 * (X)$$

$$T = 107.20 * (7)$$

$$T = 750$$

A.M. Peak Hour:

$$T = 9.57 * (X)$$

$$T = 9.57 * (7)$$

$$T = 67$$

Enter = 37 55%

Exit = 30 45%

P.M. Peak Hour:

$$T = 9.05 * (X)$$

$$T = 9.05 * (7)$$

$$T = 63$$

Enter = 38 61%

Exit = 25 39%

**APPENDIX I
WARRANT ANALYSIS**

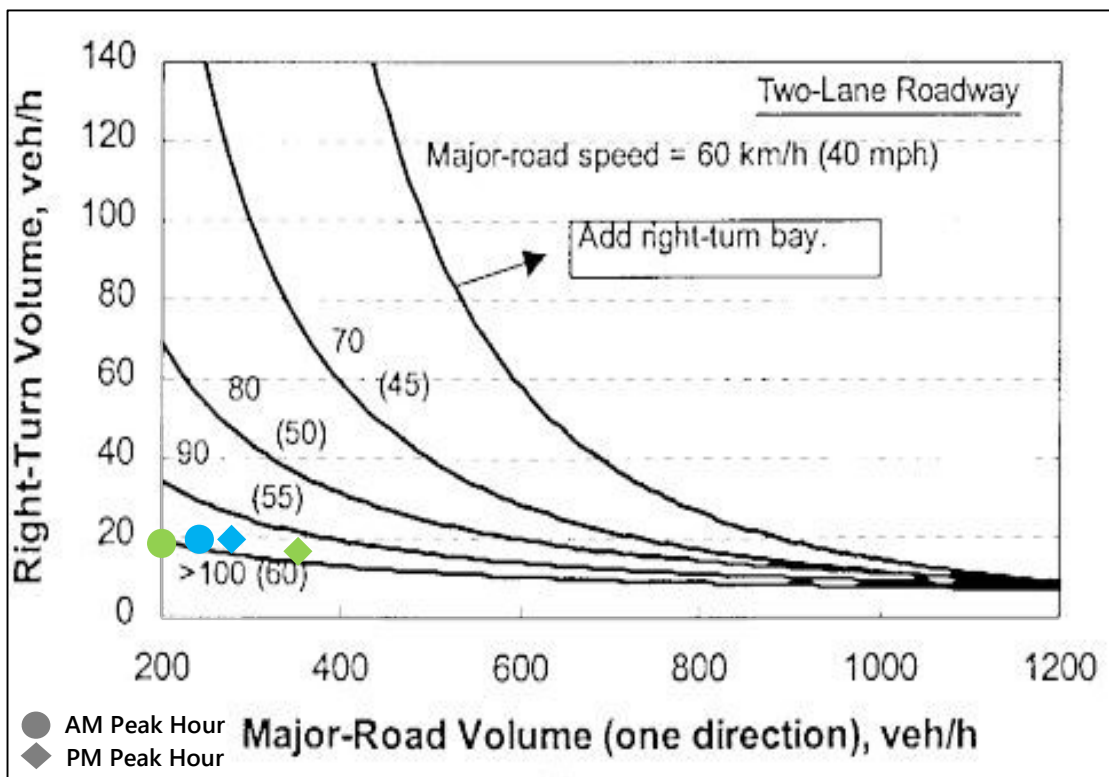
Projected Conditions (Peak Hours)

RIGHT-TURN LANE WARRANT ANALYSIS

(Based on NCHRP 457: Evaluating Intersection Improvements)

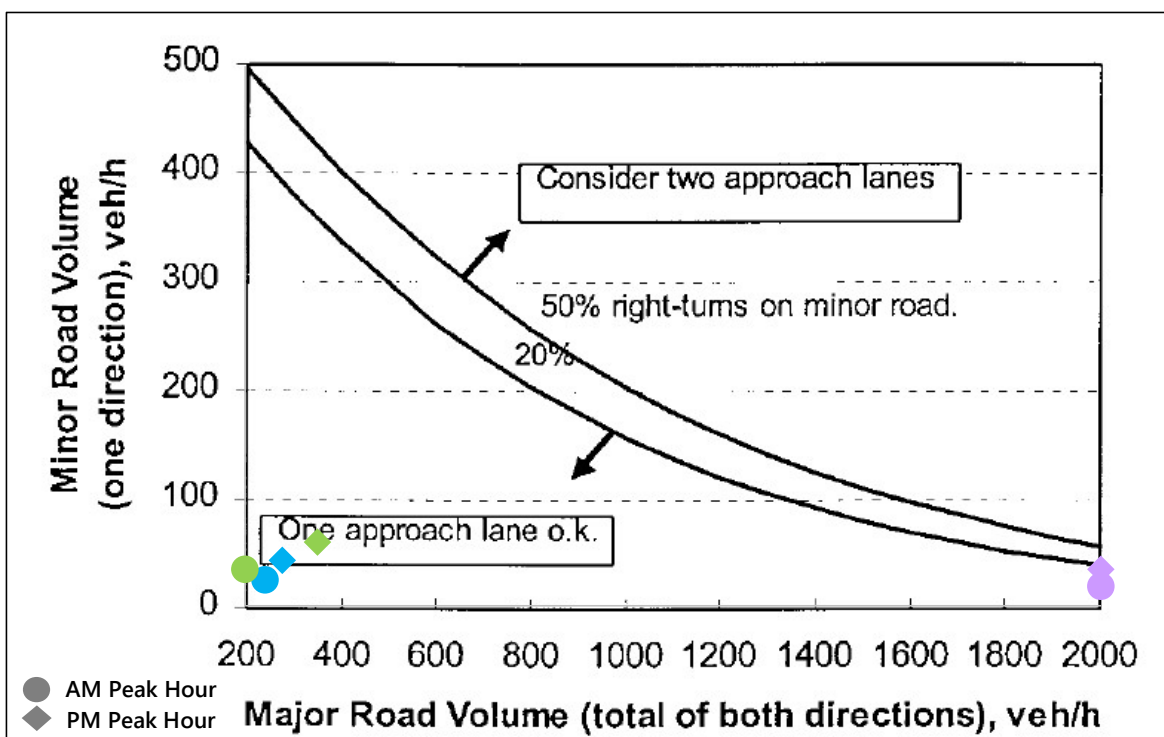
Intersection Approach			Speed Limit	AM Peak Hour			PM Peak Hour		
				V_R^*	V_A^*	Warrant Met?	V_R^*	V_A^*	Warrant Met?
Brentwood Blvd and Driveway A			30	20	242	NO	20	278	NO
Brentwood Blvd and Driveway B			30	19	198	NO	17	352	NO

V_R = Right Turn Volumes, V_A = Advancing Volumes



Projected Conditions (Peak Hours)
MINOR APPROACH ANALYSES
(Based on Intersection Channelization Design Guide)

Approach - Intersection			AM Peak Hour			PM Peak Hour		
			Minor Road Volume	Major Road Volume	2-Lane Approach?	Minor Road Volume	Major Road Volume	2-Lane Approach?
Brentwood Blvd and Driveway A			24	242	NO	42	278	NO
Brentwood Blvd and Driveway B			34	198	NO	59	352	NO
Maryland Way and Driveway C			18	2080	NO	34	2511	NO





SHARED PARKING STUDY

EAST PARK
BRENTWOOD, TENNESSEE



PREPARED FOR:
KISER VOGRIN DESIGN
APRIL 2022

**SHARED PARKING STUDY
EAST PARK
NASHVILLE, TENNESSEE**

PREPARED FOR:
KISER VOGRIN DESIGN



PREPARED BY:
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1. INTRODUCTION AND PROJECT DESCRIPTION

The purpose of this study is to complete an analysis to determine the minimum number of parking spaces required to accommodate the combined land uses associated with the proposed East Park development. As shown by Figure 1, the study area is located on the east side of Brentwood Boulevard and north of Maryland Way in Brentwood, Tennessee.

According to the developer, the development will include an existing 87,917 square foot office building and an existing 80,263 square foot office building that will remain. The proposed development will include approximately 7,000 square feet of restaurant space and 120 hotel rooms.

The purpose of this study is to determine the projected parking demand of the combined land uses. Since the proposed site will include a mix of land uses, the peak parking demand for each use will not occur at the same time. Parking rate information from the City of Brentwood's *Code of Ordinances* as well as typical parking patterns and data presented in *Shared Parking*, 3rd Edition, published by the Urban Land Institute (ULI) were utilized to determine the peak parking demand of the site.



Location of the Study Area
(Not to Scale)

Figure 1.

2. PARKING ANALYSIS

2.1 Zoning Ordinance Requirements

The City of Brentwood's *Code of Ordinances* contains parking space requirements for specific land uses that do not account for shared parking that may occur with a mix of land uses. This ordinance was reviewed to determine the parking that would be required for the proposed land uses if no adjustments for shared parking were made. The results of these calculations are shown in Table 1.

TABLE 1. PARKING DEMAND BASED ON CITY OF BRENTWOOD'S CODE OF ORDINANCES

LAND USE	SIZE	PARKING RATE PER ZONING ORDINANCE	UNADJUSTED PARKING DEMAND
Office	168,180 s.f.	1 space per 300 s.f.	561 spaces
Hotel	120 rooms	1 space per room, plus 1 space per employee on the maximum shift	130 spaces
Restaurant	7,000 s.f.	1 space per 100 s.f.	70 spaces
TOTAL			761 spaces

Table 1 shows the proposed land uses and sizes for the East Park development, the parking demand rates contained in the City of Brentwood's *Code of Ordinances*, and the number of parking spaces required per the code with no adjustments for shared parking. As shown, based on the parking demand rates, the proposed development would require a total of 761 parking spaces, if shared parking were not considered.

Generally, the procedure outlined above is followed when determining parking needs for developments within Brentwood. However, for sites with a mixture of uses, this procedure typically overestimates the parking demand. The overall peak parking demand for a mixed-use site can be significantly less than the sum of the peak parking demands of the individual uses since different types of uses have different peaking characteristics. Therefore, the total number of parking spaces shown in Table 1 is considered an overestimation of the actual parking demand for the combined land uses.

2.2 Shared Parking Analysis

Shared Parking, Third Edition, includes extensive research that quantifies how shared parking among mixed-use developments results in a lower parking demand than the sum of the parking needed for the individual uses. This reduction is due in part to fluctuations in the parking demand throughout the day. The peak demand for two different uses does not necessarily occur at the same time. Also, shared trips between the different land uses within a mixed-use site will typically result in lower parking demands.

In order to determine the number of parking spaces that are needed to serve the proposed development, a shared parking analysis was conducted for the combined land uses. The parking demand rates for each month of the year were identified per land use. The month with the peak parking demand was then determined. Next, the hourly parking demand rates for a typical weekday and a weekend were identified for each of the proposed land uses. The City of Brentwood's *Code of Ordinances* standard parking rates were used for the base parking rate. The monthly parking demand factor and the hourly parking demand factor were applied to the base parking rates for each land use in order to determine the number of parking spaces that are required for each use on an hourly basis. Finally, the hourly parking demands for the individual uses were added together to determine the total parking demand per hour for the site. This procedure was followed to determine the weekday peak parking demand and the weekend peak parking demand. The analysis is described further below.

Monthly Parking Demand Factors

Studies have shown that the parking demand for a given land use will typically change from month to month. Therefore, the monthly parking demands for the proposed development were evaluated to determine the peak monthly variations.

For each of the land uses, the monthly parking demand factors were taken from *Shared Parking*. These factors were then applied to the base parking rates to determine the monthly parking demand for each land use. For each month, the parking demands for the proposed uses were summed to identify the month with the highest parking demand. The peak month is expected to be April.

Non-Captive Parking Factors and Mode Adjustment Factors

Studies have shown that developments containing multiple uses will typically have a reduction of customer parking needs due to customers parking and visiting more than one use. The term "captive market" is used to describe someone already present in the area that will visit another site. The ULI base rates were utilized for the non-captive parking factors.

The mode adjustment factor is the percentage of visitors that drive to the development rather than use an alternative means of transportation such as riding public transportation, taking a taxi or ride-share, riding a bicycle, or walking. A 5% reduction was applied to account for alternative modes for the office and restaurant land uses. It is expected that guests of the hotel land use will utilize ride-share or taxi services at a higher rate. For a suburban business hotel, ULI recommends an alternative mode reduction of 41% on weekdays and 31% on weekends. These rates were utilized for the analyses.

Hourly Parking Demand

For each of the proposed uses, the standard parking demand rates previously described were multiplied by the peak monthly parking demand factor and the hourly parking demand factor to determine the hourly parking demand. The hourly parking demands for each of the land uses were then summed to determine the total hourly parking demands for the development. The weekday and weekend peak hours for the current development plan are both expected to be 11:00 AM in April.

TABLE 2. SHARED PARKING MODEL – PROJECTED PARKING DEMAND

DEVELOPMENT	PEAK PARKING DEMAND	
	Weekday	Weekend
East Park	600 spaces	597 spaces

Table 2 presents the results of the shared parking analysis for the proposed East Park development. As shown, the development will have the potential for shared parking between land uses. As previously mentioned, based on the City of Brentwood's *Code of Ordinances* parking demand rates, the current development program would require a total of 761 parking spaces for the current site plan, if shared parking were not considered.

The shared parking analysis indicates the peak parking demand for the proposed development is projected to be 600 spaces. The parking supply for the development program could be reduced by approximately 21% of the base parking demand rates required by the City of Brentwood's *Code of Ordinances*. The shared parking analysis worksheet is presented in the Appendix.

3. CONCLUSIONS & RECOMMENDATIONS

As previously discussed, using the City of Brentwood's *Code of Ordinances* parking rates without a shared parking analysis determined 761 parking spaces would be required for the proposed East Park development. A shared parking analysis was conducted using the City of Brentwood's *Code of Ordinances* base rates.

The shared parking analysis reduced the total number of parking spaces needed by approximately 161 spaces, which is a 21% reduction in required number of parking spaces. Consequently, the maximum number of parking spaces needed to accommodate the proposed development is 600 spaces.

APPENDIX

Project: East Park

Description:

Shared Parking Demand Summary																		
Peak Month: APRIL -- Peak Period: 11 AM, WEEKDAY																		
Land Use	Project Data		Weekday					Weekend					Weekday			Weekend		
			Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Base Ratio	Driving Adj	Non-Captive Ratio	Project Ratio	Unit For Ratio	Peak Hr Adj	Peak Mo Adj	Estimated Parking	Peak Hr Adj	Peak Mo Adj	Estimated Parking
	Quantity	Unit											11 AM	April	Demand	11 AM	April	Demand
Retail																		
Food and Beverage																		
Fine/Casual Dining	7,000	sf GLA	10.00	95%	61%	5.75	ksf GLA	10.00	95%	56%	5.27	ksf GLA	40%	94%	15	15%	94%	5
Employee			0.00	95%	100%	0.00		0.00	95%	100%	0.00		90%	100%	-	75%	100%	-
Entertainment and Institutions																		
Hotel and Residential																		
Hotel-Business	120	keys	1.00	59%	100%	0.59	key	1.00	69%	100%	0.69	key	60%	100%	43	60%	100%	50
Hotel-Leisure		keys	1.00	50%	100%	0.50	key	1.00	50%	100%	0.50	key	70%	100%	-	70%	100%	-
Hotel Employees	120	keys	0.08	95%	100%	0.08	key	0.08	95%	100%	0.08	key	100%	100%	9	100%	100%	9
Restaurant/Lounge		sf GLA	0.00	63%	90%	0.00	ksf GLA	0.00	54%	30%	0.00	ksf GLA	5%	92%	-	5%	92%	-
Meeting/Banquet (0 to 20 sq ft/key)		sf GLA	0.00	68%	60%	0.00	ksf GLA	0.00	68%	70%	0.00	ksf GLA	60%	100%	-	60%	100%	-
Meeting/Banquet (20 to 50 sq ft/key)		sf GLA	0.00	68%	60%	0.00	ksf GLA	0.00	68%	70%	0.00	ksf GLA	60%	100%	-	60%	100%	-
Meeting/Banquet (50 to 100 sq ft/key)		sf GLA	0.00	68%	60%	0.00	ksf GLA	0.00	68%	70%	0.00	ksf GLA	60%	100%	-	60%	100%	-
Convention (100 to 200 sq ft/key)		sf GLA	0.00	68%	60%	0.00	ksf GLA	0.00	68%	70%	0.00	ksf GLA	100%	55%	-	100%	55%	-
Convention (> 200 sq ft/key)		sf GLA	0.00	68%	60%	0.00	ksf GLA	0.00	68%	70%	0.00	ksf GLA	100%	55%	-	100%	55%	-
Restaurant/Meeting Employees		sf GLA	0.00	95%	100%	0.00	ksf GLA	0.00	95%	100%	0.00	ksf GLA	100%	100%	-	100%	100%	-
Office																		
Office 100 to 500 ksf	168,180	sf GFA	0.00	95%	100%	0.00	ksf GFA	0.00	95%	100%	0.00	ksf GFA	45%	100%	-	100%	100%	-
Reserved		emp	0.00	95%	100%	0.00		0.00	95%	100%	0.00		100%	100%	-	100%	100%	-
Employee			3.33	95%	100%	3.16		3.33	95%	100%	3.16		100%	100%	533	100%	100%	533
Additional Land Uses																		
													Customer/Visitor	58	Customer	55		
													Employee/Resident	542	Employee/Resident	542		
													Reserved	-	Reserved	-		
													Total	600	Total	597		

Hazen *Memorandum*

April 27, 2022

To: Brentwood Water Services (Brentwood)
From: Seth Bradley P.E., Associate
Ryan Dean, Sr. Hydraulic Modeler
Marissa Golgosky EIT, Assistant Engineer II

Re: Capacity Evaluation – East Park Proposed Development

Hazen performed an evaluation of the East Park proposed development as shown in Figure 1. The purpose of the evaluation was to determine if Brentwood's existing sewer system would have adequate capacity to receive requested flows for the above-referenced development. Brentwood's calibrated collection system hydraulic model was used for the evaluation.

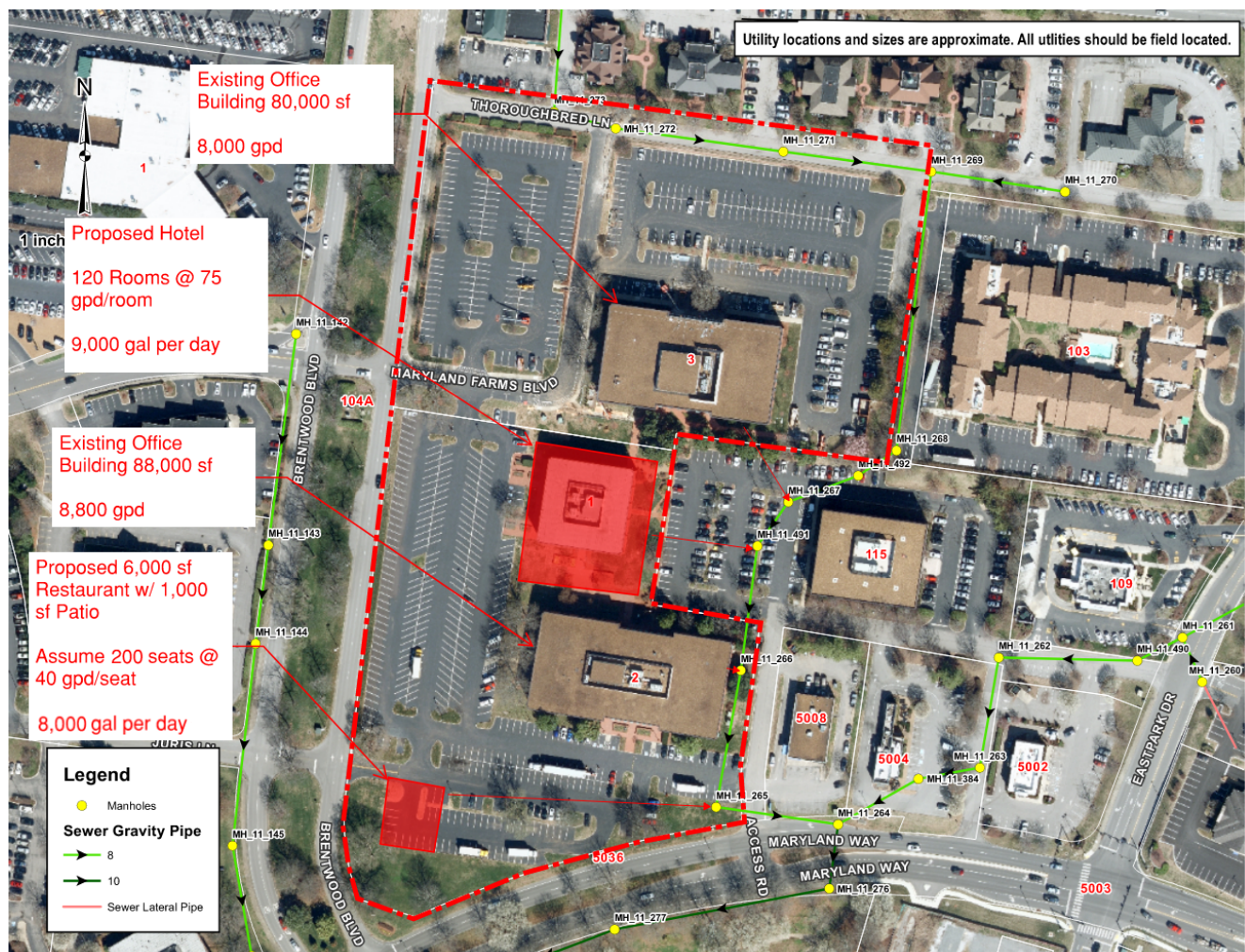


Figure 1: Capacity Evaluation Area

Modeling Assumptions

- Sewer capacity was evaluated by adding proposed flows to the model under existing conditions.
- Flow for the proposed hotel was based on the guidelines of 75 gpd/room for 120 rooms.
- Flow for the proposed restaurant was based on the guidelines of 40 gpd/seat for 200 seats.
- Wet-weather capacity was evaluated by using the established 2-year, 24-hour design storm for Brentwood.

Model Calibration Update

The model calibration in this area was last refined during the 2020 model update. During that effort, calibration was updated based on flow meter T-07, which was located on the main trunk and downstream of the trunk connection for this area. Model parameters were adjusted to match both dry and wet weather conditions based on this data.

Hydraulic Analysis

Sanitary flows for the proposed developments were entered into the model based on the information provided. Impacts to the system were evaluated for both dry and wet weather conditions.

For dry weather conditions, the average daily flow from the proposed condition (i.e., reduced office flows with new hotel and restaurant) were loaded into model. The comparison of hydraulic profiles between existing and proposed dry weather conditions is shown in Figures 2 and 3. Evaluation of the peak hydraulic grade from the point of connection down to the trunk sewer revealed no capacity limitations for proposed development in terms of depth of flow within pipe. No segment was shown to be surcharged.

For wet weather conditions, the same average daily flows were loaded into model, except this time, during a simulation with the 2-year, 24-hour design storm. Review of the same hydraulic profile indicates the additional flow from proposed developments did not result in a significant difference in HGL within the branch sewer. The comparison of hydraulic profiles between existing and proposed wet weather conditions is shown in Figures 4 and 5. The peak hydraulic grade in this profile was observed to increase by a maximum of approximately 0.6 inches and no segments were shown to surcharge until the trunk.

The model shows that the additional proposed flows would increase the amount of surcharging downstream in the main trunk sewer during the design storm rainfall event. Although overflow volume in the trunk is predicted to increase during the 2-year, 24-hour design storm, the model shows that no new overflow locations in the system are created with the addition of this development.

Conclusions

Based on the evaluation of model runs conducted, the local impact of the proposed development on Brentwood's receiving sewer is negligible based on predicted levels during both dry and wet-weather conditions. However, resulting surcharge in the downstream trunk sewer is predicted that will need to be addressed separately from this project. It is assumed that the master plan recommendations will be implemented to address surcharging in the trunk sewer as appropriate.







MEMORANDUM

To: Chris Milton and Drew Muirhead, City of Brentwood

From: Mary McGowan, P.E.
Kimley-Horn and Associates, Inc.

Date: April 18, 2022

Subject: East Park (Brentwood Blvd and Maryland Way) Proposed Sewer Demand

The proposed development is seeking a rezone to demolish the existing 33,000 SF office, keep the 87,000 SF office building, and add a 120 key hotel and a 6,000 SF restaurant. The current C1 Office zoning would allow for the current 87,000 SF office building to remain and the addition of another 88,000 SF Office building to be added. The proposed development capacity demand has been analyzed for these two options.

REZONING:

With the demolishing of the 33,000 SF office building, keeping the 87,000 SF office building, adding the restaurant and hotel, the sanitary sewer demand is increased by 20,350 gpd. With using a peaking factor of 400%, an 8-inch pipe will only utilize 0.20 cfs of the 1.01 cfs pipe capacity for the proposed development in its entirety.

Kimley-Horn		WATER AND SANITARY SEWER ESTIMATED DEMAND AND PIPE CAPACITY			
		Per City of Brentwood			
PREPARED FOR:	City of Brentwood	PREPARED BY:	Mary McGowan	DATE:	4/18/2022
DESCRIPTION:	Mixed Use Development	REVISED BY:		DATE:	
ADDRESS:	East Park	REVISED BY:		DATE:	
	Brentwood, TN	REVISED BY:		DATE:	
KH PROJECT #:	118289005				
					LEGEND
					User Input
					Calculated

Note to User: The majority of the Estimated Demand Rates used below are from Nashville Metro Water Services Guide to New Construction, Appendix 3 - "Projected Flow Examples." This list has been supplemented with additional rates according to various resources. Supplemental rates that have been added are indented and italicized. Calculation assumptions have been noted in cell comments.

ESTIMATED DEMAND						
Discharge Facility	Design Unit	# of Units		Unit Flow (gpd)	Total Flow (gpd)	
		Existing	Proposed		Existing	Proposed
General Office Space	Per Employee	480	350	25	12,000	8,750
Hotels/Motels	Per Room		120	130		15,600
Restaurants	Per Seat		200	40		8,000
Total Estimated Demand (gpd)					12,000	32,350
					Existing	Proposed

CURRENT C1 OFFICE ZONING:

With the demolishing of the 33,000 SF office building, keeping the 87,000 SF office building, adding an 88,000 SF office building, the sanitary sewer demand is increased by 5,550 GPD. With using a peaking factor of 400%, an 8-inch pipe will only utilize 0.11 cfs of the 1.01 cfs pipe capacity for the proposed demand.

Kimley-Horn		WATER AND SANITARY SEWER ESTIMATED DEMAND AND PIPE CAPACITY				
Per City of Brentwood						
PREPARED FOR:	City of Brentwood	PREPARED BY:	Mary McGowan	DATE:	4/18/2022	
DESCRIPTION:	Mixed Use Development	REVISED BY:		DATE:		
ADDRESS:	East Park	REVISED BY:		DATE:		
	Brentwood, TN	REVISED BY:		DATE:		
KH PROJECT #:	118289005					
					LEGEND	
					User Input	
					Calculated	
Note to User: The majority of the Estimated Demand Rates used below are from Nashville Metro Water Services Guide to New Construction, Appendix 3 - "Projected Flow Examples." This list has been supplemented with additional rates according to various resources. Supplemental rates that have been added are indented and italicized. Calculation assumptions have been noted in cell comments.						
ESTIMATED DEMAND						
Discharge Facility	Design Unit	# of Units		Unit Flow (gpd)	Total Flow (gpd)	
		Existing	Proposed		Existing	Proposed
General Office Space	Per Employee	480	702	25	12,000	17,550
Hotels/Motels	Per Room			130		
Restaurants	Per Seat			40		
Total Estimated Demand (gpd)					12,000	17,550
					Existing	Proposed

SUMMARY:

Both development options (proposed rezone and current zoning) would include a demand increase from the current conditions. Both options would be served by an 8-inch sanitary sewer pipe with additional capacity remaining in the pipe. The site is currently served by an existing 8-inch sanitary sewer pipe.

Brentwood City Commission Agenda

Meeting Date: 05/09/2022

Approval to purchase Cisco Network Switch for Fire Station 5

Submitted by: Sarah VanWormer, Technology

Department: Technology

Information

Subject

Approval to purchase a Cisco 48-port Switch for Fire Station 5

Background

The Technology Department needs to purchase a Cisco 48-port network switch to install at the new Fire Station 5. This is a standard switch that has historically been readily available with very short lead times. However, staff has been advised by vendors that due to supply chain issues across multiple industries, switches like this can now take up to a year to arrive upon ordering.

In contacting suppliers, staff has discovered that Presidio has this switch in stock as part of a very small supply, and is available immediately upon issuance of a purchase order. This purchase is from the NASPO State Purchasing Cooperative Contract at a cost of \$10,422.40.

Staff Recommendation

Technology staff recommends purchase of this switch for Fire Station 5.

Fiscal Impact

Amount : \$10,422.40

Source of Funds: Capital Projects Fund

Account Number: 311-45200-89700

Fiscal Impact:

The network switch is funded from the Capital Projects Fund as part of the Fire Station 5 project.

Attachments

Network Switch

TO: City of Brentwood
Michele Kramer
5211 Maryland Way
Brentwood, TN 37027

michele.kramer@brentwoodtn.gov
(p) 6153717000

FROM: Presidio Networked Solutions
Eddie Orfale
12 Cadillac Drive
Suite 130
Brentwood, TN 37027

eorfale@presidio.com
(p) +1.407.641.0550

BILL TO: City of Brentwood
Accounts Payable Michelle
PO BOX 788
Brentwood, TN 37024

Michele.kramer@brentwoodtn.gov
(p) (615) 371-7000

SHIP TO: City of Brentwood
Erik Marschang
5211 Maryland Way
Brentwood, TN 37027

Erik.marschang@brentwoodtn.gov
(p) 615-371-7000

Customer#: CITYO509

Contract Vehicle: Tennessee NASPO ValuePoint Cisco AR3227 TN# 65778

Account Manager: Jeff Hodges

Inside Sales Rep: Eddie Orfale

Title: City of Brentwood - 9300 Switch

#	Part #	Description	Unit Price	Qty	Ext Price
C9300-48UN-E					
1	C9300-48UN-E	Catalyst 9300 48-port of 5Gbps Network Essentials	\$8,457.63	1	\$8,457.63
2	C9300-NW-E-48	C9300 Network Essentials, 48-port license	\$0.00	1	\$0.00
3	PWR-C1-1100WAC-P	1100W AC 80+ platinum Config 1 Power Supply	\$0.00	1	\$0.00
4	PWR-C1-1100WAC-P/2	1100W AC 80+ platinum Config 1 Secondary Power Supply	\$1,236.11	1	\$1,236.11
5	CAB-C15-CBN	Cabinet Jumper Power Cord, 250 VAC 13A, C14-C15 Connectors	\$0.00	2	\$0.00
6	C9300-SSD-NONE	No SSD Card Selected	\$0.00	1	\$0.00
7	C9300-STACK-NONE	No Stack Cable Selected	\$0.00	1	\$0.00
8	C9300-SPWR-NONE	No Stack Power Cable Selected	\$0.00	1	\$0.00
9	NM-BLANK-T1	Cisco Catalyst Type 1 Network Module Blank	\$0.00	1	\$0.00
10	C9300-DNA-E-48	C9300 DNA Essentials, 48-Port Term Licenses	\$0.00	1	\$0.00
11	C9300-DNA-E-48-3Y	C9300 DNA Essentials, 48-port - 3 Year Term License	\$728.66	1	\$728.66
12	NETWORK-PNP-LIC	Network Plug-n-Play Connect for zero-touch device deployment	\$0.00	1	\$0.00
13	SC9300UK9-175	Cisco Catalyst 9300 XE 17.5 UNIVERSAL UNIVERSAL	\$0.00	1	\$0.00
Total:					\$10,422.40

Sub Total:		\$10,422.40
Grand Total:		\$10,422.40

**QUOTE:****2001722033563-01**

DATE:

05/03/2022

PAGE:

2 of 2

TERMS AND CONDITIONS OF THE CISCO NASPO AR3227 TENNESSEE 65778 SHALL GOVER THIS QUOTE

QUOTE IS VALID FOR 30 DAYS FROM DATE SHOWN ABOVE.

PURSUANT TO THIS CONTRACT YOUR PO MUST REFLECT THE FOLLOWING CONTRACT:
CISCO NASPO AR3227 TENNESSEE 65778

Tax ID# 58-1667655; Size Business: Large; CAGE Code: 0KD05; DUNS#15-405-0959

Credit: Net 30 days (all credit terms subject to prior Presidio credit department approval)

Delivery: FOB Terms Destination