Staff Report

To: The Hanahan Planning Commission
Cc: Larry Sturdivant, Building Official; Alex Gonzalez, MODHAB
From: Jeff Hajek, Planner/Economic Development Director
Date: May 4, 2021
Re: Subdivision Plat Request for 5725 Edison Avenue

Applicant/Owner: MODHAB
Location: Westside of Edison Avenue
Tax Map Number(s): 265-16-04-022
Approval Requested: Subdivision Plat Approval
Existing Zoning/Land Use: Town Residential (TR)/Vacant

General Application Overview and Background

The proposed site is located on the western side of Edison Avenue, approximately 355 feet north of Remount Road. The existing site is currently vacant, as there was a single-family, detached structure on the property until it was demolished in 1996.

The applicant, MODHAB, is proposing to subdivide the 7,780 SF lot (0.17 acres) into three (3) separate parcels to construct three (3) single-family detached residences. The following are the lots and their corresponding sizes:

1. Lot "D-1": 2,840 SF
2. Lot "D-2": 2,100 SF
3. Lot "D-3": 2,840 SF

This application has utilized the recently adopted 2020 zoning text amendment that added to the definition of what constitutes "frontage." Density in the Town Residential (TR) district is based on frontage. A property owner can construct four (4) dwelling units for every 100 linear feet of frontage. The amendment to the frontage definition allows for both public *and* private frontage to be counted toward the density calculation.

Proposed access will be primarily off Edison Avenue in the form of an ingress/egress easement that will be maintained by a homeowner's association.

General Conformance Analysis

The following report utilized the 2008 Hanahan Zoning Ordinance, specifically Section 4.5.11 (Standards By Zone: Town Residential [TR]) and Section 3.5 (Final Plat/Minor Land Development Plat) to analyze the proposed subdivision plat and ensure that it meets all zoning standards.

Per the Zoning Ordinance, staff finds the following general conformance standards for the proposed site:

1. **Lot size**—The proposed meets the minimum of 1,500 SF
2. **Lot Width**— The proposed parcels meet the minimum width of 25'.
3. **Residential Density**—Four (4) units per 100 linear feet. Proposed subdivision plat contains 262 linear feet of frontage, which allows for ten (10) units. Applicant only proposing three (3) lots (units).
4. **Setbacks**—The proposed lots meet the required setbacks:
    - Front: 7'
    - Side: 0'
    - Rear: 15'

Subdivision Plat Corrections

Section 3.5(B)(2)(b): Applicant will need to provide a vicinity map on the subdivision plat.

Recommendation

As stated in the General Conformance Analysis section, the proposed subdivision plat meets all the "Standards by Zone" for the Town Residential (TR) zoning district. Furthermore, the provided subdivision plat meets the documentation requirements laid out in Section 3.5 (Final Plat/Minor Land Development Plat). This plat will need to be stamped and signed by the City, as well as stamped and recorded with Berkeley County. Following recordation, a TMS number will be assigned to the subdivided property.

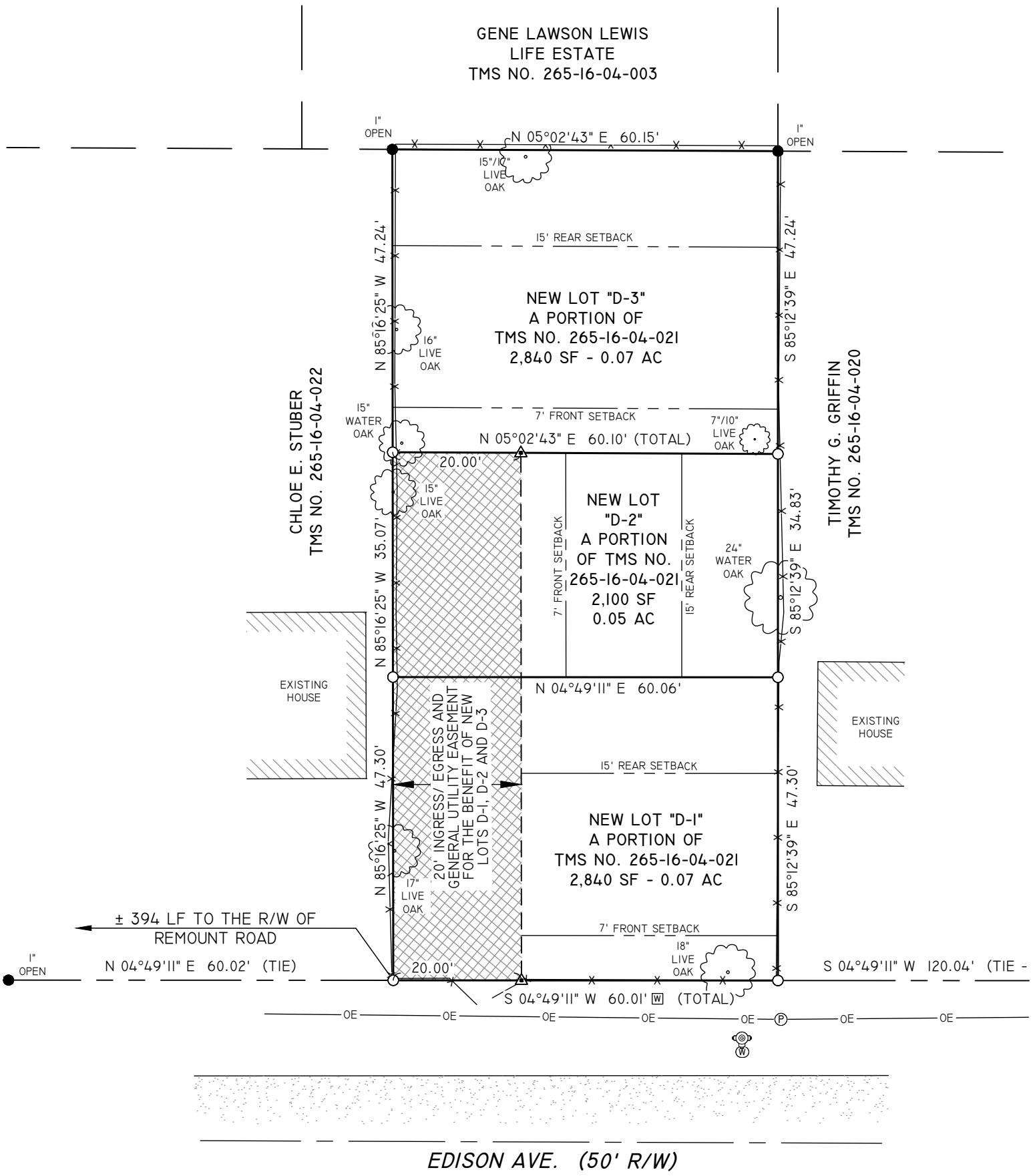
As a reminder, this plan constitutes a subdivision plat submittal. Approval of this plan does not imply approval of permits to begin construction. The subdivision plat must be approved and recorded prior to transfer of individual lots depicted on this plan.

Based upon staff's review, the City recommends that the Planning Commission ***approve*** the submitted subdivision plat, *with* conditions. Said conditions include:

1. Submitting all requested information in the "Subdivision Plat Corrections" section of this staff report.

LOCATION MAP
(NOT TO SCALE)

PRELIMINARY



"I HEREBY STATE THAT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARDS OF PRACTICE MANUAL FOR SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS "A" SURVEY AS SPECIFIED THEREIN."
- LUCAS H. STOLTZ, PLS (NO. 34994)

SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR No. 34994 LUCAS H. STOLTZ

SUBDIVISION PLAT

SHOWING THE SUBDIVIDED OF LOT "D" (A PORTION OF LOT 5, BLOCK 13) TO CREATE NEW LOT "D-1", LOT "D-2", LOT "D-3" AND A 20' INGRESS/ EGRESS AND GENERAL UTILITY EASEMENT
RONAELE A. HOLLIDAY AS TRUSTEE
LOCATED IN THE CITY OF HANAHAN
BERKELEY COUNTY, SOUTH CAROLINA
APRIL 7, 2021

PREPARED FOR: X
JOB NO.: 21161

SOUTH CAROLINA COASTAL DIMENSIONS LAND SURVEYING, LLC No. 5789 CERTIFICATE OF AUTHORIZATION

COASTAL DIMENSIONS LAND SURVEYING LLC
1538 EAST CROSSING LN
MT. PLEASANT, SC 29466
WWW.COASTALDIM.COM | TELEPHONE: 843-530-2771 | EMAIL: LUCAS@COASTALDIM.COM

Staff Report

To: The Hanahan Planning Commission
Cc: Larry Sturdivant, Building Official; Brad Hinchberger, Bowman Consulting
From: Jeff Hajek, Planner/Economic Development Director
Date: May 4, 2021
Re: Preliminary Land Development Plan Approval for Heron Preserve

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Applicant/Owner: Bowman Consultant/Crescent Communities
Location: Southeast of Foster Creek Road/Williams Lane intersection (across the street from Bowen's Corner Elementary School).
Tax Map Number(s): 259-00-00-117
Approval Requested: Preliminary Development Plan Approval
Existing Zoning/Land Use: Type B, Planned Development (Type B, PD)/undeveloped

General Application Overview and Background

The Type B, Planned Development (Type B, PD) District, Heron Preserve at Tanner Plantation, is located immediately south of Williams Lane, adjacent to Bowen's Corner Elementary School and southeast of the intersection of Foster Creek Road and Williams Lane. The twenty-one (21) acre tract currently is comprised of undisturbed wooded uplands (17.2 acres) and wetlands (jurisdictional: 3.8 acres; non-jurisdictional: 0.23 acres) throughout the parcel.

This formerly, city-owned parcel was recently sold to Crescent Communities in February 2021. The sale was guided by a development agreement that stipulates conditions for the future use of the property, which includes development of single-family detached homes. The Type B, PD received City Council approval January 12, 2021.

It is the intent of the developer to "provide an upscale, residential neighborhood option, presenting a higher-end product line of drive-under home site, as an enhanced offering for the surrounding community." In total, the applicant is proposing to create a subdivision of 90 single-family lots, ranging from 2,850 SF to 6,062 SF (average lot size: 3,340 SF) in an area on approximately ten (10) acres of land. The proposed houses will be elevated, with drive-under garages. The

remaining land (7 acres or 33 percent of the property), which is primarily wetlands, will be preserved as open space for residents of the community. The applicant is proposing one (1) entrance and exit to the development that will tie-in to Williams Lane, a SCDOT-maintained road. A traffic study was submitted for the Type B, PD approval request. The traffic impact analysis (TIA), approved by SCDOT, found that there was no external mitigation required for the proposed development.

Utilities for Charleston Water System (CWS), Berkeley County Water and Sanitation Authority (BCWS) and Dominion Power are existing and little infrastructure enhancements, other than connections and extensions will be needed.

Consistency with the Heron Preserve at Tanner Plantation PD Document and Surrounding Districts

Overall, the approved PD document mirrors that of the RS district in regard to primary use—strictly single-family detached units only. The PD document deviated from the RS zoning district by providing regulatory provisions that adjust the density, minimum lot size, height maximum and setbacks to accommodate for the desired number of 91 parcels. Other than these custom regulations, the PD document cedes to the 2008 Zoning Ordinance for guidance on building design standards, landscaping standards, signage standards, parking and access standards, road and bicycle/pedestrian infrastructure standards and natural resource protection and green space standards.

Overall, the proposed development meets the intent of the PD document and the applicable zoning standards of the 2008 Zoning Ordinance. The single-family use is compatible with the surrounding zoning districts, which include Single-Family Residential (RS) to the north, south and west of the site and Residential—Manufactured Housing (RT) to the east of the site. Being that these uses are of the same land use intensity, no additional landscape buffers are required. Additionally, the intended use of the property, single-family residential, will blend in with the character and architectural language of the surrounding neighborhoods.

General Conformance Analysis

The following report utilized the 2008 Hanahan Zoning Ordinance and the "Heron Preserve at Tanner Plantation" PD document to analyze the submitted preliminary land development plan for the Park at Hanahan development.

Per the Zoning Ordinance, staff finds the following general conformance standards for the proposed site:

1. **Lot size**—All proposed lot sizes adhere to the PD document's minimum lot size.
2. **Lot Width**— All lots meet the minimum lot width of 30 ft.
3. **Density**—5 units per acre maximum. The proposed development meets this requirement currently at 5 units per acre.
4. **Setbacks**—All proposed building sites meet the required setbacks as dictated by the ordinance. Below are the required:
    - Front: 0
    - Side: 0'
    - Rear: 0'
5. **Impervious Surface Ratio**—85% maximum allowed. All homes are under the allowed maximum.

Preliminary Plat Requested Corrections

Given that the submitted preliminary subdivision plat meets general zoning conformance, there are other pertinent and required elements needed to have a complete submittal. These documentation requirements may be found in the 2008 Zoning Ordinance, Section 3.2. The following will be needed for approval:

Required Contents of the Preliminary Plan (Section 3.2)

Existing Site Information

1. **Section 3.2(B)(3)(d):** Location, ownership, parcel identification numbers, zoning classifications and land uses of adjoining properties, including those across the rights-of-way
    a. Zoning classifications and land uses of subject and adjoining properties will need to be shown on existing conditions plan.

2. **Section 3.2(B)(3)(e):** All existing municipal boundaries, property lines, rights-of-way, easements, railroads, water and sewer lines, fire hydrants, utility transmission lines, culverts, bridges, storm drainage infrastructure, water courses and buildings and other structures.
    a. Please ensure all of the listed above is shown on existing conditions plan.

3. **Section 3.2(B)(3)(g):** All trees required to be protected, including graphic indication as to whether landmark trees and protected trees are proposed to be preserved or removed. Tree survey and protection standards shall be those found in Chapter 7 of the Zoning Ordinance.
    a. No tree protection plan was shown on the existing site information, only a tree survey. Applicant will need to show what trees are slated from removal and those that are to be preserved. Please refer to Chapter 7 for guidance.

4. **Section 3.2(B)(3)(k):** Critical lines of jurisdictional and isolated wetlands in accordance with state and federal standards as well as any buffers expected to be required by state and federal agencies.
    a. Please show required wetlands buffer measurements around jurisdictional wetlands area.
    b. Permits from Army Corps of Engineers, SC DHEC—OCRM and SC DHEC Bureau of Water will need to be submitted.

Proposed Land Development Information

1. **Section 3.2(B)(4)(a):** Roads, rights-of-way, widths and materials
    a. ROW widths were provided, however site plan needs to show road widths and materiality of said roads.
2. **Section 3.2(B)(4)(b):** Proposed name for "Road A" and "Road B" will need to be pre-approved by Berkeley County E-911.
3. **Section 3.2(B)(4)(c):** Extent of all parking areas with number of stalls, including handicap-accessible and loading stalls.
    a. Parking areas are shown in overall site plan (Sheet 4), but the total number of stalls, both for each residence, handicapped and off-street parking, will need to be shown on site plan.
4. **Section 3.2(B)(4)(h):** Schematic plans for utilities (i.e. – sewerage, potable water, electricity, street lighting, cable, telephone, and gas lines and stormwater drainage).
    a. No schematic plans were submitted—these will need to be submitted in order to achieve a complete submittal.

Other

Bicycle/Pedestrian Infrastructure

In the revised "Bicycle and Pedestrian Circulation Plan" provided by Bowman Consulting in November 2020, the plan shows a proposed crosswalk on Williams Lane, connecting Heron Preserve to Bowen Corner Elementary School. This is nowhere in the site plan and will need to be shown on the revised site plan. Additionally, in the Circulation Plan, the development called for crosswalks throughout the neighborhood—these are not shown on the plan either.

Lastly, staff will need an update on the "potential routing for multi-use path to connect to Tanner Pedestrian/Bike Trail." This was a bike/ped connection the developer was proposing to connect to the existing Tanner Bike/Ped. Trail.

Submittal to Respective Utilities and Agencies

The applicant will need to ensure that the preliminary plan has been submitted to Charleston Water System (CWS), Berkeley County Water and Sanitation (BCWS), Berkeley County Engineering for general review and review for stormwater management and SC Department of Transportation. Letters of recommendation/approval will be needed to receive planning commission approval.

Copies of the eventual construction plans will also need to be submitted to Berkeley County Engineering. Comments received by said agencies may affect changes to the preliminary plan.

Given the presence of jurisdictional wetlands, copies of the proper permits from the Army Corps of Engineers, DHEC—OCRM and DHEC Bureau of Water will need to be sent to the City for approval.

Recommendation

This plan constitutes a preliminary plat subdivision submittal. Approval of this plan does not imply approval of permits to begin construction. Approval of this application will enable the developer to seek permits for land disturbance and installation of necessary infrastructure to serve this phase of the project. Subsequent to approval to install infrastructure, the applicant must submit a final plat that depicts all easements provided for its maintenance, whether by a public

agency or property owners association. Such plat must be approved and recorded prior to transfer of individual lots depicted on this plan.

Based upon staff's review, the City recommends that the Planning Commission ***approve*** the submitted preliminary land development plan for the "Heron Preserve at Tanner Plantation" development with conditions. The stated conditions must be fully completed to receive Planning Commission approval for land development. Said conditions include:

1. Addressing all requested information in the "Preliminary Plat Requested Corrections" section of this staff report.
2. Addressing all requested information in the "Pedestrian/Bicycle Infrastructure" section of this staff report.
3. Receipt of recommendation/approval letters from CWS, BCWS, Berkeley County Engineering, Army Corps of Engineers, DHEC—OCRM and DHEC Bureau of Water.

PROPOSED
PRELIMINARY LAND DEVELOPMENT PLANS
FOR
HERON PRESERVE AT TANNER PLANTATION
CITY OF HANAHAN, BERKELEY COUNTY, SC

PARCEL ID# 259-00-00-117

PROJECT INFORMATION

PROJECT	HERON PRESERVE AT TANNER PLANTATION
PROJECT ADDRESS	# TBD WILLIAMS LANE, HANAHAN, SC 29410
PARCEL PIN NUMBERS	259-00-00-117
LOT ACREAGE	21.31 AC
PARCEL ZONING	PLANNED DEVELOPMENT DISTRICT (PD)
PROPOSED PARCEL USE	PLANNED DEVELOPMENT DISTRICT, RESIDENTIAL NEIGHBORHOOD – 91 SINGLE-FAMILY RESIDENTIAL LOTS
FRONT SETBACK	0'
SIDE SETBACK	0'
REAR SETBACK	0'

CONTACTS:

SURVEYING - PARKER LAND SURVEYING, LLC
5910 GRIFFIN STREET
HANAHAN, SC 29410
PHONE: (843) 554-7777
CONTACT: ANDREW C. GILLETTE JR., PLS

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION - RIGHT OF TRANSFER
PO BOX 308 858 HIGHWAY 15 NORTH ST. GEORGE, SC 29477
PHONE: (843) 636-9681
CONTACT: MARK WESTBURY, SOUTHERN REGION ADMINISTRATOR

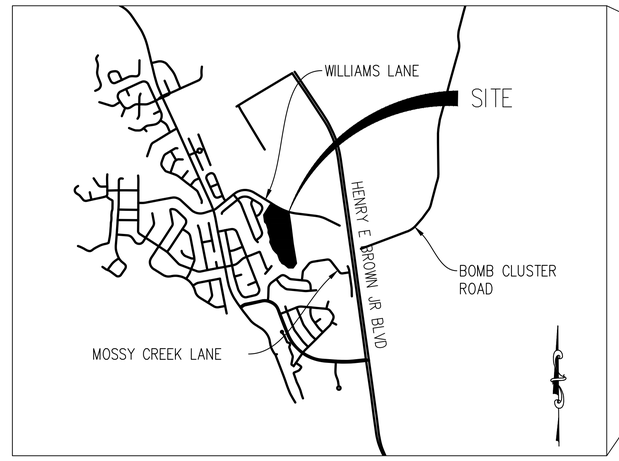
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION - CONSTRUCTION & INSPECTION FOR ALL WORK IN THE RIGHT-OF-WAY
PO BOX 308 858 HIGHWAY 15 NORTH ST. GEORGE, SC 29477
PHONE: (843) 371-0342
CONTACT: DANIEL BURTON, SCDOT DISTRICT CONSTRUCTION ENGINEER

CHARLESTON WATER SYSTEM
103 ST. PHILIP STREET CHARLESTON, SC 29403
PHONE: (843) 727-6869
CONTACT: LYDIA OWENS

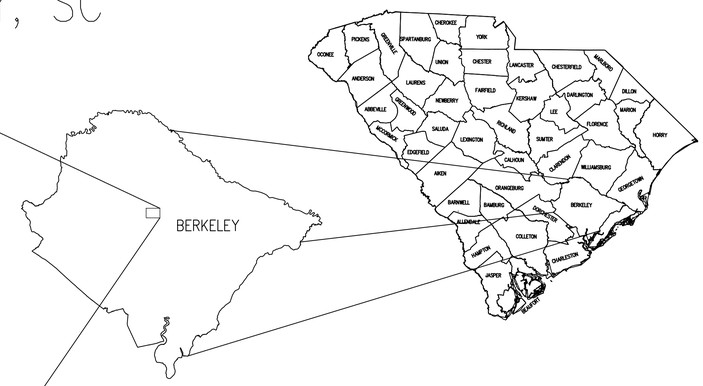
BERKELEY COUNTY WATER AND SANITATION
212 OAKLEY PLANTATION DRIVE
MONCKS CORNER, SC 29461
PHONE: (843) 719-2316
CONTACT: ASHLEY YEH

UTILITY PROVIDERS:

SEWER SYSTEM PROVIDER	BERKELEY COUNTY WATER AND SANITATION
WATER PROVIDER	CHARLESTON WATER SYSTEM



SITE LOCATION MAP
1" = 2000'
2000 1000 0 2000 4000
GRAPHIC SCALE
1" = 2000'



Sheet List Table

Sheet Number	Sheet Title	Sheet Number
1	COVER SHEET	1
2	SURVEY (BY OTHERS)	2
3	SURVEY (BY OTHERS)	3
4	OVERALL PLAN	4
5	OPEN SPACE PLAN	5
6	PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 1 OF 6)	6
7	PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 2 OF 6)	7
8	PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 3 OF 6)	8
9	PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 4 OF 6)	9
10	PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 5 OF 6)	10
11	PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 6 OF 6)	11

CIVIL ENGINEER:

BOWMAN CONSULTING GROUP
880 ISLAND PARK DRIVE, SUITE 400
CHARLESTON, SC 29492
(843) 501-0333
CONTACT: JARED CHRYSOSTOM, P.E.

OWNER/DEVELOPER:

HERON PRESERVE LLC
572 SAVANNAH HIGHWAY
CHARLESTON, SC 29407
PHONE: (843) 573-9635
CONTACT: JOSHUA CRAIG, DIRECTOR OF ACQUISITIONS

SURVEYOR:

PARKER LAND SURVEYING LLC
5910 GRIFFIN STREET
HANAHAN, SC 29410
PHONE: (843) 554-7777
CONTACT: ANDREW C. GILLETTE JR.

SUBMITTAL HISTORY

NO.	DESCRIPTION	DATE

Bowman Consulting Group, Ltd.
880 Island Park Drive
Suite 400
Charleston, SC 29492
bowmanconsulting.com

COVER SHEET
HERON PRESERVE AT TANNER PLANTATION
PRELIMINARY LAND DEVELOPMENT PLANS
CITY OF HANAHAN, SOUTH CAROLINA

BOWMAN CONSULTING GROUP LTD. NO. 4523

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 36839 4/9/21 JARED MARK CHRYSOSTOM

PLAN STATUS	
DATE	DESCRIPTION

JMC DESIGN	BWH DRAWN	JMC CHKD
SCALE	H: N/A V: N/A	
JOB No. 150012-01-009		
DATE APRIL 9, 2021		
FILE No. 150012-D-CP-009-COV.DWG		
SHEET 1		

Cad file name: V:\150012 - crescent homes\150012-01-009 (eng) - hanahan tract pdd\engineering\engineering plans\preliminary land development plans (no construction)\150012-D-CP-009-COV.dwg 4/9/2021

LEGEND

- PROPERTY LINE WITH CORNER FOUND (AS DESCRIBED)
- PROPERTY LINE WITH CORNER SET (¾" REBAR)
- PROPERTY LINE ADJACENT
- RIGHT OF WAY
- FLOOD ZONE (GRAPHICALLY SCALED)
- WETLAND LINE
- PERENNIAL CREEK – EDGE BANK
- WETLAND AREA
- CREEK AREA

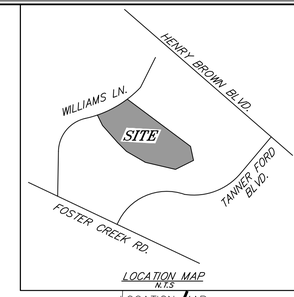
SITE SUMMARY	
TOTAL NON JURISDICTIONAL WETLAND	0.235 ACRES
TOTAL JURISDICTIONAL WETLAND	3.868 ACRES
TOTAL UPLAND	17.203 ACRES
TOTAL SITE	21.306 ACRES

REFERENCES:

1. CONVEYANCE PLAT SHOWING TRACT 3K AND TRACT 4, LOCATED AT TANNER PLANTATION, DATED OCTOBER 3, 2002, BY RICHARD A ALDRIDGE, SCPLS# 20854 AND RECORDED AT BERKELEY COUNTY PLAT CABINET P PAGE 317.
2. FINAL SUBDIVISION PLAT SHOWING TANNER PLANTATION, PHASE 9 MOSSY CREEK, DATED NOVEMBER 9, 2006 BY RICHARD A ALDRIDGE, SCPLS# 20854 AND RECORDED AT BERKELEY COUNTY PLAT CABINET R PAGE 262.
3. SUBDIVISION PLAT SHOWING TANNER PLANTATION PHASE 4, AMBERGLEN SUBDIVISION, TRACT 3H, DATED JULY 23, 2002, BY RICHARD A ALDRIDGE, SCPLS# 20854 AND RECORDED AT BERKELEY COUNTY PLAT CABINET P PAGE 267.
4. SUBDIVISION PLAT SHOWING TANNER PLANTATION PHASE 1–B1, THE COMMONS, TRACT 3E, DATED MAY 5, 2005, BY RICHARD A ALDRIDGE, SCPLS# 20854 AND RECORDED AT BERKELEY COUNTY PLAT CABINET M PAGE 035.
5. SUBDIVISION PLAT SHOWING TANNER PLANTATION PHASE 2, SECTION A2, SWEETGRASS SUBDIVISION, A PORTION OF TRACT 3G, DATED JANUARY 30, 2003, BY RICHARD A ALDRIDGE SCPLS# 20854 AND RECORDED AT BERKELEY COUNTY PLAT CABINET P PAGE 355.

NOTES:

1. INFORMATION SHOWN OUTSIDE OF THE SURVEY LIMITS IS FOR INFORMATIONAL PURPOSES ONLY.
2. BY GRAPHICAL PLOTTING, THIS PROPERTY APPEARS TO BE LOCATED IN FLOOD ZONE X AND AE (ELV 9) PER FEMA PANEL 45015C0685E, CITY OF HANAHAN (455030) EFFECTIVE DATE 12/7/2018.
3. AREAS DETERMINED BY COORDINATE METHOD.
4. PROPERTY CORNERS FOUND AS LABELED.
5. ALL PROPERTY CORNER SET AR ¾" REBAR.
6. ANY EASEMENTS SHOWN ARE PER REFERENCES ONLY. PROPERTY MAY BE SUBJECT TO EASEMENTS AND RESTRICTIONS NOT OBVIOUS OR APPARENT TO THE SURVEYOR.
7. THIS SURVEY DOES NOT CONFIRM OR DENY THE EXISTENCE OF WETLANDS.
8. A TITLE SEARCH WAS NOT PERFORMED FOR THE CREATION OF THIS SURVEY.
9. THE APPROXIMATE GEOGRAPHICAL CENTER OF THIS SITE IS LATITUDE: 32°56'34" LONGITUDE: -80°00'16"



LOCATION MAP
N.T.S.

60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

N SCNAD 83

TMS# 259-00-00-029
FRANK MARTILENO SURVIVORSHIP.

TMS# 259-00-00-030
HEIRS OF CYRUS RICHARDSON

TMS# 259-00-00-31
HEIRS OF JAMES McCLARY

TMS# 259-11-02-028
MOSSY CREEK POA INC.

TMS# 259-00-00-104
BERKELEY COUNTY SCHOOL DISTRICT

TMS# 259-00-00-117
928,097.05 sq.ft.
21.306 acres

NON JURISDICTIONAL WETLAND
10,222.65 sq.ft.
0.235 acres

UPLAND
877,363.81 sq.ft.
13.254 acres

JURISDICTIONAL WETLAND
165,489.84 sq.ft.
3.868 acres

UPLAND 2
72,012.16 sq.ft.
3.949 acres

ZONE "X"

ZONE "AE" (9)

TMS# 259-12-01-071
AMBERGLEN HOA

AMBERGLEN AT TANNER PLANTATION

TMS# 259-07-02-052
COMMONS AT TANNER PLANTATION HOA

THE COMMONS AT TANNER PLANTATION

TMS# 259-11-03-097
COMMONS AT TANNER PLANTATION HOA

TMS# 259-11-01-056
SWEETGRASS AT TANNER PLANTATION HOA

SWEETGRASS AT TANNER PLANTATION

WILLIAMS LANE
(66' RIGHT OF WAY)

RIVER ROCK ROAD

STONE MOSS WAY

THE COMMONS AT TANNER PLANTATION

CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	DELTA	DIRECTION	CHORD
C1	383.61'	1465.39'	192.91'	14°59'56"	S 66°01'58" E	382.51'
C2	46.26'	35.00'	27.21'	75°43'58"	S 70°10'13" W	42.97'

LINE TABLE		
LINE	BEARING	LENGTH
L1	S 07°17'20" E	13.40'
L2	N 87°03'36" W	37.65'
L3	S 45°40'39" E	54.27'
L4	S 19°55'05" W	5.22'
L5	S 58°29'06" W	91.83'
L6	N 83°15'41" W	39.22'
L7	N 67°26'11" W	31.23'
L8	N 25°55'15" W	39.25'
L9	N 20°49'17" W	40.93'
L10	N 21°59'17" W	12.63'
L11	S 76°48'33" E	47.37'
L12	S 54°36'19" E	56.55'
L13	N 58°33'01" E	62.25'
L14	S 15°08'02" E	28.28'
L15	S 20°14'48" E	58.43'
L16	S 06°35'45" W	45.76'
L17	S 04°40'36" W	32.84'

LINE TABLE		
LINE	BEARING	LENGTH
L18	S 25°53'21" E	44.49'
L19	S 54°19'15" E	34.61'
L20	S 45°15'26" W	30.35'
L21	S 17°59'42" W	60.55'
L22	S 76°22'16" W	42.21'
L23	S 82°45'17" W	42.22'
L24	S 15°49'35" E	13.91'
L25	S 27°52'34" E	39.69'
L26	S 74°57'41" E	28.60'
L27	N 70°45'27" E	41.92'
L28	S 50°12'09" E	40.15'
L29	S 30°32'00" E	37.49'
L30	S 01°47'49" W	37.88'
L31	S 25°11'30" W	46.02'
L32	S 40°34'58" W	23.36'
L33	S 13°47'39" E	1.17'
L34	S 40°37'26" E	81.26'

LINE TABLE		
LINE	BEARING	LENGTH
L35	S 38°10'32" E	83.52'
L36	S 02°48'39" W	47.31'
L37	S 29°23'30" E	39.94'
L38	S 08°47'58" E	35.78'
L39	S 17°06'05" W	43.00'
L40	S 83°44'15" W	23.92'
L41	S 87°33'13" W	32.09'
L42	S 02°04'38" E	20.03'
L43	S 85°26'28" E	56.36'
L44	S 63°20'14" E	35.97'
L45	S 01°01'22" W	42.85'
L46	S 06°44'19" W	26.78'
L47	S 52°18'01" E	64.34'
L48	N 89°47'36" E	19.75'
L49	N 70°16'41" E	4.13'
L50	N 22°39'26" E	74.92'
L51	N 53°09'05" E	35.25'

LINE TABLE		
LINE	BEARING	LENGTH
L52	S 35°24'22" W	25.74'
L53	S 13°04'49" W	45.56'
L54	S 02°50'27" E	19.29'
L55	S 50°16'30" W	48.88'
L56	S 38°46'40" W	28.94'
L57	S 01°51'00" W	82.86'
L58	S 09°54'59" E	57.44'
L59	S 39°49'02" E	53.46'
L60	S 33°24'13" E	53.73'
L61	S 24°50'18" E	31.86'
L62	S 71°39'54" E	43.06'
L63	S 36°39'51" E	24.52'
L64	S 40°58'04" E	26.32'
L65	S 06°38'56" W	16.23'
L66	S 39°53'29" W	41.25'
L67	S 39°48'37" W	36.71'
L68	S 22°52'04" W	5.99'

LINE TABLE		
LINE	BEARING	LENGTH
L69	S 66°20'28" E	57.67'
L70	S 09°20'02" W	112.88'
L71	S 60°49'58" E	38.18'
L72	S 85°00'48" E	52.64'
L73	S 63°07'33" E	22.37'
L74	N 36°32'34" E	20.19'
L75	N 35°23'40" W	135.79'
L76	S 58°43'22" E	64.34'
L77	S 66°42'31" E	37.18'
L78	S 59°12'16" E	46.91'
L79	S 63°51'41" E	31.19'
L80	S 56°36'57" E	48.47'
L81	S 38°51'29" E	62.32'
L82	S 60°46'14" E	33.70'
L83	S 85°01'45" E	28.43'
L84	N 68°12'51" W	4.62'
L85	N 43°22'53" W	46.67'

LINE TABLE		
LINE	BEARING	LENGTH
L86	N 48°59'39" W	83.92'
L87	N 23°17'09" W	37.25'
L88	S 68°16'44" W	53.32'
L89	N 89°48'14" W	40.47'
L90	S 53°58'41" W	3.45'
L91	N 43°29'20" W	65.04'
L92	N 36°52'48" W	31.21'
L93	N 23°56'12" W	27.98'
L94	N 24°47'51" E	26.12'
L95	N 20°55'37" W	50.52'
L96	N 00°06'44" E	2.93'
L97	N 34°15'14" W	74.92'
L98	N 26°22'26" W	16.46'
L99	N 64°22'52" W	49.78'
L100	N 39°20'27" W	88.33'
L101	N 25°54'55" W	34.00'
L102	N 22°17'17" W	45.73'

LINE TABLE		
LINE	BEARING	LENGTH
L103	N 33°32'49" W	58.11'
L104	N 43°00'08" E	37.37'
L105	N 23°47'42" W	45.46'
L106	N 80°16'45" W	30.15'
L107	N 46°53'58" W	110.54'
L108	N 23°31'57" E	74.22'
L109	N 37°33'59" W	15.53'
L110	N 31°46'19" W	43.32'
L111	N 77°38'12" E	21.68'
L112	N 02°25'17" W	51.49'
L113	N 07°02'47" W	30.38'
L114	N 39°17'52" E	43.72'
L115	N 57°30'32" E	26.38'
L116	N 40°19'17" E	51.70'
L117	N 58°26'21" W	35.77'
L118	N 32°59'46" W	55.94'
L119	N 09°35'49" W	2.05'

LINE TABLE		
LINE	BEARING	LENGTH
L120	N 43°08'44" W	77.02'
L121	N 10°15'09" W	31.42'
L122	N 39°54'59" W	26.28'
L123	N 33°01'12" W	37.58'
L124	N 15°20'48" E	37.91'
L125	N 51°34'07" W	48.31'
L126	N 07°21'07" W	53.82'
L127	N 39°03'37" W	50.63'
L128	N 20°42'44" W	45.12'
L129	N 30°49'57" W	41.01'
L130	N 86°36'40" E	39.35'
L131	N 73°12'45" E	33.53'
L132	N 71°24'19" E	23.71'
L133	N 19°24'29" W	39.98'
L134	N 21°30'31" W	32.73'
L135	N 30°32'35" W	36.76'
L136	N 34°44'54" E	43.45'
L137	N 03°04'17" E	45.89'

TITLE
TREE & TOPOGRAPHIC SURVEY
TMS# 259-00-00-117
PROPERTY OF THE CITY OF HANAHAN
LOCATED IN THE CITY OF HANAHAN
BERKELEY COUNTY, SOUTH CAROLINA

NO.	DATE	REVISIONS

SOUTH CAROLINA NOT FOR CONSTRUCTION CERTIFICATION OF SURVEY
PARKER LAND SURVEYING, LLC
No. 3014

Parker Land Surveying, LLC
5910 Griffin Street
Hanahan, SC 29410
Phone: (843) 554-7777
Fax: (843) 554-7779

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 27738
ANDREW C. GILLIS
08/22/18

DESIGNED :	—
DRAWN :	CAC
CHECKED :	ACG
APPROVED :	ACG
SCALE :	1"=60'
DATE :	7/24/2020
PROJECT NO. :	18-039
SHEET	1 OF 1

LEGEND

PROPERTY LINE WITH CORNER FOUND (AS DESCRIBED)
PROPERTY LINE WITH CORNER SET (¾" REBAR)
PROPERTY LINE ADJACENT
RIGHT OF WAY
FLOOD ZONE (GRAPHICALLY SCALED)
WETLAND LINE
WETLAND AREA

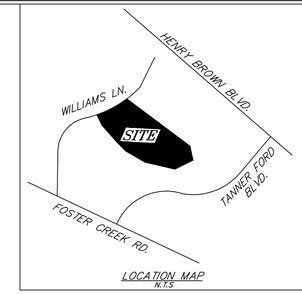
SITE SUMMARY	
TOTAL NON JURISDICTIONAL WETLAND	0.235 ACRES
TOTAL JURISDICTIONAL WETLAND	3.868 ACRES
TOTAL UPLAND	17.203 ACRES
TOTAL SITE	21.306 ACRES

REFERENCES:

1. CONVEYANCE PLAT SHOWING TRACT 3K AND TRACT 4, LOCATED AT TANNER PLANTATION, DATED OCTOBER 3, 2002, BY RICHARD A ALDRIDGE, SCPLS# 20854 AND RECORDED AT BERKELEY COUNTY PLAT CABINET P PAGE 317.
2. FINAL SUBDIVISION PLAT SHOWING TANNER PLANTATION, PHASE 9 MOSSY CREEK, DATED NOVEMBER 9, 2006 BY RICHARD A ALDRIDGE, SCPLS# 20854 AND RECORDED AT BERKELEY COUNTY PLAT CABINET R PAGE 262.
3. SUBDIVISION PLAT SHOWING TANNER PLANTATION PHASE 4, AMBERGLEN SUBDIVISION, TRACT 3H, DATED JULY 22, 2002, BY RICHARD A ALDRIDGE, SCPLS# 20854 AND RECORDED AT BERKELEY COUNTY PLAT CABINET P PAGE 267.
4. SUBDIVISION PLAT SHOWING TANNER PLANTATION PHASE 1-B1, THE COMMONS, TRACT 3E, DATED MAY 5, 2005, BY RICHARD A ALDRIDGE, SCPLS# 20854 AND RECORDED AT BERKELEY COUNTY PLAT CABINET M PAGE 035.
5. SUBDIVISION PLAT SHOWING TANNER PLANTATION PHASE 2, SECTION A2, SWEETGRASS SUBDIVISION, A PORTION OF TRACT 3G, DATED JANUARY 30, 2003, BY RICHARD A ALDRIDGE SCPLS# 20854 AND RECORDED AT BERKELEY COUNTY PLAT CABINET P PAGE 355.

NOTES:

1. INFORMATION SHOWN OUTSIDE OF THE SURVEY LIMITS IS FOR INFORMATIONAL PURPOSES ONLY.
2. BY GRAPHICAL PLOTTING, THIS PROPERTY APPEARS TO BE LOCATED IN FLOOD ZONE X AND AE (ELV 9) PER FEMA PANEL 45015C0685E, CITY OF HANAHAN (455030) EFFECTIVE DATE 12/7/2018.
3. AREAS DETERMINED BY COORDINATE METHOD.
4. PROPERTY CORNERS FOUND AS LABELED.
5. ALL PROPERTY CORNER SET AR ¾" REBAR.
6. ANY EASEMENTS SHOWN ARE PER REFERENCES ONLY, PROPERTY MAY BE SUBJECT TO EASEMENTS AND RESTRICTIONS NOT OBVIOUS OR APPARENT TO THE SURVEYOR.
7. THIS SURVEY DOES NOT CONFIRM OR DENY THE EXISTENCE OF WETLANDS.
8. A TITLE SEARCH WAS NOT PERFORMED FOR THE CREATION OF THIS SURVEY.
9. THE APPROXIMATE GEOGRAPHICAL CENTER OF THIS SITE IS LATITUDE: 32-56-34 LONGITUDE: -80-00-16



LOCATION MAP
N.T.S

80 0 30 80 120 240
(IN FEET)
1 inch = 80 ft.

SCNAD 83

TMS# 259-00-00-029
FRANK MARTILENO SURVIVORSHIP.

TMS# 259-00-00-030
HEIRS OF CYRUS RICHARDSON

TMS# 259-00-00-31
HEIRS OF JAMES McCLARY

TMS# 259-11-02-028
MOSSY CREEK POA INC.

TMS# 259-00-00-104
BERKELEY COUNTY SCHOOL DISTRICT

N 405820.24
E 2305510.89

N 404428.65
E 2305715.32

WILLIAMS LANE
(66' RIGHT OF WAY)

TMS# 259-00-00-117
928,097.05 sq.ft.
21.306 acres

EXCLUDED WATER
(WETLAND 2)
10,222.65 sq.ft.
0.235 acres

UPLAND 1
577,363.81 sq.ft.
13.254 acres

JURISDICTIONAL WETLAND 1
168,489.84 sq.ft.
3.868 acres
3,151 LF +/-

JURISDICTIONAL TRIBUTARY 1
26,789.40 sq.ft.
0.615 acres
3,150 LF +/-

UPLAND 2
172,021.16 sq.ft.
3.949 acres

TMS# 259-12-01-071
AMBERGLEN HOA

AMBERGLEN AT TANNER PLANTATION

TMS# 259-07-02-052
COMMONS AT TANNER PLANTATION HOA

TMS# 259-11-03-097
COMMONS AT TANNER PLANTATION HOA

TMS# 259-11-01-056
SWEETGRASS AT TANNER PLANTATION HOA

THE COMMONS AT TANNER PLANTATION

SWEETGRASS AT TANNER PLANTATION

RIVER ROCK ROAD

STONE MOSS WAY

CURVE TABLE						
CURVE	LENGTH	RADIUS	TANGENT	DELTA	DIRECTION	CHORD
C1	383.61'	1465.39'	192.91'	14°59'56"	S 66°01'58" E	382.51'
C2	46.26'	35.00'	27.21'	75°43'58"	S 70°01'31" W	42.97'

LINE TABLE		
LINE	BEARING	LENGTH
L1	S 07°17'20" E	13.40'
L2	N 87°03'36" W	37.65'
L3	S 45°40'39" E	54.27'
L4	S 19°55'05" W	5.22'
L5	S 58°28'06" W	91.83'
L6	N 83°15'41" W	39.22'
L7	N 67°26'11" W	31.23'
L8	N 25°55'15" W	39.25'
L9	N 20°49'17" W	40.93'
L10	N 21°59'17" W	12.63'
L11	S 76°48'33" E	47.37'
L12	S 54°36'19" E	56.55'
L13	N 58°33'01" E	62.25'
L14	S 15°08'02" E	28.28'
L15	S 20°14'48" E	58.43'
L16	S 06°35'45" W	45.76'
L17	S 04°40'36" W	32.84'

LINE TABLE		
LINE	BEARING	LENGTH
L18	S 25°53'21" E	44.49'
L19	S 54°19'15" E	34.61'
L20	S 45°15'26" W	30.35'
L21	S 17°39'42" W	60.55'
L22	S 76°22'16" W	42.71'
L23	S 82°45'17" W	42.22'
L24	S 15°49'35" E	13.91'
L25	S 27°52'34" E	39.69'
L26	S 74°57'41" E	28.60'
L27	N 70°45'27" E	41.92'
L28	S 50°12'02" E	40.15'
L29	S 30°32'00" E	37.49'
L30	S 01°47'49" W	37.88'
L31	S 25°11'30" W	46.02'
L32	S 40°34'58" W	23.36'
L33	S 13°47'39" E	1.17'
L34	S 40°37'26" E	81.26'

LINE TABLE		
LINE	BEARING	LENGTH
L35	S 38°10'32" E	83.52'
L36	S 02°48'39" W	47.31'
L37	S 29°23'30" E	39.94'
L38	S 08°47'58" E	35.78'
L39	S 17°06'05" W	43.00'
L40	S 83°44'15" W	23.92'
L41	S 87°33'13" W	32.09'
L42	S 02°04'38" E	20.03'
L43	S 85°26'28" E	56.36'
L44	S 63°20'14" E	35.97'
L45	S 01°01'22" W	42.85'
L46	S 06°44'19" W	26.78'
L47	S 52°18'01" E	64.34'
L48	N 89°47'36" E	19.75'
L49	N 70°16'41" E	4.13'
L50	N 22°39'26" E	74.92'
L51	N 53°09'05" E	35.25'

LINE TABLE		
LINE	BEARING	LENGTH
L52	S 35°24'22" W	25.74'
L53	S 13°04'49" W	45.56'
L54	S 02°50'27" E	19.29'
L55	S 60°16'30" W	48.88'
L56	S 38°46'40" W	28.94'
L57	S 01°51'00" W	82.96'
L58	S 09°54'59" E	57.44'
L59	S 39°49'02" E	53.46'
L60	S 33°24'13" E	53.73'
L61	S 24°50'18" E	31.86'
L62	S 71°59'54" E	45.06'
L63	S 36°39'51" E	24.57'
L64	S 40°58'04" E	26.32'
L65	S 06°38'56" W	16.23'
L66	S 39°53'29" W	41.25'
L67	S 39°48'37" W	36.71'
L68	S 22°32'04" W	5.99'

LINE TABLE		
LINE	BEARING	LENGTH
L69	S 66°20'28" E	57.67'
L70	S 09°20'02" W	112.88'
L71	S 60°49'58" E	38.18'
L72	S 85°00'48" E	52.64'
L73	S 63°07'33" E	22.37'
L74	N 36°32'34" E	20.19'
L75	N 35°23'40" W	135.79'
L76	S 58°43'22" E	64.34'
L77	S 66°42'31" E	37.18'
L78	S 59°12'16" E	46.91'
L79	S 63°51'41" E	31.19'
L80	S 56°36'57" E	48.47'
L81	S 38°51'29" E	62.32'
L82	S 60°46'14" E	33.70'
L83	S 85°01'45" E	28.43'
L84	N 68°12'51" W	4.62'
L85	N 43°25'53" W	46.67'

LINE TABLE		
LINE	BEARING	LENGTH
L86	N 48°59'39" W	83.92'
L87	N 23°17'09" W	37.25'
L88	S 68°16'44" W	53.32'
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L90	S 53°58'41" W	3.45'
L91	N 43°09'20" W	65.04'
L92	N 36°52'48" W	31.21'
L93	N 23°56'12" W	27.98'
L94	N 24°47'51" E	26.12'
L95	N 20°55'57" W	50.52'
L96	N 02°56'44" E	2.93'
L97	N 34°15'14" W	74.92'
L98	N 26°22'26" W	16.46'
L99	N 64°22'52" W	49.78'
L100	N 39°20'27" W	88.33'
L101	N 25°54'55" W	34.00'
L102	N 22°12'12" W	45.73'

LINE TABLE		
LINE	BEARING	LENGTH
L103	N 33°32'49" W	58.11'
L104	N 43°00'08" E	37.37'
L105	N 23°47'42" W	45.46'
L106	N 80°16'45" W	30.15'
L107	N 46°53'58" W	110.54'
L108	N 23°31'57" E	74.22'
L109	N 37°33'59" W	15.53'
L110	N 31°46'19" W	43.32'
L111	N 77°38'12" E	21.68'
L112	N 02°25'17" W	51.49'
L113	N 07°02'47" W	30.38'
L114	N 19°17'52" E	43.72'
L115	N 57°30'32" E	26.38'
L116	N 40°19'17" E	51.70'
L117	N 58°26'21" W	35.77'
L118	N 32°59'46" W	55.94'
L119	N 09°35'49" W	2.05'

LINE TABLE		
LINE	BEARING	LENGTH
L120	N 43°08'44" W	77.02'
L121	N 10°15'09" W	31.42'
L122	N 39°54'59" W	26.28'
L123	N 33°01'12" W	37.58'
L124	N 15°20'48" E	37.91'
L125	N 51°34'07" W	48.31'
L126	N 07°21'07" W	53.82'
L127	N 39°03'37" W	50.63'
L128	N 20°42'44" W	45.12'
L129	N 30°49'57" W	41.01'
L130	N 86°36'40" E	39.35'
L131	N 73°12'45" E	33.53'
L132	N 71°24'19" E	23.71'
L133	N 19°24'29" W	39.98'
L134	N 21°30'31" W	32.73'
L135	N 30°32'35" W	36.76'
L136	N 34°44'54" E	43.45'
L137	N 03°04'17" E	45.89'

REVISIONS | NO. | DATE |

TITLE
WETLAND DELINEATION SURVEY
TMS# 259-00-00-117
PROPERTY OF THE CITY OF HANAHAN
LOCATED IN THE CITY OF HANAHAN
BERKELEY COUNTY, SOUTH CAROLINA

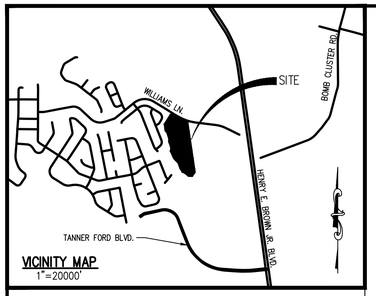
SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR No. 27759 MICHAEL C. GILLIAM

SOUTH CAROLINA PARKER LAND SURVEYING, LLC No. 3914 CERTIFICATE OF AUTHORIZATION

Parker Land Surveying, LLC
5910 Griffin Street
Hanahan, SC 29410
Phone: (843) 554-7777
Fax: (843) 554-7779

DESIGNED : —
DRAWN : ACG Jr
CHECKED : ACG
APPROVED : ACG
SCALE : 1"=60'
DATE : MAY 5, 2018
PROJECT NO. : 18-039
SHEET 1 OF 2

C:\Land Projects 2009\18039 City of Hanahan - 21 acres\sf\18-039 City of Hanahan - 21 Acres\dwg\18-039 City of Hanahan - 21 Acres Wetland 9-10-2020.dwg, 9/10/2020 12:39:26 PM, by Cliff Colwell



VICINITY MAP
1"=20000'

GENERAL NOTES:

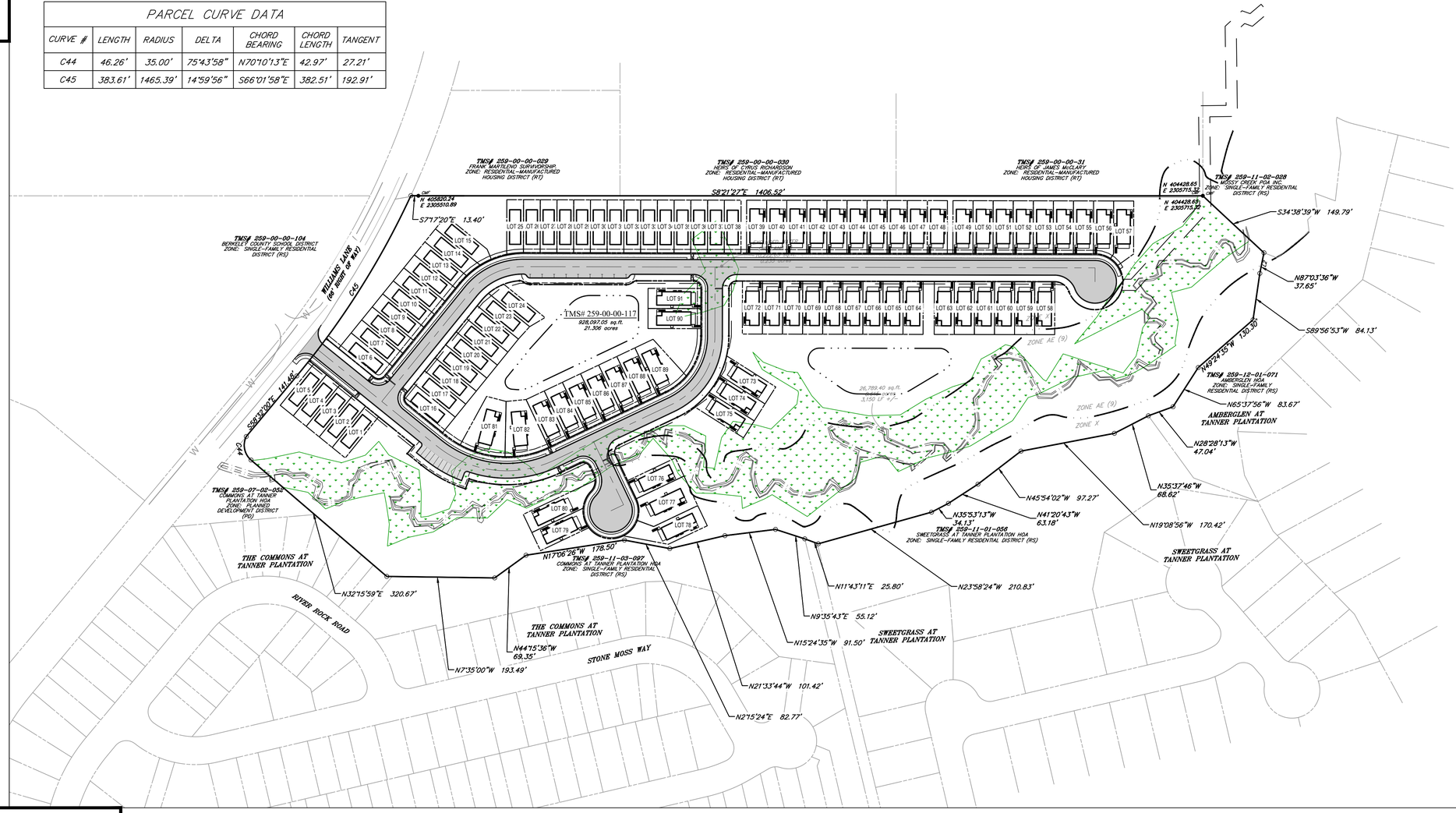
TOTAL ACREAGE: 21.31 AC

LEGEND:

PROPOSED STORMWATER MANAGEMENT POND
LOT LINE
PROPERTY LINE
WETLAND

PARCEL CURVE DATA

CURVE #	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH	TANGENT
C44	46.26'	35.00'	75°43'58"	N70°10'13"E	42.97'	27.21'
C45	383.61'	1465.39'	14°59'56"	S66°01'58"E	382.51'	192.91'



FOR OFFICIAL USE ONLY

100 50 0 100 200
GRAPHIC SCALE
1" = 100'

Bowman CONSULTING

Bowman Consulting Group, Ltd.
880 Island Park Drive
Suite 400
Charleston, SC 29492
bowmanconsulting.com

OVERALL PLAN
HERON PRESERVE AT TANNER PLANTATION
PRELIMINARY LAND DEVELOPMENT PLANS
CITY OF HANAHAN, SOUTH CAROLINA

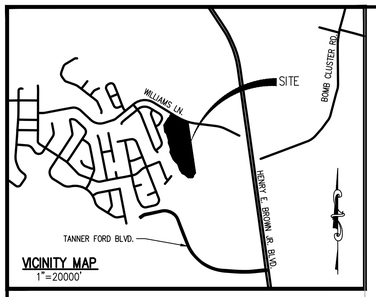
BOWMAN CONSULTING GROUP LTD. NO. 4523

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 36839 4/9/21 JARED MARK CHRYSOSTOM

PLAN STATUS	
DATE	DESCRIPTION

JMC DESIGN	BWH DRAWN	JMC CHKD
SCALE	H: 1" = 100' V: 1" = 100'	
JOB No. 150012-01-009		
DATE APRIL 9, 2021		
FILE No.		
SHEET 4		

Cad file name: V:\150012 - crescent homes\150012-01-009 (eng) - hanahan tract pdd\engineering\engineering plans\preliminary land development plans (no construction)\150012-D-CP-009-OVERALLPLAT.dwg 4/9/2021

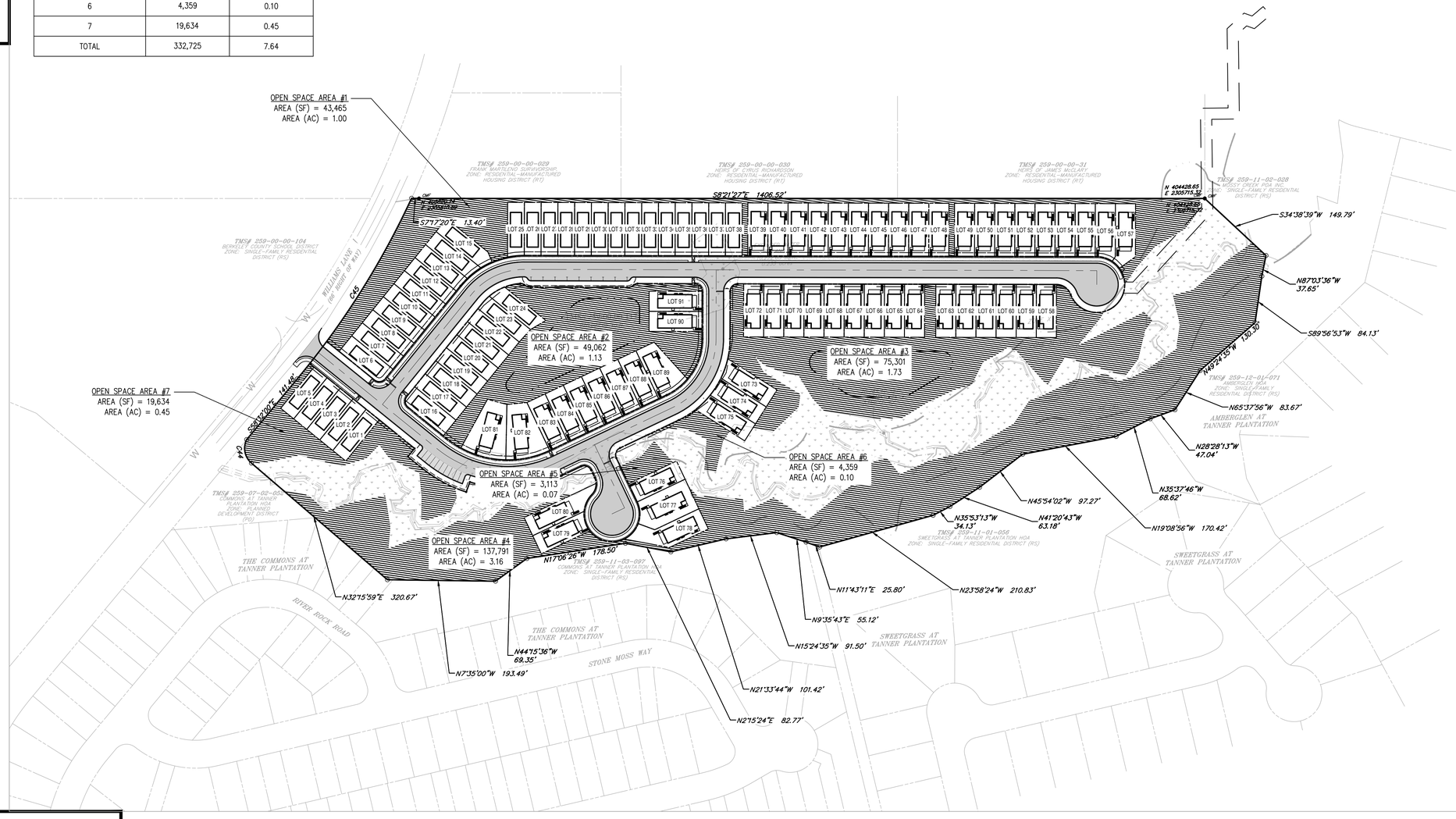


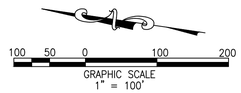
VICINITY MAP
1"=20000'

OPEN SPACE AREA		
OPEN SPACE NUMBER	AREA (SF)	AREA (AC)
1	43,465	1.00
2	49,062	1.13
3	75,301	1.73
4	137,791	3.16
5	3,113	0.07
6	4,359	0.10
7	19,634	0.45
TOTAL	332,725	7.64

LEGEND:

PROPOSED STORMWATER MANAGEMENT POND
LOT LINE
PROPERTY LINE
WETLAND
OPEN SPACE





FOR OFFICIAL USE ONLY

Bowman CONSULTING

Bowman Consulting Group, Ltd.
880 Island Park Drive
Suite 400
Charleston, SC 29492

bowmanconsulting.com

OPEN SPACE PLAN

HERON PRESERVE AT TANNER PLANTATION

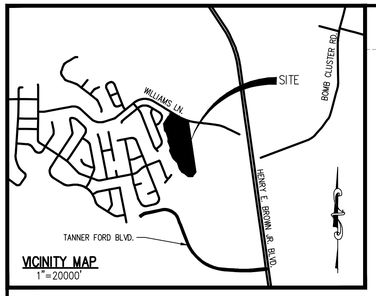
PRELIMINARY LAND DEVELOPMENT PLANS

CITY OF HANAHAN, SOUTH CAROLINA

PLAN STATUS	
DATE	DESCRIPTION

JMC DESIGN	BWH DRAWN	JMC CHKD
SCALE	H: 1" = 100' V: 1" = 100'	
JOB No. 150012-01-009		
DATE APRIL 9, 2021		
FILE No.		
SHEET 5		

Cad file name: V:\150012 - Crescent Homes\150012-01-009 (ENG) - Hanahan Tract PDD\Engineering\Engineering Plans\Preliminary Land Development Plans (No Construction)\150012-D-CP-009-OSP.dwg 4/9/2021



VICINITY MAP
1"=20000'

LEGEND

- PROPERTY LINE WITH CORNER FOUND (AS DESCRIBED)
- PROPERTY LINE WITH CORNER SET (3/4" REBAR)
- PROPERTY LINE ADJACENT
- PROPERTY LINE ADJACENT
- FLOOD ZONE (GRAPHICALLY SCALED)
- WETLAND LINE
- WETLAND AREA
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- EXISTING EDGE OF PAVEMENT
- DITCH
- PROPOSED STORMWATER MANAGEMENT POND
- PROPOSED 6' CONCRETE SIDEWALK
- 8 PINE — PROTECTED TREE TO BE DEMOLISHED
- 8 PINE — PROTECTED TREE TO BE PRESERVED
- LANDMARK TREE TO BE DEMOLISHED
- LANDMARK TREE TO BE PRESERVED
- BCWS — BERKELEY COUNTY WATER & SANITATION
- CWS — CHARLESTON WATER SYSTEM
- PROPOSED FIRE HYDRANT
- PROPOSED CWS WATER LINE
- R/W CENTERLINE
- PROPOSED BCWS SEWER EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED CWS WATER EASEMENT
- LANDSCAPE BUFFER LINE
- 18" RCP STORM DRAINAGE PIPE
- OPEN SPACE
- PROPOSED OVERSTOREY TREE
- PROPOSED UNDERSTOREY TREE
- PROPOSED SHRUB
- (10) PARKING COUNT

TMS# 259-00-00-104
BERKELEY COUNTY SCHOOL DISTRICT
ZONE: SINGLE-FAMILY RESIDENTIAL DISTRICT (RS)

WILLIAMS LANE (66' RIGHT OF WAY)

N 405820.24
E 230510.89

NEW 50' PUBLIC R.O.W. ROAD A

ROAD B NEW 50' PUBLIC R.O.W.

TMS# 259-00-00-117

OPEN SPACE AREA #1
AREA (SF) = 43,465
AREA (AC) = 1.00

OPEN SPACE AREA #2
AREA (SF) = 49,062
AREA (AC) = 1.13

OPEN SPACE AREA #3
AREA (SF) = 19,634
AREA (AC) = 0.45

OPEN SPACE AREA #5
AREA (SF) = 3,113
AREA (AC) = 0.07

±1,509' TO INTERSECTION OF NORTHGATE DRIVE

BCWS SANITARY SEWER EASEMENT (WIDTH VARIES)

CWS WATER EASEMENT (WIDTH VARIES)

8" PVC WATER

8" PVC SANITARY SEWER

8' LANDSCAPE BUFFER

15' POND MAINTENANCE SHELF

20' PUBLIC DRAINAGE EASEMENT

STORMWATER MANAGEMENT POND 1

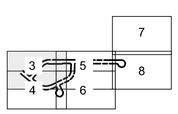
6' SIDEWALK (TYP.)

PROPOSED STORM

ZONE X

ZONE AE (9)

FOR OFFICIAL USE ONLY



SHEET INDEX MAP
SCALE: 1"=1000'

NOTES:

1. 91 SINGLE-FAMILY RESIDENTIAL LOTS ARE BEING PROPOSED.
2. THE SURVEYED PROPERTIES DELINEATED HEREON IS LOCATED IN THE CITY OF HANAHAN, BERKELY COUNTY SOUTH CAROLINA AS TMS NUMBER 259-00-00-117.
3. INFORMATION SHOWN OUTSIDE OF THE SURVEY LIMITS IS FOR INFORMATIONAL PURPOSES ONLY.
4. BY GRAPHICAL PLOTTING, THIS PROPERTY APPEARS TO BE LOCATED IN FLOOD ZONE X AND AE (ELV 9) PER FEMA PANEL 45015C0685E, CITY OF HANAHAN (455030) EFFECTIVE DATE 12/7/2018.
5. AREAS DETERMINED BY COORDINATE METHOD.
6. PROPERTY CORNERS FOUND AS LABELED.
7. ALL PROPERTY CORNER SET AR ¾" REBAR.
8. ANY EASEMENTS SHOWN ARE PER REFERENCES ONLY, PROPERTY MAY BE SUBJECT TO EASEMENTS AND RESTRICTIONS NOT OBVIOUS OR APPARENT TO THE SURVEYOR.
9. THIS SURVEY DOES NOT CONFIRM OR DENY THE EXISTENCE OF WETLANDS.
10. A TITLE SEARCH WAS NOT PERFORMED FOR THE CREATION OF THIS SURVEY.
11. THE APPROXIMATE GEOGRAPHICAL CENTER OF THIS SITE IS LATITUDE: 32-56-34 LONGITUDE: -80-00-16

PARCEL CURVE DATA

CURVE #	LENGTH	RADIUS	DELTA
C1	2.92'	13.50'	12°22'36"
C2	21.21'	13.50'	90°00'00"
C3	17.96'	146.50'	7°01'30"
C4	30.85'	146.50'	12°04'00"
C5	22.79'	146.50'	8°54'54"
C6	18.07'	96.50'	10°43'52"
C7	32.13'	96.50'	19°04'33"
C8	79.05'	96.50'	46°56'07"
C9	29.51'	146.50'	11°32'33"
C10	7.77'	10.00'	44°30'11"
C11	29.59'	146.50'	11°34'23"
C12	13.02'	18.50'	40°18'58"

PARCEL CURVE DATA

CURVE #	LENGTH	RADIUS	DELTA
C13	13.25'	18.50'	41°01'39"
C14	7.16'	10.00'	41°01'29"
C28	21.21'	13.50'	90°00'00"
C35	10.82'	27.00'	22°58'00"
C36	21.21'	13.50'	90°00'00"
C38	81.11'	175.00'	26°33'18"
C39	83.95'	175.00'	27°29'10"
C40	90.48'	244.00'	21°14'43"
C41	31.65'	175.00'	10°21'45"
C42	21.21'	13.50'	90°00'00"
C43	2.42'	13.50'	10°15'32"

30 15 0 30 60
GRAPHIC SCALE
1" = 30'

Bowman CONSULTING

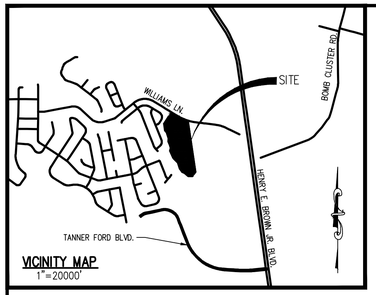
Bowman Consulting Group, Ltd.
880 Island Park Drive
Suite 400
Charleston, SC 29492
bowmanconsulting.com

PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 1 OF 6)
HERON PRESERVE AT TANNER PLANTATION
PRELIMINARY LAND DEVELOPMENT PLANS
CITY OF HANAHAN, SOUTH CAROLINA

BOWMAN CONSULTING GROUP, LTD. SOUTH CAROLINA PROFESSIONAL ENGINEER No. 36839 4/9/21 JAMES MARK CHRYSOSTOM

PLAN STATUS	
DATE	DESCRIPTION
JMC DESIGN	BWH DRAWN	JMC CHKD
SCALE	H: 1" = 30' V: 1" = 30'
JOB No. 150012-01-009	
DATE APRIL 9, 2021	
FILE No.	
SHEET 6	

Cad file name: v:\150012 - crescent homes\150012-01-009 (eng) - hanahan tract pdd\engineering\engineering plans\preliminary land development plans (no construction)\150012-D-CP-009-PLDP.dwg 4/9/2021



VICINITY MAP
1"=20000'

LEGEND

- PROPERTY LINE WITH CORNER FOUND (AS DESCRIBED)
- PROPERTY LINE WITH CORNER SET (3/4" REBAR)
- PROPERTY LINE ADJACENT
- PROPERTY LINE ADJACENT
- FLOOD ZONE (GRAPHICALLY SCALED)
- WETLAND LINE
- WETLAND AREA
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- EXISTING EDGE OF PAVEMENT
- DITCH
- PROPOSED STORMWATER MANAGEMENT POND
- PROPOSED 6' CONCRETE SIDEWALK
- PROTECTED TREE TO BE DEMOLISHED
- PROTECTED TREE TO BE PRESERVED
- LANDMARK TREE TO BE DEMOLISHED
- LANDMARK TREE TO BE PRESERVED

BCWS	BERKELEY COUNTY WATER & SANITATION
CWS	CHARLESTON WATER SYSTEM
	PROPOSED FIRE HYDRANT
	PROPOSED CWS WATER LINE
	R/W CENTERLINE
	PROPOSED BCWS SEWER EASEMENT
	PROPOSED DRAINAGE EASEMENT
	PROPOSED CWS WATER EASEMENT
	LANDSCAPE BUFFER LINE
	18" RCP STORM DRAINAGE PIPE
	OPEN SPACE
	PROPOSED OVERSTOREY TREE
	PROPOSED UNDERSTOREY TREE
	PROPOSED SHRUB
(10)	PARKING COUNT

NEW 50' PUBLIC R/W ROAD A

8" PVC WATER

6' SIDEWALK (TYP.)

OPEN SPACE AREA #7
AREA (SF) = 19,634
AREA (AC) = 0.45

±1,509' TO INTERSECTION OF NORTHGATE DRIVE

8' LANDSCAPE BUFFER

20' PUBLIC DRAINAGE EASEMENT

SANITARY 8" PVC SEWER

CWS WATER EASEMENT (WIDTH VARIES)

PROPOSED STORM

BCWS SANITARY SEWER EASEMENT (WIDTH VARIES)

STORMWATER MANAGEMENT POND 1

15' POND MAINTENANCE SHELF

OPEN SPACE AREA #2
AREA (SF) = 49,062
AREA (AC) = 1.13

OPEN SPACE AREA #5
AREA (SF) = 3,113
AREA (AC) = 0.07

NEW 50' PUBLIC R/W ROAD C

OPEN SPACE AREA #4
AREA (SF) = 137,791
AREA (AC) = 3.16

TMS# 259-07-02-052
COMMONS AT TANNER PLANTATION HOA
ZONE: PLANNED DEVELOPMENT DISTRICT (PD)

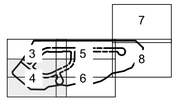
TMS# 259-11-03-097
COMMONS AT TANNER PLANTATION HOA
ZONE: SINGLE-FAMILY RESIDENTIAL DISTRICT (RS)

THE COMMONS AT TANNER PLANTATION

RIVER ROCK ROAD

THE COMMONS AT TANNER PLANTATION

FOR OFFICIAL USE ONLY



SHEET INDEX MAP
SCALE: 1"=1000'

NOTES:

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10. A TITLE SEARCH WAS NOT PERFORMED FOR THE CREATION OF THIS SURVEY.
11. THE APPROXIMATE GEOGRAPHICAL CENTER OF THIS SITE IS LATITUDE: 32-56-34 LONGITUDE: -80-00-16

PARCEL CURVE DATA

CURVE #	LENGTH	RADIUS	DELTA
C2	21.21'	13.50'	90°00'00"
C28	21.21'	13.50'	90°00'00"
C29	39.85'	50.00'	45°40'13"
C30	38.22'	50.00'	43°47'29"
C31	68.51'	50.00'	78°30'17"
C32	37.35'	50.00'	42°47'54"
C33	33.78'	50.00'	38°42'29"
C34	21.92'	27.00'	46°30'23"
C35	10.82'	27.00'	22°58'00"

PARCEL CURVE DATA

CURVE #	LENGTH	RADIUS	DELTA
C36	21.21'	13.50'	90°00'00"
C37	168.59'	225.00'	42°55'48"
C38	81.11'	175.00'	26°33'18"
C39	83.95'	175.00'	27°29'10"
C40	90.48'	244.00'	21°14'43"
C41	31.65'	175.00'	10°21'45"
C42	21.21'	13.50'	90°00'00"
C43	2.42'	13.50'	10°15'32"

30 15 0 30 60
GRAPHIC SCALE
1" = 30'

Bowman
CONSULTING

Bowman Consulting Group, Ltd.
880 Island Park Drive
Suite 400
Charleston, SC 29492

bowmanconsulting.com
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PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 2 OF 6)
HERON PRESERVE AT TANNER PLANTATION
PRELIMINARY LAND DEVELOPMENT PLANS
CITY OF HANAHAN, SOUTH CAROLINA

BOWMAN CONSULTING GROUP, LTD. OF SC

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 36839
4/9/21
JARED MARK CHRISOSTOMO

PLAN STATUS	
DATE	DESCRIPTION

JMC	BWH	JMC
DESIGN	DRAWN	CHKD

SCALE H: 1" = 30'
V: 1" = 30'

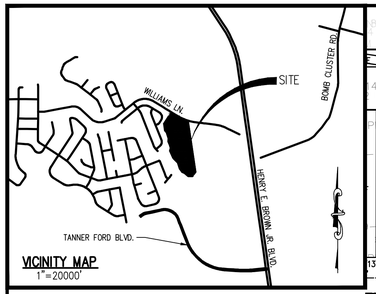
JOB No. 150012-01-009

DATE APRIL 9, 2021

FILE No.

SHEET 7

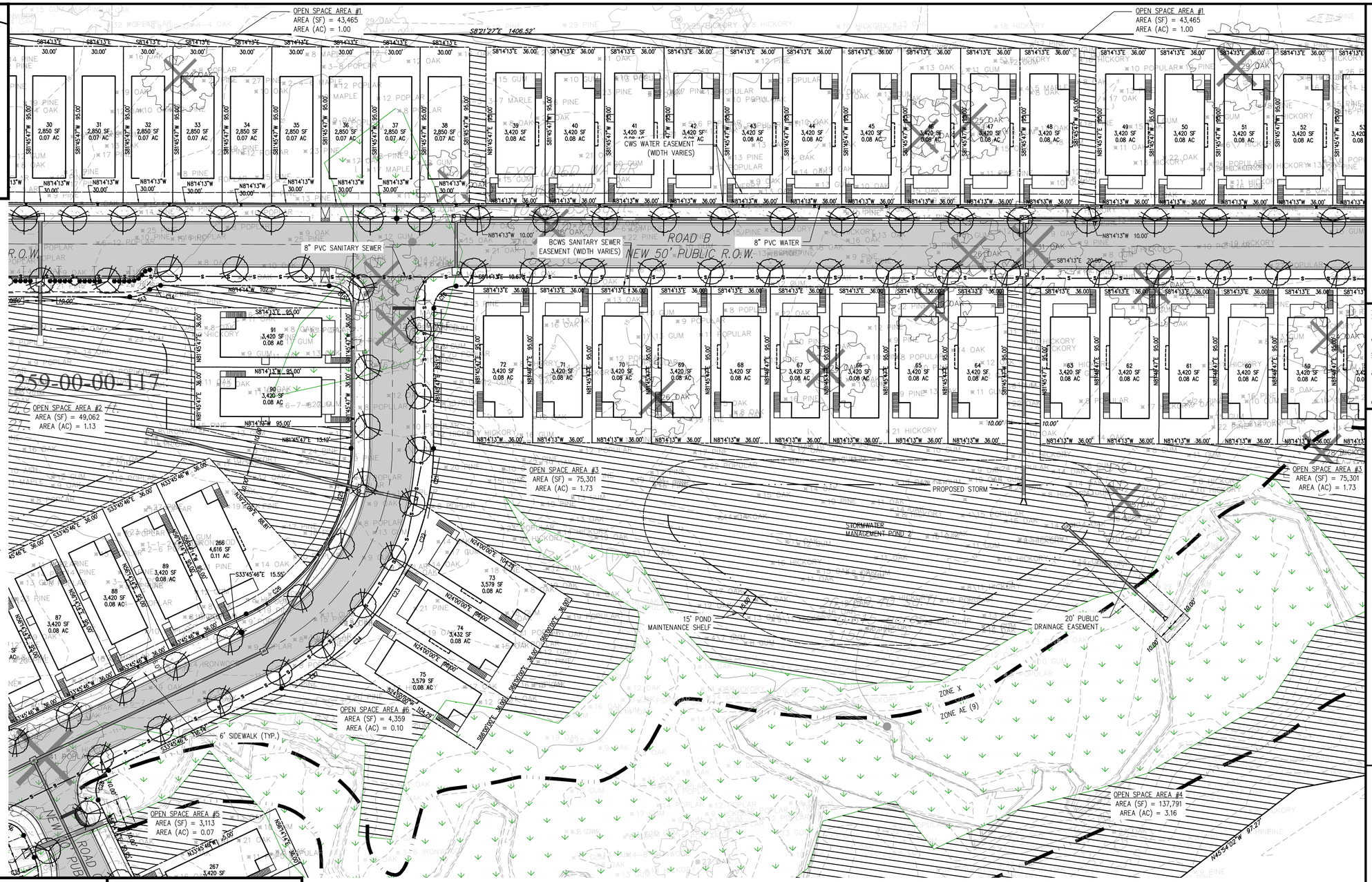
Cad file name: v:\150012 - crescent homes\150012-01-009 (eng) - hanahan tract pdd\engineering\engineering plans\preliminary land development plans (no construction)\150012-D-CP-009-PLDP.dwg 4/9/2021



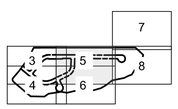
VICINITY MAP
1"=20000'

LEGEND

- PROPERTY LINE WITH CORNER FOUND (AS DESCRIBED)
- PROPERTY LINE WITH CORNER SET (3/4" REBAR)
- PROPERTY LINE ADJACENT
- PROPERTY LINE ADJACENT
- FLOOD ZONE (GRAPHICALLY SCALED)
- WETLAND LINE
- WETLAND AREA
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- EXISTING EDGE OF PAVEMENT
- DITCH
- PROPOSED STORMWATER MANAGEMENT POND
- PROPOSED 6' CONCRETE SIDEWALK
- PROTECTED TREE TO BE DEMOLISHED
- PROTECTED TREE TO BE PRESERVED
- LANDMARK TREE TO BE DEMOLISHED
- LANDMARK TREE TO BE PRESERVED
- BCWS BERKELEY COUNTY WATER & SANITATION
- CWS CHARLESTON WATER SYSTEM
- PROPOSED FIRE HYDRANT
- PROPOSED CWS WATER LINE
- R/W CENTERLINE
- PROPOSED BCWS SEWER EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED CWS WATER EASEMENT
- LANDSCAPE BUFFER LINE
- 18" RCP STORM DRAINAGE PIPE
- OPEN SPACE
- PROPOSED OVERSTOREY TREE
- PROPOSED UNDERSTOREY TREE
- PROPOSED SHRUB
- (10) PARKING COUNT



FOR OFFICIAL USE ONLY



SHEET INDEX MAP
SCALE: 1"=1000'

NOTES:

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10. A TITLE SEARCH WAS NOT PERFORMED FOR THE CREATION OF THIS SURVEY.
11. THE APPROXIMATE GEOGRAPHICAL CENTER OF THIS SITE IS LATITUDE: 32-56-34 LONGITUDE: -80-00-16

PARCEL CURVE DATA

CURVE #	LENGTH	RADIUS	DELTA
C13	13.25'	18.50'	41°01'39"
C14	7.16'	10.00'	41°01'29"
C15	21.21'	13.50'	90°00'00"
C16	21.21'	13.50'	90°00'00"
C21	35.81'	161.50'	12°42'11"
C22	37.02'	161.50'	13°08'05"
C23	36.07'	161.50'	12°47'54"

PARCEL CURVE DATA

CURVE #	LENGTH	RADIUS	DELTA
C24	37.02'	161.50'	13°08'05"
C25	77.95'	111.50'	40°03'18"
C26	47.52'	111.50'	24°25'09"
C27	35.81'	161.50'	12°42'11"
C28	21.21'	13.50'	90°00'00"
C35	10.82'	27.00'	22°58'00"

30 15 0 30 60
GRAPHIC SCALE
1" = 30'

Bowman
CONSULTING

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880 Island Park Drive
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Charleston, SC 29492
bowmanconsulting.com

PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 3 OF 6)
HERON PRESERVE AT TANNER PLANTATION
PRELIMINARY LAND DEVELOPMENT PLANS
CITY OF HANAHAN, SOUTH CAROLINA

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 36839
4/9/21
JARED MARK CHRISTOPHER

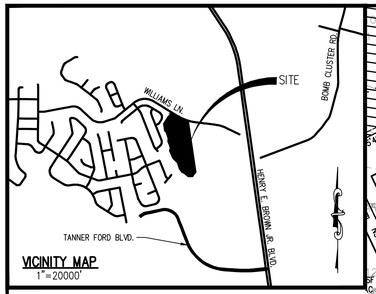
PLAN STATUS

DATE	DESCRIPTION

JMC	BWH	JMC
DESIGN	DRAWN	CHKD

SCALE H: 1" = 30'
V: 1" = 30'
JOB No. 150012-01-009
DATE APRIL 9, 2021
FILE No.
SHEET 8

Cad file name: v:\150012 - crescent homes\150012-01-009 (eng) - hanahan tract pdd\engineering\engineering plans\preliminary land development plans (no construction)\150012-D-CP-009-PLDP.dwg 4/9/2021



VICINITY MAP
1"=20000'

LEGEND

- PROPERTY LINE WITH CORNER FOUND (AS DESCRIBED)
- PROPERTY LINE WITH CORNER SET (3/4" REBAR)
- PROPERTY LINE ADJACENT
- PROPERTY LINE ADJACENT
- FLOOD ZONE (GRAPHICALLY SCALED)
- WETLAND LINE
- WETLAND AREA
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
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- DITCH
- PROPOSED STORMWATER MANAGEMENT POND
- PROPOSED 6' CONCRETE SIDEWALK
- PROTECTED TREE TO BE DEMOLISHED
- PROTECTED TREE TO BE PRESERVED
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- LANDMARK TREE TO BE PRESERVED
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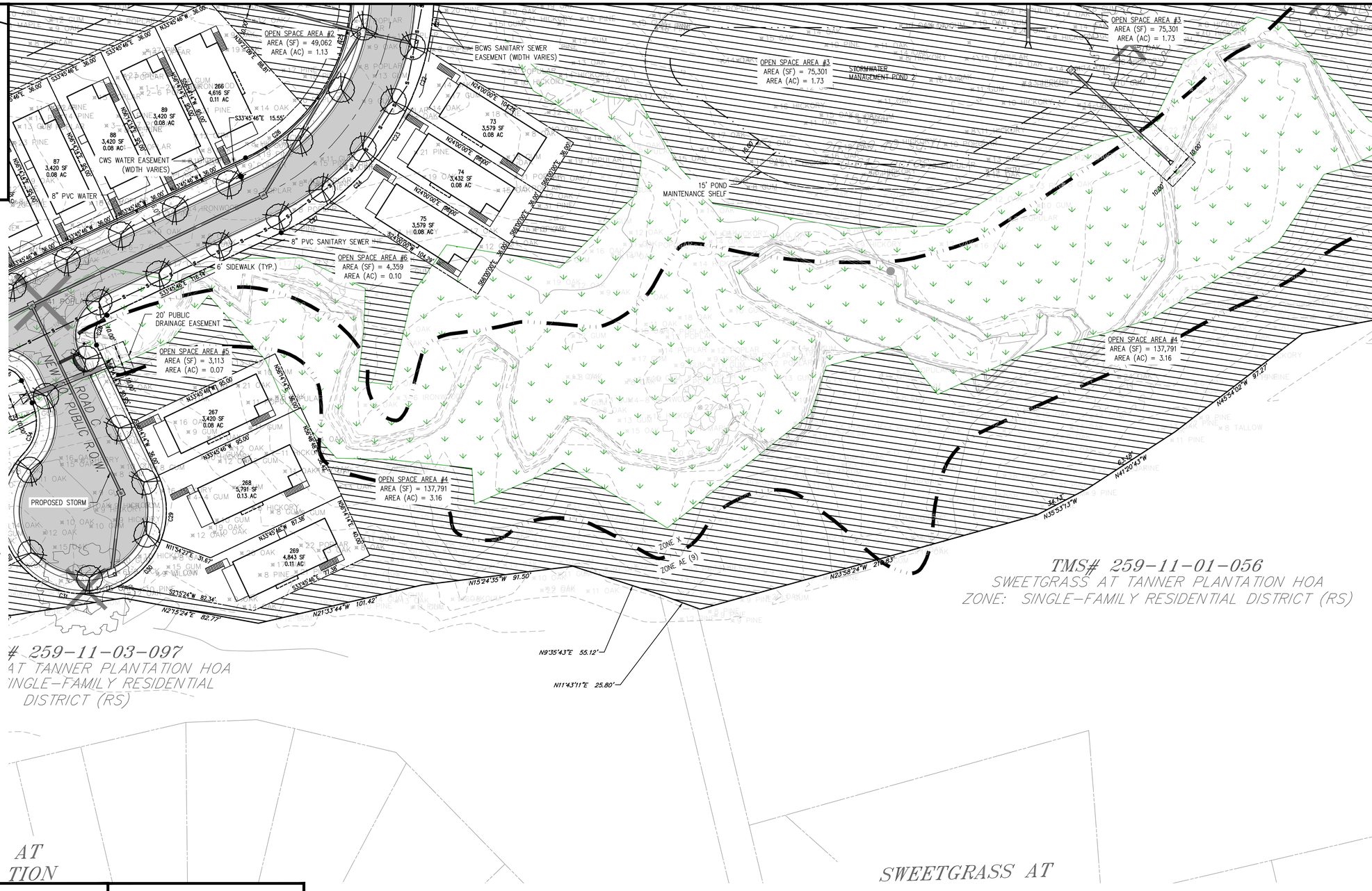
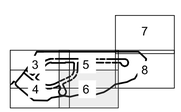
- CWS CHARLESTON WATER SYSTEM
- PROPOSED FIRE HYDRANT
- PROPOSED CWS WATER LINE
- R/W CENTERLINE
- PROPOSED BCWS SEWER EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED CWS WATER EASEMENT
- LANDSCAPE BUFFER LINE
- 18" RCP STORM DRAINAGE PIPE
- OPEN SPACE
- PROPOSED OVERSTOREY TREE
- PROPOSED UNDERSTOREY TREE
- PROPOSED SHRUB
- (10) PARKING COUNT



FOR OFFICIAL USE ONLY



SHEET INDEX MAP
SCALE: 1"=1000'

NOTES:

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PARCEL CURVE DATA			
CURVE #	LENGTH	RADIUS	DELTA
C21	35.81'	161.50'	12°42'11"
C22	37.02'	161.50'	13°08'05"
C23	36.07'	161.50'	12°47'54"
C24	37.02'	161.50'	13°08'05"
C25	77.95'	111.50'	40°03'18"
C26	47.52'	111.50'	24°25'09"
C27	35.81'	161.50'	12°42'11"

PARCEL CURVE DATA			
CURVE #	LENGTH	RADIUS	DELTA
C28	21.21'	13.50'	90°00'00"
C29	39.85'	50.00'	45°40'13"
C30	38.22'	50.00'	43°47'29"
C31	68.51'	50.00'	78°30'17"
C34	21.92'	27.00'	46°30'23"
C35	10.82'	27.00'	22°58'00"

30 15 0 30 60
GRAPHIC SCALE
1" = 30'

Bowman CONSULTING

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PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 4 OF 6)
HERON PRESERVE AT TANNER PLANTATION
PRELIMINARY LAND DEVELOPMENT PLANS
CITY OF HANAHAN, SOUTH CAROLINA

JARED MARK CHRYSOSTOM
SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 36839
4/9/21

PLAN STATUS	
DATE	DESCRIPTION

JMC	BWH	JMC
DESIGN	DRAWN	CHKD

SCALE H: 1" = 30'
V: 1" = 30'

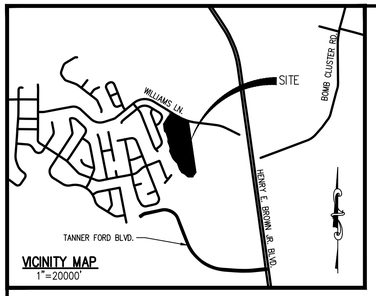
JOB No. 150012-01-009

DATE APRIL 9, 2021

FILE No.

SHEET 9

Cad file name: v:\150012 - crescent homes\150012-01-009 (eng) - hanahan tract pdd\engineering\engineering plans\preliminary land development plans (no construction)\150012-D-CP-009-PLDP.dwg 4/9/2021



VICINITY MAP
1"=20000'

LEGEND

- PROPERTY LINE WITH CORNER FOUND (AS DESCRIBED)
- PROPERTY LINE WITH CORNER SET (3/4" REBAR)
- PROPERTY LINE ADJACENT
- PROPERTY LINE ADJACENT
- FLOOD ZONE (GRAPHICALLY SCALED)
- WETLAND LINE
- WETLAND AREA
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- EXISTING EDGE OF PAVEMENT
- DITCH
- PROPOSED STORMWATER MANAGEMENT POND
- PROPOSED 6' CONCRETE SIDEWALK
- 8 PINE — PROTECTED TREE TO BE DEMOLISHED
- 8 PINE — PROTECTED TREE TO BE PRESERVED
- LANDMARK TREE TO BE DEMOLISHED
- LANDMARK TREE TO BE PRESERVED
- BCWS — BERKELEY COUNTY WATER & SANITATION
- CWS — CHARLESTON WATER SYSTEM
- PROPOSED FIRE HYDRANT
- PROPOSED CWS WATER LINE
- R/W CENTERLINE
- PROPOSED BCWS SEWER EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED CWS WATER EASEMENT
- LANDSCAPE BUFFER LINE
- 18" RCP STORM DRAINAGE PIPE
- OPEN SPACE
- PROPOSED OVERSTOREY TREE
- PROPOSED UNDERSTOREY TREE
- PROPOSED SHRUB
- (10) — PARKING COUNT
- EXISTING WATER LINE
- EXISTING COMMUNICATION SERVICE
- EXISTING GAS SERVICE
- EXISTING ELECTRIC SERVICE

8" PVC SANITARY SEWER

BCWS SANITARY SEWER EASEMENT (WIDTH VARIES)

OPEN SPACE AREA #1
AREA (SF) = 43,465
AREA (AC) = 1.00

N 404428.65
E 2305715.32

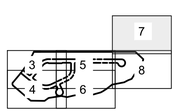
ZONE X
ZONE AE (9)

TMS# 259-11-02-028
MISSY CREEK POA, INC.
ZONE: SINGLE-FAMILY RESIDENTIAL DISTRICT (RS)

TMS# 259-00-00-31
'RS OF JAMES McCLARY
RESIDENTIAL-MANUFACTURED
'OUSING DISTRICT (RT)

S81°41'37"E 36.00' (×5)

FOR OFFICIAL USE ONLY



SHEET INDEX MAP
SCALE: 1"=1000'

NOTES:

1. 91 SINGLE-FAMILY RESIDENTIAL LOTS ARE BEING PROPOSED.
2. THE SURVEYED PROPERTIES DELINEATED HEREON IS LOCATED IN THE CITY OF HANAHAN, BERKELY COUNTY SOUTH CAROLINA AS TMS NUMBER 259-00-00-117.
3. INFORMATION SHOWN OUTSIDE OF THE SURVEY LIMITS IS FOR INFORMATIONAL PURPOSES ONLY.
4. BY GRAPHICAL PLOTTING, THIS PROPERTY APPEARS TO BE LOCATED IN FLOOD ZONE X AND AE (ELV 9) PER FEMA PANEL 45015C0685E, CITY OF HANAHAN (455030) EFFECTIVE DATE 12/7/2018.
5. AREAS DETERMINED BY COORDINATE METHOD.
6. PROPERTY CORNERS FOUND AS LABELED.
7. ALL PROPERTY CORNER SET AR ¾" REBAR.
8. ANY EASEMENTS SHOWN ARE PER REFERENCES ONLY, PROPERTY MAY BE SUBJECT TO EASEMENTS AND RESTRICTIONS NOT OBVIOUS OR APPARENT TO THE SURVEYOR.
9. THIS SURVEY DOES NOT CONFIRM OR DENY THE EXISTENCE OF WETLANDS.
10. A TITLE SEARCH WAS NOT PERFORMED FOR THE CREATION OF THIS SURVEY.
11. THE APPROXIMATE GEOGRAPHICAL CENTER OF THIS SITE IS LATITUDE: 32-56-34 LONGITUDE: -80-00-16

NOTE: UNDERGROUND UTILITY INFORMATION SHOWN IS BASED ON FIELD EVIDENCE AS IDENTIFIED BY LOWCOUNTRY LOCATION LLC AND FIELD SURVEY BY BOWMAN CONSULTING GROUP DURING THE MONTH OF DECEMBER, 2019.

30 15 0 30 60
GRAPHIC SCALE
1" = 30'

Bowman CONSULTING

Bowman Consulting Group, Ltd.
880 Island Park Drive
Suite 400
Charleston, SC 29492
bowmanconsulting.com

PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 5 OF 6)
HERON PRESERVE AT TANNER PLANTATION
PRELIMINARY LAND DEVELOPMENT PLANS
CITY OF HANAHAN, SOUTH CAROLINA

BOWMAN CONSULTING GROUP LTD. NO. 4523

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 36839 4/9/21 JARED MARK CHRYSOSTOM

PLAN STATUS	
DATE	DESCRIPTION

JMC	BWH	JMC
DESIGN	DRAWN	CHKD

SCALE H: 1" = 30'
V: 1" = 30'

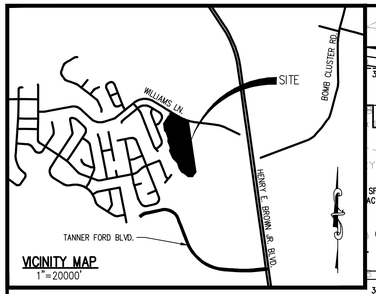
JOB No. 150012-01-009

DATE APRIL 9, 2021

FILE No.

SHEET 10

Cad file name: V:\150012 - crescent homes\150012-01-009 (eng) - hanahan tract pdd\engineering\engineering plans\preliminary land development plans (no construction)\150012-D-CP-009-PLDP.dwg 4/9/2021



VICINITY MAP
1"=20000'

LEGEND

- PROPERTY LINE WITH CORNER FOUND (AS DESCRIBED)
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- PROPERTY LINE ADJACENT
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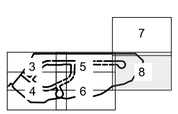
- OPEN SPACE
- PROPOSED OVERSTOREY TREE
- PROPOSED UNDERSTOREY TREE
- PROPOSED SHRUB
- (10) — PARKING COUNT

E 2305715.32
ZONE: SINGLE-FAMILY RESIDENTIAL DISTRICT (RS)
N 404428.65
E 2305715.32
OPEN SPACE AREA #1
AREA (SF) = 43,465
AREA (AC) = 1.00
S54°39'39"W 149.79'
BCWS SANITARY SEWER EASEMENT (WIDTH VARIES)
8" PVC SANITARY SEWER
CWS WATER EASEMENT (WIDTH VARIES)
8" PVC WATER
6' SIDEWALK (TYP.)
PROPOSED STORM
N87°03'36"W 37.85'
OPEN SPACE AREA #4
AREA (SF) = 137,791
AREA (AC) = 3.16
S08°56'24"W 84.13'
OPEN SPACE AREA #3
AREA (SF) = 75,301
AREA (AC) = 1.73
N49°24'45"W 130.30'
N69°57'58"W 83.67'
47.04'
N28°28'13"W
68.62'
N35°37'46"W
N19°08'56"W 170.42'
ZONE X
ZONE AE (9)
TMS# 259-12-01-071
AMBERGLEN HOA
ZONE: SINGLE-FAMILY RESIDENTIAL DISTRICT (RS)
AMBERGLEN AT TANNER PLANTATION

FOR OFFICIAL USE ONLY



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PARCEL CURVE DATA

CURVE #	LENGTH	RADIUS	DELTA
C17	32.15'	50.85'	36°13'43"
C18	17.99'	50.00'	20°36'54"
C19	170.49'	50.00'	195°22'13"
C20	32.74'	27.00'	69°28'23"

30 15 0 30 60
GRAPHIC SCALE
1" = 30'

Bowman CONSULTING

Bowman Consulting Group, Ltd.
880 Island Park Drive
Suite 400
Charleston, SC 29492
bowmanconsulting.com

PRELIMINARY LAND DEVELOPMENT PLAN (SHEET 6 OF 6)
HERON PRESERVE AT TANNER PLANTATION
PRELIMINARY LAND DEVELOPMENT PLANS
CITY OF HANAHAN, SOUTH CAROLINA

BOWMAN CONSULTING GROUP LTD. SOUTH CAROLINA

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 36839 4/9/21 JARED MARK CHRYSOSTOM

PLAN STATUS

DATE	DESCRIPTION

JMC	BWH	JMC
DESIGN	DRAWN	CHKD

SCALE H: 1" = 30' V: 1" = 30'
JOB No. 150012-01-009
DATE APRIL 9, 2021
FILE No.
SHEET 11

Cad file name: v:\150012 - crescent homes\150012-01-009 (eng) - hanahan tract pdd\engineering\engineering plans\preliminary land development plans (no construction)\150012-D-CP-009-PLDP.dwg 4/9/2021

Staff Report

To: The Hanahan Planning Commission
Cc: Larry Sturdivant, Building Official, Mike Kittrell (Seamon Whiteside)
From: Jeff Hajek, Planner/Economic Development Director
Date: May 4, 2021
Re: Request for the Creation of a Type "B" Planned Development ("Thrash Property Type 'B' Planned Development District") and subsequent rezoning of TMS# 259-00-01-004 and 259-03-01-101 from Planned Development (PD), Type B (Tanner Townhomes) to Planned Development (PD), Type B (Thrash Property)

General Information

Applicant/Owner: Seamon Whiteside/Stanley Martin Homes
Location: North of Phase III of Scenic Point Subdivision, and West of dead end of Whispering Oak Drive
Tax Map Number(s): TMS #259-00-01-004; 259-03-01-101
Approval Requested: Rezoning and Creation of Type B, Planned Development
Existing Zoning: Type B, Planned Development (PD)
Requested Zoning: Type B, Planned Development (PD)

Background and General Application Overview

The proposed Type B, Planned Development (PD) district, "Thrash Property" (Name to be determined by developer), is located immediately north of the Scenic Point subdivision, south of the Goose Creek Reservoir and bounded by the Reservoir to the west and The Reserve subdivision to the east. The combined acreage of the two tracts (259-00-01-004=25.14 acres; 259-00-01-001=1.91 acres) is approximately twenty-seven (27.11) acres and currently is comprised of undisturbed wooded uplands (26.37 acres) and wetlands (0.74 acres; jurisdictional) throughout the parcel. Of this total acreage, 13.5 acres will be developed for residential purposes (50%) and the remaining 13.49 acres will be open space (49.9%). The majority of the open space 8.22 acres will be designated for park space.

It is the intent of the developer to:

"to create a zoning district that preserves natural open space by creating development requirements that allow for a more compact development footprint,

while also providing a framework to create a walkable community that supports a high quality of life."

In total, the applicant is proposing to create a subdivision of 81 single-family lots. Forty (40) lots will consist of single-family detached units, while the remaining forty-one (41) units will be single-family attached units (townhomes). Single-family detached lots will range from 4,800 SF to 6,000 SF and townhome lots will range from 1,500 SF to 2,212 SF. Both housing types will be constructed on a total of 13.5 acres (approximately 50% of the land).

Currently, no renderings, elevations or specifics on the architectural language of the development have been submitted.

Bald Eagle Nest Preservation

Currently, there is a bald eagle's nest present in the southeastern area of the site, adjacent to the end of Whispering Oak Drive, where future ingress/egress of the subject site will be. This is one of four (4) nests, that are scattered across the eastern shore of the Goose Creek Reservoir. The eagles present are descendants from the original pair who first settled in this area in 1979. The developer has already been in discussions with the South Carolina Department of Natural Resources (SCDNR) and has applied for permits with U.S. Fish and Wildlife Services (USFWS). Per federal and state regulations, the developer is required to make no disturbance within the 330-foot radius buffer that surrounds the eagle nest, as well as accommodate construction around the eagle's nesting period within the 660-foot buffer. Construction activity within the 660-foot buffer is what requires permits from USFWS.

Natural and Historical Preservation Amenities

The developer is putting an emphasis on maintaining the natural state of the property as much as possible following completion of the development. In so doing, the applicant is proposing a 35'-50' buffer zone along all the parcel boundaries that border the Reservoir. Additionally, they will maintain a "25' Courtesy Buffer" on the southern boundary of the parcel, between the subject development and the Scenic Point subdivision. Among other amenities will be a 5'-8' (variable width) hiking trail network throughout the entire development utilizing the 35'-50' buffer zone, a community dock with boat slips, and two (2) cultural preserve parks. Said parks are sites that have been designated by the South Carolina Historic Preservation Office (SCHPO) as having historical significance.

Access and Infrastructure

There is one (1) proposed means of ingress/egress for the development, which is located at the end of Whispering Oak Drive (located within The Reserve subdivision). Accessing the site will require the construction of a new bridge over a small creek, that will allow for construction activity and eventual access for residents and guests. The applicant is in the process of obtaining permits from the Army Corps of Engineers to be granted approval for said crossing. All roads within the development will be built to the City of Hanahan and Berkeley County's

standards and following completion all rights-of-way will be turned over to the County.

The developer has completed a traffic impact analysis, as required under Section 4.7.5(D)(1). Given the number of units (81), relatively small compared to the size and acreage of the property, suggested traffic mitigation for the development is minimal. Conclusions from the report recommend installation of an exclusive northbound left-turn lane on Foster Creek Road. This will be installed at the developer's expense. Staff will require Berkeley County approval of traffic impact analysis as a condition for approval.

Lastly, the development will require a pump station to provide proper sewer service to the Thrash Property. Said pump station will be installed at the developer's expense and will be maintained by Berkeley County Water and Sanitation, subject to their acceptance. A current proposed location for the pump station will be located near the southern boundary of the parcel, just north of the 25' Courtesy Buffer.

Analysis

History and Overview of Previous Zoning Designation, Type B, Planned Development

Prior to Stanley Martin's acquisition of the Thrash Tract, the subject property was rezoned and approved by City Council as a Type B, PD in 2006. Given its adoption year (prior to the current 2008 Zoning Ordinance) the PD was under the guidance of the 1993 Zoning Ordinance.

The PD, originally titled "The Tanner Townhomes," proposed 171 single-family attached, townhome units throughout the property, with a community dock on the Reservoir. At the time, DNR and Fish and Wildlife, only permitted a 100-foot radius from the existing eagle's nest at the time. Today, these radii have been significantly increased. The development added other amendments in 2006 and 2007 and changed the name to "Scenic Point Townhomes." Development of the PD was abandoned following the 2008 Great Recession, with no proposals since.

Overview of Proposed Zoning District: Planned Development, Type B (PD, Type B) and the Overall Proposed Development's Conformance

The proposed zoning district for the subject development is Type "B", PD (Section 4.7). The intent of this district seeks to:

The purpose of the Planned Development District tool in the City of Hanahan is to encourage variety and flexibility in the use and development of land in order to promote its most appropriate use; to improve design, character and quality of new development; to facilitate the provision of streets and utilities; to preserve natural and scenic features in open space; to allow the developer to meet changes in technology and demand; to provide a maximum choice in types of housing, shopping, and community environment; and to promote higher aesthetic

standards for land development in the City of Hanahan. The developer shall own the responsibility to propose alternate zoning and land development standards that further these objectives and, furthermore, to illustrate the envisioned land development that necessitates alternate standards as an official master plan for review by the planning commission and approval of the city council. The proposed text and master plan shall identify all community facilities necessitated by the development to meet the intent of the Hanahan Zoning and Land Development ordinances, including but not limited to roads and parking, parks and open space, natural and cultural resources, and education and public safety facility sites.

In summation, the Type "B" PD district's intent is to provide for the zoning flexibility and allow for the aspirational and visionary; allowing the applicant to provide "higher aesthetic standards", "preserve natural and scenic features" and "improve design," as well as a variety other attributes. Overall, the proposed development mirrors that of the RS district regarding primary use—strictly single-family detached and attached units only. The developer seeks to create regulatory provisions that adjusts the density, minimum lot size, height maximum and setbacks in order to accommodate for the desired number of 81 parcels.

Other than the stated provisions, the applicant is not seeking to utilize the PD to the fullest extent in regards to a variety of uses (commercial, mixed-use, etc.), but its intent is to maintain residential uses (single-family) in order to provide harmony with the surrounding subdivisions. Overall, the developer has divided the property into land use categories, which include: Thrash Tract Residential (TTR), which are areas comprised of the single-family detached homes and townhomes, Thrash Tract Open Space (TTO), all land left in its natural state, and Thrash Tract Park Open Space (TTO-P), which include the walking trails and cultural preserve parks.

As noted in more detail in "Background" Section of this report, the developer's intent is to preserve the natural character of the site. This commitment meets Section 4.7.1(E) (PD General Provisions):

"The proposal shall efficiently and effectively program the use of land in a manner that preserves natural amenities and environmentally sensitive features to the greatest extent possible."

Minimum Requirements for Type B, Planned Development Districts

To be considered as a Type B, Planned Development district, the applicant must meet the Minimum Requirements as outlined in Section 4.7.2 in the 2008 Land Development Ordinance. Below are the following requirements and applicability to the Developer in meeting them:

1. **Minimum District Size:** Two (2) acres in size. A Planned Development District may need to be larger than two (2) acres to meet the next standard, "district location."
    a. **Requirement Met:** The applicant's proposed development meets this requirement with a total parcel size of approximately twenty-seven (27.11) acres.

2. **District Location:** To avoid illegal spot zoning, a Planned Development District shall be located in an area that can be justified as a distinct district based on characteristics of the land, access to infrastructure and juxtaposition of zoning districts in the vicinity.
    a. **Requirement Met:** The applicant's proposed PDD will blend in with the surrounding single-family residential character, as it is surrounded by RS and Conservation/Preservation (CP)-zoned properties. Furthermore, the property has ready access to nearly all required utilities and other infrastructure in the vicinity, with the exception of a pump station (proposed to be installed).

3. **Minimum Public Infrastructure:** The area proposed for a Planned Development District shall have direct access to public infrastructure systems—roads, potable water, sewer, stormwater drainage, etc.—in a location where the infrastructure systems can adequately accommodate increases in demand reasonably expected to be generated by development within the PDD. Alternatively, the developer shall propose to upgrade the infrastructure systems accordingly. Proposed improvements need not be limited to infrastructure segments abutting the property; the broader system shall be upgraded to offset negative impacts to surrounding districts.
    a. **Requirement Met:** The proposed development does meet the minimum required infrastructure per the attached correspondence from the respective utilities and agencies (CWS, BCWS, Berkeley County, SCDOT), with the exception of letters from Berkeley County Engineering and Berkeley County Roads and Bridges.

Requirements for Illustration of Existing Conditions

To fulfill the requirements of the Type B, PD application, the following existing conditions documentation must be submitted. Below are comments that will need to be addressed for the documents submitted for "Thrash Property." Each heading below corresponds to all required information under Section 4.7.4 (Requirements for Illustration of Existing Conditions):

1. **Section 4.7.4(C)(5):** Applicant will need to show "existing zoning classifications and uses of land within the proposed Planned Development District and on adjoining properties, including those across rights-of-way
2. **Section 4.7.4(C)(7):** Applicant will need to show the "existing landmarks, especially those related to infrastructure, such as roads, railroads, bridges, culverts and utility substations in the vicinity of the proposed district.
    a. Applicant will need to specifically show the cultural preserve areas on existing conditions map.

Master Development Plan Requirements

To fulfill the requirements of the Type B, PD application, the following Master Development Plan documentation must be submitted. Below are comments that will need to be addressed for the documents submitted for "Thrash Property." Each heading below corresponds to all required information under Section 4.7.5 (Master development plan requirements.)

Existing Site Information

1. **Section 4.7.5(B)(2):** Applicant will need to show on existing conditions plan the "total tract boundaries of the property being developed, showing bearings and distances, and a statement of total acreage of the property.
    a. Total tract boundaries and total acreage are shown, but not bearings and distances.

2. **Section 4.7.5(B)(3):** Applicant will need to show on existing parcel identification numbers (tax map numbers) on subject property and adjacent properties.

Proposed Land Development Information

1. **Section 4.7.5(C)(2):** Rights-of-way widths were provided, but applicant will need to show widths for proposed roadways or sidewalks.
2. **Section 4.7.5(C)(4):** Sites and tentative footprints of structures other than single-family residences with approximate acreages and rough estimates of expected gross floor area.
    a. The regulatory provisions state that there may be structures in the parks area no more than 800 SF. Please show said buildings footprints.

Supplemental Data

1. **Section 4.7.5(D)(2):** Written statements from affected public infrastructure and service providers were received from: BCWS, CWS, Dominion Energy and the Hanahan Fire Department. However, the City will need a recommendation letter from Berkeley County Engineering and Berkeley County Roads and Bridges.

Requirements of Statement of Intent and Regulatory Provisions

As mentioned in the "Overview of Proposed Zoning District: Planned Development, Type B (PD, Type B) and the Overall Proposed Development's Conformance" section, the Thrash Property PD relies heavily upon the existing 2008 Zoning and Land Development Ordinance for the majority of the required regulatory provisions. Hanahan zoning ordinances used include: building design standards, landscaping and sign standards, parking and access standards, road and pedestrian infrastructure standards and stormwater standards.

As dictated by Section 4.7.6(B), there are a series of provisions that are suggested to be part of the PDD. Below are the proposed regulations for the development:

Zoning Comparison Table			
	Single-Family Residential-Moderate Density(RSM)	Thrash Property PD: Single-Family Detached	Thrash Property PD: Townhomes
Min. Lot Area-Residential	6,000 SF	None	None
Min. Lot Width	50 ft.	40 ft.	18 ft.
Min. Setbacks-Front, Street Frontage	25 ft.	20 ft.	18 ft.
Min. Setbacks-Side-Residential	5 ft.	5 ft.	5 ft. on end units
Min. Setbacks-Rear-Residential	15 ft.	10 ft.	10 ft.
Max. Impervious Surface Ratio	55%	85%	80 %
Max. Height	35 ft.	45 ft.	45 ft.
Max. Residential Density	8 units per acre	6 units per acre	6 units per acre

Overall, the developer has chosen to minimize the total residential development area to preserve the natural condition of the property and leave substantial space for an "outdoor living room." As such, there is no minimum lot size and the lot widths have been reduced significantly from the RSM designation. Height was increased to allow for drive-under residential product.

Any of these provisions not identified in the PD document, shall revert to the 2008 Zoning Ordinance. The following below represent staff comments for specific provisions provided in the Heron Preserve PD document:

1. **Section 4.7.6(B)(A)—**An approximate timeline for phasing and build-out of the development will need to be provided in the statement of intent section.

Consistency with the Comprehensive Plan and Other Considerations

As with any rezoning, the requested zoning designation should align with the goals, policies and future land uses of the municipality's guiding comprehensive plan. Stated in the 2012 City of Hanahan Comprehensive Plan (the most current to date), "while the future land use plan neither dictates a precise requirement nor eliminates room for flexibility, it does articulate a vision and guide for future development in the City."

According to the Comprehensive Plan, this proposed rezoning is within relative compliance of this guiding document. In Section I: Issues, Goals and Policies of the

comprehensive plan, this rezoning would be compliant with a list of goals set forth in the document. These include:

Population Goals and Policies

GOAL 3: Hanahan will guide population growth to areas where supporting infrastructure exists or can efficiently be expanded without sacrificing the environment or quality of life which currently characterize Hanahan.

2. The City will encourage new growth to locate where public services already exist and are adequate to handle needs so the City can continue to provide the highest quality of essential services

Land Use Goals and Policies

GOAL 1: Hanahan will continue to protect and enhance the character of the City's existing neighborhoods as well as encourage the preservation of its wetlands and natural resources

3. The City will ensure that new development in residential districts is compatible in scale and character with existing residences and that it preserves important neighborhood characteristics.
4. The City will ensure future development is compatible with it natural resources and does not compromise the environmental quality.
5. The City will encourage the protection of natural drainage areas, wetlands, and stream corridors, important wildlife habitat areas and other key scenic resources from encroachment and incompatible uses.

Natural and Cultural Resources Goals and Policies

GOAL 1: Hanahan will continue to protect and preserve its historic and cultural resources.

1. The City will continue to promote and support the protection and enhancement of its unique historic and cultural resources.

Lastly, the 2012 Comprehensive Plan Future Land Use Map (Appendix: Figure 1) identifies the future land use of the subject properties as "Medium Density Neighborhood." The intent of this future land use district, is "provide for and/or sustain medium density neighborhoods with small lots and a mix of housing types (Page 28)." The principal land use in this designation is single-family residential development typical of urban neighborhoods with small lots, or attached residential structures like duplexes or townhomes, limited to 8 units per acre. Furthermore, in the land use description, new developments within in the Medium Density Neighborhood district should encourage walkable neighborhood units within the community. Given the development's intention to preserve natural resources, reduce lot sizes for walkability, provide a variety of housing types and increase walkability through a trail network, overall, the intent and master plan of the PD fulfills the intent of this future land use district.

Recommendations

Based upon staff's review, it is recommended that the Planning Commission ***conditionally approve*** the planned development district (PDD), Thrash Property, and the subsequent amendment to the 2010 Zoning Map for the rezoning of TMS numbers 259-00-01-004; 259-03-01-101 from Type B, Planned Development (Tanner Townhomes) to Type "B" PD (Thrash Property) for the following reasons:

1. The proposed development is in line with the 2012 Comprehensive Plan Goals, Policies and Future Land Uses
2. The proposed development is in line with the 2008 Zoning Ordinance and its surrounding zoning districts
3. The rezoning will blend in with the surrounding residential character of the area.
4. The rezoning will benefit the economic well-being of the City and its residents.

The following conditions will need to be met to approve the PD and therefore recommend it to City Council for final approval:

1. Addressing all comments in the "Requirements for Illustration of Existing Conditions" section
2. Addressing all comments in the "Development Master Plan Requirements" section
3. Addressing all comments in "Requirements of Statement of Intent and Regulatory Provisions" section
4. Receipt of letters of approval from Berkeley County concerning traffic impact analysis
5. Receipt of letters of recommendation from Berkeley County Engineering, Berkeley County Roads and Bridges on availability to provide service
6. Receipt of permits from the Army Corps of Engineers for wetland crossing and U.S. Fish and Wildlife for bald eagle preservation.

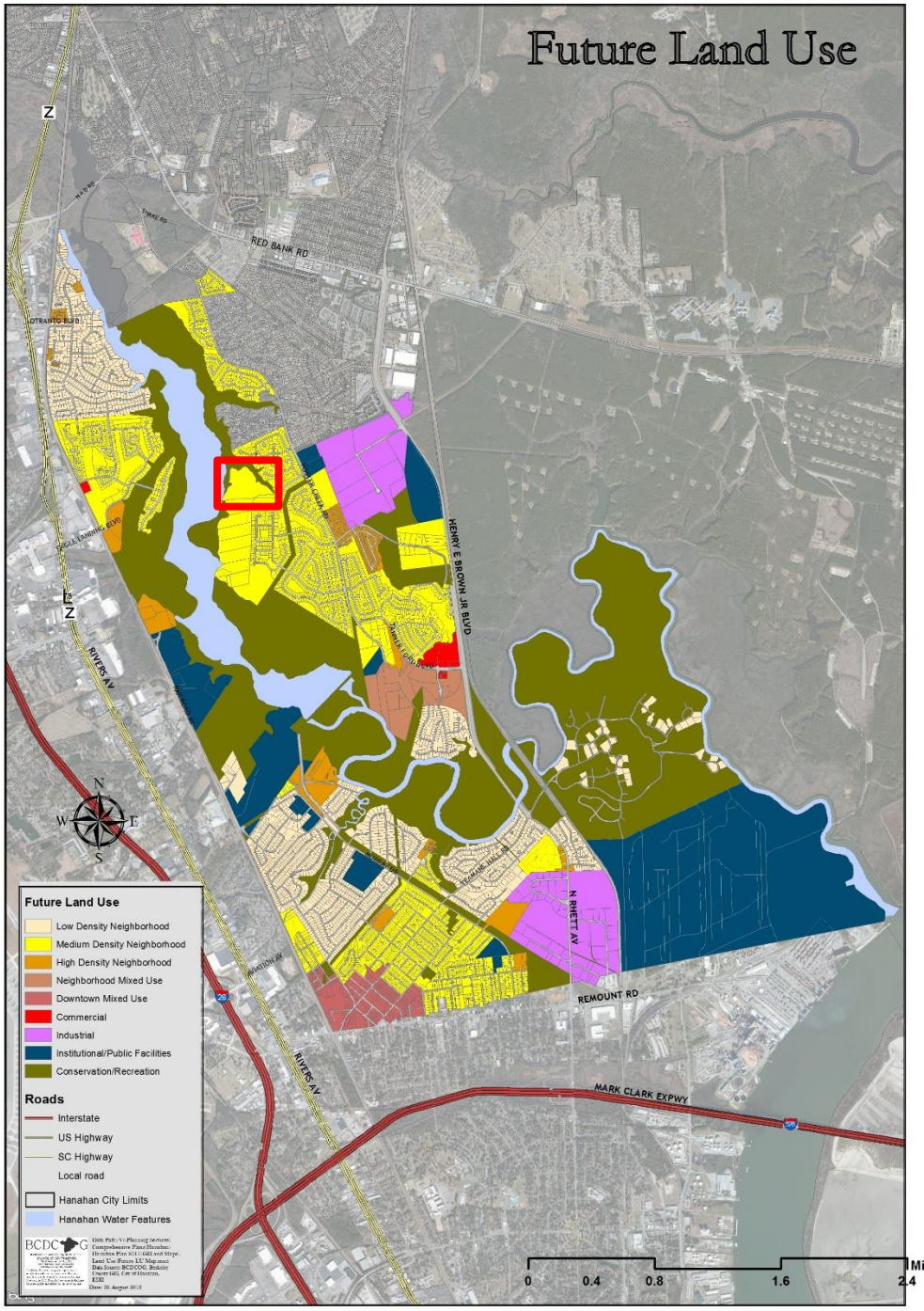

Figure 1: 2012 Future Land Use Map

Thrash Property

Type"B" Planned Development District

City of Hanahan, South Carolina

April 7, 2021

Prepared by:

SeamonWhiteside

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Applicant:

Stanley Martin Homes

www.stanleymartin.com

843-371-5835

Contact: Roger Hunt

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1. Statement of Intent

The intent of the Thrash Property PD is to create a zoning district that preserves natural open space by creating development requirements that allow for a more compact development footprint while also providing a framework to create a walkable community that supports a high quality of life. The development requires sidewalks within public rights of way and trails through common areas to promote pedestrian circulation. The PDD requires approximately 10 acres of preserved open space to be provided. This will lead to a reduction in roughly 100 units from the current overall density plan.

Standard Hanahan Single Family zoning would not allow a reduced lot size, reduced setbacks, and increased lot coverage, as outlined in this PD, that provides for a more compact development footprint and associated allocation of preserved Open Space.

Both the preservation of natural open space and the creation of walkability within public rights of way are elements that contribute to the overall sustainability and character of the Hanahan community at large.

2. General Provision Criteria

4.7.1 of the City of Hanahan Type B PD—Planned Development ordinance requires certain General Provision criteria be met. The criteria and a description of how each item is met is outlined below:

(A) A Planned Development District is a zoning district proposed by the developer in place of existing zoning classifications applied to the land proposed for development. This Type "B" PD differs from a Type "A" PD in that existing zoning standards are replaced rather than modified. The developer may therefore propose alternative land uses and development intensities. Rezoning—legislative action taken by Hanahan City Council—is therefore necessary for final approval of a Type "B" PD, a Planned Development District.

Alternative land uses and development intensities are proposed within this document and will require rezoning by Hanahan City Council before final approval of the Thrash Property PD

(B) The applicant proposing a Planned Development District in the City of Hanahan shall achieve all of the standards of this section in good faith and shall demonstrate intent of achieving such standards and document how they will be achieved in writing and through illustration.

All standards of the PD requirements are provided herein, and are demonstrated through written descriptions and illustrations.

(C) It shall be the responsibility of the applicant to demonstrate why zoning and land development standards of the City of Hanahan otherwise applicable should be modified or replaced by the provisions of the proposed Planned Development District. The applicant shall document exceptions or variations to existing zoning and land development regulations essential to the project in terms of site, design, or dimensional requirements.

The "Statement of Intent" (1) from this document outlines the reasons for modifying the City of Hanahan development standards, which can be further understood through the

Master Development Plan. Variations to site, design, and dimensional requirements are provided within this document in "Regulatory Provisions" (7).

(D) The proposed land uses, development intensities, and associated standards shall be consistent with all policies and goals of the City of Hanahan Comprehensive Land Use Plan.

The proposed land uses, development intensities, and associated standards are consistent with all policies and goals of the City of Hanahan Comprehensive Land Use Plan. The future Land Use Plan recommends Medium Density Neighborhood which support smaller lots, a mix of product, attached residential structures, and limits density to 8 units per acre. ***The Thrash Property PD meets all of these recommendations and is well under the density limitation****.*

(E) The proposal shall efficiently and effectively program the use of land in a manner that preserves natural amenities and environmentally sensitive features to the greatest extent possible.

As stated in the "Statement of Intent" (1) and illustrated on the Master Development Plan, land has been programmed to preserve natural amenities and environmentally sensitive features, such as a bald eagle nesting zone and the adjacent wetlands and reservoir.

(F) The proposal shall not negatively alter the existing prevailing character of an adjacent neighborhood or district by initiating a high concentration of intense uses, a high volume of heavy truck traffic, a scale of the development that dwarfs neighboring properties or disrupts community aesthetics, or degradation and loss of natural resources in and adjacent to the city.

The Thrash Property PD proposes a 25' buffer along the property line next to the adjacent neighborhood to the South and is complimentary to the adjacent single family land use, scale, vehicular patterns, and aesthetic. Natural resources are being preserved in the form of a natural preserve.

(G) The proposed development shall not create any externalities—obtrusive, disruptive, intrusive, or excessive light, odor, noise, or vibration—beyond the boundaries of the Planned Development District.

The Thrash Property PD proposes lighting per the City of Hanahan Standards. The proposed Land Use is complimentary of the adjacent single family use and does not propose any elements that would create obtrusive, disruptive, intrusive, or excessive light, odor, noise, or vibration.

(H) The proposed Planned Development District with residential components shall include pedestrian-friendly circulation, building scale, and aesthetics and for future occupants to allow the opportunity to walk within the City of Hanahan and to preempt the necessity of driving within the built-out Planned Development District.

Pedestrian friendly circulation is proposed in the form of sidewalks and trails. Building scale is pedestrian appropriate set forth by the maximum 3 story building height, as well are reduced front setbacks that create a better scale within the public realm. Pleasant

Aesthetics are to be provided through proposed architecture, street tree requirements, preservation of quality trees, and allocation of preserved natural areas.

(I) The land proposed for development shall adjoin and have full access to all existing public infrastructure and services available in the City of Hanahan—roads, water and sewer service, stormwater drainage, etc. The responsibility of providing the improvements necessary to serve the development shall be that of the applicant. The proposal shall, where possible, enhance connectivity of infrastructure and minimize dead-end infrastructure lines (roads, water and sewer lines, etc.) by accessing infrastructure networks available along road frontages and adjoining land developments.

The Thrash Property PD is served by Public water, sewer, and storm drainage and is accessed via Whispering Oak Drive Public Right of Way. All necessary improvements to these facilities in order to serve the property will be the responsibility of the Applicant.

3. Minimum Requirements Criteria

4.7.2 of the City of Hanahan Type B PD—Planned Development ordinance requires certain Minimum Requirements criteria be met. The criteria and a description of how each item is met is outlined below:

(A) the following shall be required for consideration of a tract of land for a Type "B" Planned Development.

(1) **Minimum district size:** Two (2) acres. A Planned Development District may need to be larger than two (2) acres to meet the next standard, "district location."

The Thrash Property PD is approximately 26.99 Acres in Size

(2) **District location.** So as to avoid illegal spot zoning, a Planned Development District shall be located in an area that can be justified as a distinct district based on the characteristics of the land, access to infrastructure, and juxtaposition of zoning districts in the vicinity.

The Thrash Property PD is located in an area that can be justified as a distinct district based on the characteristics of the land, access to infrastructure, and juxtaposition of zoning districts in the vicinity.

(3) **Minimum public infrastructure.** The area proposed for a Planned Development District shall have direct access to public infrastructure systems—roads, potable water, sewer, stormwater drainage, etc.—in a location where the infrastructure systems can adequately accommodate increases in demand reasonably expected to be generated by development within the PDD. Alternatively, the developer shall propose to upgrade the infrastructure systems accordingly. Proposed improvements need not be limited to infrastructure segments abutting the property; the broader system shall be upgraded to offset negative impacts to surrounding districts.

The Thrash Property PD has direct access to public infrastructure systems—roads, potable water, sewer, stormwater drainage, etc. The Thrash Property

PD requires the applicant to fund a wastewater pump station and all off-site traffic improvements as required by the included Traffic Impact Analysis. Coordination letters with Utility companies have been provided in Appendix C.

(B) The following minimum requirements shall be met by the approved development upon completion.

(1) The Planned Development District shall include setbacks and/or buffering from adjoining districts of significantly lower development intensity. Specific dimensions of setbacks and buffering shall be proposed by the applicant and reviewed by the planning commission.

A 25' buffer has been proposed adjacent to the existing single-family neighborhood, as well as a 35-50' buffer around all designated wetlands. All buffers are per the City of Hanahan Zoning requirements. Setbacks, buffers, and other development requirements are outlined within this PD.

(2) The Planned Development District shall include provisions to protect natural and cultural resources, provide adequate buffering thereof, and designate adequate park space for recreation and social interaction as appropriate for the land uses and development intensities proposed. Specific dimensions, acreages, and locations shall be proposed by the applicant and reviewed by the planning commission.

Cultural resources have been located and are being preserved and avoided through the subdivision design as illustrated in the Master Development Plan. Natural resources are protected by reduction of lot sizes and setbacks to allow for a Natural Preserve. Recreation and social interaction opportunities are being provided in the form of a trail system through natural areas, open park spaces and a community dock with boat slips, which is being applied for with CWS, DHEC and USACE.

(C) Improvements required by the City of Hanahan shall be limited to capital projects necessary to ensure preservation of pre-existing levels of service in Hanahan. In the event that the proposed planned development can be expected to create a proportional need for upgraded capital facilities, Section 5.18 of the Hanahan Land Development Ordinance: "Adequate, Oversized, and Off-site Improvements" shall prevail.

The Thrash Property PD requires the applicant to fund a wastewater pump station and all off-site traffic improvements as required by the included Traffic Impact Analysis.

4. Existing Conditions Summary

A. The site currently exists as a wooded site served by Whispering Oak Drive, adjacent to the Goose Creek Reservoir. The site is bound by the reservoir on the West, North, and East

Boundaries, and a single-family attached subdivision to the South. The site contains an Eagle Nest and two archeological sites, all of which are to be preserved. Existing conditions plans in the forms of surveys have been provided in Appendix A of this document and meet the requirements of 4.7.4.

5. Master Development Plans Summary

A. Master Development Plans including a Land Use Plan and Master Plan including street and pedestrian designs, Open Space Plan, Traffic Study, and Letters of Coordination have been provided in the Appendices of this document.

6. Zoning Default Statement

Any zoning or land development regulations or requirements not specifically detailed within this document shall default to the Zoning Ordinance and Land Development Regulations of the City of Hanahan, South Carolina. Land Use criteria not specifically detailed within this document shall default to Single Family Residential – Moderate Density (RSM) section 4.5.5 of the City of Hanahan Zoning Ordinance.

7. Regulatory Provisions

A. Land Use

1. Thrash Tract Residential Land Use (TTR)
   a) Permitted land uses include single family attached residential, single family detached residential, associated amenity centers, roadways, utilities, and all other land uses (permitted, conditional, and accessory) as allowed by the City of Hanahan RSM zoning designation.
   b) No more than 50% of the units within TTR may be single family attached product.
2. Thrash Tract Open Space Land Use (TTO)
   a) Permitted land uses include preserved natural open space and improved open space. See Green Space Standards.

B. Land Use and Density Chart

Land Use	Acreage	Allowable Density	Maximum Units
TTR	13.50	6 DU/AC	81 units
TTO	13.49	0 DU/AC	0 units
Total	26.99	3 DU/AC	81 units

C. Lot, and Building Standards for TTR Land Use Zone

Standard	PDD Requirement for Single Family Attached Lots	PDD requirement for Single Family Detached Lots	Previous RSM Requirement
Minimum Lot Width	18 ft	40 ft	50 ft
Front / Street Setback	18 ft	20ft	20 ft
Side Setback	5 ft on end units	5 ft	5 ft
Rear Setback	10 ft	10 ft	15 ft
Maximum Impervious Surface	85%	80%	55%
Maximum FAR	N/A	N/A	N/A
Maximum Height	45 ft	45 ft	40 ft

D. Building Design Standards

Building design standards will be per the City of Hanahan Code of Ordinances Chapter 8 – Building and Building Regulations, and will meet all applicable International Building Code requirements.

There will be a 5' encroachment allowance within the front and rear setbacks for porches, balconies, steps and overhangs.

E. Landscaping and Sign Standards

Landscaping and Sign Standards will be per City of Hanahan Zoning Ordinance Chapter 6 Landscaping and Chapter 8 Signage, with the exception that the buffer between the Thrash Tract PD and adjacent single-family detached community shall be increased to 25' in width.

F. Parking and Access Standards

Parking and Access Standards will be per City of Hanahan Land Development Ordinance 5.9 – Parking.

G. Road and Pedestrian Infrastructure Standards

1. Road and Pedestrian infrastructure standards will be per City of Hanahan Land Development Ordinance 5.5 -Blocks, 5.6 -Roads, and 5.7 -Design and Improvement Standards for Pedestrians with the exception that sidewalks will be required on both sides of the road and may be 4' in width.
2. All Road Rights of Ways are intended to be public, to be constructed by the developer and owned and maintained by Berkeley County, subject to their acceptance.
3. All curbs will be rolled or valley curbs.

H. Stormwater

1. Stormwater design shall be per City of Hanahan Land Development Ordinance 5.11 - Stormwater and Floodplain management.

I. Green Space Standards

1. Green Space standards will be per City of Hanahan Land Development Ordinance 5.13. - Green Space with the exception that open air park structures no larger than 800 s.f. may be considered Park Space.
2. Green space shall be a minimum of 40% of the gross acreage of the Thrash PDD. Of the Total Greenspace, 25% shall be park space or improved open space.
3. All open space shall be owned and maintained by the POA.

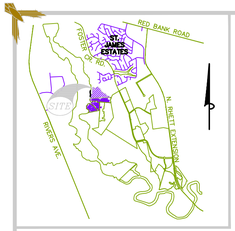
J. Wetland Buffer Standards

1. Wetland and Reservoir buffer Standards will be per City of Hanahan Land Development Ordinance 5.12 -Water Quality Protection with the exception that the Reservoir buffer shall be increased to 50' in width and may contain a pervious trail.
2. Views corridors may be created within the buffer along the waterfront through selective clearing of underbrush, trees no greater than 2" caliper, limbs no larger than 3" diameter or higher than 7' from existing grade.

K. Capital Improvements

1. A Traffic Impact Assessment (TIA) has been provided in Appendix B of this PD.
   a) In summary, the TIA recommends the following: Installation of an exclusive northbound left-turn lane on Foster Creek Road
   b) All improvements required by the TIA will be constructed at the developers expense.
2. A pump station is required to provide proper sewer service to the Thrash Property PD.
   a) The pump station shall be constructed at the developer's expense.
   b) The pump station is intended to be owned and maintained by Berkeley County Water and Sanitation, subject to their acceptance.

Appendix A



VICINITY MAP (NTS)

GPA S.C. GRID

REFERENCES:

1) PLAT BY HAROLD MOORE, DATED OCTOBER 1972. RECORDED IN PLAT CABINET D, PAGE 280, BERKELEY COUNTY RMC.
2) PLAT BY TRICO, DATED JANUARY 17, 2005. RECORDED IN PLAT CABINET Q PAGE 356B, BERKELEY COUNTY RMC.
3) PLAT BY JAMES T. REID, DATED APRIL 22, 2005. RECORDED IN PLAT CABINET Q PAGE 369D, BERKELEY COUNTY RMC.
4) PLAT BY GPA PROFESSIONAL LAND SURVEYORS, DATED MARCH 11, 2019. RECORDED IN INSTRUMENT NO. 2019030299–2019030300, BERKELEY COUNTY RMC.
5) PLAT BY GPA PROFESSIONAL LAND SURVEYORS, DATED JUNE 18, 2018. RECORDED IN PLAT CABINET Q, PAGE 312h & 313h, BERKELEY COUNTY RMC.
6) UNRECORDED WAIVER AND RELEASE OF FLOOD AND FLOWAGE RIGHTS SIGNED SEPTEMBER 18, 2006 WHICH REFERENCES ABOVE REFERENCES NO. 1 AND NO. 2.

NOTES:

1) AREA WAS DETERMINED BY THE COORDINATE METHOD.
2) ANYTHING SHOWN OUTSIDE THE DEFINED BOUNDARY IS FOR DESCRIPTIVE PURPOSES ONLY.
3) THE PUBLIC RECORDS REFERENCED ON THIS PLAT ARE ONLY USED AND/OR NECESSARY TO THE ESTABLISHMENT OF THE BOUNDARY OF THIS PROPERTY. THEY ARE NOT AND DO NOT CONSTITUTE A TITLE SEARCH.
4) DISTANCES SHOWN HEREON ARE HORIZONTAL GROUND DISTANCES.
5) NO SUBSURFACE OR ENVIRONMENTAL INVESTIGATION OR SURVEYS WERE PERFORMED FOR THIS PLAT. THEREFORE THIS PLAT DOES NOT REFLECT THE EXISTENCE OR NONEXISTENCE OF WETLANDS, CONTAMINATION, OR OTHER CONDITIONS WHICH MAY AFFECT THIS PROPERTY.
6) TMS NO. 259–00–01–004 & 259–03–01–101
7) THERE ARE NO APPLICABLE OCRM CRITICAL LINE BUFFERS OR SETBACKS ON THIS PROPERTY.
8) ALL ELEVATIONS ARE BASED ON NAVD 1988 DATUM.
9) NO LAND OR OTHER AREA IS DEDICATED FOR PUBLIC USE BY THIS PLAT UNLESS A DEDICATION IS EXPRESSLY STATED HEREON.
10) THE WETLANDS SHOWN HEREON WERE LOCATED BY GPA PROFESSIONAL LAND SURVEYORS AS DELINEATED BY NEWKIRK ENVIRONMENTAL, INC.

FLOOD NOTE:

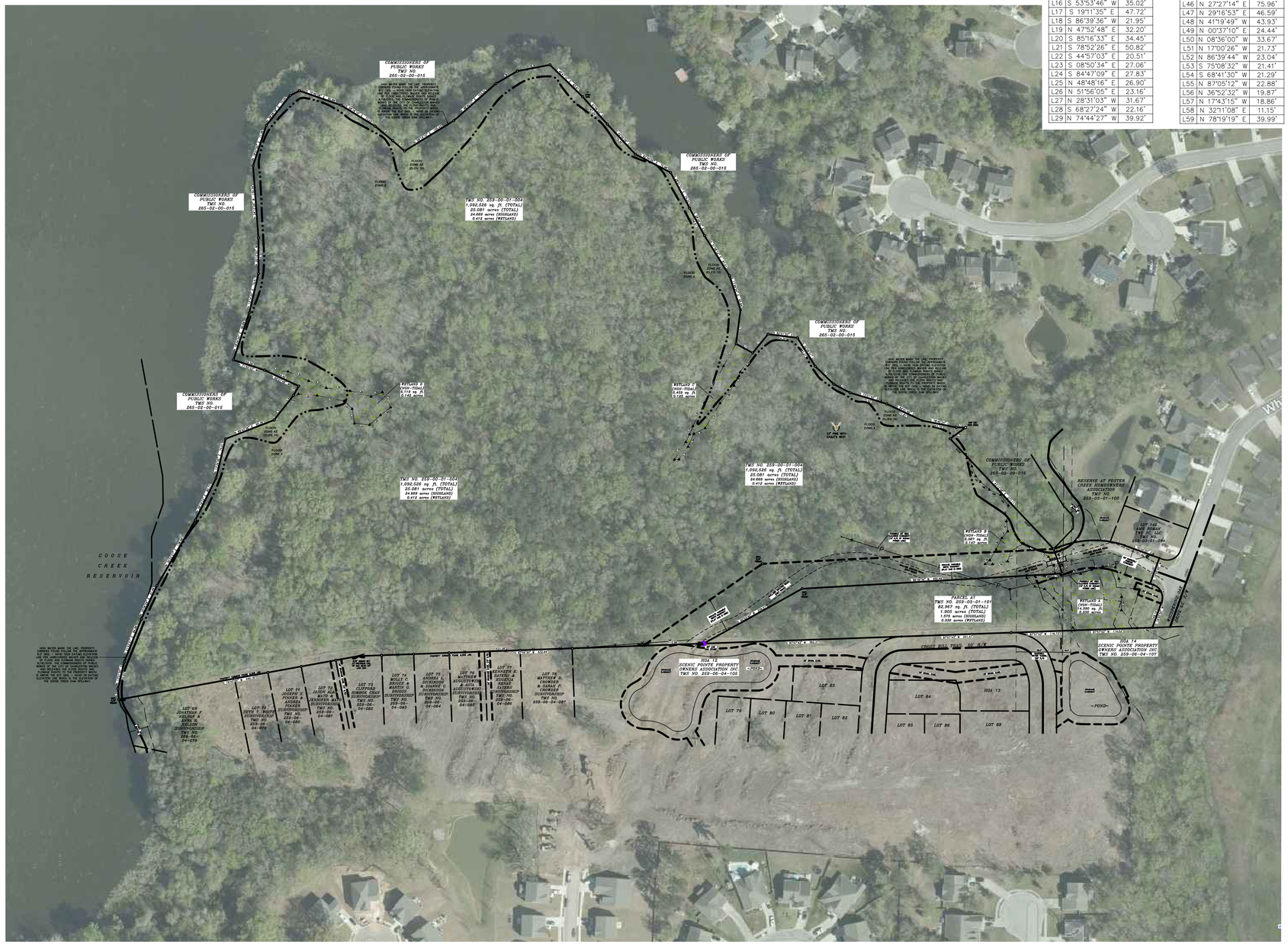
THIS PROPERTY IS LOCATED IN FLOOD ZONES X & AE (ELEV. 10) AS SHOWN FROM FEMA FLOOD MAPS, PANEL NO. 45015C 0685E, REVISED 12/07/2018.

LEGEND

○	–	IRON FOUND (AS DESCRIBED)
●	–	IRON SET (5/8" REBAR)
□	–	CONCRETE MONUMENT FOUND
△	–	CALCULATED POINT
Ⓟ	–	POWER POLE
⟜	–	GUY WIRE
	–	ADJOINER LINE
	–	RIGHT–OF–WAY
	–	CENTER LINE
	–	EASEMENT LINE (AS DESCRIBED)
	–	WETLAND LINE
	–	BUFFER LINE (AS DESCRIBED)
——P——	–	OVERHEAD POWER LINE
	–	MATCH LINE
	–	FLOOD LINE

CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD
C1	71.80'	175.00'	23°30'25"	36.41'	N 80°26'27" E	71.29'
C2	22.81'	175.00'	7°28'01"	11.42'	S 84°04'20" E	22.79'
C3	27.70'	175.00'	9°04'07"	13.88'	S 75°48'16" E	27.67'
C4	39.27'	25.00'	90°00'00"	25.00'	S 25°04'05" E	35.36'

LINE	BEARING	DISTANCE
L1	S 87°57'43" W	27.77'
L2	N 04°53'41" W	19.63'
L3	N 38°06'38" E	33.28'
L4	N 38°06'38" E	24.52'
L5	N 29°27'34" E	19.37'
L6	S 50°34'03" E	41.78'
L7	S 49°16'07" E	28.96'
L8	N 59°48'06" E	45.57'
L9	N 79°09'59" E	60.59'
L10	S 07°37'18" W	62.40'
L11	S 61°18'34" E	34.98'
L12	N 39°07'05" E	44.30'
L13	S 45°57'57" E	47.31'
L14	S 62°10'32" E	33.45'
L15	S 89°14'29" E	17.12'
L16	S 53°53'46" W	35.02'
L17	S 19°11'35" E	47.72'
L18	S 86°39'36" W	21.95'
L19	N 47°52'48" E	32.20'
L20	S 85°16'33" E	34.45'
L21	S 78°52'26" E	50.82'
L22	S 44°57'03" E	20.51'
L23	S 08°50'34" E	27.06'
L24	S 84°47'09" E	27.83'
L25	N 48°48'16" E	26.90'
L26	N 51°56'05" E	23.16'
L27	N 28°31'03" W	31.67'
L28	S 68°27'24" W	22.16'
L29	N 74°44'27" W	39.92'
L30	N 82°58'40" W	43.77'
L31	N 68°18'13" W	34.84'
L32	N 65°29'22" W	41.67'
L33	N 86°42'33" W	43.40'
L34	S 33°28'23" W	41.76'
L35	S 23°54'21" W	27.38'
L36	S 38°51'19" W	41.05'
L37	S 30°39'40" W	53.55'
L38	S 63°49'23" W	23.00'
L39	S 23°49'43" W	25.98'
L40	S 36°06'48" W	28.68'
L41	S 87°40'23" W	8.37'
L42	N 33°04'25" E	38.33'
L43	N 26°02'02" E	15.80'
L44	N 22°37'37" E	15.91'
L45	N 26°07'53" E	47.98'
L46	N 27°27'14" E	75.96'
L47	N 29°16'53" E	46.59'
L48	N 41°19'49" W	43.93'
L49	N 00°37'10" E	24.44'
L50	N 08°36'00" W	33.67'
L51	N 17°00'26" W	21.73'
L52	N 86°39'44" W	23.04'
L53	S 75°08'32" W	21.41'
L54	S 68°41'30" W	21.29'
L55	N 87°05'12" W	22.88'
L56	N 36°52'32" W	19.87'
L57	N 17°43'15" W	18.86'
L58	N 32°11'08" E	11.15'
L59	N 78°19'19" E	39.99'
L60	N 72°32'07" E	28.02'
L61	N 36°27'00" W	5.99'
L62	N 29°40'52" W	38.26'
L63	N 37°56'49" W	26.27'
L64	N 44°08'10" W	23.83'
L65	N 75°50'40" W	18.71'
L66	N 43°22'20" W	21.58'
L67	N 83°32'33" E	32.64'
L68	N 74°30'33" E	11.25'
L69	N 74°30'33" E	9.01'
L70	N 09°45'25" W	13.80'
L71	N 30°56'22" W	18.37'
L72	N 50°18'06" W	18.73'
L73	N 67°19'56" W	33.78'
L74	S 58°18'42" W	27.51'
L75	S 18°31'58" W	19.56'
L76	S 79°12'57" W	28.03'
L77	N 89°18'11" W	13.83'
L78	N 50°47'15" E	11.45'
L79	N 30°30'22" E	22.78'
L80	N 26°28'48" E	23.32'
L81	N 40°52'29" E	16.59'
L82	N 07°22'51" W	18.23'
L83	N 07°04'43" E	29.04'
L84	N 36°47'44" W	24.15'
L85	N 63°57'59" W	22.66'
L86	N 48°58'09" W	21.96'
L87	N 40°03'35" W	13.44'
L88	N 21°44'41" W	19.58'
L89	N 14°06'30" W	11.62'



I, JOHNATHAN F. BURNS, A PROFESSIONAL LAND SURVEYOR IN THE STATE OF SOUTH CAROLINA, HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY HEREIN WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS A SURVEY AS SPECIFIED THEREIN, ALSO THERE ARE NO VISIBLE ENCROACHMENTS OR PROJECTIONS OTHER THAN SHOWN.

THIS SURVEY IS NOT VALID UNLESS EMBOSSED WITH AN ORIGINAL SURVEYOR'S SEAL. THIS SURVEY HAS BEEN DONE WITHOUT THE BENEFIT OF REVIEWING A CURRENT TITLE SEARCH.

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 30TH DAY OF MARCH, 2021.

JOHNATHAN F. BURNS, PLS–22742

SOUTH CAROLINA – GPA, INC. No. COA570 – CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA – No. 22742 – JOHNATHAN F. BURNS – REGISTERED LAND SURVEYOR

100' 0 50' 100' 200'
1 inch = 100 ft.

WETLAND TABLE NOTE:

SEE SHEET 3 OF 3 FOR WETLAND TABLE.

GPA PROFESSIONAL LAND SURVEYORS EST. 1987

GPA INC.
SERVING SOUTH CAROLINA AND NORTH CAROLINA

CHARLESTON SC CORP OFC
281 TREELAND DR. STE B
LADSON SC 29456
OFFICE (843) 285–2424

CHARLOTTE NC BRANCH
605 PHILLIP DAVIS DR. STE 3
CHARLOTTE NC 28217
OFFICE (704) 335–8600

GREENVILLE SC BRANCH
1200 WOODRUFF RD. STE G–17
GREENVILLE SC 29607
OFFICE (864) 274–0454

"Integrity Without Boundaries"
www.gpaland.com

SCALE 1"=40'
FLD. BK. P.G.
JOB NO. 215041
DATE 03/29/2021
DRAWN BY WCM
CHECKED BY DLG

BOUNDARY SURVEY

SHOWING TMS NO. 259-00-01-004 & 259-03-01-101
OWNED BY
THRASH PROPERTIES, LLC
LOCATED IN THE CITY OF HANAHAN
BERKELEY COUNTY, SOUTH CAROLINA

PREPARED FOR
DESCENT MARTIN HOMES

DATE	REVISION	BY

SHEET 1 OF 3

NOTES:

1.) AREA CALCULATED BY THE COORDINATE METHOD.

2.) BEARINGS SHOWN HEREON ARE MAGNETIC AND AS SUCH ARE SUBJECT TO LOCAL ATTRACTION.

3.) THIS PLAT IS INTENDED ONLY TO SHOW THE LOCATION OF TMS NO. 259-00-01-004. THE PROPERTY LINES SHOWN HEREON ARE BASED ON FOUND MONUMENTATION, LISTED REFERENCE DATA, AND LINES OF OCCUPATION AND DO NOT CONTITUTE A TITLE SEARCH.

4.) ALL IRON PIPES SET ARE 5/8" REBAR.

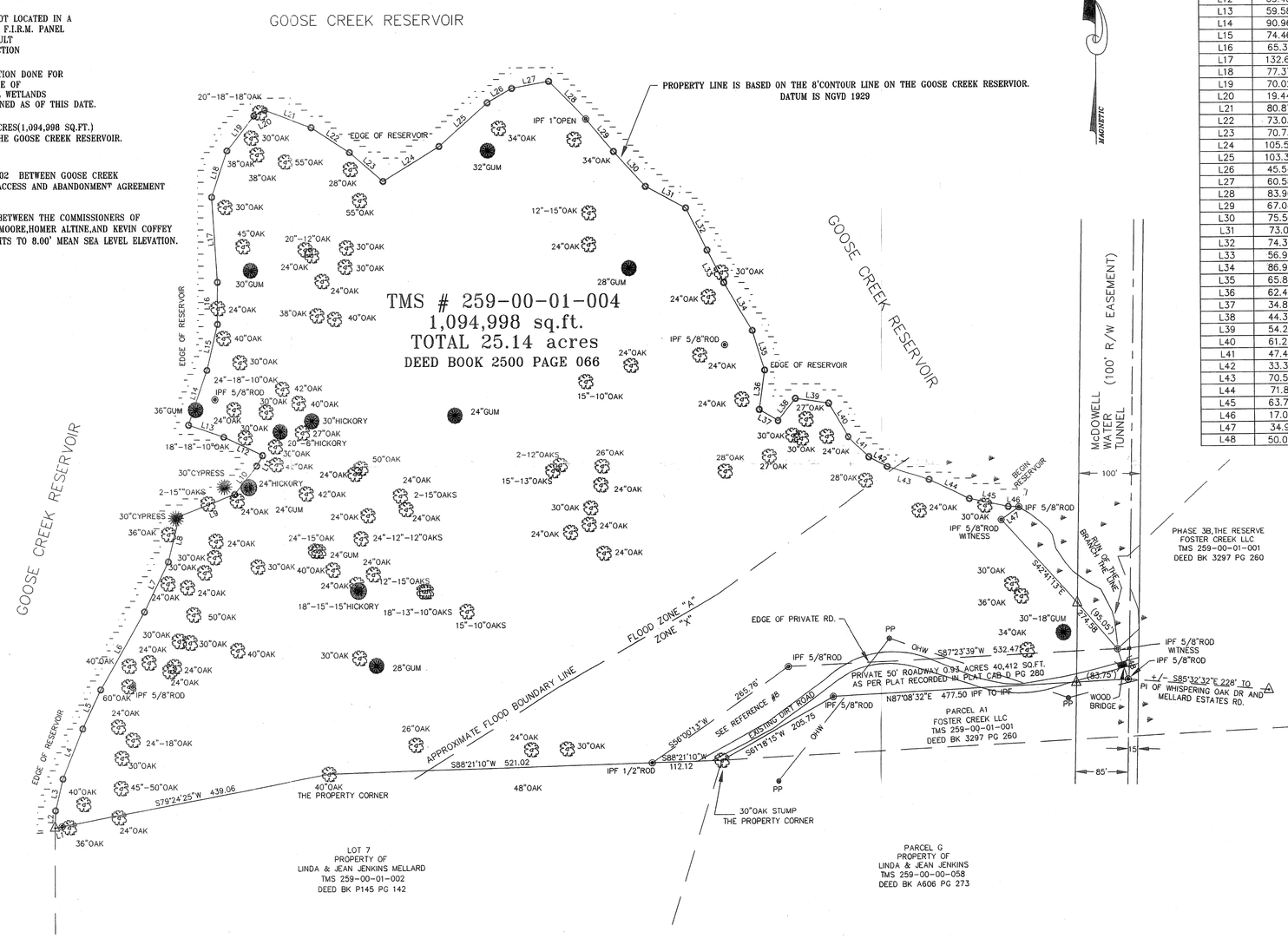
5.) A PORTION OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD HAZARD AREA; ZONE "A" AS PER F.I.R.M. PANEL #45015C 0685D, DATED OCTOBER 16,2003. THE OTHER PORTION OF THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA; ZONE "X" AS PER F.I.R.M. PANEL #45015C 0685D, DATED OCTOBER 16,2003. CONSULT LOCAL BUILDING OFFICIALS PRIOR TO CONSTRUCTION

6.) THERE HAS BEEN NO ENVIRONMENTAL INVESTIGATION DONE FOR TMS 242-00-00-008; THE PRESENCE OR ABSENCE OF U.S. ARMY CORPS OF ENGINEERS JURISDICTIONAL WETLANDS OR DHEC-OCRM CRITICAL AREAS ARE UNDETERMINED AS OF THIS DATE.

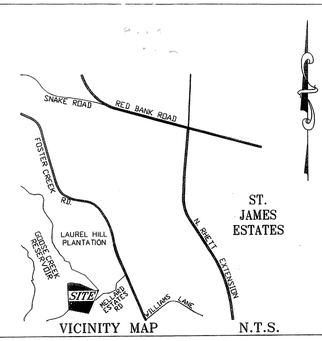
7.) TOTAL AREA OF TMS 259-00-01-004 IS 25.14 ACRES(1,094,998 SQ.FT.) AND IS BASED UPON THE 8'CONTOUR LINE ON THE GOOSE CREEK RESERVOIR. DATUM IS NGVD 1929

8.) UNRECORDED DOCUMENT DATED DECEMBER 6, 2002 BETWEEN GOOSE CREEK PROPERTIES AND FOSTER CREEK,LLC GRANTS A ACCESS AND ABANDONMENT AGREEMENT

9.) UNRECORDED DOCUMENT DATED MARCH 15,2005 BETWEEN THE COMMISSIONERS OF PUBLIC WORKS,CITY OF CHARLESTON AND RAY C.MOORE,HOMER ALTINE,AND KEVIN COFFEY WAIVES AND RELEASES FLOOD AND FLOWAGE RIGHTS TO 8.00' MEAN SEA LEVEL ELEVATION.



LINE TABLE		
LINE	LENGTH	BEARING
L1	11.36	S79°24'25"W
L2	27.13	N01°30'57"E
L3	50.93	N13°25'36"E
L4	84.88	N22°12'11"E
L5	67.59	N25°40'44"E
L6	138.97	N30°50'09"E
L7	85.89	N26°47'50"E
L8	73.91	N13°55'14"E
L9	95.42	N69°07'14"E
L10	57.77	N38°37'35"E
L11	19.34	N29°59'59"E
L12	69.48	N64°40'01"W
L13	59.58	N71°24'01"W
L14	90.96	N19°28'19"E
L15	74.46	N13°41'34"E
L16	65.31	N00°17'49"E
L17	132.61	N03°44'06"W
L18	77.37	N18°37'38"E
L19	70.02	N38°57'34"E
L20	19.44	N63°20'34"E
L21	80.87	S70°20'47"E
L22	73.03	S57°44'45"E
L23	70.73	S49°33'44"E
L24	105.52	N58°48'44"E
L25	103.35	N49°09'56"E
L26	45.54	N60°20'49"E
L27	60.58	N79°38'36"E
L28	83.96	S45°11'08"E
L29	67.04	S41°14'52"E
L30	75.56	S42°40'50"E
L31	73.01	S62°09'09"E
L32	74.30	S27°26'47"E
L33	56.93	S27°53'56"E
L34	86.95	S31°27'40"E
L35	65.86	S17°12'23"E
L36	62.40	S08°11'36"W
L37	34.87	S60°48'03"E
L38	44.35	N39°49'54"E
L39	54.29	S82°23'07"E
L40	61.24	S31°28'15"E
L41	47.45	S45°35'43"E
L42	33.32	S61°29'33"E
L43	70.53	S72°40'20"E
L44	71.81	S64°11'53"E
L45	63.79	S78°15'17"E
L46	17.06	S87°58'42"E
L47	34.91	N54°35'34"E
L48	50.04	S20°07'42"E



VICINITY MAP N.T.S.

PLANNING AND RMC USE ONLY

Doc# 000013011
PLAT CABINET Q PAGE 369-1)
Filed and Recorded
04/25/2005 03:40:41PM
Cynthia B. Forte
Register of Deeds Berkeley Co. SC

BERKELEY CO. R.M.C. REFERENCES:

1. PLAT OF TRACTS 3 AND 4 OF THE JOHN MELLARD ESTATE, DATED MAY 8, 1985, BY CHARLIE B. ACOCK III, S.C.P.L.S. No. 9543, AND RECORDED IN CABINET F, PAGE 100.

2. PLAT OF TRACT 2 OF THE JOHN MELLARD ESTATE, DATED MAY 9, 1985, BY CHARLIE B. AYCOCK III,AND RECORDED IN CABINET F, PAGE 101.

3. PLAT SHOWING PHASE "I-B" LAUREL HILL PLANTATION SUBDIVISION, A 8.481 ACRE TRACT, DATED JANUARY 30, 1987, REVISED MAY 11, 1987, BY ANDREW C. GILLETTE,AND RECORDED IN CABINET H, PAGE 74.

4. PLAT SHOWING PHASE "H-B" LAUREL HILL PLANTATION SUBDIVISION, A 7.117 ACRE TRACT, DATED FEBRUARY 20, 1987, REVISED DECEMBER 2, 1987, AND JULY 8, 1988, BY ANDREW C. GILLETTE, S.C.P.L.S. No. 5933, AND RECORDED IN CABINET H, PAGE 73.

5. SUBDIVISION PLAT SHOWING PHASE 1B, (THE RESERVE) A 17.962 ACRE TRACT OF LAND, A PORTION OF TRACT 2, PARCEL A, PROPERTY OF FOSTER CREEK, LLC, DATED JUNE 22, 2004, BY RICHARD A. ALDRIDGE, S.C.P.L.S. No. 20854, AND RECORDED IN CABINET Q, PAGE 244-C.

6. PLAT OF TRACTS 3 & 4 OF THE JOHN MELLARD ESTATE, LOCATED IN GOOSE CREEK PARISH, BERKELEY COUNTY, SOUTH CAROLINA, DATED MAY 8, 1985 BY CHARLIE B. AYCOCK, III, RLS NO. 9543, AND RECORDED IN CABINET F, PAGE 100.

7. SUBDIVISION PLAT SHOWING PHASE 3B, (THE RESERVE) A 3.463 ACRE TRACT OF LAND, A PORTION OF TRACT 2, PARCEL A, PROPERTY OF FOSTER CREEK, LLC, DATED JANUARY 17,2004, BY RICHARD A. ALDRIDGE

8. PLAT OF A PORTION OF JOHN A. MELLARD ESTATE,DATED OCTOBER 1972,BY HAROLD A. MOORE, S.C.P.L.S. No.359,AND RECORDED IN CABINET D PAGE 280

BOUNDARY SURVEY
OF A
25.14 ACRE TRACT
TAX MAP # 259-00-01-004
OWNED BY
GOOSE CREEK PROPERTIES A/P
AND ABOUT TO BE CONVEYED TO
DENNIS AVERY
LOCATED IN THE
CITY OF HANAHAN

BERKELEY COUNTY SOUTH CAROLINA

DATE APRIL 22,2005 SCALE: 1"=100'

LEGEND
- IRON PIPE FOUND (AS NOTED)
- IRON PIPE SET (5/8" REBAR)
- CONC. MON. FOUND
- CALCULATED POINT
- PROPERTY LINE
- OAK TREE
- CYPRESS TREE
- HICKORY TREE
- GUM TREE

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

I, hereby state that to the best of my knowledge, information and belief, the survey shown hereon was made in accordance with the requirements of the Minimum Standards Manual for the Practice of Land Surveying in South Carolina, and meets or exceeds the requirements for a Class _A_ survey as specified therein; also there are no visible encroachments, projections, or setbacks affecting the property other than those shown.

4.25.05

SOUTH CAROLINA PROFESSIONAL ENGINEER REG. No. 17228 LAND SURVEYOR JAMES T. REID

JAMES T. REID, S.C. P.L.S. No.17228
P.O. BOX 20182
CHARLESTON, S.C. 29413
PHONE: (843) 367-1412

Appendix B

LEGEND

- PRESERVED GRAND TREE (APPROXIMATE LOCATION)
- TRAIL NETWORK (5' - 8' VARIABLE WIDTH)
- PROPERTY BOUNDARY
- RIGHT-OF-WAY
- CENTER LINE
- WETLAND LINE
- LOT LINE
- BUILDING SETBACK
- BUFFER LINE
- FLOOD LINE

LAND USE SUMMARY

THRASH TRACT RESIDENTIAL - **TTR**	13.50 AC.	50.03%
THRASH TRACT OPEN SPACE - **TTO**	13.49 AC.	49.97%
TOTAL	**26.99 AC.**	
*THRASH TRACT PARK OPEN SPACE - **TTO (P)**	8.22 AC.	30.46%

*__TTO (P)__ IS 60.95% OF TOTAL **TTO** ACREAGE

LAND USE LEGEND

- THRASH TRACT RESIDENTIAL - **TTR**
- THRASH TRACT OPEN SPACE - **TTO**
- THRASH TRACT PARK OPEN SPACE - **TTO (P)**

660' RADIUS

330' RADIUS

CULTURAL PRESERVE PARK

FLOOD ZONE AE (ELEV. 10)

FLOOD ZONE X

POTENTIAL POND

GOOSE CREEK RESERVOIR

23" PINE WITH EAGLE'S NEST

EAGLE PRESERVE

CONCEPTUAL PUMP STATION

25' COURTESY BUFFER

CROSS BILL TRAIL 50' R/W

WHISPERING OAK DRIVE 60' R/W

NOTE: THIS PLAN IS CONCEPTUAL IN NATURE AND SUBJECT TO CHANGE.

0 30 60 120
SCALE: 1" = 60'

N W E S

SEAMONWHITESIDE

LAND USE PLAN - THRASH TRACT

STANLEY MARTIN HOMES
HANAHAN, SC
4/6/2021

LOT/BUILDING STANDARDS

SINGLE FAMILY DETACHED	SINGLE FAMILY ATTACHED
MINIMUM LOT WIDTH: 40'	MINIMUM LOT WIDTH: 20'
MINIMUM LOT DEPTH: 120'	MINIM LOT DEPTH: 75'
FRONT SETBACK: 5'	FRONT SETBACK: 5'
SIDE SETBACK: 5'	SIDE SETBACK: 5'
REAR SETBACK: 10'	REAR SETBACK 10'
TOTAL UNITS: **40**	TOTAL UNITS: **41**

TOTAL LOTS: 81

DENSITY TABLE

TOTAL ACREAGE	ALLOWABLE DENSITY	MAXIMUM UNITS
26.99 AC	**3 DU/AC**	**81 UNITS**

LEGEND

- PRESERVED GRAND TREE (APPROXIMATE LOCATION)
- PROPOSED STREET TREE (50' - 60' SPACING O.C.)
- TRAIL NETWORK (5' - 8' VARIABLE WIDTH)
- PROPERTY BOUNDARY
- RIGHT-OF-WAY
- CENTER LINE
- WETLAND LINE
- LOT LINE
- BUILDING SETBACK
- BUFFER LINE
- FLOOD LINE

TRAIL NETWORK (TYP.)
35' - 50' BUFFER ZONE (35' MINIMUM)
660' RADIUS
330' RADIUS
CULTURAL PRESERVE PARK
FLOOD ZONE AE (ELEV. 10)
FLOOD ZONE X
POTENTIAL POND
COMMUNITY DOCK WITH BOAT SLIPS
GOOSE CREEK RESERVOIR
WETLAND (TYP.)
PROPERTY LINE (TYP.)
FLOOD LINE (TYP.)
23" PINE WITH EAGLE'S NEST
GRAND TREE (TYP.)
EAGLE PRESERVE
SINGLE FAMILY ATTACHED LOT END LOT 29.5' X 75' (TYP.)
SINGLE FAMILY ATTACHED LOT 20' X 75' (TYP.)
PUBLIC ROW (TYP.)
STREET TREE (TYP.) AT 50'-60' O.C.
CONCEPTUAL PUMP STATION
CONCEPTUAL PUMP STATION LOCATION
25' COURTESY BUFFER
CROSS BILL TRAIL 50' R/W
WHISPERING OAK DRIVE 60' R/W

NOTE: THIS PLAN IS CONCEPTUAL IN NATURE AND SUBJECT TO CHANGE.

0 30 60 120
SCALE: 1" = 60'

N W E S

SEAMONWHITESIDE

MASTERPLAN - THRASH TRACT

STANLEY MARTIN HOMES
HANAHAN, SC
4/6/2021

Appendix C

Traffic Impact Analysis

Hanahan Thrash Tract
Hanahan, SC

Prepared for:
Stanley Martin Homes

B I H L

ENGINEERING

Traffic Impact Analysis
Hanahan Thrash Tract
Hanahan, SC

Prepared for:
Stanley Martin Homes

Prepared by:
Bihl Engineering, LLC
306 Meeting Street, Suite 300
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(843) 637-9187

April 2021

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1.0 Executive Summary

The Hanahan Thrash Tract development is proposed to be located off of Whispering Oak Drive in Hanahan, SC. The development is proposed to include 40 single-family homes and 43 townhomes, and it will be accessed via a new roadway connected to the western end of Whispering Oak Drive. For the purposes of this traffic impact analysis (TIA), the development is assumed to be complete in 2026.

The study area for the TIA includes the following existing intersections.

- Foster Creek Road at Snake Road (signalized)
- Foster Creek Road at Whispering Oak Drive (unsignalized)
- Foster Creek Road at Song Sparrow Way/Williams Lane (roundabout)
- Foster Creek Road at Tanner Ford Boulevard (unsignalized)

Due to the COVID-19 pandemic, traffic volumes and travel patterns have been impacted. All turning movements were adjusted using AM and PM adjustment factors as stated in the SCDOT District 6 *Traffic Impact Analyses during COVID-19 Pandemic (Update)* memorandum (February 5, 2021). These adjusted traffic volumes were used in the Existing conditions analysis.

Based on the results of the analysis, the intersection of Foster Creek Road at Snake Road currently operates with elevated delay during the AM peak hour and acceptably during the PM peak hour. The intersection of Foster Creek Road at Song Sparrow Way/Williams Lane currently operates acceptably during the AM and PM peak hours. The intersections are projected to continue to operate with elevated delay during the AM peak hour and acceptably during the PM peak hour in the 2026 No Build and 2026 Build conditions. The proposed development contributes less than 1% of the traffic at the intersection of Foster Creek Road at Snake Road in the 2026 AM and PM peak hour Build conditions. The proposed development contributes less than 3% of the traffic during the AM peak hour and less than 5% during the PM peak hour at the intersection of Foster Creek Road at Song Sparrow Way/Williams Lane in the 2026 Build conditions.

The unsignalized intersection of Foster Creek Road at Whispering Oak Drive currently operates acceptably and is projected to continue to operate acceptably in the 2026 No Build and 2026 Build conditions. Based on SCDOT *Roadway Design Manual* (2017) guidelines, an exclusive northbound left-turn lane “should be considered” on Foster Creek Road at Whispering Oaks Drive. The turn lane was included in the 2026 Build analysis.

The unsignalized intersection of Foster Creek Road at Tanner Ford Boulevard currently operates acceptably and is projected to continue to operate acceptably in the 2026 No Build and 2026 Build conditions.

Based on results of the analysis, the following transportation-related improvement is recommended as a part of this project:

- Foster Creek Road at Whispering Oak Drive
    - Installation of an exclusive northbound left-turn lane on Foster Creek Road

Results in this report are based solely on traffic studies and are considered input into final design considerations. The final design will be determined by the project engineer after other design elements (such as, but not limited to, utilities, stormwater, etc.) are taken into consideration.

2.0 Introduction

The Hanahan Thrash Tract development is proposed to be located off of Whispering Oak Drive in Hanahan, SC. The development is proposed to include 40 single-family homes and 43 townhomes, and it will be accessed via a new roadway connected to the western end of Whispering Oak Drive. For the purposes of this TIA, the development is assumed to be complete in 2026.

This report presents the trip generation, distribution, traffic analyses, and any recommendations for transportation improvements required to meet anticipated traffic demands.

3.0 Inventory

3.1 Study Area

The study area for the TIA includes the following existing intersections.

- Foster Creek Road at Snake Road
- Foster Creek Road at Whispering Oak Drive
- Foster Creek Road at Song Sparrow Way/Williams Lane
- Foster Creek Road at Tanner Ford Boulevard

Figure 1 (Appendix) shows the proposed development location and **Figure 2 (Appendix)** shows the project conceptual site plan.

3.2 Existing Conditions

Roadways in the project vicinity include Foster Creek Road, Snake Road, Tanner Ford Boulevard, Whispering Oak Drive, Song Sparrow Way, and Williams Lane.

Foster Creek Road (S-809) is a two-lane, undivided major collector roadway with a posted speed limit of 35 miles per hour (mph) north of the project, 45 mph in the vicinity of the project, and 40 mph south of the project.

Snake Road (S-208) is a two-lane, undivided major collector roadway with a posted speed limit of 35 mph in the study area. Per South Carolina Department of Transportation (SCDOT) counts, Snake Road has a 2019 annual average daily traffic (AADT) of 13,100 vehicles per day (vpd) in the study area.

Tanner Ford Boulevard is a two-lane, divided major collector roadway with a posted speed limit of 35 mph in the study area.

Whispering Oak Drive is a two-lane, undivided roadway with a posted speed limit of 25 mph. The proposed development will connect to Whispering Oak Drive.

Song Sparrow Way is a two-lane, undivided roadway with a posted speed limit of 25 mph.

Williams Lane is a two-lane, undivided roadway with a posted speed limit of 30 mph.

Figure 3 (Appendix) shows the existing roadway laneage in the study area.

4.0 Traffic Generation

The potential trip generation of the proposed development was determined using trip generation information from the Institute of Transportation Engineers' (ITE) *Trip Generation, 10th Edition* (2017).

Table 1 summarizes the AM and PM peak hour trips associated with the proposed development.

Table 1:
Projected Trip Generation

Land Use and Intensity	ITE Land Use Code	AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out
Single-Family Detached Housing – 40 Dwelling Units	210	33	8	25	42	26	16
Multifamily Housing (Low-Rise) – 43 Dwelling Units	220	21	5	16	28	18	10
Net New Trips		**54**	**13**	**41**	**70**	**44**	**26**

Source: *ITE Trip Generation, 10th Edition*

As shown in **Table 1**, the proposed development is projected to generate 54 new trips (13 entering, 41 exiting), during the AM peak hour and 70 new trips (44 entering, 26 exiting), during the PM peak hour.

5.0 Site Traffic Distribution

The proposed development traffic was assigned to the surrounding roadway network. The directional distribution and assignment were based on qualitative knowledge of the project area, quantitative application of existing traffic patterns, and expected trip length.
The following general trip distribution was applied to the project trips associated with the planned development.

- 70% to/from the east on Tanner Ford Boulevard
- 5% to/from the east on Williams Lane
- 5% to/from the east on Snake Road
- 20% to/from the west on Snake Road

Figure 4 (**Appendix**) shows the traffic distribution for the proposed development in the study area.

6.0 Traffic Volumes

6.1 Existing Traffic

Peak hour intersection turning movement counts including vehicular, pedestrian, and heavy vehicle traffic were performed in March 2021 from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM at the following intersections:

- Foster Creek Road at Snake Road
- Foster Creek Road at Whispering Oak Drive
- Foster Creek Road at Song Sparrow Way/Williams Lane
- Foster Creek Road at Tanner Ford Boulevard

Due to the COVID-19 pandemic, traffic volumes and travel patterns have been impacted. All turning movements were adjusted using AM and PM adjustment factors of 1.15 and 1.02 for the AM and PM peak hours, respectively, as stated in the SCDOT District 6 *Traffic Impact Analyses during COVID-19 Pandemic (Update)* memorandum (February 5, 2021). These adjusted traffic volumes were used in the Existing conditions analysis.

Existing peak hour intersection turning movement volumes are shown on **Figure 5 (Appendix)**. The turning movement count data is included in the **Appendix.**

6.2 2026 No Build Traffic

Historic growth is the increase in existing traffic volumes due to usage increases and non-specific growth throughout the area. A growth rate of 3.5% per year was applied to the study area in the analysis.

The 2026 No Build traffic volumes include existing traffic grown to the buildout year. **Figure 6** (**Appendix**) and **Figure 7** (**Appendix**) show the 2026 No Build AM and PM peak hour traffic volumes, respectively.

6.3 Project Traffic

The AM peak hour and PM peak hour projected proposed development trips were assigned based on the trip distribution discussed in **Section 5.**

6.4 2026 Build Traffic

The 2026 total traffic volumes include the 2026 background traffic and the proposed development traffic at buildout. The 2026 AM and PM peak hour total traffic volumes are shown in **Figure 6** (**Appendix**) and **Figure 7** (**Appendix**), respectively.

Intersection volume development worksheets are included in the **Appendix**.

7.0 Capacity Analysis

Capacity analyses were performed for the AM and PM peak hours in the Existing, 2026 No Build, and 2026 Build conditions using the Synchro, Version 10, and SIDRA 7.0 software programs to determine the operating characteristics of the adjacent roadway network and the impacts of the proposed development. The analyses were conducted with methodologies contained in the *Highway Capacity Manual, 6th Edition* (HCM 6) (Transportation Research Board, December 2016). The Synchro and SIDRA output sheets are included in the **Appendix**.

Capacity of an intersection is defined as the maximum number of vehicles that can pass through an intersection during a specified time, typically an hour. Capacity is described by level of service (LOS) for the operating characteristics of an intersection. LOS is a qualitative measure that describes operational conditions and motorist perceptions within a traffic stream. HCM 6 defines six levels of service, LOS A through LOS F, with A being the best and F being the worst.

LOS for signalized intersections is determined by the overall intersection operations and is reflected in average delay per vehicle. LOS D or better is typically considered acceptable for signalized intersections.

LOS for a two-way stop-controlled (TWSC) intersection is determined by the delay of the poorest performing minor approach, as LOS is not defined for TWSC intersections as a whole. At a TWSC intersection, the major street experiences little to no delay. LOS for a roundabout is determined by the overall intersection operations and is reflected in seconds per vehicle.

Capacity analyses were performed for the Existing, 2026 No Build, and 2026 Build AM and PM peak hour traffic conditions at the following intersections:

- Foster Creek Road at Snake Road (signalized)
- Foster Creek Road at Whispering Oak Drive (unsignalized)
- Foster Creek Road at Song Sparrow Way/Williams Lane (roundabout)
- Foster Creek Road at Tanner Ford Boulevard (unsignalized)

Any heavy vehicle percentages (HV%) below 2.0% were adjusted to 2.0% in all conditions for the purposes of the analysis.

Existing signal timings were applied to the intersection of Foster Creek Road at Snake Road in the Existing, 2026 No Build, and 2026 Build conditions.

Table 2 summarizes LOS and control delay (average seconds of delay per vehicle) for the projected Existing, 2026 No Build, and 2026 Build AM and PM peak hour conditions.

Table 2:
Level of Service and Delay (average seconds per vehicle)

Intersection	Traffic Control[1]	Existing Conditions		2026 No Build Conditions		2026 Build Conditions	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Foster Creek Rd. at Snake Rd.	S	F (106.4)	C (24.5)	F (159.0)	C (32.9)	F (163.9)	C (34.4)
Foster Creek Rd. at Whispering Oak Dr.	U	B (13.5) – EB	B (12.6) – EB	C (15.6) – EB	B (14.1) – EB	C (19.1) – EB	C (15.4) – EB
Foster Creek Rd. at Song Sparrow Way/ Williams Ln.	R	C (16.2)	A (2.9)	E (36.7)	A (7.7)	E (42.4)	A (8.1)
Foster Creek Rd. at Tanner Ford Blvd.	U	B (10.2) – WB	C (15.0) – WB	B (11.9) – SB[2]	C (20.4) – WB	B (12.5) – SB[2]	C (22.7) – WB

1. S = Signalized, U = Unsignalized
2. Delay on the southbound approach was found to be longer than the westbound stop-controlled approach due to the number of southbound left turning vehicles.

7.1 Foster Creek Road at Snake Road

As shown in **Table 2**, the signalized intersection of Foster Creek Road at Snake Road currently operates with elevated delay at LOS F during the AM peak hour and at LOS C during the PM peak hour. The intersection is projected to continue to operate with elevated delay at LOS F during the AM peak hour and acceptably at LOS C during the PM peak hour in the 2026 No Build and 2026 Build conditions.

Based on the projected traffic volumes, this development is expected to contribute less than one percent of the total traffic volumes at the intersection of Foster Creek Road at Snake Road in the 2026 Build AM and PM peak hours. Due to the small percentage of site traffic at the intersection, no site-related improvements are recommended at this intersection.

7.2 Foster Creek Road at Whispering Oak Drive

As shown in **Table 2**, the unsignalized intersection of Foster Creek Road at Whispering Oak Drive currently operates acceptably at LOS B during the AM and PM peak hour conditions. The intersection is projected to operate acceptably at LOS C during the AM peak hour and at LOS B during the PM peak hour in the 2026 No Build conditions.

SCDOT *Roadway Design Manual* (2017) guidelines were reviewed at the unsignalized intersection of Foster Creek Road at Whispering Oak Drive to determine if criteria were met for the consideration of an exclusive northbound left-turn lane on Foster Creek Road. Based on a comparison of the projected 2026 Build AM and PM peak hour traffic volumes to the criteria, it was determined that an exclusive northbound left-turn lane on Foster Creek Road at Whispering Oak Drive "should be considered" for a two-lane roadway and is therefore recommended. The turn lane analysis chart is included in the **Appendix**. The northbound left-turn lane was included in the 2026 Build analysis. With the addition of the recommended turn lane, the intersection is projected to operate acceptably at LOS C during the AM and PM peak hours in the 2026 Build conditions.

7.3 Foster Creek Road at Song Sparrow Way/Williams Lane

As shown in **Table 2**, the roundabout at the intersection of Foster Creek Road at Song Sparrow Way/Williams Lane currently operates acceptably at LOS C during the AM peak hour and at LOS A during the PM peak hour. The roundabout is projected to operate with elevated delay at LOS E during the AM peak hour and acceptably at LOS A during the PM peak hour in the 2026 No Build and 2026 Build conditions.

Based on the projected traffic volumes, this development is expected to contribute less than three percent of the total traffic volumes at the intersection of Foster Creek Road at Song Sparrow Way/Williams Lane in the 2026 Build AM peak hour and less than five percent in the 2026 Build PM peak hour. Due to the small percentage of site traffic at the intersection, no site-related improvements are recommended at this intersection.

7.4 Foster Creek Road at Tanner Ford Boulevard

As shown in **Table 2**, the unsignalized intersection of Foster Creek Road at Tanner Ford Boulevard currently operates acceptably at LOS B during the AM peak hour and at LOS C during the PM peak hour conditions. The intersection is projected to continue to operate acceptably at LOS B (southbound approach) during the AM peak hour and at LOS C during the PM peak hour in the 2026 No Build and 2026 Build conditions. While not stop-controlled, due to the number of southbound left turning vehicles during the AM peak hour, the southbound approach experience higher delay than the stop controlled westbound approach.

8.0 Conclusion

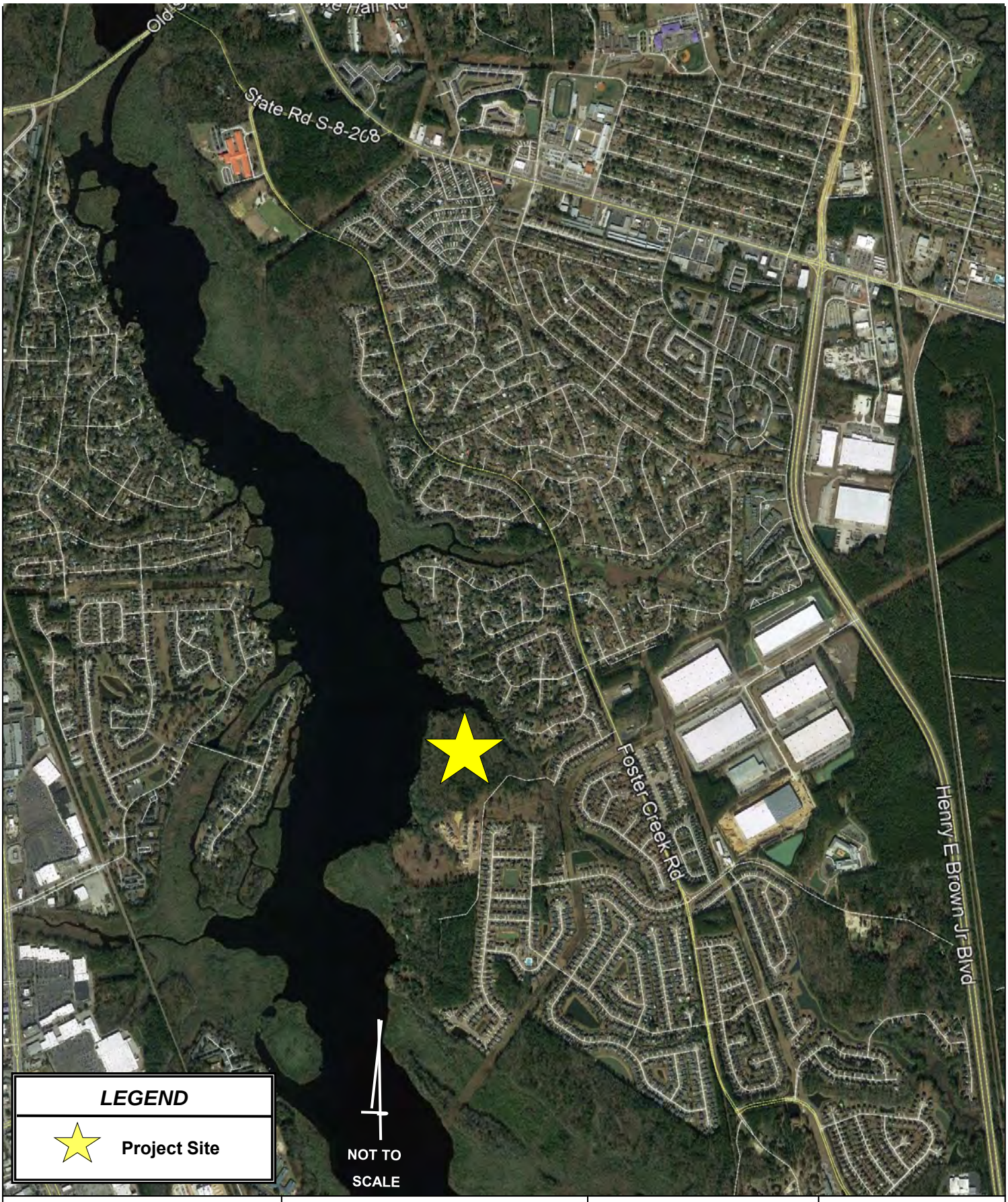
The Hanahan Thrash Tract development is proposed to be located off of Whispering Oak Drive in Hanahan, SC. The development is proposed to include 40 single-family homes and 43 townhomes, and it will be accessed via a new roadway connected to the western end of Whispering Oak Drive. For the purposes of this TIA, the development is assumed to be complete in 2026.

Based on results of the analysis, the following transportation-related improvement is recommended as a part of this project:

- Foster Creek Road at Whispering Oak Drive
    - Installation of an exclusive northbound left-turn lane on Foster Creek Road

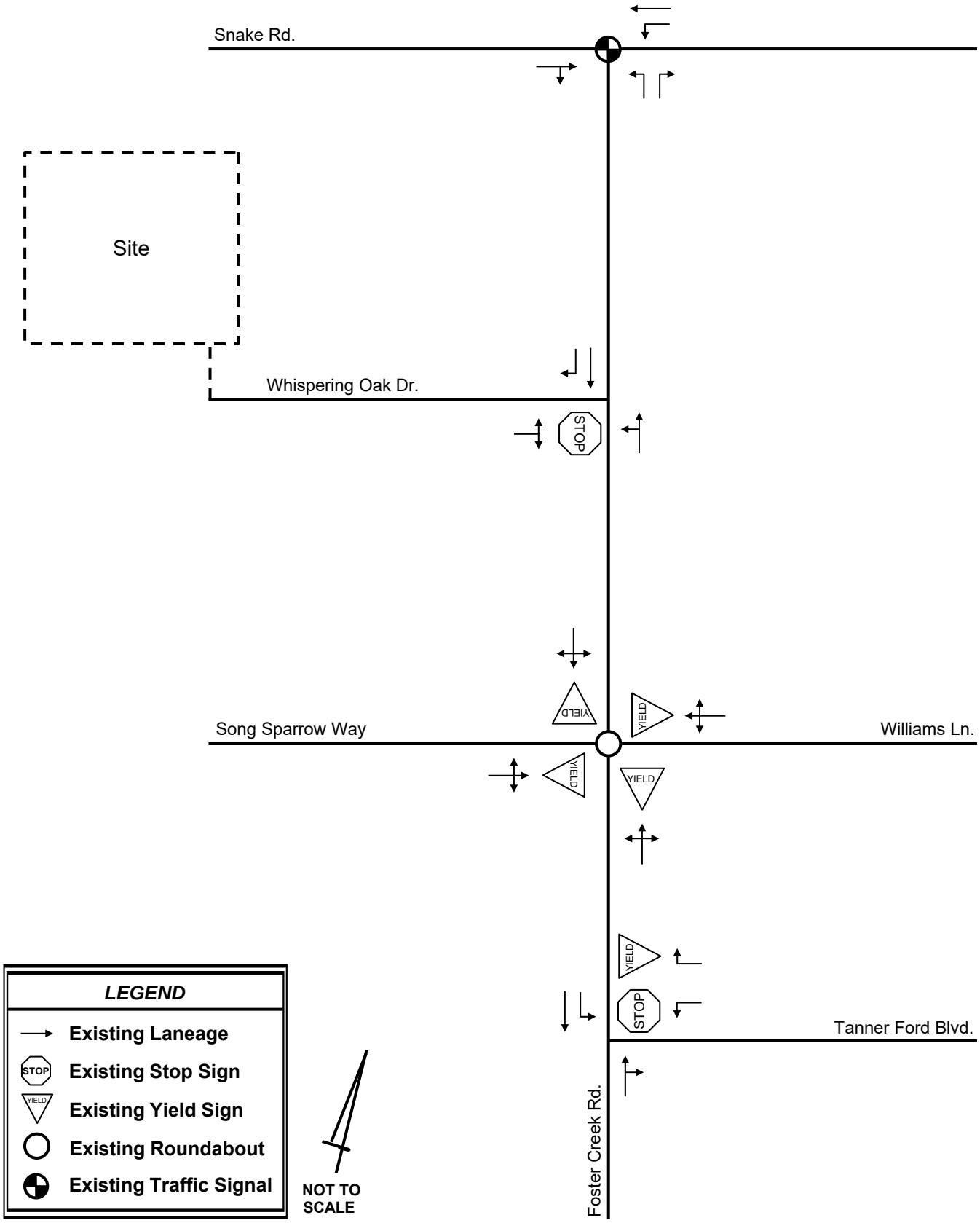
Results in this report are based solely on traffic studies and are considered input into final design considerations. The final design will be determined by the project engineer after other design elements (such as, but not limited to, utilities, stormwater, etc.) are taken into consideration.

Appendix

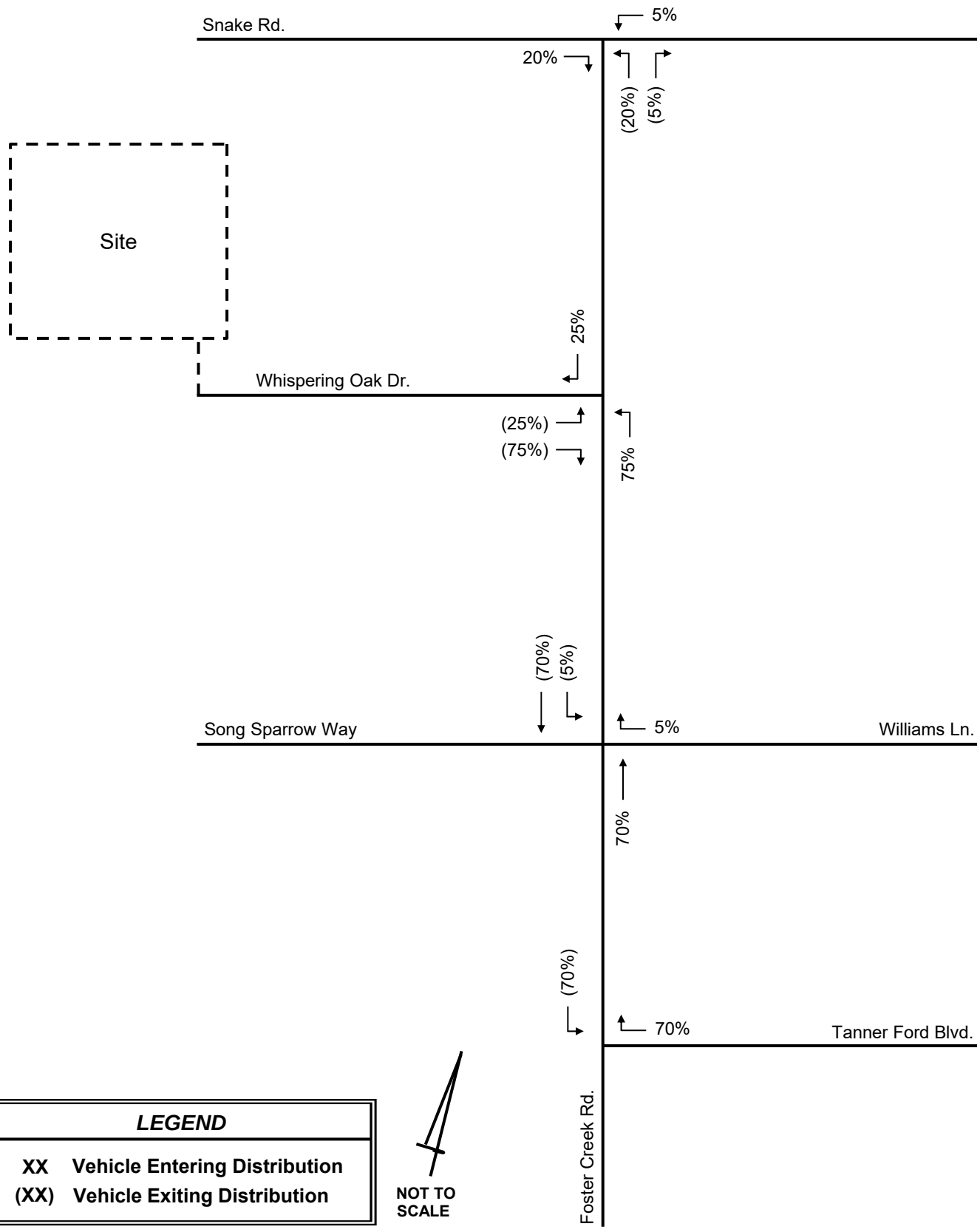


BIHL ENGINEERING	**Hanahan Thrash Tract Traffic Impact Analysis**	**Site Location**	**Figure 1**

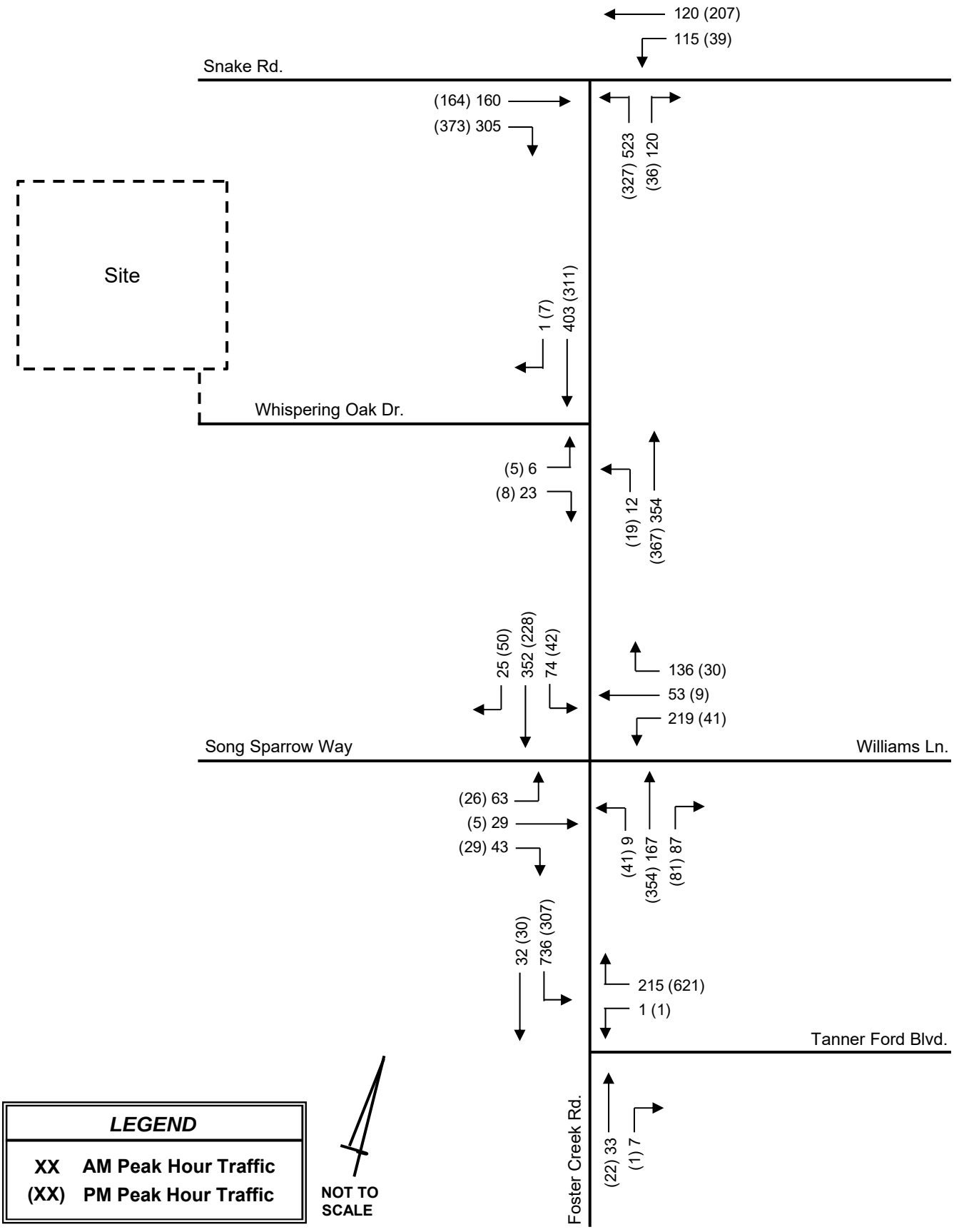
Source: Seamon Whiteside	Hanahan Thrash Tract Traffic Impact Analysis	Conceptual Site Plan	Figure 2



BIHL ENGINEERING	Hanahan Thrash Tract Traffic Impact Analysis	Existing Laneage	Figure 3



BIHL ENGINEERING	Hanahan Thrash Tract Traffic Impact Analysis	Trip Distribution	Figure 4

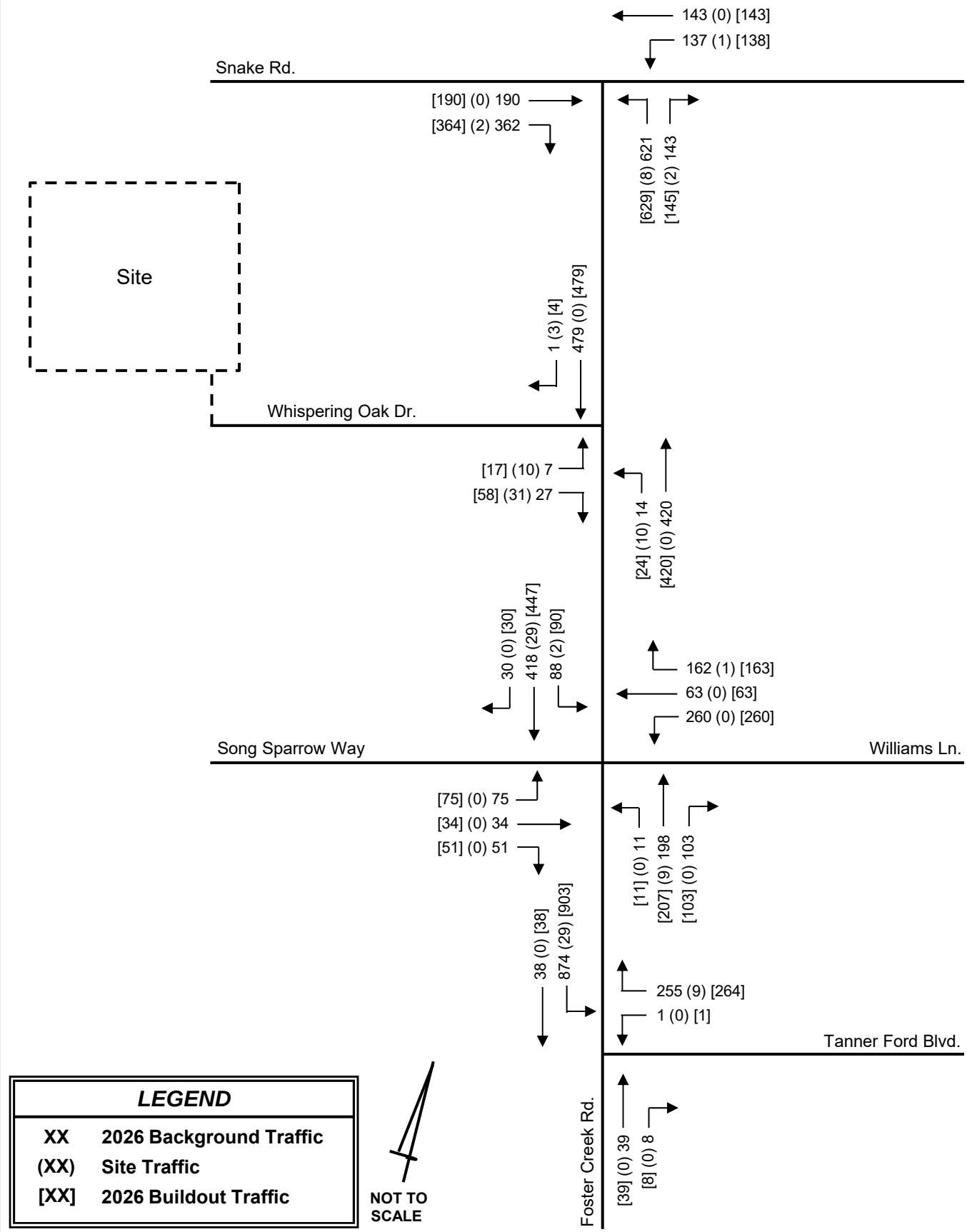


BIHL ENGINEERING

Hanahan Thrash Tract Traffic Impact Analysis

Existing Traffic Volumes

Figure 5

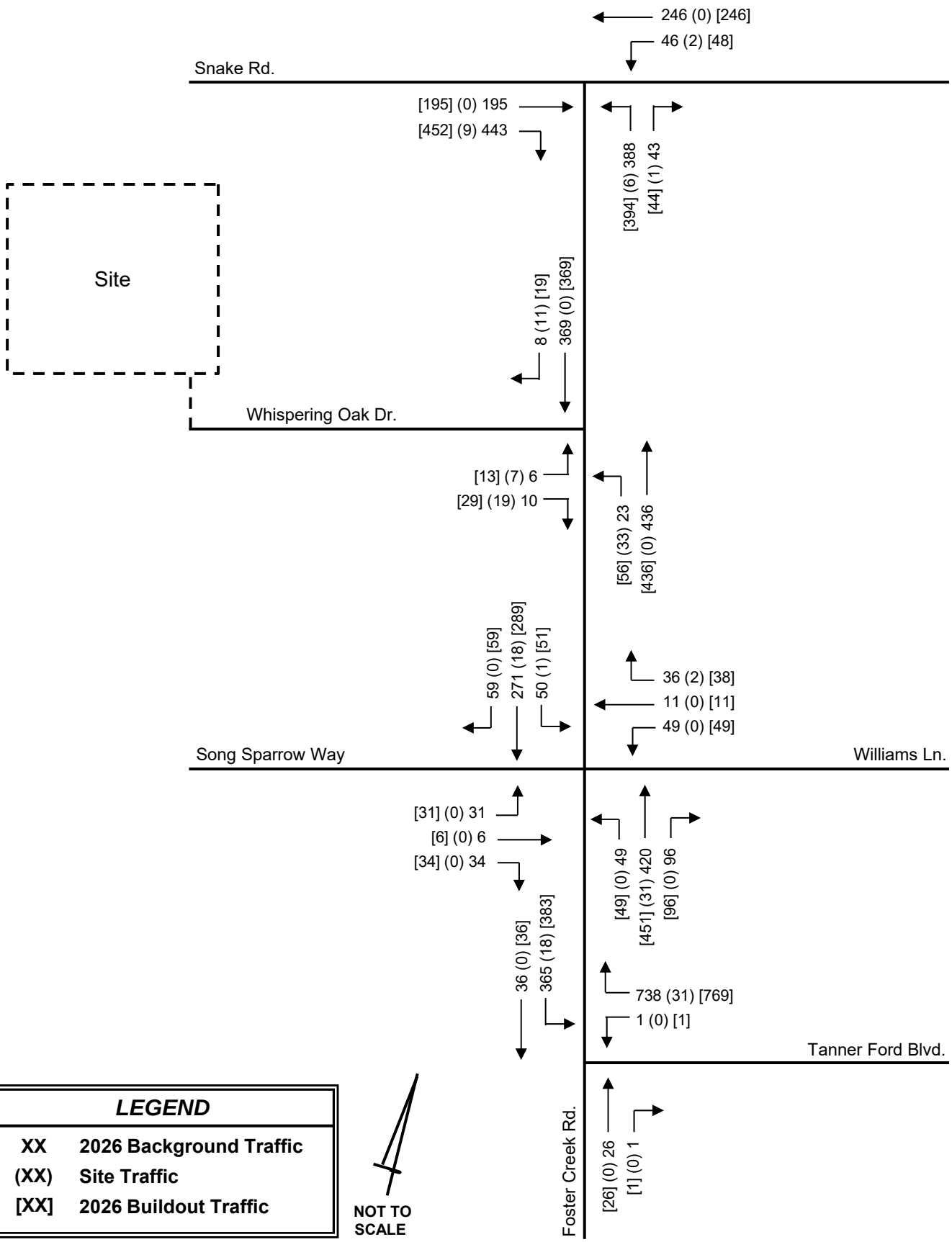


BIHL ENGINEERING

Hanahan Thrash Tract Traffic Impact Analysis

2026 AM Peak Traffic Volumes

Figure 6



BIHL ENGINEERING

Hanahan Thrash Tract Traffic Impact Analysis

2026 PM Peak Traffic Volumes

Figure 7

SHORT COUNTS

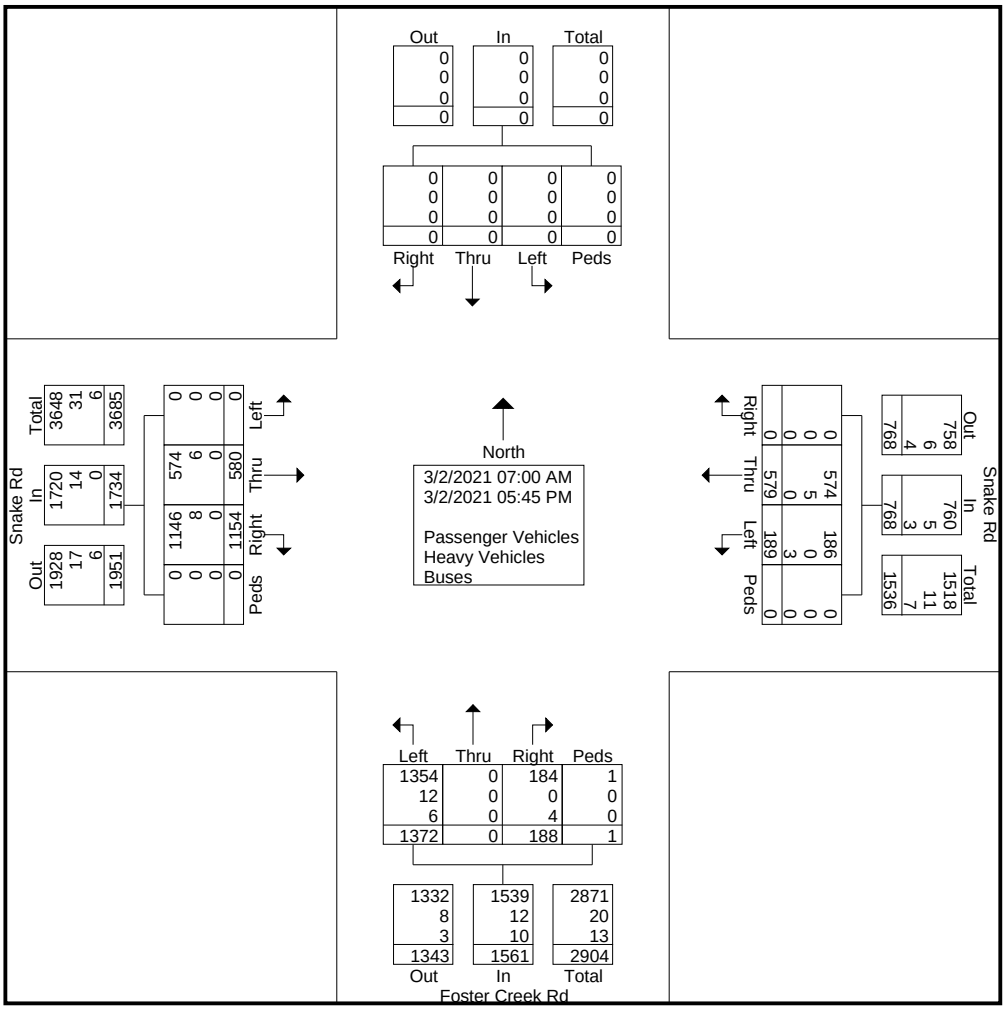
File Name : Snake Rd @ Foster Creek Rd
Site Code :
Start Date : 3/2/2021
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

	From North				Snake Rd From East				Foster Creek Rd From South				Snake Rd From West				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00 AM	0	0	0	0	53	21	0	0	111	0	49	0	0	25	93	0	352
07:15 AM	0	0	0	0	25	27	0	0	163	0	40	0	0	40	61	0	356
07:30 AM	0	0	0	0	15	27	0	0	105	0	8	0	0	37	59	0	251
07:45 AM	0	0	0	0	7	29	0	0	76	0	7	0	0	37	52	0	208
Total	0	0	0	0	100	104	0	0	455	0	104	0	0	139	265	0	1167
08:00 AM	0	0	0	0	2	14	0	0	75	0	5	0	0	36	45	0	177
08:15 AM	0	0	0	0	4	20	0	0	75	0	9	0	0	29	35	0	172
08:30 AM	0	0	0	0	3	38	0	0	76	0	6	0	0	31	26	0	180
08:45 AM	0	0	0	0	4	40	0	0	90	0	5	0	0	26	42	0	207
Total	0	0	0	0	13	112	0	0	316	0	25	0	0	122	148	0	736
04:00 PM	0	0	0	0	12	59	0	0	93	0	7	0	0	46	75	0	292
04:15 PM	0	0	0	0	7	50	0	0	70	0	8	0	0	38	92	0	265
04:30 PM	0	0	0	0	9	43	0	0	79	0	7	0	0	39	97	0	274
04:45 PM	0	0	0	0	10	51	0	0	79	0	13	0	0	38	102	0	293
Total	0	0	0	0	38	203	0	0	321	0	35	0	0	161	366	0	1124
05:00 PM	0	0	0	0	11	44	0	0	80	0	10	0	0	27	98	0	270
05:15 PM	0	0	0	0	6	46	0	0	61	0	3	0	0	43	102	0	261
05:30 PM	0	0	0	0	7	31	0	0	72	0	7	1	0	42	96	0	256
05:45 PM	0	0	0	0	14	39	0	0	67	0	4	0	0	46	79	0	249
Total	0	0	0	0	38	160	0	0	280	0	24	1	0	158	375	0	1036
Grand Total	0	0	0	0	189	579	0	0	1372	0	188	1	0	580	1154	0	4063
Apprch %	0	0	0	0	24.6	75.4	0	0	87.9	0	12	0.1	0	33.4	66.6	0	
Total %	0	0	0	0	4.7	14.3	0	0	33.8	0	4.6	0	0	14.3	28.4	0	
Passenger Vehicles	0	0	0	0	186	574	0	0	1354	0	184	1	0	574	1146	0	4019
% Passenger Vehicles	0	0	0	0	98.4	99.1	0	0	98.7	0	97.9	100	0	99	99.3	0	98.9
Heavy Vehicles	0	0	0	0	0	5	0	0	12	0	0	0	0	6	8	0	31
% Heavy Vehicles	0	0	0	0	0	0.9	0	0	0.9	0	0	0	0	1	0.7	0	0.8
Buses	0	0	0	0	3	0	0	0	6	0	4	0	0	0	0	0	13
% Buses	0	0	0	0	1.6	0	0	0	0.4	0	2.1	0	0	0	0	0	0.3

SHORT COUNTS

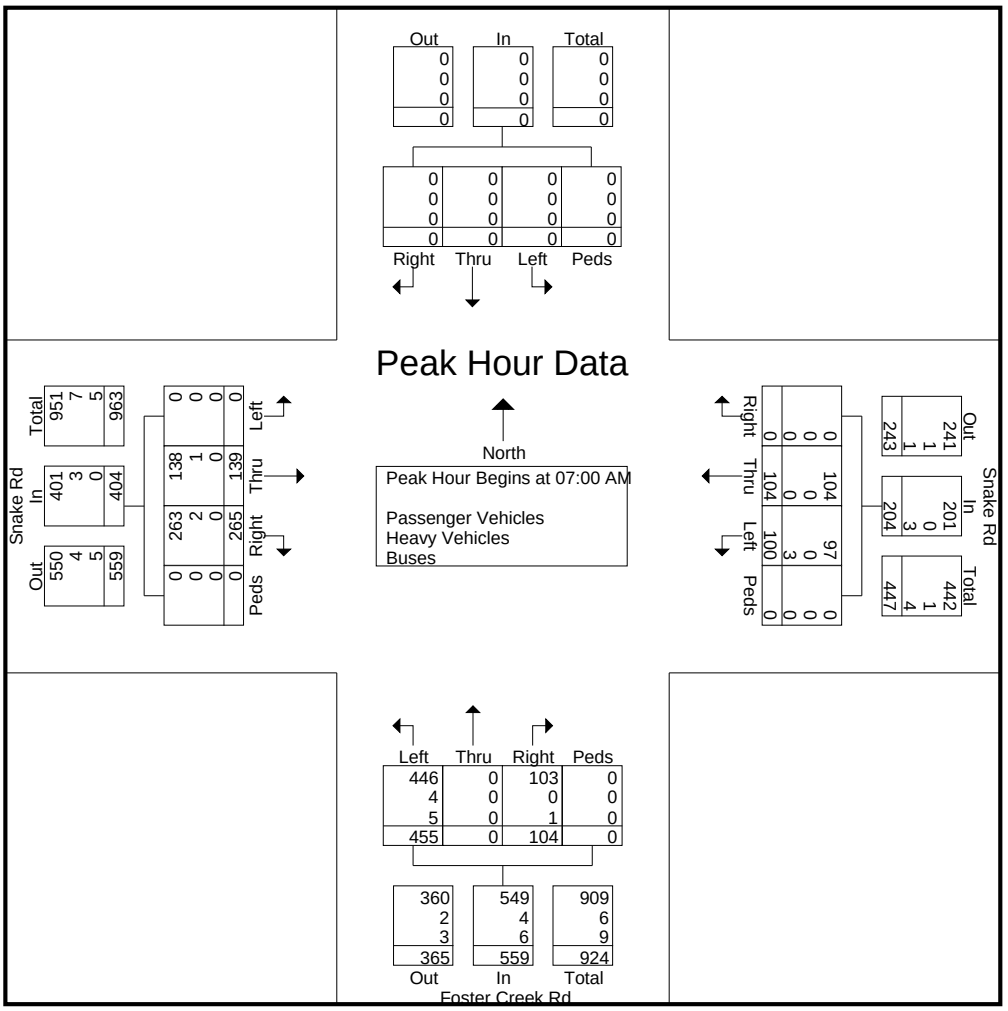
File Name : Snake Rd @ Foster Creek Rd
Site Code :
Start Date : 3/2/2021
Page No : 2



SHORT COUNTS

File Name : Snake Rd @ Foster Creek Rd
Site Code :
Start Date : 3/2/2021
Page No : 3

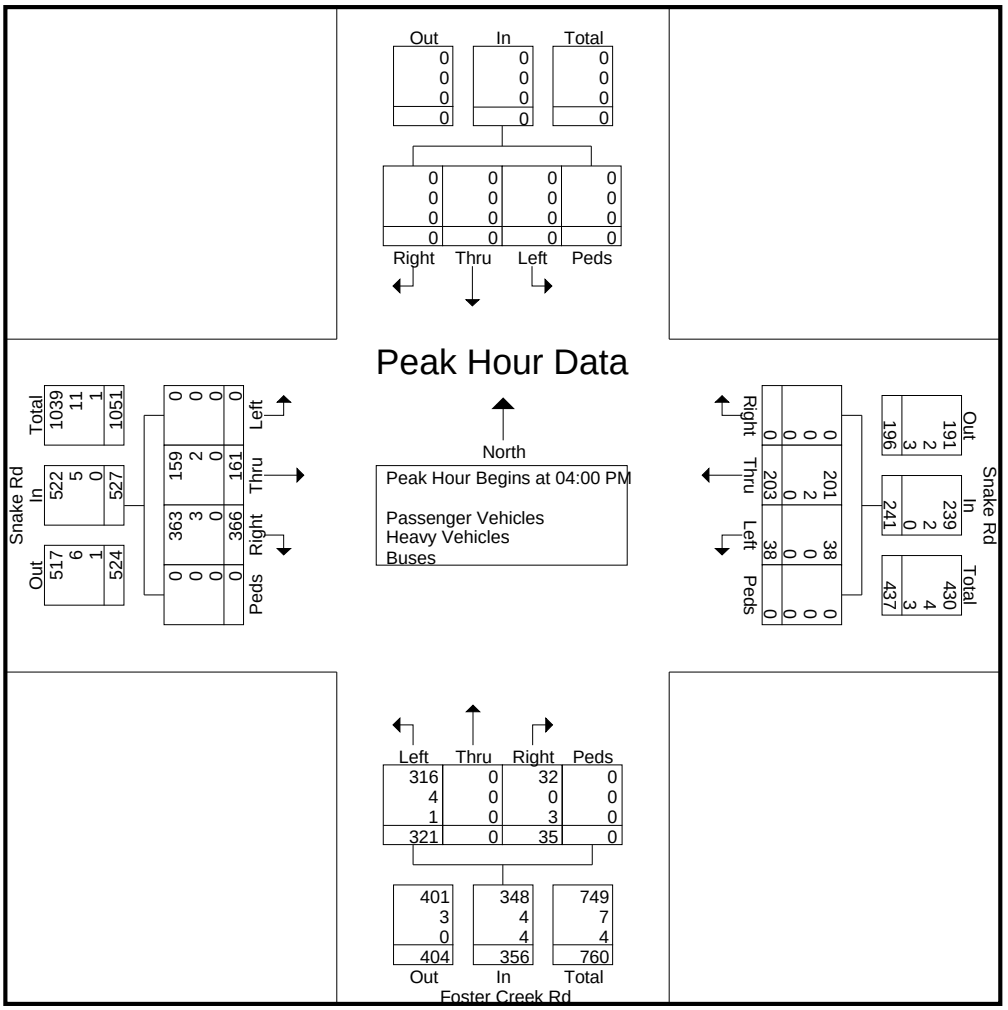
	From North					Snake Rd From East					Foster Creek Rd From South					Snake Rd From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	0	0	0	**53**	21	0	0	**74**	111	0	**49**	0	160	0	25	**93**	0	**118**	352
07:15 AM	0	0	0	0	0	25	27	0	0	52	**163**	0	40	0	**203**	0	**40**	61	0	101	**356**
07:30 AM	0	0	0	0	0	15	27	0	0	42	105	0	8	0	113	0	37	59	0	96	251
07:45 AM	0	0	0	0	0	7	**29**	0	0	36	76	0	7	0	83	0	37	52	0	89	208
Total Volume	0	0	0	0	0	100	104	0	0	204	455	0	104	0	559	0	139	265	0	404	1167
% App. Total	0	0	0	0		49	51	0	0		81.4	0	18.6	0		0	34.4	65.6	0		
PHF	.000	.000	.000	.000	.000	.472	.897	.000	.000	.689	.698	.000	.531	.000	.688	.000	.869	.712	.000	.856	.820
Passenger Vehicles	0	0	0	0	0	97	104	0	0	201	446	0	103	0	549	0	138	263	0	401	1151
% Passenger Vehicles						97.0					98.0		99.0				99.3	99.2			
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	1	2	0	3	7
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0.9	0	0	0	0.7	0	0.7	0.8	0	0.7	0.6
Buses	0	0	0	0	0	3	0	0	0	3	5	0	1	0	6	0	0	0	0	0	9
% Buses	0	0	0	0	0	3.0	0	0	0	1.5	1.1	0	1.0	0	1.1	0	0	0	0	0	0.8



SHORT COUNTS

File Name : Snake Rd @ Foster Creek Rd
Site Code :
Start Date : 3/2/2021
Page No : 4

	From North					Snake Rd From East					Foster Creek Rd From South					Snake Rd From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	**12**	**59**	0	0	**71**	**93**	0	7	0	**100**	0	**46**	75	0	121	292
04:15 PM	0	0	0	0	0	7	50	0	0	57	70	0	8	0	78	0	38	92	0	130	265
04:30 PM	0	0	0	0	0	9	43	0	0	52	79	0	7	0	86	0	39	97	0	136	274
04:45 PM	0	0	0	0	0	10	51	0	0	61	79	0	**13**	0	92	0	38	**102**	0	**140**	**293**
Total Volume	0	0	0	0	0	38	203	0	0	241	321	0	35	0	356	0	161	366	0	527	1124
% App. Total	0	0	0	0		15.8	84.2	0	0		90.2	0	9.8	0		0	30.6	69.4	0		
PHF	.000	.000	.000	.000	.000	.792	.860	.000	.000	.849	.863	.000	.673	.000	.890	.000	.875	.897	.000	.941	.959
Passenger Vehicles	0	0	0	0	0	38	201	0	0	239	316	0	32	0	348	0	159	363	0	522	1109
% Passenger Vehicles							99.0				98.4		91.4				98.8	99.2			
Heavy Vehicles	0	0	0	0	0	0	2	0	0	2	4	0	0	0	4	0	2	3	0	5	11
% Heavy Vehicles	0	0	0	0	0	0	1.0	0	0	0.8	1.2	0	0	0	1.1	0	1.2	0.8	0	0.9	1.0
Buses	0	0	0	0	0	0	0	0	0	0	1	0	3	0	4	0	0	0	0	0	4
% Buses	0	0	0	0	0	0	0	0	0	0	0.3	0	8.6	0	1.1	0	0	0	0	0	0.4



SHORT COUNTS

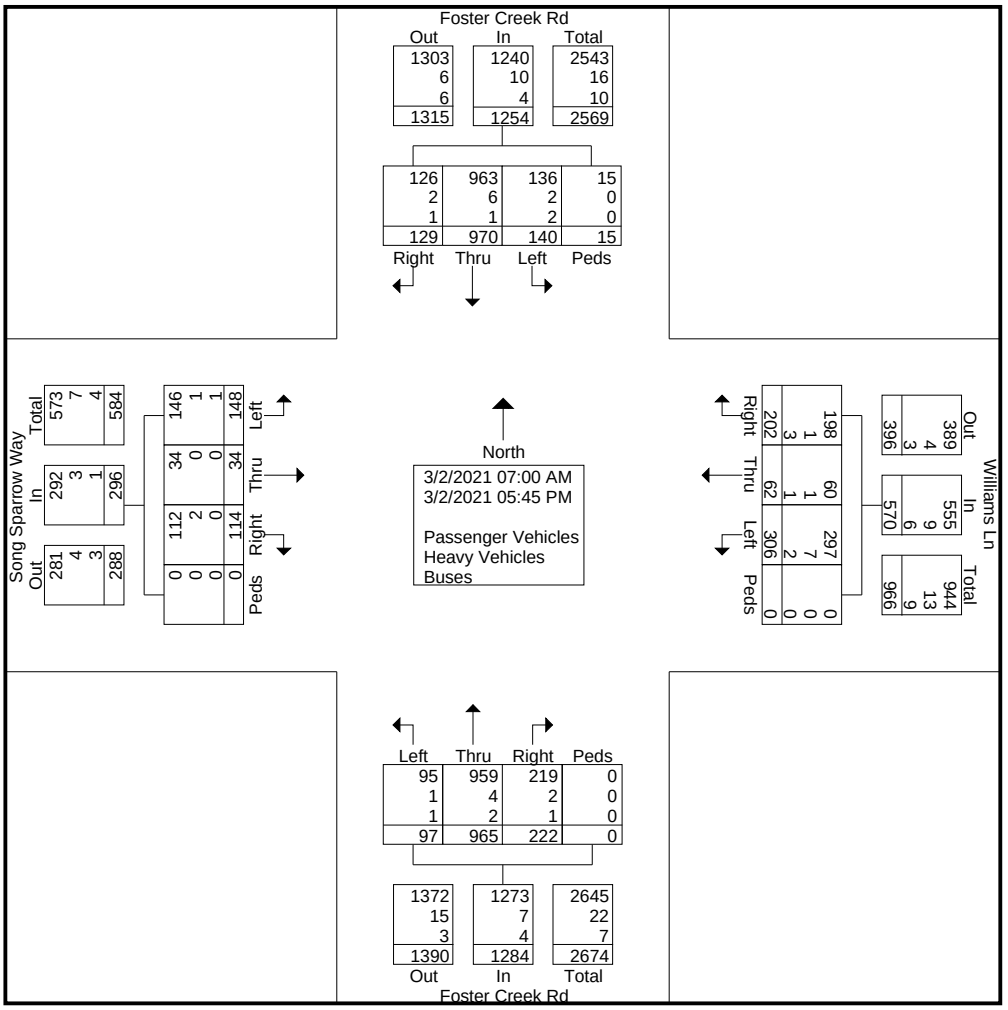
File Name : Foster Creek Rd @ Song Sparrow Way
Site Code :
Start Date : 3/2/2021
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

	Foster Creek Rd From North				Williams Ln From East				Foster Creek Rd From South				Song Sparrow Way From West				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00 AM	40	73	3	10	83	31	52	0	0	20	49	0	11	19	6	0	397
07:15 AM	16	82	3	1	77	15	51	0	1	45	15	0	17	6	9	0	338
07:30 AM	4	75	7	1	11	0	8	0	2	44	6	0	11	0	13	0	182
07:45 AM	4	76	9	0	19	0	7	0	5	36	6	0	16	0	9	0	187
Total	64	306	22	12	190	46	118	0	8	145	76	0	55	25	37	0	1104
08:00 AM	0	65	4	1	6	0	9	0	1	37	5	0	2	0	2	0	132
08:15 AM	2	55	9	0	8	1	1	0	4	42	2	0	13	0	12	0	149
08:30 AM	4	57	7	0	8	0	4	0	8	38	1	0	6	0	12	0	145
08:45 AM	3	50	3	1	6	0	3	0	5	42	6	0	16	1	10	0	146
Total	9	227	23	2	28	1	17	0	18	159	14	0	37	1	36	0	572
04:00 PM	5	51	7	1	14	2	9	0	12	74	14	0	10	2	3	0	204
04:15 PM	5	56	8	0	14	2	10	0	8	73	11	0	8	1	4	0	200
04:30 PM	6	53	15	0	9	1	9	0	9	87	16	0	7	2	10	0	224
04:45 PM	13	63	15	0	11	2	3	0	9	100	22	0	8	1	5	0	252
Total	29	223	45	1	48	7	31	0	38	334	63	0	33	6	22	0	880
05:00 PM	10	55	9	0	10	4	11	0	11	81	22	0	4	0	4	0	221
05:15 PM	12	53	10	0	10	2	6	0	11	79	19	0	6	2	9	0	219
05:30 PM	7	49	10	0	10	2	9	0	4	87	15	0	6	0	4	0	203
05:45 PM	9	57	10	0	10	0	10	0	7	80	13	0	7	0	2	0	205
Total	38	214	39	0	40	8	36	0	33	327	69	0	23	2	19	0	848
Grand Total	140	970	129	15	306	62	202	0	97	965	222	0	148	34	114	0	3404
Apprch %	11.2	77.4	10.3	1.2	53.7	10.9	35.4	0	7.6	75.2	17.3	0	50	11.5	38.5	0	
Total %	4.1	28.5	3.8	0.4	9	1.8	5.9	0	2.8	28.3	6.5	0	4.3	1	3.3	0	
Passenger Vehicles	136	963	126	15	297	60	198	0	95	959	219	0	146	34	112	0	3360
% Passenger Vehicles	97.1	99.3	97.7	100	97.1	96.8	98	0	97.9	99.4	98.6	0	98.6	100	98.2	0	98.7
Heavy Vehicles	2	6	2	0	7	1	1	0	1	4	2	0	1	0	2	0	29
% Heavy Vehicles	1.4	0.6	1.6	0	2.3	1.6	0.5	0	1	0.4	0.9	0	0.7	0	1.8	0	0.9
Buses	2	1	1	0	2	1	3	0	1	2	1	0	1	0	0	0	15
% Buses	1.4	0.1	0.8	0	0.7	1.6	1.5	0	1	0.2	0.5	0	0.7	0	0	0	0.4

SHORT COUNTS

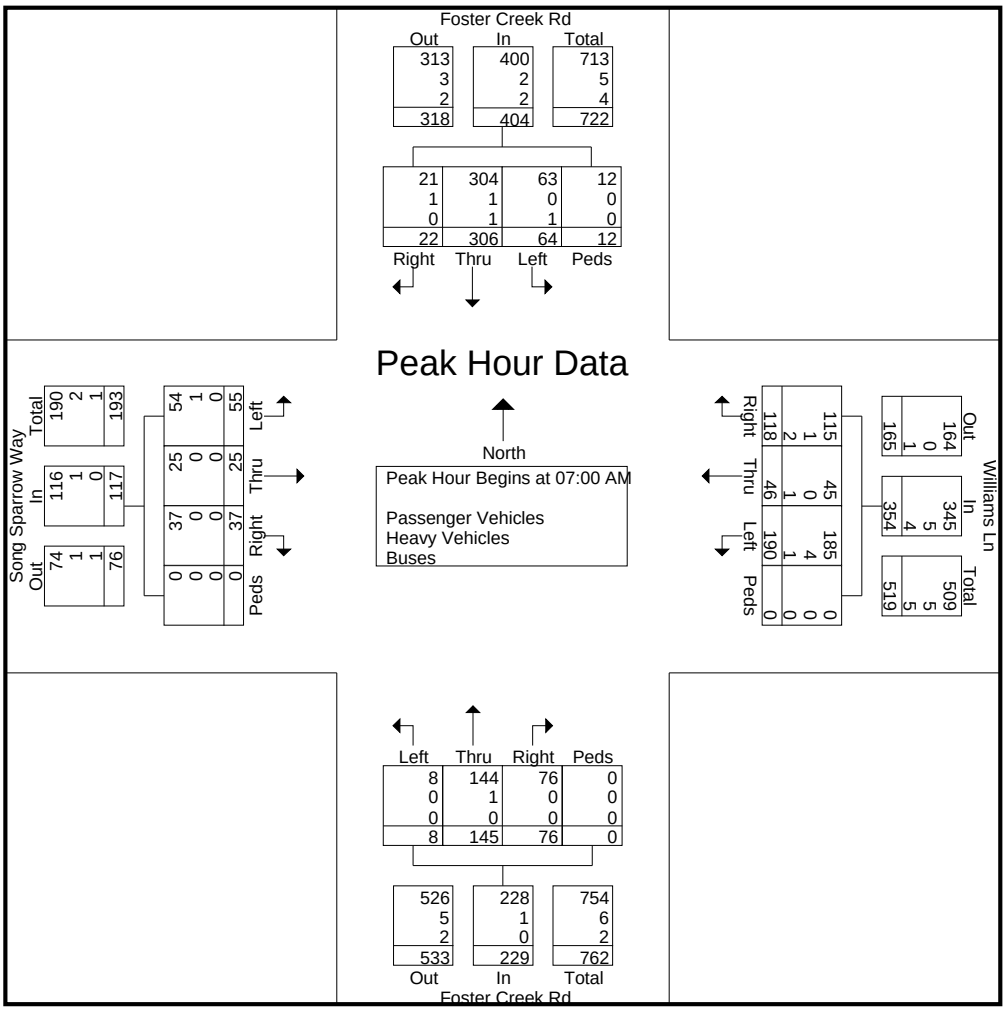
File Name : Foster Creek Rd @ Song Sparrow Way
Site Code :
Start Date : 3/2/2021
Page No : 2



SHORT COUNTS

File Name : Foster Creek Rd @ Song Sparrow Way
Site Code :
Start Date : 3/2/2021
Page No : 3

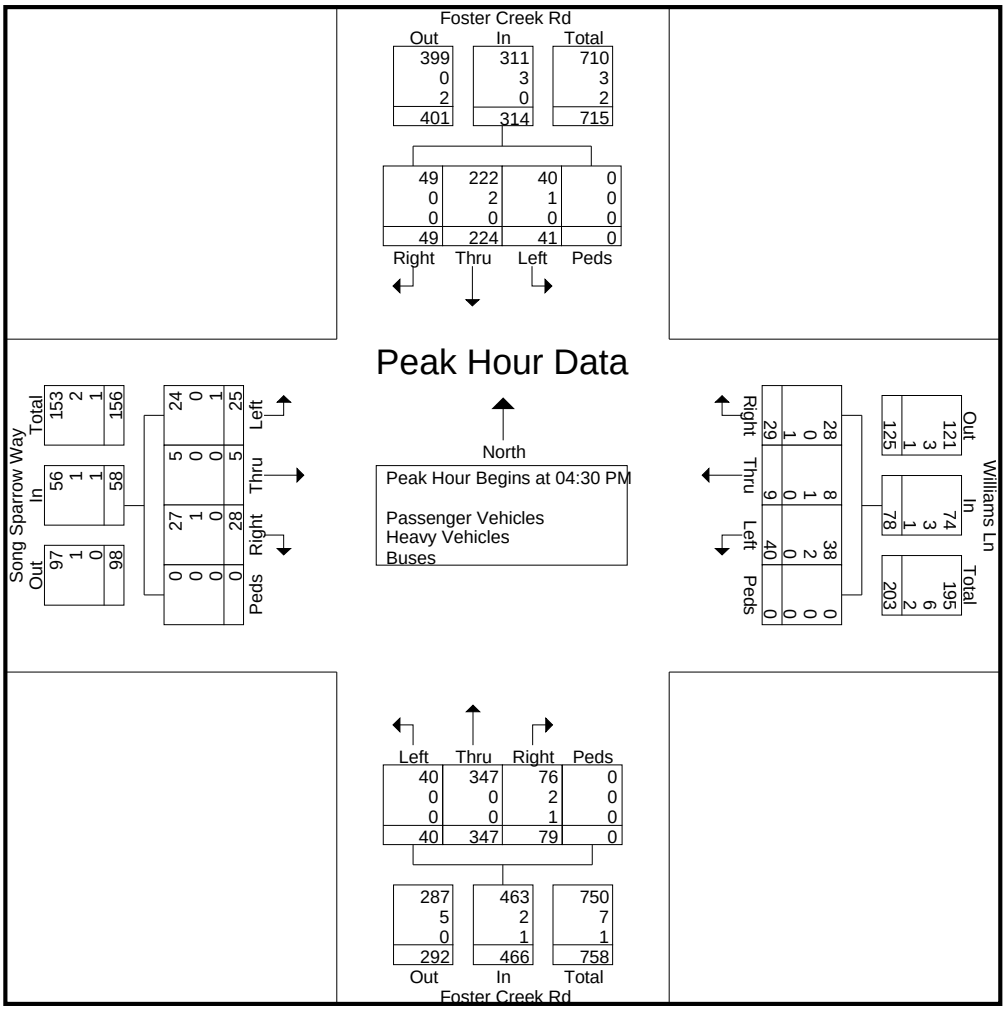
	Foster Creek Rd From North					Williams Ln From East					Foster Creek Rd From South					Song Sparrow Way From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	**40**	73	3	**10**	**126**	**83**	**31**	**52**	0	**166**	0	20	**49**	0	**69**	11	**19**	6	0	**36**	**397**
07:15 AM	16	**82**	3	1	102	77	15	51	0	143	1	**45**	15	0	61	**17**	6	9	0	32	338
07:30 AM	4	75	7	1	87	11	0	8	0	19	2	44	6	0	52	11	0	**13**	0	24	182
07:45 AM	4	76	**9**	0	89	19	0	7	0	26	**5**	36	6	0	47	16	0	9	0	25	187
Total Volume	64	306	22	12	404	190	46	118	0	354	8	145	76	0	229	55	25	37	0	117	1104
% App. Total	15.8	75.7	5.4	3		53.7	13	33.3	0		3.5	63.3	33.2	0		47	21.4	31.6	0		
PHF	.400	.933	.611	.300	.802	.572	.371	.567	.000	.533	.400	.806	.388	.000	.830	.809	.329	.712	.000	.813	.695
Passenger Vehicles	63	304	21	12	400	185	45	115	0	345	8	144	76	0	228	54	25	37	0	116	1089
% Passenger Vehicles	98.4	99.3	95.5			97.4	97.8	97.5				99.3				98.2					
Heavy Vehicles	0	1	1	0	2	4	0	1	0	5	0	1	0	0	1	1	0	0	0	1	9
% Heavy Vehicles	0	0.3	4.5	0	0.5	2.1	0	0.8	0	1.4	0	0.7	0	0	0.4	1.8	0	0	0	0.9	0.8
Buses	1	1	0	0	2	1	1	2	0	4	0	0	0	0	0	0	0	0	0	0	6
% Buses	1.6	0.3	0	0	0.5	0.5	2.2	1.7	0	1.1	0	0	0	0	0	0	0	0	0	0	0.5



SHORT COUNTS

File Name : Foster Creek Rd @ Song Sparrow Way
Site Code :
Start Date : 3/2/2021
Page No : 4

	Foster Creek Rd From North					Williams Ln From East					Foster Creek Rd From South					Song Sparrow Way From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	6	53	**15**	0	74	9	1	9	0	19	9	87	16	0	112	7	**2**	**10**	0	**19**	224
04:45 PM	**13**	**63**	15	0	**91**	**11**	2	3	0	16	9	**100**	**22**	0	**131**	**8**	1	5	0	14	**252**
05:00 PM	10	55	9	0	74	10	**4**	**11**	0	**25**	**11**	81	22	0	114	4	0	4	0	8	221
05:15 PM	12	53	10	0	75	10	2	6	0	18	11	79	19	0	109	6	2	9	0	17	219
Total Volume	41	224	49	0	314	40	9	29	0	78	40	347	79	0	466	25	5	28	0	58	916
% App. Total	13.1	71.3	15.6	0		51.3	11.5	37.2	0		8.6	74.5	17	0		43.1	8.6	48.3	0		
PHF	.788	.889	.817	.000	.863	.909	.563	.659	.000	.780	.909	.868	.898	.000	.889	.781	.625	.700	.000	.763	.909
Passenger Vehicles	40	222	49	0	311	38	8	28	0	74	40	347	76	0	463	24	5	27	0	56	904
% Passenger Vehicles	97.6	99.1				95.0	88.9	96.6					96.2			96.0		96.4			
Heavy Vehicles	1	2	0	0	3	2	1	0	0	3	0	0	2	0	2	0	0	1	0	1	9
% Heavy Vehicles	2.4	0.9	0	0	1.0	5.0	11.1	0	0	3.8	0	0	2.5	0	0.4	0	0	3.6	0	1.7	1.0
Buses	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	1	0	0	0	1	3
% Buses	0	0	0	0	0	0	0	3.4	0	1.3	0	0	1.3	0	0.2	4.0	0	0	0	1.7	0.3



SHORT COUNTS

File Name : Whispering Oak Rd @ Foster Creek Rd
Site Code :
Start Date : 3/2/2021
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

	Foster Creek Rd From North				From East				Foster Creek Rd From South				Whispering Oak Dr From West				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00 AM	0	101	0	0	0	0	0	0	1	81	0	0	1	0	5	0	189
07:15 AM	0	83	0	0	0	0	0	0	5	110	0	0	1	0	9	0	208
07:30 AM	0	80	1	0	0	0	0	0	3	64	0	0	3	0	4	0	155
07:45 AM	0	86	0	0	0	0	0	0	1	53	0	0	0	0	2	0	142
Total	0	350	1	0	0	0	0	0	10	308	0	0	5	0	20	0	694
08:00 AM	0	54	2	0	0	0	0	0	1	46	0	0	1	0	2	0	106
08:15 AM	0	59	0	0	0	0	0	0	0	59	0	0	0	0	3	0	121
08:30 AM	0	55	0	0	0	0	0	0	2	53	0	0	3	0	3	0	116
08:45 AM	0	58	2	0	0	0	0	0	0	64	0	0	3	0	0	0	127
Total	0	226	4	0	0	0	0	0	3	222	0	0	7	0	8	0	470
04:00 PM	0	59	0	0	0	0	0	0	1	89	0	0	1	0	3	0	153
04:15 PM	0	68	2	0	0	0	0	0	3	84	0	0	0	0	2	0	159
04:30 PM	0	68	0	0	0	0	0	0	4	92	0	0	0	0	3	0	167
04:45 PM	0	87	2	0	0	0	0	0	4	97	0	0	1	0	2	0	193
Total	0	282	4	0	0	0	0	0	12	362	0	0	2	0	10	0	672
05:00 PM	0	80	0	0	0	0	0	0	5	95	0	0	0	0	1	0	181
05:15 PM	0	70	5	0	0	0	0	0	6	76	0	0	4	0	2	0	163
05:30 PM	0	66	2	0	0	0	0	0	2	89	0	0	1	0	2	0	162
05:45 PM	0	64	1	0	0	0	0	0	2	91	0	0	1	0	3	0	162
Total	0	280	8	0	0	0	0	0	15	351	0	0	6	0	8	0	668
Grand Total	0	1138	17	0	0	0	0	0	40	1243	0	0	20	0	46	0	2504
Apprch %	0	98.5	1.5	0	0	0	0	0	3.1	96.9	0	0	30.3	0	69.7	0	
Total %	0	45.4	0.7	0	0	0	0	0	1.6	49.6	0	0	0.8	0	1.8	0	
Passenger Vehicles	0	1130	17	0	0	0	0	0	40	1232	0	0	20	0	43	0	2482
% Passenger Vehicles	0	99.3	100	0	0	0	0	0	100	99.1	0	0	100	0	93.5	0	99.1
Heavy Vehicles	0	6	0	0	0	0	0	0	0	5	0	0	0	0	1	0	12
% Heavy Vehicles	0	0.5	0	0	0	0	0	0	0	0.4	0	0	0	0	2.2	0	0.5
Buses	0	2	0	0	0	0	0	0	0	6	0	0	0	0	2	0	10
% Buses	0	0.2	0	0	0	0	0	0	0	0.5	0	0	0	0	4.3	0	0.4

SHORT COUNTS

File Name : Whispering Oak Rd @ Foster Creek Rd
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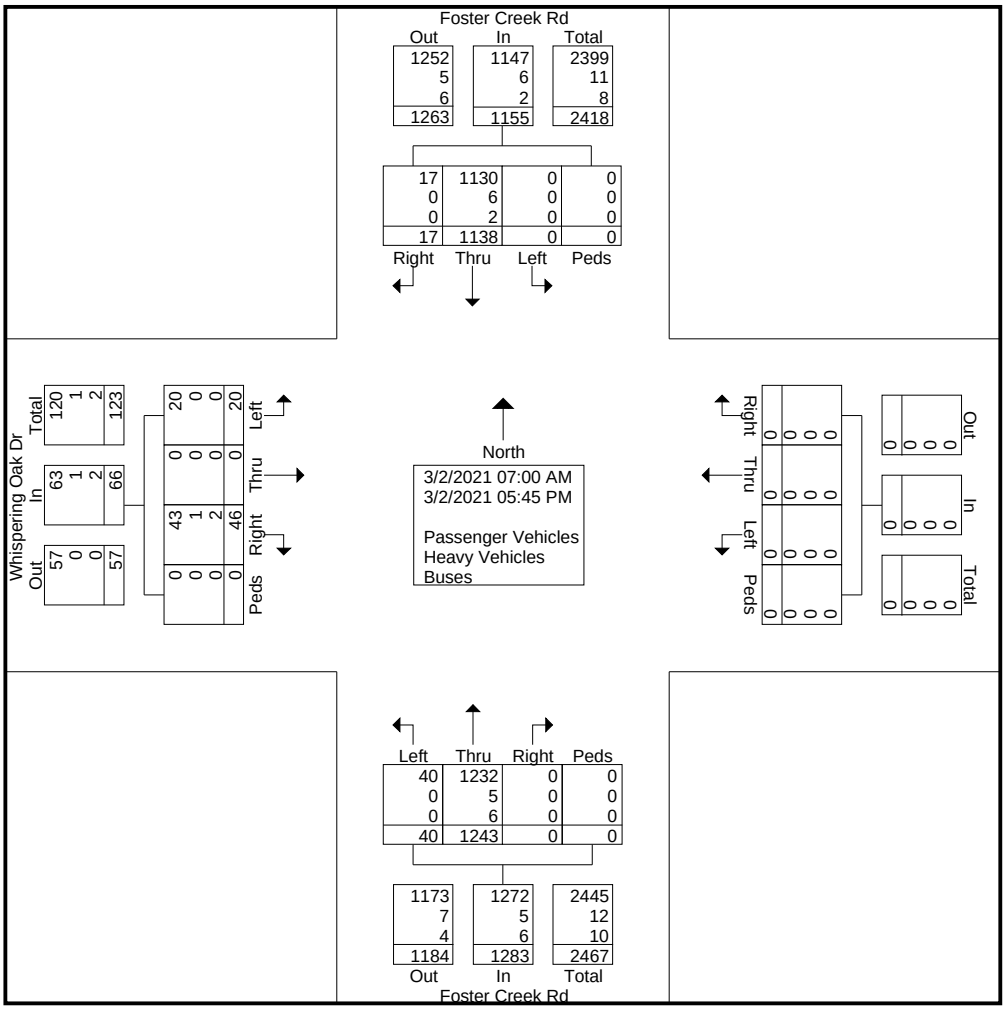

SHORT COUNTS

File Name : Whispering Oak Rd @ Foster Creek Rd
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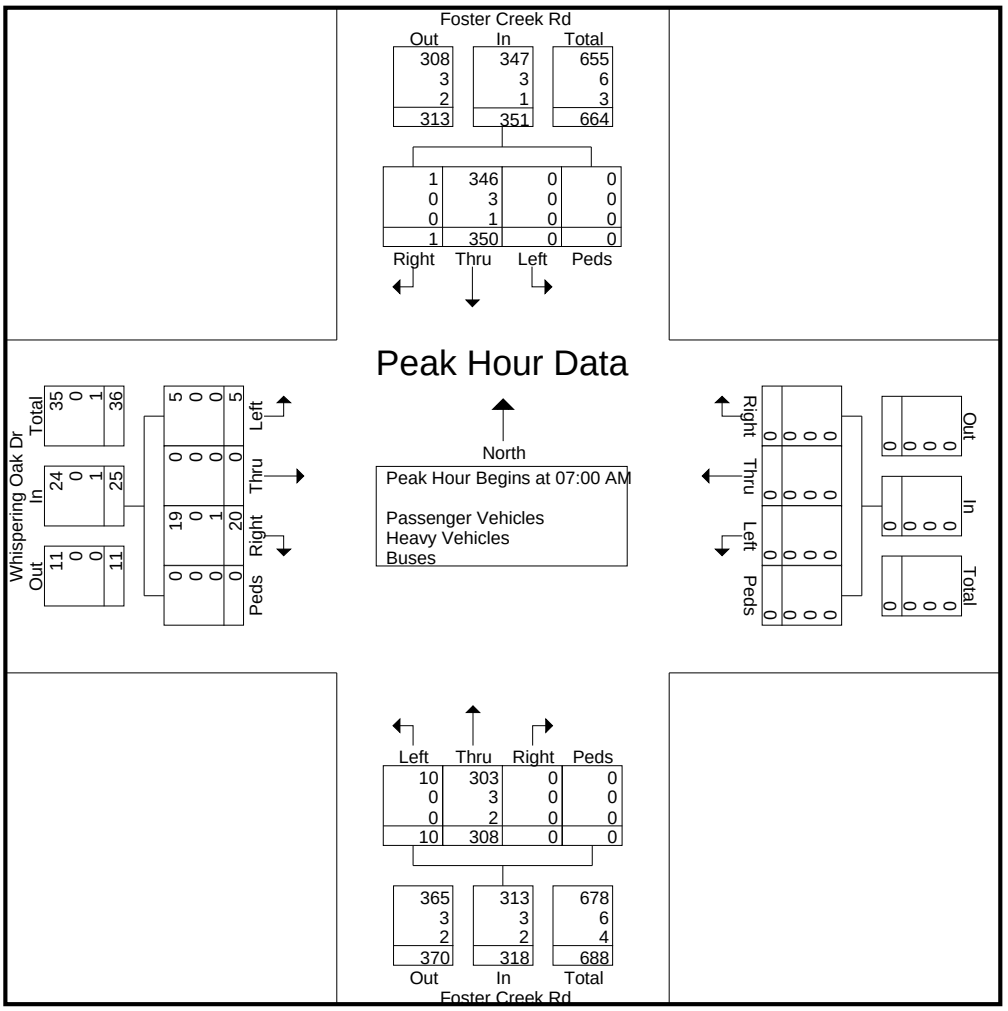
	Foster Creek Rd From North					From East					Foster Creek Rd From South					Whispering Oak Dr From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	**101**	0	0	**101**	0	0	0	0	0	1	81	0	0	82	1	0	5	0	6	189
07:15 AM	0	83	0	0	83	0	0	0	0	0	**5**	**110**	0	0	**115**	1	0	**9**	0	**10**	**208**
07:30 AM	0	80	**1**	0	81	0	0	0	0	0	3	64	0	0	67	**3**	0	4	0	7	155
07:45 AM	0	86	0	0	86	0	0	0	0	0	1	53	0	0	54	0	0	2	0	2	142
Total Volume	0	350	1	0	351	0	0	0	0	0	10	308	0	0	318	5	0	20	0	25	694
% App. Total	0	99.7	0.3	0		0	0	0	0		3.1	96.9	0	0		20	0	80	0		
PHF	.000	.866	.250	.000	.869	.000	.000	.000	.000	.000	.500	.700	.000	.000	.691	.417	.000	.556	.000	.625	.834
Passenger Vehicles	0	346	1	0	347	0	0	0	0	0	10	303	0	0	313	5	0	19	0	24	684
% Passenger Vehicles		98.9										98.4						95.0			
Heavy Vehicles	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
% Heavy Vehicles	0	0.9	0	0	0.9	0	0	0	0	0	0	1.0	0	0	0.9	0	0	0	0	0	0.9
Buses	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	4
% Buses	0	0.3	0	0	0.3	0	0	0	0	0	0	0.6	0	0	0.6	0	0	5.0	0	4.0	0.6



SHORT COUNTS

File Name : Whispering Oak Rd @ Foster Creek Rd
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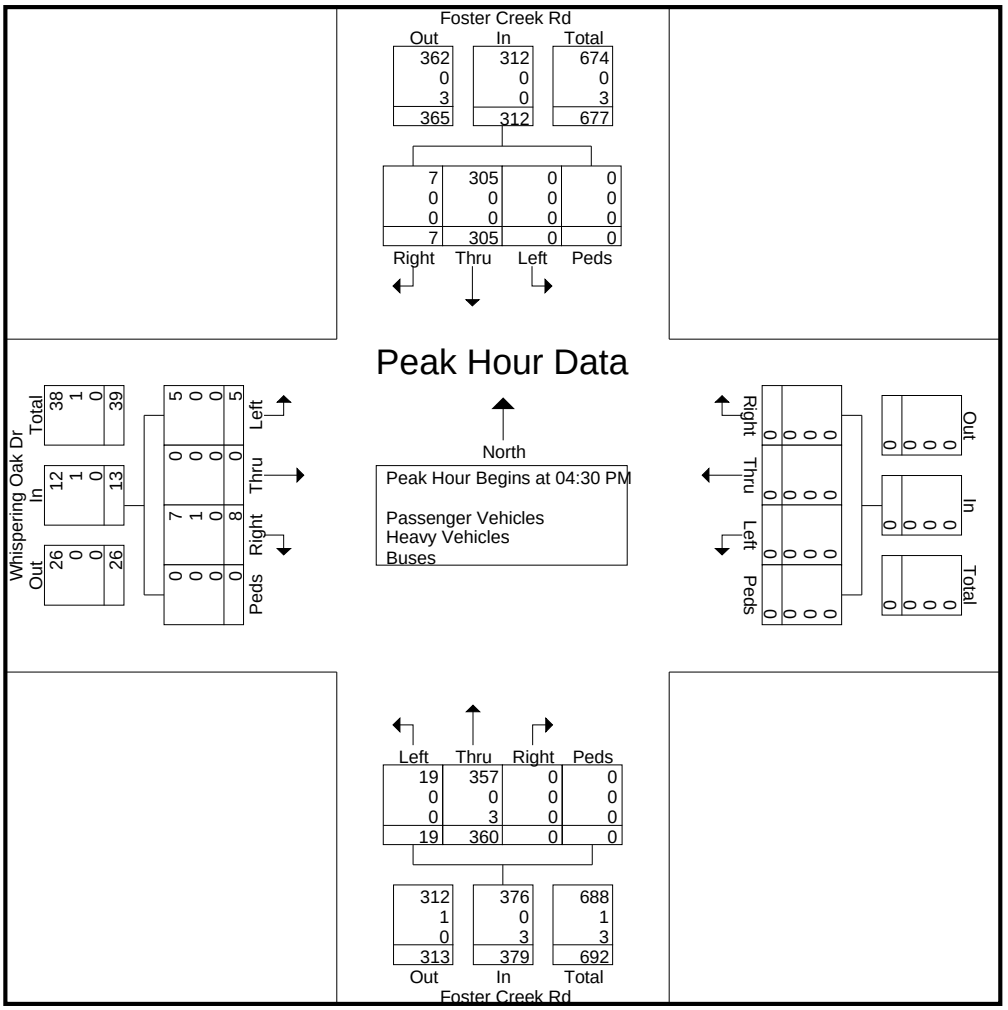
	Foster Creek Rd From North					From East					Foster Creek Rd From South					Whispering Oak Dr From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	68	0	0	68	0	0	0	0	0	4	92	0	0	96	0	0	**3**	0	3	167
04:45 PM	0	**87**	2	0	**89**	0	0	0	0	0	4	**97**	0	0	**101**	1	0	2	0	3	**193**
05:00 PM	0	80	0	0	80	0	0	0	0	0	5	95	0	0	100	0	0	1	0	1	181
05:15 PM	0	70	**5**	0	75	0	0	0	0	0	**6**	76	0	0	82	**4**	0	2	0	**6**	163
Total Volume	0	305	7	0	312	0	0	0	0	0	19	360	0	0	379	5	0	8	0	13	704
% App. Total	0	97.8	2.2	0		0	0	0	0		5	95	0	0		38.5	0	61.5	0		
PHF	.000	.876	.350	.000	.876	.000	.000	.000	.000	.000	.792	.928	.000	.000	.938	.313	.000	.667	.000	.542	.912
Passenger Vehicles	0	305	7	0	312	0	0	0	0	0	19	357	0	0	376	5	0	7	0	12	700
% Passenger Vehicles												99.2						87.5			
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12.5	0	7.7	0.1
Buses	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
% Buses	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	0.4



SHORT COUNTS

File Name : Foster Creek Rd @ Tanner Ford Blvd
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Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

	Foster Creek Rd From North				Tanner Ford Blvd From East				Foster Creek Rd From South				From West				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00 AM	184	6	0	0	1	0	50	0	0	10	2	0	0	0	0	0	253
07:15 AM	197	8	0	0	0	0	35	0	0	7	1	0	0	0	0	0	248
07:30 AM	141	6	0	0	0	0	46	0	0	7	2	0	0	0	0	0	202
07:45 AM	118	8	0	0	0	0	56	0	0	5	1	0	0	0	0	0	188
Total	640	28	0	0	1	0	187	0	0	29	6	0	0	0	0	0	891
08:00 AM	94	4	0	0	0	0	47	0	0	2	1	0	0	0	0	0	148
08:15 AM	117	2	0	0	0	0	29	0	0	3	0	1	0	0	0	0	152
08:30 AM	139	4	0	0	0	0	48	0	0	5	0	0	0	0	0	0	196
08:45 AM	82	2	0	0	1	0	52	0	0	4	0	0	0	0	0	0	141
Total	432	12	0	0	1	0	176	0	0	14	1	1	0	0	0	0	637
04:00 PM	78	5	0	0	0	0	122	0	0	7	0	0	0	0	0	0	212
04:15 PM	81	7	0	0	0	0	142	0	0	5	0	0	0	0	0	0	235
04:30 PM	73	10	0	0	0	0	153	0	0	4	0	0	0	0	0	0	240
04:45 PM	77	4	0	0	0	0	171	0	0	7	0	0	0	0	0	0	259
Total	309	26	0	0	0	0	588	0	0	23	0	0	0	0	0	0	946
05:00 PM	70	8	0	0	1	0	143	0	0	6	1	0	0	0	0	0	229
05:15 PM	69	6	0	0	0	0	132	0	0	4	0	0	0	0	0	0	211
05:30 PM	66	9	0	0	0	0	158	0	0	4	0	0	0	0	0	0	237
05:45 PM	50	13	0	0	0	0	132	0	0	6	2	0	0	0	0	0	203
Total	255	36	0	0	1	0	565	0	0	20	3	0	0	0	0	0	880
Grand Total	1636	102	0	0	3	0	1516	0	0	86	10	1	0	0	0	0	3354
Apprch %	94.1	5.9	0	0	0.2	0	99.8	0	0	88.7	10.3	1	0	0	0	0	
Total %	48.8	3	0	0	0.1	0	45.2	0	0	2.6	0.3	0	0	0	0	0	
Passenger Vehicles	1617	101	0	0	3	0	1505	0	0	84	10	1	0	0	0	0	3321
% Passenger Vehicles	98.8	99	0	0	100	0	99.3	0	0	97.7	100	100	0	0	0	0	99
Heavy Vehicles	14	1	0	0	0	0	6	0	0	2	0	0	0	0	0	0	23
% Heavy Vehicles	0.9	1	0	0	0	0	0.4	0	0	2.3	0	0	0	0	0	0	0.7
Buses	5	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	10
% Buses	0.3	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0.3

SHORT COUNTS

File Name : Foster Creek Rd @ Tanner Ford Blvd
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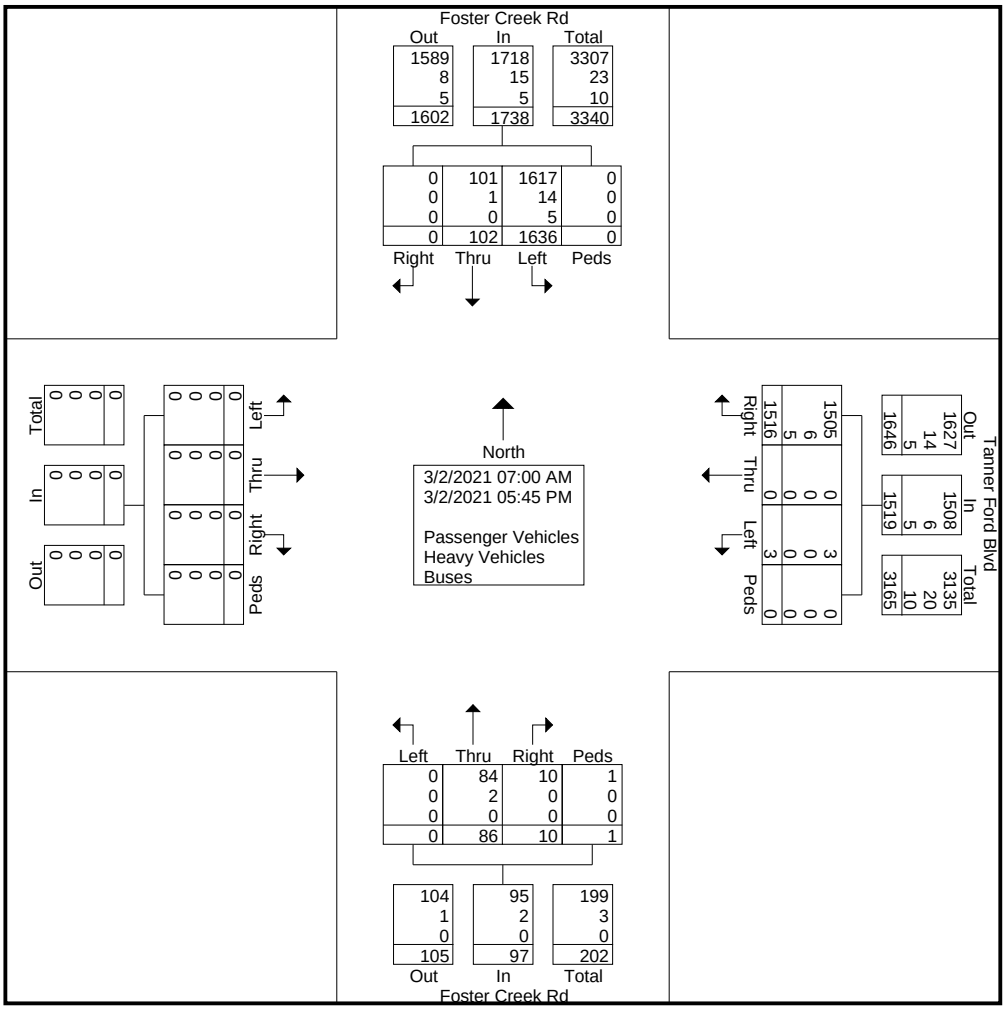

SHORT COUNTS

File Name : Foster Creek Rd @ Tanner Ford Blvd
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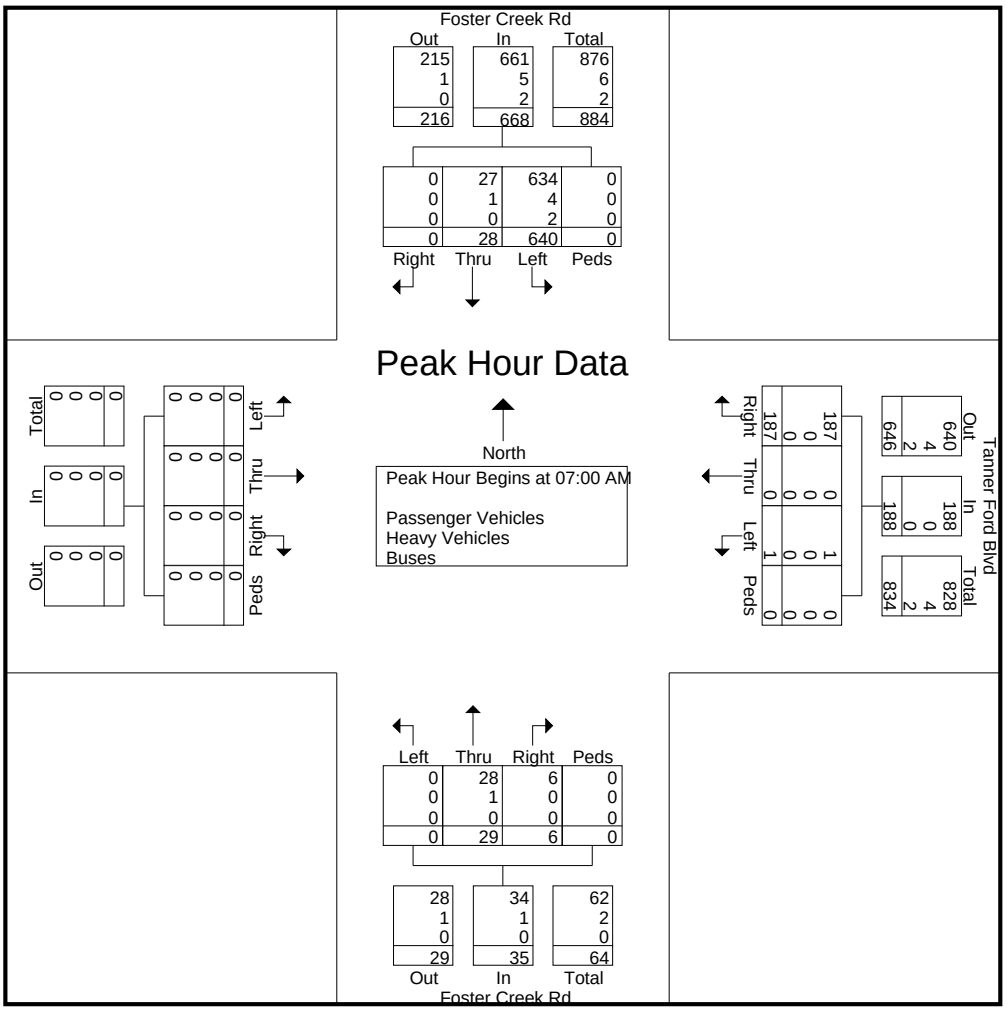
	Foster Creek Rd From North					Tanner Ford Blvd From East					Foster Creek Rd From South					From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	184	6	0	0	190	**1**	0	50	0	51	0	**10**	**2**	0	**12**	0	0	0	0	0	**253**
07:15 AM	**197**	**8**	0	0	**205**	0	0	35	0	35	0	7	1	0	8	0	0	0	0	0	248
07:30 AM	141	6	0	0	147	0	0	46	0	46	0	7	2	0	9	0	0	0	0	0	202
07:45 AM	118	8	0	0	126	0	0	**56**	0	**56**	0	5	1	0	6	0	0	0	0	0	188
Total Volume	640	28	0	0	668	1	0	187	0	188	0	29	6	0	35	0	0	0	0	0	891
% App. Total	95.8	4.2	0	0		0.5	0	99.5	0		0	82.9	17.1	0		0	0	0	0		
PHF	.812	.875	.000	.000	.815	.250	.000	.835	.000	.839	.000	.725	.750	.000	.729	.000	.000	.000	.000	.000	.880
Passenger Vehicles	634	27	0	0	661	1	0	187	0	188	0	28	6	0	34	0	0	0	0	0	883
% Passenger Vehicles	99.1	96.4										96.6									
Heavy Vehicles	4	1	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6
% Heavy Vehicles	0.6	3.6	0	0	0.7	0	0	0	0	0	0	3.4	0	0	2.9	0	0	0	0	0	0.7
Buses	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
% Buses	0.3	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2



SHORT COUNTS

File Name : Foster Creek Rd @ Tanner Ford Blvd
Site Code :
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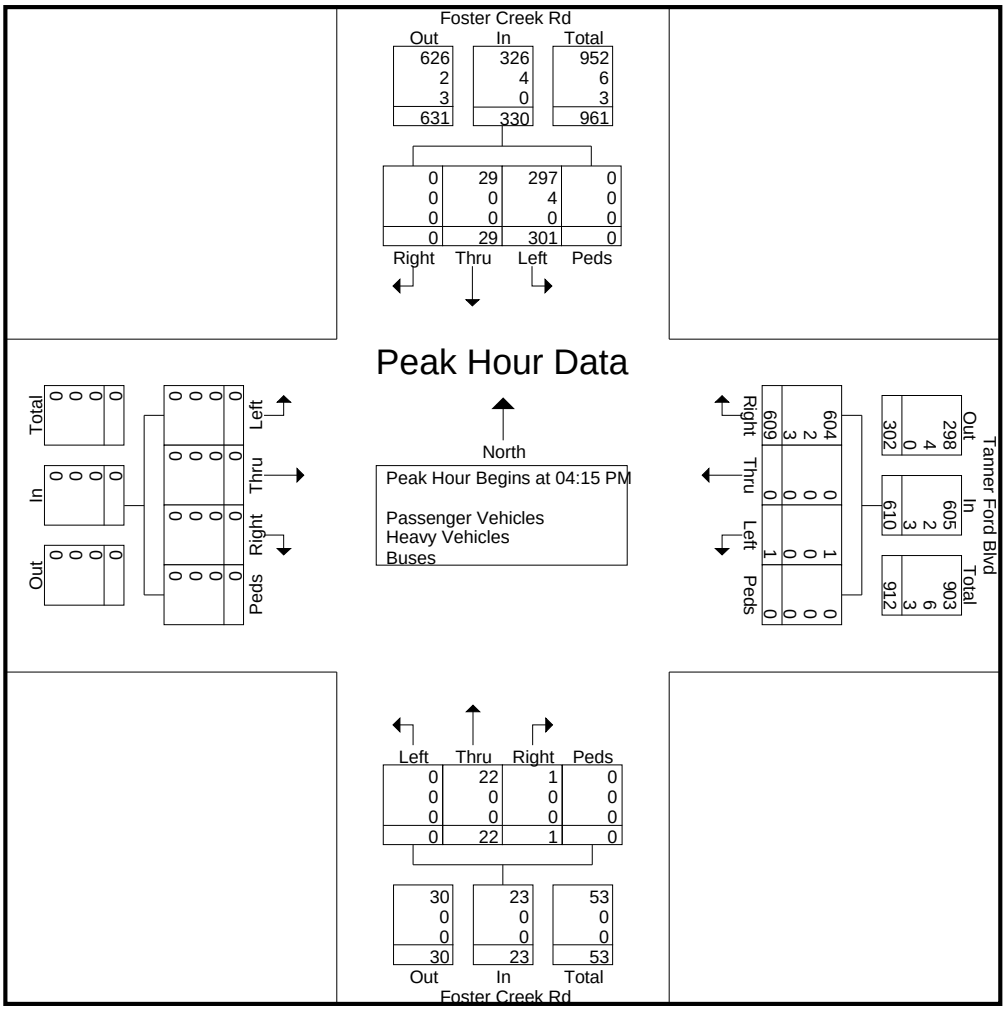
	Foster Creek Rd From North					Tanner Ford Blvd From East					Foster Creek Rd From South					From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	**81**	7	0	0	**88**	0	0	142	0	142	0	5	0	0	5	0	0	0	0	0	235
04:30 PM	73	**10**	0	0	83	0	0	153	0	153	0	4	0	0	4	0	0	0	0	0	240
04:45 PM	77	4	0	0	81	0	0	**171**	0	**171**	0	**7**	0	0	**7**	0	0	0	0	0	**259**
05:00 PM	70	8	0	0	78	**1**	0	143	0	144	0	6	**1**	0	7	0	0	0	0	0	229
Total Volume	301	29	0	0	330	1	0	609	0	610	0	22	1	0	23	0	0	0	0	0	963
% App. Total	91.2	8.8	0	0		0.2	0	99.8	0		0	95.7	4.3	0		0	0	0	0		
PHF	.929	.725	.000	.000	.938	.250	.000	.890	.000	.892	.000	.786	.250	.000	.821	.000	.000	.000	.000	.000	.930
Passenger Vehicles	297	29	0	0	326	1	0	604	0	605	0	22	1	0	23	0	0	0	0	0	954
% Passenger Vehicles	98.7							99.2													
Heavy Vehicles	4	0	0	0	4	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	6
% Heavy Vehicles	1.3	0	0	0	1.2	0	0	0.3	0	0.3	0	0	0	0	0	0	0	0	0	0	0.6
Buses	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
% Buses	0	0	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	0	0	0	0	0	0.3



INTERSECTION VOLUME DEVELOPMENT

Hanahan Thrash Tract TIA

Foster Creek Road at Snake Road

AM PEAK HOUR (7:00 AM to 8:00 AM)

Description	Foster Creek Road Northbound			- Southbound			Snake Road Eastbound			Snake Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Raw March 2021 Traffic Count Volumes	455	0	104	0	0	0	0	139	265	100	104	0
Existing 2021 Traffic Count Volumes with 1.15 COVID Adjustment Factor Applied[1]	523	0	120	0	0	0	0	160	305	115	120	0
Pedestrians		0			0			0			0	
Heavy Vehicle %		1.8%			0.0%			0.7%			1.5%	
Peak Hour Factor		0.69			0.00			0.86			0.69	
Annual Growth Rate	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Growth Factor	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188
Adjacent Site Development Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2026 Background Traffic	621	0	143	0	0	0	0	190	362	137	143	0
Trip Distribution												
New Trips IN									20%	5%		
New Trips OUT	20%		5%									
Pass By Distribution												
Pass By IN												
Pass By OUT												
New Trips	8	0	2	0	0	0	0	0	2	1	0	0
Pass By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	8	0	2	0	0	0	0	0	2	1	0	0
2026 Buildout Total	**629**	**0**	**145**	**0**	**0**	**0**	**0**	**190**	**364**	**138**	**143**	**0**

1. Traffic counts collected in March 2021 and adjusted by 1.15 COVID factor based on SCDOT guidance

PM PEAK HOUR (4:00 PM to 5:00 PM)

Description	Foster Creek Road Northbound			- Southbound			Snake Road Eastbound			Snake Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Raw March 2021 Traffic Count Volumes	321	0	35	0	0	0	0	161	366	38	203	0
Existing 2021 Traffic Count Volumes with 1.02 COVID Adjustment Factor Applied[1]	327	0	36	0	0	0	0	164	373	39	207	0
Pedestrians		0			0			0			0	
Heavy Vehicle %		2.2%			0.0%			0.9%			0.8%	
Peak Hour Factor		0.89			0.00			0.94			0.85	
Annual Growth Rate	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Growth Factor	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188
Adjacent Site Development Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2026 Background Traffic	388	0	43	0	0	0	0	195	443	46	246	0
Trip Distribution												
New Trips IN									20%	5%		
New Trips OUT	20%		5%									
Pass By Distribution												
Pass By IN												
Pass By OUT												
New Trips	6	0	1	0	0	0	0	0	9	2	0	0
Pass By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	6	0	1	0	0	0	0	0	9	2	0	0
2026 Buildout Total	**394**	**0**	**44**	**0**	**0**	**0**	**0**	**195**	**452**	**48**	**246**	**0**

1. Traffic counts collected in March 2021 and adjusted by 1.02 COVID factor based on SCDOT guidance

4/5/2021 14:25

INTERSECTION VOLUME DEVELOPMENT
Hanahan Thrash Tract TIA
Foster Creek Road at Song Sparrow Way/Williams Lane
AM PEAK HOUR (7:00 AM to 8:00 AM)

Description	Foster Creek Road Northbound			Foster Creek Road Southbound			Song Sparrow Way Eastbound			Williams Lane Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Raw March 2021 Traffic Count Volumes	8	145	76	64	306	22	55	25	37	190	46	118
Existing 2021 Traffic Count Volumes with 1.15 COVID Adjustment Factor Applied[1]	9	167	87	74	352	25	63	29	43	219	53	136
Pedestrians		0			12			0			0	
Heavy Vehicle %		0.4%			1.0%			0.9%			2.5%	
Peak Hour Factor		0.83			0.80			0.81			0.53	
Annual Growth Rate	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Growth Factor	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188
Adjacent Site Development Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2026 Background Traffic	11	198	103	88	418	30	75	34	51	260	63	162
Trip Distribution												
New Trips IN		70%										5%
New Trips OUT				5%	70%							
Pass By Distribution												
Pass By IN												
Pass By OUT												
New Trips	0	9	0	2	29	0	0	0	0	0	0	1
Pass By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	9	0	2	29	0	0	0	0	0	0	1
2026 Buildout Total	**11**	**207**	**103**	**90**	**447**	**30**	**75**	**34**	**51**	**260**	**63**	**163**

1. Traffic counts collected in March 2021 and adjusted by 1.15 COVID factor based on SCDOT guidance

PM PEAK HOUR (4:30 PM to 5:30 PM)

Description	Foster Creek Road Northbound			Foster Creek Road Southbound			Song Sparrow Way Eastbound			Williams Lane Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Raw March 2021 Traffic Count Volumes	40	347	79	41	224	49	25	5	28	40	9	29
Existing 2021 Traffic Count Volumes with 1.02 COVID Adjustment Factor Applied[1]	41	354	81	42	228	50	26	5	29	41	9	30
Pedestrians		0			0			0			0	
Heavy Vehicle %		0.6%			1.0%			3.4%			5.1%	
Peak Hour Factor		0.89			0.86			0.76			0.78	
Annual Growth Rate	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Growth Factor	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188
Adjacent Site Development Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2026 Background Traffic	49	420	96	50	271	59	31	6	34	49	11	36
Trip Distribution												
New Trips IN		70%										5%
New Trips OUT				5%	70%							
Pass By Distribution												
Pass By IN												
Pass By OUT												
New Trips	0	31	0	1	18	0	0	0	0	0	0	2
Pass By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	31	0	1	18	0	0	0	0	0	0	2
2026 Buildout Total	**49**	**451**	**96**	**51**	**289**	**59**	**31**	**6**	**34**	**49**	**11**	**38**

1. Traffic counts collected in March 2021 and adjusted by 1.02 COVID factor based on SCDOT guidance

4/5/2021 14:25

INTERSECTION VOLUME DEVELOPMENT

Hanahan Thrash Tract TIA

Foster Creek Road at Whispering Oak Drive

AM PEAK HOUR (7:00 AM to 8:00 AM)

Description	Foster Creek Road Northbound			Foster Creek Road Southbound			Whispering Oak Drive Eastbound			- Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Raw March 2021 Traffic Count Volumes	10	308	0	0	350	1	5	0	20	0	0	0
Existing 2021 Traffic Count Volumes with 1.15 COVID Adjustment Factor Applied[1]	12	354	0	0	403	1	6	0	23	0	0	0
Pedestrians		0			0			0			0	
Heavy Vehicle %		1.5%			1.2%			4.0%			0.0%	
Peak Hour Factor		0.69			0.87			0.63			0.00	
Annual Growth Rate	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Growth Factor	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188
Adjacent Site Development Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2026 Background Traffic	14	420	0	0	479	1	7	0	27	0	0	0
Trip Distribution												
New Trips IN	75%					25%						
New Trips OUT							25%		75%			
Pass By Distribution												
Pass By IN												
Pass By OUT												
New Trips	10	0	0	0	0	3	10	0	31	0	0	0
Pass By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	10	0	0	0	0	3	10	0	31	0	0	0
2026 Buildout Total	**24**	**420**	**0**	**0**	**479**	**4**	**17**	**0**	**58**	**0**	**0**	**0**

1. Traffic counts collected in March 2021 and adjusted by 1.15 COVID factor based on SCDOT guidance

PM PEAK HOUR (4:30 PM to 5:30 PM)

Description	Foster Creek Road Northbound			Foster Creek Road Southbound			Whispering Oak Drive Eastbound			- Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Raw March 2021 Traffic Count Volumes	19	360	0	0	305	7	5	0	8	0	0	0
Existing 2021 Traffic Count Volumes with 1.02 COVID Adjustment Factor Applied[1]	19	367	0	0	311	7	5	0	8	0	0	0
Pedestrians		0			0			0			0	
Heavy Vehicle %		0.8%			0.0%			7.7%			0.0%	
Peak Hour Factor		0.94			0.88			0.54			0.00	
Annual Growth Rate	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Growth Factor	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188
Adjacent Site Development Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2026 Background Traffic	23	436	0	0	369	8	6	0	10	0	0	0
Trip Distribution												
New Trips IN	75%					25%						
New Trips OUT							25%		75%			
Pass By Distribution												
Pass By IN												
Pass By OUT												
New Trips	33	0	0	0	0	11	7	0	19	0	0	0
Pass By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	33	0	0	0	0	11	7	0	19	0	0	0
2026 Buildout Total	**56**	**436**	**0**	**0**	**369**	**19**	**13**	**0**	**29**	**0**	**0**	**0**

1. Traffic counts collected in March 2021 and adjusted by 1.02 COVID factor based on SCDOT guidance

4/5/2021 14:25

INTERSECTION VOLUME DEVELOPMENT
Hanahan Thrash Tract TIA
Foster Creek Road at Tanner Ford Boulevard
AM PEAK HOUR (7:00 AM to 8:00 AM)

Description	Foster Creek Road Northbound			Foster Creek Road Southbound			- Eastbound			Tanner Ford Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Raw March 2021 Traffic Count Volumes	0	29	6	640	28	0	0	0	0	1	0	187
Existing 2021 Traffic Count Volumes with 1.15 COVID Adjustment Factor Applied[1]	0	33	7	736	32	0	0	0	0	1	0	215
Pedestrians		0			0			0			0	
Heavy Vehicle %		2.9%			1.0%			0.0%			0.0%	
Peak Hour Factor		0.73			0.82			0.00			0.84	
Annual Growth Rate	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Growth Factor	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188
Adjacent Site Development Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2026 Background Traffic	0	39	8	874	38	0	0	0	0	1	0	255
Trip Distribution												
New Trips IN												70%
New Trips OUT				70%								
Pass By Distribution												
Pass By IN												
Pass By OUT												
New Trips	0	0	0	29	0	0	0	0	0	0	0	9
Pass By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	29	0	0	0	0	0	0	0	9
2026 Buildout Total	**0**	**39**	**8**	**903**	**38**	**0**	**0**	**0**	**0**	**1**	**0**	**264**

1. Traffic counts collected in March 2021 and adjusted by 1.15 COVID factor based on SCDOT guidance

PM PEAK HOUR (4:15 PM to 5:15 PM)

Description	Foster Creek Road Northbound			Foster Creek Road Southbound			- Eastbound			Tanner Ford Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Raw March 2021 Traffic Count Volumes	0	22	1	301	29	0	0	0	0	1	0	609
Existing 2021 Traffic Count Volumes with 1.02 COVID Adjustment Factor Applied[1]	0	22	1	307	30	0	0	0	0	1	0	621
Pedestrians		0			0			0			0	
Heavy Vehicle %		0.0%			1.2%			0.0%			0.8%	
Peak Hour Factor		0.82			0.94			0.00			0.89	
Annual Growth Rate	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Growth Factor	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188	1.188
Adjacent Site Development Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2026 Background Traffic	0	26	1	365	36	0	0	0	0	1	0	738
Trip Distribution												
New Trips IN												70%
New Trips OUT				70%								
Pass By Distribution												
Pass By IN												
Pass By OUT												
New Trips	0	0	0	18	0	0	0	0	0	0	0	31
Pass By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	18	0	0	0	0	0	0	0	31
2026 Buildout Total	**0**	**26**	**1**	**383**	**36**	**0**	**0**	**0**	**0**	**1**	**0**	**769**

1. Traffic counts collected in March 2021 and adjusted by 1.02 COVID factor based on SCDOT guidance

4/5/2021 14:25

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	160	305	115	120	523	120
Future Volume (veh/h)	160	305	115	120	523	120
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	186	355	167	174	758	174
Peak Hour Factor	0.86	0.86	0.69	0.69	0.69	0.69
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	243	463	350	1063	544	616
Arrive On Green	0.42	0.42	0.08	0.57	0.31	0.31
Sat Flow, veh/h	575	1098	1781	1870	1781	1585
Grp Volume(v), veh/h	0	541	167	174	758	174
Grp Sat Flow(s),veh/h/ln	0	1673	1781	1870	1781	1585
Q Serve(g_s), s	0.0	26.2	4.7	4.2	29.0	7.2
Cycle Q Clear(g_c), s	0.0	26.2	4.7	4.2	29.0	7.2
Prop In Lane		0.66	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	706	350	1063	544	616
V/C Ratio(X)	0.00	0.77	0.48	0.16	1.39	0.28
Avail Cap(c_a), veh/h	0	706	371	1063	544	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	23.4	17.0	9.8	33.0	20.0
Incr Delay (d2), s/veh	0.0	7.8	1.0	0.3	188.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.2	1.8	1.7	40.7	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	31.2	18.0	10.1	221.3	20.2
LnGrp LOS	A	C	B	B	F	C
Approach Vol, veh/h	541			341	932	
Approach Delay, s/veh	31.2			13.9	183.8	
Approach LOS	C			B	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.9	46.1				60.0	35.0
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	9.0	39.0				54.0	29.0
Max Q Clear Time (g_c+I1), s	6.7	28.2				6.2	31.0
Green Ext Time (p_c), s	0.1	3.6				1.5	0.0

Intersection Summary		
HCM 6th Ctrl Delay		106.4
HCM 6th LOS		F

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	23	12	354	403	1
Future Vol, veh/h	6	23	12	354	403	1
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	-	-	-	-	155
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	69	69	87	87
Heavy Vehicles, %	4	4	2	2	2	2
Mvmt Flow	10	37	17	513	463	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1010	463	464	0	-	0
Stage 1	463	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.12	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.218	-	-	-
Pot Cap-1 Maneuver	264	595	1097	-	-	-
Stage 1	629	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	258	595	1097	-	-	-
Mov Cap-2 Maneuver	258	-	-	-	-	-
Stage 1	615	-	-	-	-	-
Stage 2	576	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1097	-	468	-	-
HCM Lane V/C Ratio	0.016	-	0.098	-	-
HCM Control Delay (s)	8.3	0	13.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	9.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	215	33	7	736	32
Future Vol, veh/h	1	215	33	7	736	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	150	-	-	215	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	73	73	82	82
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	1	256	45	10	898	39

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1885	50	0	0	55	0
Stage 1	50	-	-	-	-	-
Stage 2	1835	-	-	-	-	-
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	78	1018	-	-	1550	-
Stage 1	972	-	-	-	-	-
Stage 2	139	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	33	1018	-	-	1550	-
Mov Cap-2 Maneuver	33	-	-	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	59	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	10
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	33	1018	1550	-
HCM Lane V/C Ratio	-	-	0.036	0.251	0.579	-
HCM Control Delay (s)	-	-	118.1	9.7	10.5	-
HCM Lane LOS	-	-	F	A	B	-
HCM 95th %tile Q(veh)	-	-	0.1	1	3.9	-

USER REPORT FOR SITE

Project: Thrash TIA SIDRA **Template: Mvmt Summary**

Site: 101 [Existing AM]

Thrust Tract TIA
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Foster Creek Road												
3	L2	11	2.0	0.290	6.1	LOS A	1.5	38.1	0.43	0.30	0.43	30.1
8	T1	201	2.0	0.290	6.1	LOS A	1.5	38.1	0.43	0.30	0.43	36.9
18	R2	105	2.0	0.290	6.1	LOS A	1.5	38.1	0.43	0.30	0.43	33.1
Approach		317	2.0	0.290	6.1	LOS A	1.5	38.1	0.43	0.30	0.43	35.3
East: Williams Lane												
1	L2	413	3.0	0.777	18.9	LOS C	16.0	409.1	0.89	1.18	1.69	27.3
6	T1	100	3.0	0.777	18.9	LOS C	16.0	409.1	0.89	1.18	1.69	23.1
16	R2	257	3.0	0.777	18.9	LOS C	16.0	409.1	0.89	1.18	1.69	26.8
Approach		770	3.0	0.777	18.9	LOS C	16.0	409.1	0.89	1.18	1.69	26.5
North: Foster Creek Road												
7	L2	92	2.0	0.723	19.3	LOS C	8.8	223.5	0.87	1.15	1.71	28.5
4	T1	440	2.0	0.723	19.3	LOS C	8.8	223.5	0.87	1.15	1.71	30.1
14	R2	31	2.0	0.723	19.3	LOS C	8.8	223.5	0.87	1.15	1.71	24.3
Approach		564	2.0	0.723	19.3	LOS C	8.8	223.5	0.87	1.15	1.71	29.5
West: Song Sparrow Way												
5	L2	78	2.0	0.331	12.3	LOS B	1.4	36.4	0.72	0.78	0.85	26.2
2	T1	36	2.0	0.331	12.3	LOS B	1.4	36.4	0.72	0.78	0.85	24.8
12	R2	53	2.0	0.331	12.3	LOS B	1.4	36.4	0.72	0.78	0.85	25.7
Approach		167	2.0	0.331	12.3	LOS B	1.4	36.4	0.72	0.78	0.85	25.7
All Vehicles		1817	2.4	0.777	16.2	LOS C	16.0	409.1	0.79	0.98	1.40	28.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	164	373	39	207	327	36
Future Volume (veh/h)	164	373	39	207	327	36
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	174	397	46	244	367	40
Peak Hour Factor	0.94	0.94	0.85	0.85	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	251	573	389	1173	416	468
Arrive On Green	0.50	0.50	0.06	0.63	0.23	0.23
Sat Flow, veh/h	507	1156	1781	1870	1781	1585
Grp Volume(v), veh/h	0	571	46	244	367	40
Grp Sat Flow(s),veh/h/ln	0	1662	1781	1870	1781	1585
Q Serve(g_s), s	0.0	22.7	1.0	4.8	17.1	1.6
Cycle Q Clear(g_c), s	0.0	22.7	1.0	4.8	17.1	1.6
Prop In Lane		0.70	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	824	389	1173	416	468
V/C Ratio(X)	0.00	0.69	0.12	0.21	0.88	0.09
Avail Cap(c_a), veh/h	0	824	465	1173	600	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.7	11.5	6.9	31.9	21.9
Incr Delay (d2), s/veh	0.0	4.8	0.1	0.4	10.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.9	0.3	1.8	8.5	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	21.5	11.7	7.3	42.5	22.0
LnGrp LOS	A	C	B	A	D	C
Approach Vol, veh/h	571			290	407	
Approach Delay, s/veh	21.5			8.0	40.5	
Approach LOS	C			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.3	48.7				60.0	26.1
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	9.0	39.0				54.0	29.0
Max Q Clear Time (g_c+I1), s	3.0	24.7				6.8	19.1
Green Ext Time (p_c), s	0.0	4.5				2.2	1.0

Intersection Summary	
HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	8	19	367	311	7
Future Vol, veh/h	5	8	19	367	311	7
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	-	-	-	-	155
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	54	94	94	88	88
Heavy Vehicles, %	8	8	2	2	2	2
Mvmt Flow	9	15	20	390	353	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	783	353	361	0	-	0
Stage 1	353	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Critical Hdwy	6.48	6.28	4.12	-	-	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.372	2.218	-	-	-
Pot Cap-1 Maneuver	354	677	1198	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	347	677	1198	-	-	-
Mov Cap-2 Maneuver	347	-	-	-	-	-
Stage 1	683	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1198	-	496	-	-
HCM Lane V/C Ratio	0.017	-	0.049	-	-
HCM Control Delay (s)	8.1	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	12

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	621	22	1	307	30
Future Vol, veh/h	1	621	22	1	307	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	150	-	-	215	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	82	82	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	698	27	1	327	32

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	714	28	0	0	28	0
Stage 1	28	-	-	-	-	-
Stage 2	686	-	-	-	-	-
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	398	1047	-	-	1585	-
Stage 1	995	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	316	1047	-	-	1585	-
Mov Cap-2 Maneuver	316	-	-	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	397	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15	0	7.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	316	1047	1585	-
HCM Lane V/C Ratio	-	-	0.004	0.666	0.206	-
HCM Control Delay (s)	-	-	16.4	15	7.9	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0	5.3	0.8	-

Site: 101 [Existing PM]

Thrust Tract TIA
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Foster Creek Road												
3	L2	46	2.0	0.434	7.3	LOS A	2.9	73.1	0.34	0.18	0.34	29.5
8	T1	398	2.0	0.434	7.3	LOS A	2.9	73.1	0.34	0.18	0.34	36.0
18	R2	91	2.0	0.434	7.3	LOS A	2.9	73.1	0.34	0.18	0.34	32.4
Approach		535	2.0	0.434	7.3	LOS A	2.9	73.1	0.34	0.18	0.34	34.7
East: Williams Lane												
1	L2	53	5.0	0.128	5.8	LOS A	0.5	13.4	0.53	0.46	0.53	32.2
6	T1	12	5.0	0.128	5.8	LOS A	0.5	13.4	0.53	0.46	0.53	26.7
16	R2	38	5.0	0.128	5.8	LOS A	0.5	13.4	0.53	0.46	0.53	31.5
Approach		103	5.0	0.128	5.8	LOS A	0.5	13.4	0.53	0.46	0.53	31.2
North: Foster Creek Road												
7	L2	49	2.0	0.309	5.9	LOS A	1.7	43.5	0.32	0.18	0.32	34.3
4	T1	265	2.0	0.309	5.9	LOS A	1.7	43.5	0.32	0.18	0.32	36.7
14	R2	58	2.0	0.309	5.9	LOS A	1.7	43.5	0.32	0.18	0.32	28.4
Approach		372	2.0	0.309	5.9	LOS A	1.7	43.5	0.32	0.18	0.32	34.8
West: Song Sparrow Way												
5	L2	34	3.0	0.086	4.7	LOS A	0.4	9.0	0.47	0.35	0.47	28.6
2	T1	7	3.0	0.086	4.7	LOS A	0.4	9.0	0.47	0.35	0.47	27.1
12	R2	38	3.0	0.086	4.7	LOS A	0.4	9.0	0.47	0.35	0.47	28.0
Approach		79	3.0	0.086	4.7	LOS A	0.4	9.0	0.47	0.35	0.47	28.2
All Vehicles		1088	2.4	0.434	6.5	LOS A	2.9	73.1	0.36	0.22	0.36	33.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	190	362	137	143	621	143
Future Volume (veh/h)	190	362	137	143	621	143
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	221	421	199	207	900	207
Peak Hour Factor	0.86	0.86	0.69	0.69	0.69	0.69
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	243	462	273	1063	544	617
Arrive On Green	0.42	0.42	0.08	0.57	0.31	0.31
Sat Flow, veh/h	576	1097	1781	1870	1781	1585
Grp Volume(v), veh/h	0	642	199	207	900	207
Grp Sat Flow(s),veh/h/ln	0	1673	1781	1870	1781	1585
Q Serve(g_s), s	0.0	34.2	5.7	5.1	29.0	8.7
Cycle Q Clear(g_c), s	0.0	34.2	5.7	5.1	29.0	8.7
Prop In Lane		0.66	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	705	273	1063	544	617
V/C Ratio(X)	0.00	0.91	0.73	0.19	1.66	0.34
Avail Cap(c_a), veh/h	0	705	293	1063	544	617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	25.8	20.6	9.9	33.0	20.4
Incr Delay (d2), s/veh	0.0	18.0	8.2	0.4	302.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.2	2.7	2.0	58.0	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	43.8	28.8	10.4	335.9	20.7
LnGrp LOS	A	D	C	B	F	C
Approach Vol, veh/h	642			406	1107	
Approach Delay, s/veh	43.8			19.4	277.0	
Approach LOS	D			B	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	14.0	46.0				60.0	35.0
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	9.0	39.0				54.0	29.0
Max Q Clear Time (g_c+I1), s	7.7	36.2				7.1	31.0
Green Ext Time (p_c), s	0.1	1.4				1.8	0.0

Intersection Summary		
HCM 6th Ctrl Delay		159.0
HCM 6th LOS		F

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	27	14	420	479	1
Future Vol, veh/h	7	27	14	420	479	1
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	-	-	-	-	155
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	69	69	87	87
Heavy Vehicles, %	4	4	2	2	2	2
Mvmt Flow	11	43	20	609	551	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1200	551	552	0	-	0
Stage 1	551	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.12	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.218	-	-	-
Pot Cap-1 Maneuver	203	530	1018	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	197	530	1018	-	-	-
Mov Cap-2 Maneuver	197	-	-	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	516	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1018	-	393	-	-
HCM Lane V/C Ratio	0.02	-	0.137	-	-
HCM Control Delay (s)	8.6	0	15.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	11.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	255	39	8	874	38
Future Vol, veh/h	1	255	39	8	874	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	150	-	-	215	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	73	73	82	82
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	1	304	53	11	1066	46

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2237	59	0	0	64	0
Stage 1	59	-	-	-	-	-
Stage 2	2178	-	-	-	-	-
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	47	1007	-	-	1538	-
Stage 1	964	-	-	-	-	-
Stage 2	93	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	14	1007	-	-	1538	-
Mov Cap-2 Maneuver	14	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	29	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	11.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	14	1007	1538	-
HCM Lane V/C Ratio	-	-	0.085	0.301	0.693	-
HCM Control Delay (s)	-	-	284.8	10.1	12.4	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	1.3	6.1	-

Site: 101 [2026 No Build AM]

Thrust Tract TIA
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Foster Creek Road												
3	L2	13	2.0	0.358	7.1	LOS A	2.0	49.6	0.49	0.37	0.49	29.7
8	T1	239	2.0	0.358	7.1	LOS A	2.0	49.6	0.49	0.37	0.49	36.3
18	R2	124	2.0	0.358	7.1	LOS A	2.0	49.6	0.49	0.37	0.49	32.6
Approach		376	2.0	0.358	7.1	LOS A	2.0	49.6	0.49	0.37	0.49	34.7
East: Williams Lane												
1	L2	491	3.0	0.977	45.1	LOS E	40.6	1039.9	1.00	2.14	3.51	20.8
6	T1	119	3.0	0.977	45.1	LOS E	40.6	1039.9	1.00	2.14	3.51	18.3
16	R2	306	3.0	0.977	45.1	LOS E	40.6	1039.9	1.00	2.14	3.51	20.5
Approach		915	3.0	0.977	45.1	LOS E	40.6	1039.9	1.00	2.14	3.51	20.4
North: Foster Creek Road												
7	L2	110	2.0	0.952	47.2	LOS E	22.4	568.7	1.00	1.81	3.59	21.1
4	T1	523	2.0	0.952	47.2	LOS E	22.4	568.7	1.00	1.81	3.59	22.0
14	R2	38	2.0	0.952	47.2	LOS E	22.4	568.7	1.00	1.81	3.59	18.7
Approach		670	2.0	0.952	47.2	LOS E	22.4	568.7	1.00	1.81	3.59	21.6
West: Song Sparrow Way												
5	L2	93	2.0	0.472	18.4	LOS C	2.3	58.3	0.81	0.97	1.20	24.5
2	T1	42	2.0	0.472	18.4	LOS C	2.3	58.3	0.81	0.97	1.20	23.3
12	R2	63	2.0	0.472	18.4	LOS C	2.3	58.3	0.81	0.97	1.20	24.0
Approach		198	2.0	0.472	18.4	LOS C	2.3	58.3	0.81	0.97	1.20	24.1
All Vehicles		2159	2.4	0.977	36.7	LOS E	40.6	1039.9	0.89	1.62	2.80	22.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	195	443	46	246	388	43
Future Volume (veh/h)	195	443	46	246	388	43
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	207	471	54	289	436	48
Peak Hour Factor	0.94	0.94	0.85	0.85	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	237	538	272	1119	479	530
Arrive On Green	0.47	0.47	0.07	0.60	0.27	0.27
Sat Flow, veh/h	508	1155	1781	1870	1781	1585
Grp Volume(v), veh/h	0	678	54	289	436	48
Grp Sat Flow(s),veh/h/ln	0	1662	1781	1870	1781	1585
Q Serve(g_s), s	0.0	33.2	1.3	6.6	21.4	1.9
Cycle Q Clear(g_c), s	0.0	33.2	1.3	6.6	21.4	1.9
Prop In Lane		0.69	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	775	272	1119	479	530
V/C Ratio(X)	0.00	0.88	0.20	0.26	0.91	0.09
Avail Cap(c_a), veh/h	0	775	332	1119	572	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	21.7	16.6	8.6	32.0	20.6
Incr Delay (d2), s/veh	0.0	13.2	0.4	0.6	16.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	14.6	0.5	2.6	11.3	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	34.9	17.0	9.2	48.9	20.7
LnGrp LOS	A	C	B	A	D	C
Approach Vol, veh/h	678			343	484	
Approach Delay, s/veh	34.9			10.4	46.1	
Approach LOS	C			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.9	48.1				60.0	30.3
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	9.0	39.0				54.0	29.0
Max Q Clear Time (g_c+I1), s	3.3	35.2				8.6	23.4
Green Ext Time (p_c), s	0.0	2.0				2.7	0.9

Intersection Summary		
HCM 6th Ctrl Delay		32.9
HCM 6th LOS		C

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	10	23	436	369	8
Future Vol, veh/h	6	10	23	436	369	8
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	-	-	-	-	155
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	54	94	94	88	88
Heavy Vehicles, %	8	8	2	2	2	2
Mvmt Flow	11	19	24	464	419	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	931	419	428	0	-	0
Stage 1	419	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Critical Hdwy	6.48	6.28	4.12	-	-	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.372	2.218	-	-	-
Pot Cap-1 Maneuver	289	621	1131	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	590	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	281	621	1131	-	-	-
Mov Cap-2 Maneuver	281	-	-	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	590	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.1	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1131	-	427	-	-
HCM Lane V/C Ratio	0.022	-	0.069	-	-
HCM Control Delay (s)	8.3	0	14.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	15.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	738	26	1	365	36
Future Vol, veh/h	1	738	26	1	365	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	150	-	-	215	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	82	82	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	829	32	1	388	38

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	847	33	0	0	33	0
Stage 1	33	-	-	-	-	-
Stage 2	814	-	-	-	-	-
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	332	1041	-	-	1579	-
Stage 1	989	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	250	1041	-	-	1579	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	329	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.4	0	7.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	250	1041	1579	-
HCM Lane V/C Ratio	-	-	0.004	0.797	0.246	-
HCM Control Delay (s)	-	-	19.5	20.4	8	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0	8.8	1	-

Site: 101 [2026 No Build PM]

Thrust Tract TIA
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Foster Creek Road												
3	L2	55	2.0	0.525	8.8	LOS A	3.9	99.9	0.43	0.25	0.43	29.0
8	T1	472	2.0	0.525	8.8	LOS A	3.9	99.9	0.43	0.25	0.43	35.2
18	R2	108	2.0	0.525	8.8	LOS A	3.9	99.9	0.43	0.25	0.43	31.8
Approach		635	2.0	0.525	8.8	LOS A	3.9	99.9	0.43	0.25	0.43	33.9
East: Williams Lane												
1	L2	63	5.0	0.169	6.8	LOS A	0.7	17.6	0.58	0.55	0.58	31.8
6	T1	14	5.0	0.169	6.8	LOS A	0.7	17.6	0.58	0.55	0.58	26.4
16	R2	46	5.0	0.169	6.8	LOS A	0.7	17.6	0.58	0.55	0.58	31.0
Approach		123	5.0	0.169	6.8	LOS A	0.7	17.6	0.58	0.55	0.58	30.8
North: Foster Creek Road												
7	L2	58	2.0	0.376	6.8	LOS A	2.2	56.6	0.38	0.23	0.38	33.8
4	T1	315	2.0	0.376	6.8	LOS A	2.2	56.6	0.38	0.23	0.38	36.2
14	R2	69	2.0	0.376	6.8	LOS A	2.2	56.6	0.38	0.23	0.38	28.1
Approach		442	2.0	0.376	6.8	LOS A	2.2	56.6	0.38	0.23	0.38	34.3
West: Song Sparrow Way												
5	L2	41	3.0	0.110	5.3	LOS A	0.4	11.5	0.51	0.42	0.51	28.4
2	T1	8	3.0	0.110	5.3	LOS A	0.4	11.5	0.51	0.42	0.51	26.9
12	R2	45	3.0	0.110	5.3	LOS A	0.4	11.5	0.51	0.42	0.51	27.8
Approach		93	3.0	0.110	5.3	LOS A	0.4	11.5	0.51	0.42	0.51	28.0
All Vehicles		1293	2.4	0.525	7.7	LOS A	3.9	99.9	0.43	0.28	0.43	33.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	190	364	138	143	629	145
Future Volume (veh/h)	190	364	138	143	629	145
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	221	423	200	207	912	210
Peak Hour Factor	0.86	0.86	0.69	0.69	0.69	0.69
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	242	463	272	1063	544	617
Arrive On Green	0.42	0.42	0.08	0.57	0.31	0.31
Sat Flow, veh/h	574	1099	1781	1870	1781	1585
Grp Volume(v), veh/h	0	644	200	207	912	210
Grp Sat Flow(s),veh/h/ln	0	1673	1781	1870	1781	1585
Q Serve(g_s), s	0.0	34.4	5.7	5.1	29.0	8.9
Cycle Q Clear(g_c), s	0.0	34.4	5.7	5.1	29.0	8.9
Prop In Lane		0.66	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	705	272	1063	544	617
V/C Ratio(X)	0.00	0.91	0.74	0.19	1.68	0.34
Avail Cap(c_a), veh/h	0	705	291	1063	544	617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	25.9	20.7	9.9	33.0	20.4
Incr Delay (d2), s/veh	0.0	18.3	8.8	0.4	312.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.3	2.8	2.0	59.5	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	44.2	29.4	10.4	345.7	20.8
LnGrp LOS	A	D	C	B	F	C
Approach Vol, veh/h	644			407	1122	
Approach Delay, s/veh	44.2			19.7	284.9	
Approach LOS	D			B	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	14.0	46.0				60.0	35.0
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	9.0	39.0				54.0	29.0
Max Q Clear Time (g_c+I1), s	7.7	36.4				7.1	31.0
Green Ext Time (p_c), s	0.1	1.4				1.8	0.0

Intersection Summary		
HCM 6th Ctrl Delay		163.9
HCM 6th LOS		F

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	58	24	420	479	4
Future Vol, veh/h	17	58	24	420	479	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	-	150	-	-	155
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	63	69	69	87	87
Heavy Vehicles, %	4	4	2	2	2	2
Mvmt Flow	27	92	35	609	551	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1230	551	556	0	-	0
Stage 1	551	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.12	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.218	-	-	-
Pot Cap-1 Maneuver	194	530	1015	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	187	530	1015	-	-	-
Mov Cap-2 Maneuver	187	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	500	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.1	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1015	-	374	-	-
HCM Lane V/C Ratio	0.034	-	0.318	-	-
HCM Control Delay (s)	8.7	-	19.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.3	-	-

Intersection	
Int Delay, s/veh	11.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	264	39	8	903	38
Future Vol, veh/h	1	264	39	8	903	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	150	-	-	215	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	73	73	82	82
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	1	314	53	11	1101	46

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2307	59	0	0	64	0
Stage 1	59	-	-	-	-	-
Stage 2	2248	-	-	-	-	-
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	42	1007	-	-	1538	-
Stage 1	964	-	-	-	-	-
Stage 2	86	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	12	1007	-	-	1538	-
Mov Cap-2 Maneuver	12	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	24	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	12.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	12	1007	1538	-
HCM Lane V/C Ratio	-	-	0.099	0.312	0.716	-
HCM Control Delay (s)	-	-	$ 335.7	10.2	13	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	0.3	1.3	6.7	-

Site: 101 [2026 Build AM]

Thrust Tract TIA
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Foster Creek Road												
3	L2	13	2.0	0.369	7.3	LOS A	2.0	51.6	0.50	0.38	0.50	29.6
8	T1	249	2.0	0.369	7.3	LOS A	2.0	51.6	0.50	0.38	0.50	36.2
18	R2	124	2.0	0.369	7.3	LOS A	2.0	51.6	0.50	0.38	0.50	32.6
Approach		387	2.0	0.369	7.3	LOS A	2.0	51.6	0.50	0.38	0.50	34.7
East: Williams Lane												
1	L2	491	3.0	0.990	48.4	LOS E	42.4	1085.3	1.00	2.23	3.71	20.2
6	T1	119	3.0	0.990	48.4	LOS E	42.4	1085.3	1.00	2.23	3.71	17.8
16	R2	308	3.0	0.990	48.4	LOS E	42.4	1085.3	1.00	2.23	3.71	19.9
Approach		917	3.0	0.990	48.4	LOS E	42.4	1085.3	1.00	2.23	3.71	19.8
North: Foster Creek Road												
7	L2	113	2.0	1.008	60.0	LOS F	29.8	756.4	1.00	2.07	4.41	18.9
4	T1	559	2.0	1.008	60.0	LOS F	29.8	756.4	1.00	2.07	4.41	19.6
14	R2	38	2.0	1.008	60.0	LOS F	29.8	756.4	1.00	2.07	4.41	17.0
Approach		709	2.0	1.008	60.0	LOS F	29.8	756.4	1.00	2.07	4.41	19.3
West: Song Sparrow Way												
5	L2	93	2.0	0.490	19.7	LOS C	2.4	60.8	0.82	0.99	1.25	24.1
2	T1	42	2.0	0.490	19.7	LOS C	2.4	60.8	0.82	0.99	1.25	23.0
12	R2	63	2.0	0.490	19.7	LOS C	2.4	60.8	0.82	0.99	1.25	23.7
Approach		198	2.0	0.490	19.7	LOS C	2.4	60.8	0.82	0.99	1.25	23.7
All Vehicles		2210	2.4	1.008	42.4	LOS E	42.4	1085.3	0.90	1.74	3.15	21.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	195	452	48	246	394	44
Future Volume (veh/h)	195	452	48	246	394	44
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	207	481	56	289	443	49
Peak Hour Factor	0.94	0.94	0.85	0.85	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	231	537	261	1114	485	537
Arrive On Green	0.46	0.46	0.07	0.60	0.27	0.27
Sat Flow, veh/h	500	1161	1781	1870	1781	1585
Grp Volume(v), veh/h	0	688	56	289	443	49
Grp Sat Flow(s),veh/h/ln	0	1661	1781	1870	1781	1585
Q Serve(g_s), s	0.0	34.4	1.3	6.7	21.8	1.9
Cycle Q Clear(g_c), s	0.0	34.4	1.3	6.7	21.8	1.9
Prop In Lane		0.70	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	769	261	1114	485	537
V/C Ratio(X)	0.00	0.90	0.21	0.26	0.91	0.09
Avail Cap(c_a), veh/h	0	769	319	1114	570	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	22.4	17.3	8.8	32.0	20.4
Incr Delay (d2), s/veh	0.0	15.1	0.4	0.6	17.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.5	0.5	2.6	11.6	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	37.5	17.7	9.3	49.6	20.5
LnGrp LOS	A	D	B	A	D	C
Approach Vol, veh/h	688			345	492	
Approach Delay, s/veh	37.5			10.7	46.7	
Approach LOS	D			B	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.0	48.0				60.0	30.7
Change Period (Y+Rc), s	6.0	6.0				6.0	6.0
Max Green Setting (Gmax), s	9.0	39.0				54.0	29.0
Max Q Clear Time (g_c+I1), s	3.3	36.4				8.7	23.8
Green Ext Time (p_c), s	0.0	1.4				2.7	0.8

Intersection Summary	
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	29	56	436	369	19
Future Vol, veh/h	13	29	56	436	369	19
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	-	150	-	-	155
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	54	94	94	88	88
Heavy Vehicles, %	8	8	2	2	2	2
Mvmt Flow	24	54	60	464	419	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1003	419	441	0	-	0
Stage 1	419	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Critical Hdwy	6.48	6.28	4.12	-	-	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.372	2.218	-	-	-
Pot Cap-1 Maneuver	262	621	1119	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	248	621	1119	-	-	-
Mov Cap-2 Maneuver	248	-	-	-	-	-
Stage 1	616	-	-	-	-	-
Stage 2	546	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.4	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1119	-	424	-	-
HCM Lane V/C Ratio	0.053	-	0.183	-	-
HCM Control Delay (s)	8.4	-	15.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-

Intersection	
Int Delay, s/veh	17.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	769	26	1	383	36
Future Vol, veh/h	1	769	26	1	383	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	0	150	-	-	215	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	82	82	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	864	32	1	407	38

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	885	33	0	0	33	0
Stage 1	33	-	-	-	-	-
Stage 2	852	-	-	-	-	-
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	315	1041	-	-	1579	-
Stage 1	989	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	234	1041	-	-	1579	-
Mov Cap-2 Maneuver	234	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	310	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.7	0	7.4
HCM LOS	C		

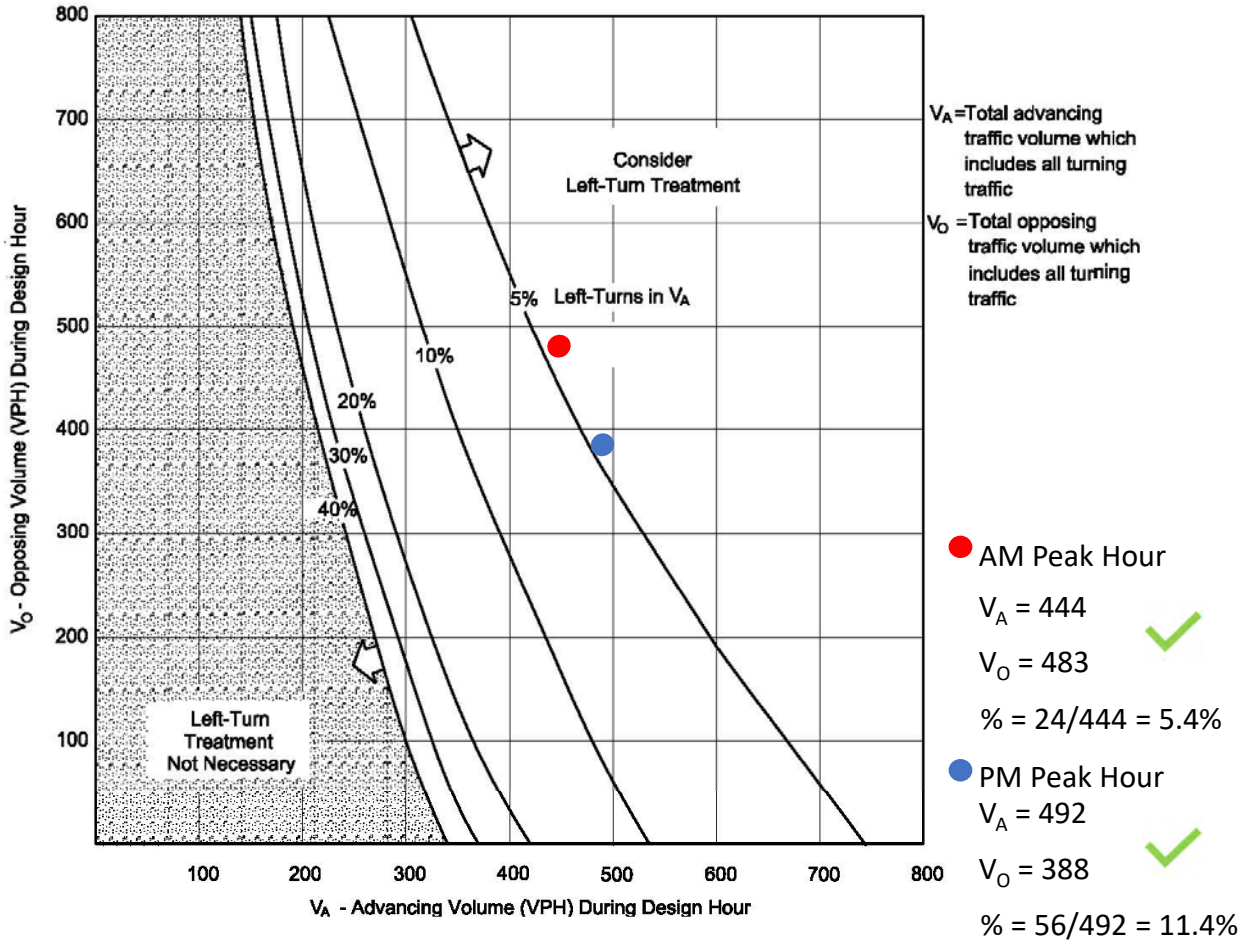
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	234	1041	1579	-
HCM Lane V/C Ratio	-	-	0.005	0.83	0.258	-
HCM Control Delay (s)	-	-	20.5	22.7	8.1	-
HCM Lane LOS	-	-	C	C	A	-
HCM 95th %tile Q(veh)	-	-	0	10.1	1	-

Site: 101 [2026 Build PM]

Thrust Tract TIA
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Foster Creek Road												
3	L2	55	2.0	0.554	9.4	LOS A	4.4	110.7	0.45	0.26	0.45	28.8
8	T1	507	2.0	0.554	9.4	LOS A	4.4	110.7	0.45	0.26	0.45	34.9
18	R2	108	2.0	0.554	9.4	LOS A	4.4	110.7	0.45	0.26	0.45	31.5
Approach		670	2.0	0.554	9.4	LOS A	4.4	110.7	0.45	0.26	0.45	33.7
East: Williams Lane												
1	L2	63	5.0	0.179	7.1	LOS A	0.7	18.6	0.60	0.58	0.60	31.6
6	T1	14	5.0	0.179	7.1	LOS A	0.7	18.6	0.60	0.58	0.60	26.3
16	R2	49	5.0	0.179	7.1	LOS A	0.7	18.6	0.60	0.58	0.60	30.9
Approach		126	5.0	0.179	7.1	LOS A	0.7	18.6	0.60	0.58	0.60	30.7
North: Foster Creek Road												
7	L2	59	2.0	0.394	7.0	LOS A	2.4	60.8	0.39	0.24	0.39	33.7
4	T1	336	2.0	0.394	7.0	LOS A	2.4	60.8	0.39	0.24	0.39	36.1
14	R2	69	2.0	0.394	7.0	LOS A	2.4	60.8	0.39	0.24	0.39	28.0
Approach		464	2.0	0.394	7.0	LOS A	2.4	60.8	0.39	0.24	0.39	34.3
West: Song Sparrow Way												
5	L2	41	3.0	0.113	5.4	LOS A	0.5	11.7	0.52	0.44	0.52	28.3
2	T1	8	3.0	0.113	5.4	LOS A	0.5	11.7	0.52	0.44	0.52	26.8
12	R2	45	3.0	0.113	5.4	LOS A	0.5	11.7	0.52	0.44	0.52	27.7
Approach		93	3.0	0.113	5.4	LOS A	0.5	11.7	0.52	0.44	0.52	27.9
All Vehicles		1353	2.3	0.554	8.1	LOS A	4.4	110.7	0.45	0.30	0.45	33.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Instructions:

1. *The family of curves represents the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.*

2. *Read V_A and V_O into the chart and locate the intersection of the two volumes.*

3. *Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a left-turn lane is not warranted based on traffic volumes.*

VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS (45 mph)
Figure 9.5-F

Appendix D

Charleston Water System

PO Box B
Charleston, SC 29402
103 St. Philip Street (29403)

(843) 727-6800
www.charlestonwater.com

February 17, 2021

Robert Wall
Stanley Martin Homes
wallrc@stanleymartin.com

Water Availability to TMS: 259-00-01-004 & 259-03-01-101
41 Town Homes and 40 Single Family lots

This letter is to certify our willingness and ability to provide water and sewer service to the above referenced site in Berkeley County, South Carolina. CWS currently has an 8' water main in the ROW of Whispering Oak Drive and Crossbill Trail which may be extended to serve the proposed development.

It will of course be a developer responsibility to ensure there are adequate pressures and quantities on the existing mains to serve this site with domestic water/fire flow and not negatively impact the existing developments. Please be advised any extensions or modifications to the infrastructure as well as any additional fire protection will be a developer's expense. All fees and cost associated with providing service to this site will be a developer expense and will be due prior to connection of any Charleston Water System's water system. This letter does not reserve capacity in the Charleston Water System infrastructure and it is incumbent upon the developer or his agent to confirm the availability herein granted past 12 months of this correspondence.

The Charleston Water System certifies the availability of service only insofar as its rights allow. Should access to our existing main/mains be denied by appropriate governing authorities, the Charleston Water System will have no other option than to deny service. This letter is not to be construed as a letter of acceptance for operation and maintenance from the Department of Health and Environmental Control.

If there are any questions pertaining to this letter, please do not hesitate to call on me at (843) 727-6869.

Sincerely,

Lydia Owens
Charleston Water System

Commercial Letter of Availability

February 15, 2021

Stanley Martin Homes
502 Wando Park Blvd., Suite 101
Mt. Pleasant, South Carolina 29464

Re: TMS 259-03-01-101

Dear Robert:

I am pleased to inform you that Dominion Energy will be able to provide electric service to the above referenced parcels. Electric service will be provided in accordance with Dominion Energy General Terms and Conditions, other documents on file with the South Carolina Public Service Commission, and the company's standard operating policies and procedures. In order to begin engineering work for the project, the following information will need to be provided:

1.) Detailed utility site plan (AutoCAD format preferred) showing water, sewer, and storm drainage as well as requested service point/transformer location.
2.) Additional drawings that indicate wetlands boundaries, tree survey with barricade plan and buffer zones (if required), as well as any existing or additional easements will also be needed.
3.) Electric load breakdown by type with riser diagrams and desired metering specifications.
4.) Signed copy of this letter acknowledging its receipt and responsibility for its contents and authorization to begin engineering work with the understanding that Dominion Energy intends to serve the referenced project.

Dominion Energy construction standards and specifications are available upon request. Please note that for multi-occupancy residential developments per SC Public Service Commission Regulation 103-327(A): *All service delivered to new multi-occupancy residential premises at which units of such premises are separately rented, leased or owned shall be delivered by an electric utility on the basis of individual meter measurement for each dwelling*. For more information or questions, contact me by phone at (843-576-8452) or at Monique.palmer@dominionenergy.com.

Sincerely,

Monique L. Palmer
Key Account Manager

AUTHORIZED SIGNATURE: _____ DATE: _____

TITLE: _____ PHONE: _____

02/19/2021

Robbie Wall, Land Development Manager
Stanley Martin Homes
502 Wando Park Blvd Suite 101
Mt. Pleasant, SC 29464

Re: Thrash Property – Foster Creek Rd.
TMS: 259-00-01-004 & 259-03-01-101

Robbie,

I am pleased to inform you that Dominion Energy will be able to provide natural gas service to the above referenced TMS: 259-00-01-004 & 259-03-01-101 located in Berkley County. Services will be provided in accordance with Dominion Energy's General Terms and Conditions, other documents on file with the South Carolina Public Service Commission, and the company's standard operating policies and procedures.

Any cost associated with providing service will be determined when a finalized/approved plan is submitted to our office. In order to begin engineering work for the project, the following information will need to be provided:

1.) Detailed utility site plan (AutoCAD format preferred) showing water, sewer, and storm drainage. The finalized/approved plan must include lot numbers, street names, and 911 addresses for each lot.
2.) Additional drawings that indicate wetlands boundaries, tree survey with barricade plan and buffer zones (if required), as well as any existing or additional easements will also be needed.
3.) Copies of the Army Corp of Engineers official delineation and permits. If applicable, OCMR permits should also be included.
4.) Signed copy of this letter acknowledging its receipt and responsibility for its contents and authorization to begin engineering work with the understanding that Dominion Energy intends to serve the referenced project.

Dominion Energy's construction standards and specifications are available upon request. For more information or questions, contact me by phone at (843) 614-0951 or at brittany.fickling@dominionenergy.com.

Sincerely,
Brittany Fickling
Dominion Energy

To: Mike Kittrell
Senior Landscape Architect

From: Joseph Bowers, Fire Chief JKB

Date: April 6, 2021

RE: **LETTER OF COORDINATION**

The City of Hanahan Fire Department is aware of the project that consists of 81-unit mix of Townhomes and Single-Family residences for Stanley Martin Homes. The property is known as the Thrash Tract- TMS#259-00-01004. Based on this fact and the layout of the subdivision the following areas are things of concern that must be addressed.

- Access- The fire department notes the bridge on the drawing and require it to have 80,000 lbs. GVW rating. Also notes that these are all dead-end streets and will have concerns in event of a fire.
- Hydrants- The fire department is requesting 7 hydrants.
- Residential Sprinklers- Due to the design and aforementioned areas the Fire Department is requesting as the AHJ to have sprinklers installed. If this is done the minimum hydrants would be 5 and it would mitigate access issues.