

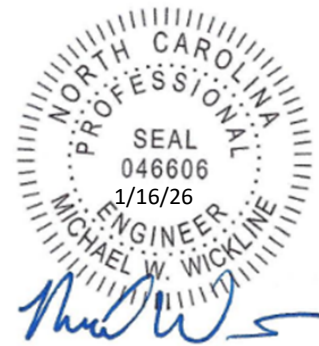
TRANSPORTATION TECHNICAL MEMORANDUM (TTM)

Date: January 16, 2026

To: Kevin Parker, PE
Engineering Director
Town of Stallings

From: Michael Wickline, PE
Principal
Design Resource Group, PA (C-2165)

Subject: **Stevens Village - Trip Generation Update and TIA Validation Memorandum
(297-031)**



Summary

Per the request of Town of Stallings staff and Stevens Village, LLC., the purpose of this memorandum is to provide a traffic evaluation for the updated Stevens Village project including evaluation of the updated trip generation with a comparison to the trip generation provided in Ramey Kemp Associates approved Idlewild Village TIA from July 2023. The intent is to provide reasoning and validation that the previously approved TIA is acceptable with the proposed updates to the current plans.

Background Information/ Proposed Development Projected Traffic

Ramey Kemp Associates completed the approved TIA for the Stevens Village project in July 2023 based on the approved plan (see attached Exhibit A - Concept Plan from the Approved TIA). The trip generation assumptions included in the previous TIA are shown in Table 1 below.

Table 1 – Approved TIA Trip Generation

Land Use [ITE Code]			Daily	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Approved TIA									
Strip Retail [822]	8,950	SF	608	16	11	27	36	36	72
Strip Retail [822]	6,000	SF	484	12	9	21	27	27	54
Strip Retail [822]	8,150	SF	574	15	10	25	33	34	67
Strip Retail [822]	8,875	SF	604	16	11	27	36	36	72
Supermarket [850]	48,840	SF	4,584	82	58	140	218	219	437
Fast-Food w/ Drive-Thru [934]	4,500	SF	2,104	102	99	201	77	72	149
Convenience Store [945]	5,000	SF	6,418	228	229	457	197	198	395
Approved TIA Total Trips			15,376	471	427	898	624	622	1,246



The updated Stevens Village plans (see attached Exhibit B – CZ/Phasing Plan) include the following land uses and trip generation calculations as shown in Table 2 per the original TIA methodology.

Table 2 – Updated Plan Trip Generation

Land Use [ITE Code]			Daily	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Updated Site Plan - Phase 1									
Strip Retail [822]	16,000	SF	905	24	15	39	54	55	109
Drive-In Bank [912]	5,700	SF	572	33	21	54	60	60	120
Supermarket [850]	46,000	SF	4,317	78	54	132	206	206	412
Fast-Food w/ Drive-Thru [934]	4,500	SF	2,104	102	99	201	77	72	149
Convenience Store [945]	3,963	SF	5,082	181	181	362	156	157	313
Single-Family (Attached) Housing [215]	52	DUs	346	5	16	21	16	11	27
Updated Site Plan - Phase 1 Total Trips			13,326	423	386	809	569	561	1,130
Difference Between Updated Site Plan - Phase 1 and Approved TIA Total Trips*			-2,050	-48	-41	-89	-55	-61	-116

Based on the trip generation calculations, the updated plan for Phase 1 is expected to generate 13,326 daily trips, 809 AM peak hour trips, and 1,130 PM peak hour trips. Comparing these results to the trip generation from the approved TIA results in the following decreases in traffic volumes:

- 2,050 less daily trips – 10.4% reduction
- 89 less AM peak hour trips – 9.9% reduction
- 116 less PM peak hour trips – 9.3% reduction

In addition to the reductions to traffic volumes and density, the updated plan also incorporates an additional development area to include residential townhomes which we are considering Phase 2 (see attached Exhibit B – CZ/Phasing Plan).

Based on the updated plan, an additional 66 townhomes are proposed on the additional adjacent development area (Phase 2). Phase 2 is currently zoned to allow commercial development. Based on recent density studies, an example of what can be developed by-right is shown below:

- 11,400 SF daycare center
- 24,000 SF of commercial retail
- 6,000 SF of fast casual restaurant

Table 3 shows the trip generation calculations for what could potentially be developed on the new Phase 2 development area compared to the proposed Phase 2 plans.



Table 3 – Phase 2 By-Right vs Phase 2 Current Plans Trip Generation Comparison

Land Use [ITE Code]			Daily	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Phase 2 By Right									
Day Care Center [565]	11,400	SF	543	66	59	125	60	67	127
Strip Retail [822]	24,000	SF	1,307	34	23	57	79	79	158
Fast Casual Restaurant [930]	6,000	SF	583	4	5	9	41	34	75
Phase 2 By Right Total Trips			2,433	104	87	191	180	180	360
Current Site Plan - Phase 2									
Single-Family (Attached) Housing [215]	66	DUs	452	7	22	29	21	15	36
Difference Between Current Site Plan - Phase 2 and Phase 2 By Right Total Trips*			-1,981	-97	-65	-162	-159	-165	-324

Based on the results of the trip generation calculations, the Phase 2 by-right plan would be expected to generate approximately 2,433 daily trips, 191 AM peak hour trips, and 360 PM peak hour trips.

The Phase 2 current plans trip generation calculations indicated the site is expected to generate approximately 452 daily trips, 29 AM peak hour trips, and 36 PM peak hour trips. Comparing these results to the by-right trip generation estimates results in the following decreases in expected traffic volumes:

- 1,981 less daily trips – 81.4% reduction
- 162 less AM peak hour trips – 84.8% reduction
- 324 less PM peak hour trips – 90.0% reduction

Although the updated plan includes additional development area, with the reductions to the densities to the commercial development and the addition of the residential land uses the total trip generation for Phases 1 and 2 is still less than originally studied in the approved TIA per the below breakdowns below.

- Daily Trips – Approved TIA Total = 15,376; Phases 1 & 2 Updated Plan = 13,778
 - **1,598 less daily trips – 10.4% reduction**
- AM Peak Trips – Approved TIA = 898; Phases 1 & 2 Updated Plan = 838
 - **60 less AM peak hour trips – 6.7% reduction**
- PM Peak Trips – Approved TIA = 1,246; Phases 1 & 2 Updated Plan = 1,166
 - **80 less PM peak hour trips – 6.4% reduction**

In summary, even though the updated plan provides additional development area, the reductions in commercial density from the earlier plans results in reductions to the daily, AM peak hour, and PM peak hour trips as compared to the traffic volumes that were studied, analyzed, and mitigated in the approved TIA. As a result, the approved TIA should be considered acceptable for use even though the plans have been updated since the developer is still committing to all traffic improvements required by the TIA which studied higher traffic volumes.



Community Concerns and Questions

It is our understanding that during the previous rezonings and community outreach meetings there have been some questions/concerns about traffic in the area and different assumptions/analysis parameters included in the original TIA. See below for some recent questions and coinciding answers.

Growth Rate and Approved Developments in the Area

The approved TIA assumed a growth rate of 1% per year as a compounded value. This matches previous assumptions for other TIAs in the area including the approved Idlewild Mixed-Use TIA.

The accepted standard for growth rates is 2% per year as a compounded value in the Greater Charlotte Area. While 2% is the standard value, this rate may go up or down based on historical growth rates in the area, inclusion of adjacent developments in the future year background traffic volumes, or availability of land for future developments. This value is generally determined during the scoping process for the TIA and per the approved scoping document 1% was the agreed upon value for use in the approved TIA.

Historical growth rate values are generally calculated based on 10 years of data and when looking at the available data provided by NCDOT the AADT of Idlewild in 2012 was 18,000 vehicles with the same location reported at 20,000 vehicles per day in 2022. This indicates a 1% per year growth rate is valid for projecting future year volumes for TIA purposes.

In addition to typical growth rate assumptions, TIAs incorporate the anticipated traffic from any nearby approved developments that have not been constructed or are not generating traffic at the time of the study.

The approved Idlewild Village TIA accounted for the following 4 nearby approved developments:

- Idlewild Mixed Use
- Stallings Farms
- Stinson Farms
- Sante

Per coordination with Stallings staff there has been one additional approved development in the area that wasn't accounted for in the previous TIA which is the McBride Subdivision. The McBride Subdivision includes 108 new single-family homes and is considered to be covered by the compounded 1% per year growth rate which was included in the background traffic used in the analysis.



Queuing at Shannamara Drive & Stevens Mill Road

Based on feedback from nearby residents, vehicle queues on Stevens Mill Road are a concern especially for the residents of Shannamara. Currently, there are a few periods (15-30 minutes in the morning peak hour) in which traffic on Stevens Mill Road extends past Shannamara Drive from Idlewild Road.

Per the approved TIA, multiple improvements will be implemented along Stevens Mill Road and at Idlewild Road to mitigate the impacts from the proposed developments anticipated traffic as noted below:

Stinson Farms:

- Construct an additional eastbound through lane on Idlewild Road that drops as a left turn lane at Stevens Mill Road
- Mark the outer lane as a shared through-right lane at Stevens Mill Road

Stevens Village:

- Construct an additional southbound left turn lane on Stevens Mill Road with 300' of storage and extend the existing left turn lane from 135' to 300' of storage resulting in dual lefts
- Extend the southbound right turn lane on Stevens Mill Road from 150' to 300' storage
- Construct an additional northbound left turn lane on Stevens Mill Road with 250' of storage and reducing the existing left turn lane to 250' of storage resulting in dual lefts
- Construct a westbound right turn lane on Idlewild Road with 225' of storage
- Construct an additional eastbound thru lane on Idlewild Road which will also act as a receiving lane for the southbound dual left turn lanes

In addition to improvements to Idlewild Road and Stevens Mill Road; the proposed development is also constructing a new signalized access on Stevens Mill Road as detailed below:

- Access "C" is to be located on Stevens Mill Drive approximately 1,085 feet northeast (centerline to centerline) from the Idlewild Road intersection and approximately 665' southwest (centerline to centerline) from the Shannamara Drive intersection.
- Per the analysis results reported in the TIA, the calculated average southbound through lane queue length of vehicles during the PM peak for the future year 2030 assuming Access "C" as signalized and the project is fully developed, would be **365 feet** measured from the STOP bar at the signal (see attached Exhibit C – **Blue** Line)
- In addition, the reported maximum southbound through lane queue during the PM peak for the future year 2030 assuming Access "C" as signalized and the project is fully developed, would be **515 feet** measured from the STOP bar at the signal (see attached Exhibit C – **RED** Line)
- This would indicate that even during the most congested period of the PM peak hour, that the expected queue of vehicles traveling southbound on Stevens Mill Road would not be expected to block the intersection at Shannamara Drive since it is 665' feet away from the proposed signalized intersection.



In summary, the proposed improvements planned for the intersection of Idlewild Road and Stevens Mill Road by the developer were based on higher peak hour traffic calculations when compared to the new plan will improve capacity along both corridors as well as reduce traffic queues on Stevens Mill Road back to Shannamara Drive. The new traffic signal on Stevens Mill Road at the proposed access will help control the speed of vehicles traveling Stevens Mill Road along with making the intersection of Stevens Mill Road and Shannamara Drive safer for residents as it will provide gaps in the traffic flow especially during the peak hours for lefts turns out from the community.

Conclusion and Recommendations

After reviewing the updated Stevens Village site plan, the updated plan does provide for additional development area, but the reductions in commercial density from the earlier plans result in reductions to the daily, AM peak hour, and PM peak hour trips as compared to the traffic volumes that were studied, analyzed, and mitigated in the approved TIA. As a result, the approved TIA should be considered acceptable for use even though the plans have been updated since the developer is still committing to all traffic improvements required by the TIA which studied higher traffic volumes.

Please contact us should you have any questions or need any additional information.

Attachments: Exhibit A - Concept Plan from Approved TIA
Exhibit B – CZ/Phasing Plan
Exhibit C - Queueing Exhibit

cc: File

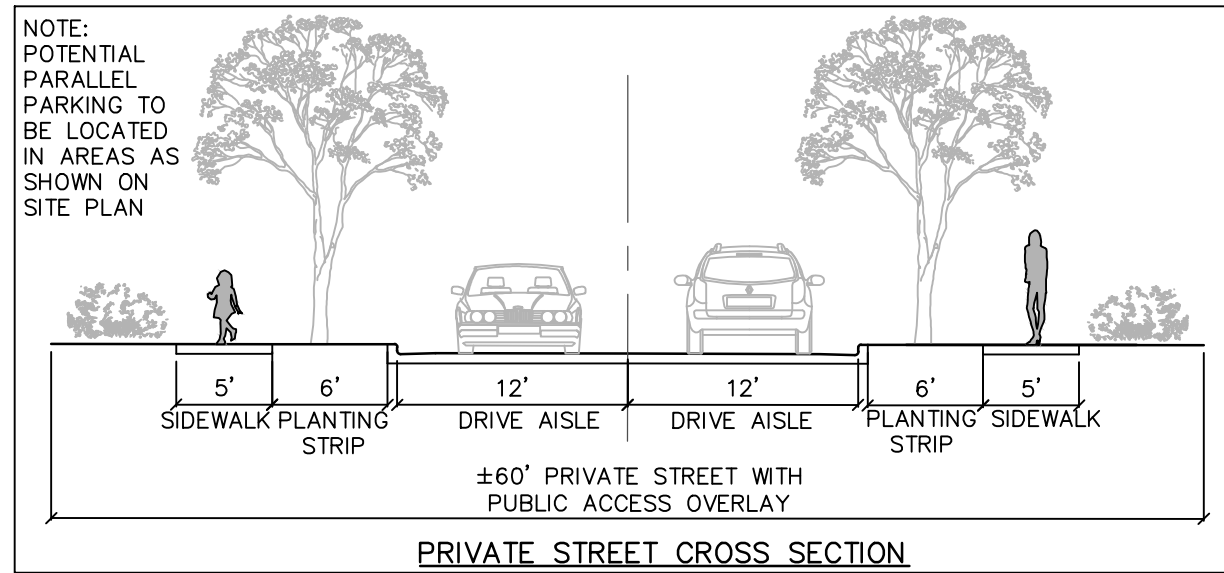


EXHIBIT A

AX # 07-075-024A
DONALD L. WALLACE &
PEGGY P. WALLACE
DB 457/631
ZONING: MU-2

TAX # 07-075-047
CHRISTOPHER PLUNKETT
DB 6374/99
ZONING: SFR-2

TAX # 07-075-046
ANTHONY MUCRINO
DB 5970/700
ZONING: SFR-2

TAX # 07-075-04
EDD D. COOK &
MELISSA D. COOK
DB 3833/438

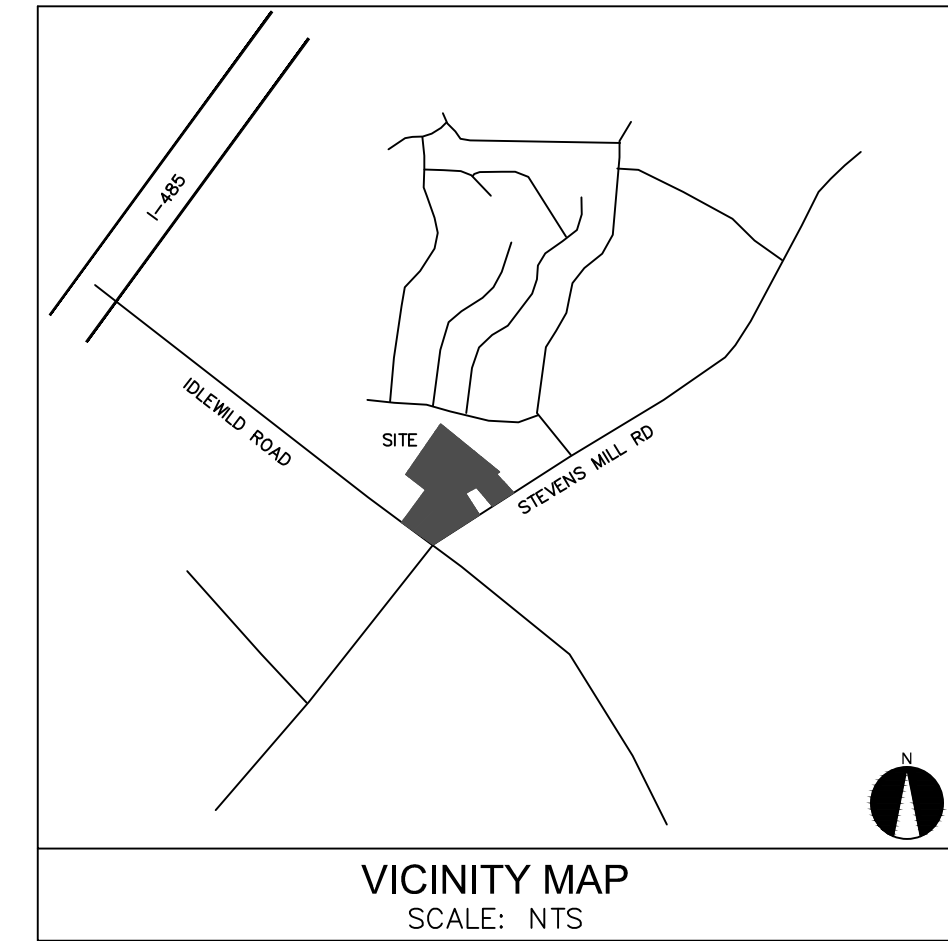
TAX # 07-075-043
HORST GRAU
DB 1377/455
ZONING: SFR-2

TAX # 07-075-03
WILLIAM PASKO &
AMANDA PASKO
DB 2046/807
ZONING: SFR-2

TAX # 07-075-037
RONALD ODOM &
BARBARA ODOM
DB 1396/629
ZONING: SFR-2

TAX #
07-075-036
GRETCHEN D.
SAWECKIS &
JOHN E.
SAWICKIS
DB 3087/456
ZONING:
SFR-2

TAX #
07-057-009J
KATHY W
ALEXANDER
DB 1572/480
ZONING:
MU-2



STEVENS MILL ROAD SITE DATA PER CONCEPT PLAN:

TAX MAP NO: 07075025, 07057009, 07057009E
ZONING: MU-2

SITE AREA:	
EXISTING R/W TO FUTURE R/W:	±0.35 AC (15,084 SF)
MAIN PARCEL:	±10.44 AC (454,791 SF)
OUTPARCEL 1:	±1.24 AC (54,122 SF) EXCLUDING FUTURE R/W
OUTPARCEL 2:	±0.49 AC (21,339 SF) EXCLUDING FUTURE R/W
TOTAL:	±12.52 AC (545,336 SF)

EXISTING LAND USE:	
MAIN PARCEL:	VACANT (WOODEN LOT)
OUTPARCEL 1:	EXISTING RESIDENTIAL
OUTPARCEL 2:	EXISTING RESIDENTIAL
SETBACKS:	12' MIN. WHEN NO BUFFER APPLIES (BUILDING TYPE STANDARDS)

BUFFERS:
 REQUIRED ABUTTING MU-2 DISTRICT: 5' VEHICULAR LANDSCAPE BUFFER
 REQUIRED ABUTTING SFR-1 DISTRICT: 30' CLASS 'B' LANDSCAPE BUFFER
 PROPOSED ABUTTING SFR-2 DISTRICTS: 70' CLASS 'B' LANDSCAPE BUFFER

PARKING REQUIRED FOR MAIN PARCEL:	182 SPACES MINIMUM (1 PER 350 SF)
	319 SPACES MAXIMUM (1 PER 200 SF)
PARKING PROVIDED FOR MAIN PARCEL:	294 SPACES (4.67/1,000 SF RATIO)
PARKING PROVIDED FOR OUTPARCEL 1:	39 SPACES
PARKING PROVIDED FOR OUTPARCEL 2:	16 SPACES

REQUIRED BUILDING HEIGHT:	50' MAXIMUM
PROPOSED BUILDING HEIGHTS:	
ANCHOR	± 36'
SHOP A:	± 36'
SHOP B:	± 36'

TREE SAVE REQUIRED: 6.2% MINIMUM = ± 0.80 AC
TREE SAVE PROVIDED: ± 0.80 AC (35,028 SF) = 6.2%

NOTE: FINAL TREE SAVE LIMITS AND LOCATIONS TO BE ESTABLISHED DURING PERMITTING BASED ON ENGINEERING DESIGN

OPEN SPACE PROVIDED:	7.5% MINIMUM = ±1.01 AC
OPEN SPACE REQUIRED:	
OPEN SPACE AREAS:	±0.22 AC (9,896 SF)
PEDESTRIAN PATH CONNECTION:	±0.16 AC (6,547 SF)
ENTRY WALKING PATH:	±0.32 AC (13,891 SF)
BMP 2:	±0.31 AC (13,694 SF)
TOTAL:	±1.01 AC (44,028 SF) = 7.5%

NOTE:

- OPEN SPACE AREAS SHALL NOT CONTAIN LESS THAN 500 SF.
- BMPS MAY ONLY COUNT TOWARDS 32% OF THE REQUIRED OPEN SPACE

WATERSHEDS: GOO
CRO

PROPOSED BUA:

MAIN PARCEL:	±57% (268,466 SF)
OUTPARCEL 1:	±35% (31,286 SF)
OUTPARCEL 2:	±59% (10,493 SF)

NOTE: OUTPARCEL 1 & 2'S BUA PERCENTAGE CALCULATED BASED ON SITE AREA LEFTOVER FROM RIGHT-OF-WAY DEDICATION

ESTIMATED UTILITY SERVICES CALCULATIONS:
SEWER SERVICE:
37,386 GAL/DAY TOTAL - SEE ESTIMATED SEWER USAGE TABLE THIS SHEET.

WATER METERS: SEE DOMESTIC & IRRIGATION METERS TABLE ABOVE.	
MAIN PARCEL:	7 WATER METERS
OUTPARCEL 1:	4 WATER METERS
OUTPARCEL 2:	2 WATER METERS

NOTE: BACKFLOW PREVENTERS MUST BE LOCATED IN EITHER AN APPROVED UNDERGROUND VAULT AT THE FRONT OF THE DEVELOPMENT SITE OR PLACED ON THE SIDE OR REAR OF THE SITE AND ADEQUATELY SCREENED. FINAL LOCATION TO BE DETERMINED DURING PERMITTING.

IDLEWILD CROSSING SITE DATA PER DEVELOPMENT AGREEMENT PLAN:

TAX MAP NO: 07057009A, 07075016A, & 070750161

ZONING: MU-2

SITE AREA:	
EXISTING R/W TO FUTURE R/W	±1.85 AC (80,786 SF) DEED RD CENTERLINE TO FUTURE R/W
OUTPARCEL 1:	±1.40 AC (61,224 SF) EXCLUDING FUTURE R/W
OUTPARCEL 2:	±1.95 AC (84,789 SF) EXCLUDING FUTURE R/W
TOTAL:	±5.20 (226,794 SF)

EXISTING LAND USE:	
MAIN PARCEL:	VACANT (WOODEN LOT)
TREE SAVE REQUIRED:	3% OF LOT AREA

SETBACKS:
FRONT: 12' MIN. WHEN NO BUFFER APPLIES
(BUILDING TYPE STANDARDS)

PARKING: PER ORDINANCE REQUIREMENTS

ROAD WIDENING NEEDED:

ADEQUATE SITE DISTANCE FOR
PROPOSED DRIVEWAY:

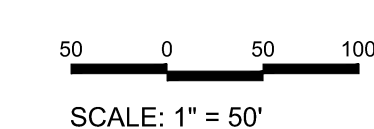
NOTE: POTENTIAL LAND USES AND CONCEPT DESIGN

ARE FOR REFERENCE ONLY. FINAL LAND USES AND PLANS TO BE DETERMINED BY OWNER IN ACCORDANCE WITH DEVELOPER AGREEMENT PLANS.

JANUARY 25, 2021

IDLEWILD VILLAGE, LLC
1341 EAST MOREHEAD STREET, SUITE 201
CHARLOTTE, NC 28204
(704) 344-1868

STEVENS MILL ROAD & IDLEWILD CROSSING





O 2459 Wilkinson Blvd, Ste 200 Charlotte, NC 28208
P 704.343.0608
W www.drgrp.com



FOR PUBLIC HEARING

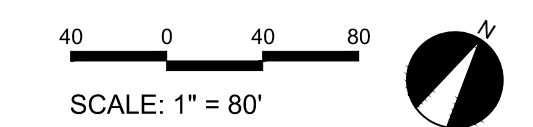
2025-XXX

CONDITIONAL PLAN

STEVENS VILLAGE
STALLINGS, NC

STEVENS VILLAGE, LLC
1341 EAST MOREHEAD STREET, SUITE 201
CHARLOTTE, NC 28204
(704) 344-1868

SCHEMATIC SITE PLAN

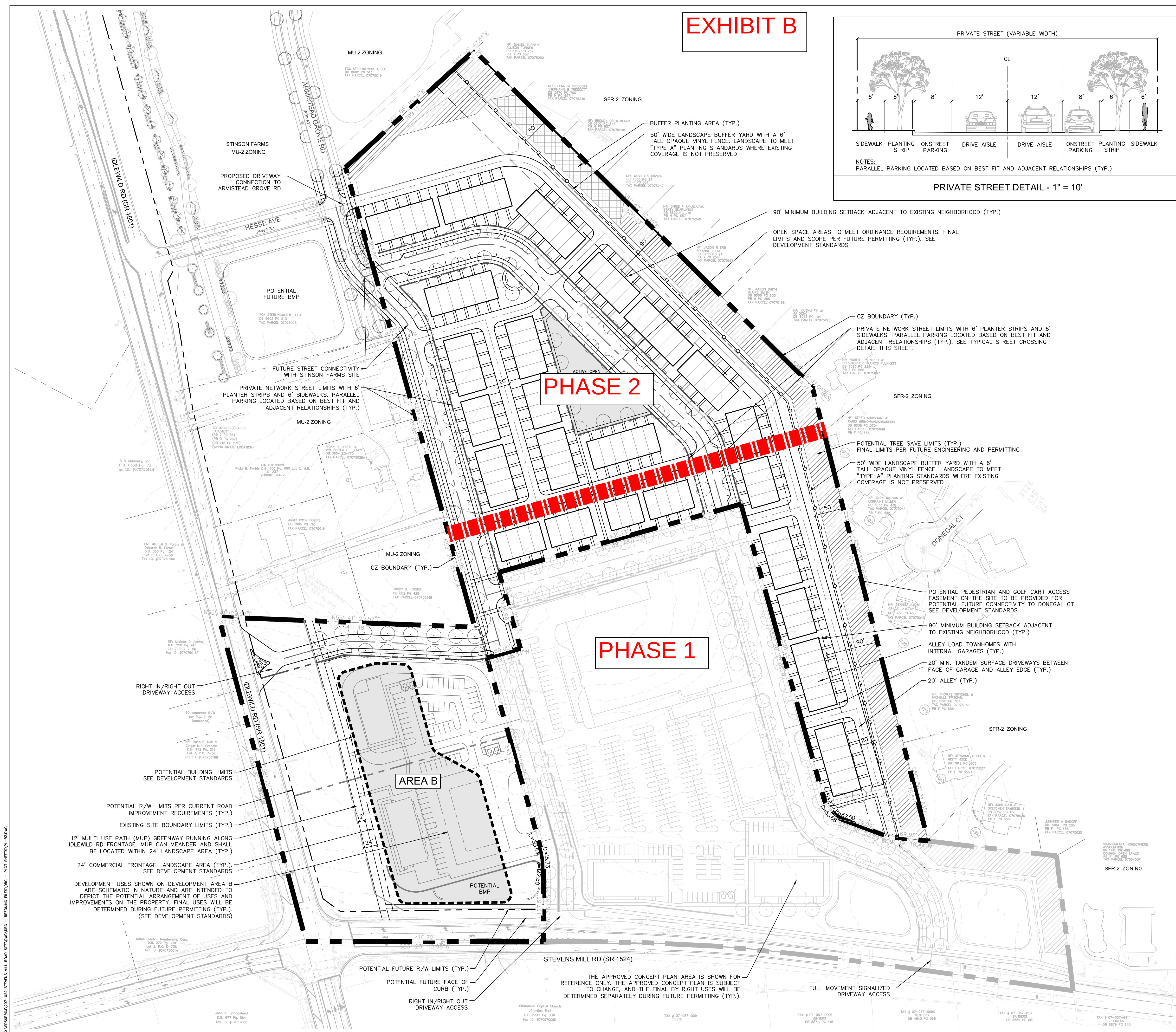


PROJECT #: 297-022
DRAWN BY:
CHECKED BY:

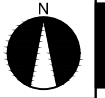
AUGUST 22, 2025

REVISIONS:

CZ1.0



Copyright © 2020 Design Resource Group, PA This plan or drawing and any accompanying documents or calculations are the property of Design Resource Group, PA; and are intended solely for the use of the recipient noted. No third party use or modification is permitted without written authorization.



VICINITY MAP
SCALE: NTS

STEVENS VILLAGE
STALLINGS, NC

STEVENS VILLAGE, LLC
1341 EAST MOREHEAD STREET, SUITE 201
QUAIL COTTAGE, NC 28884

CHARLOTTE, NC 28204
(704) 344-1868

5 0 15 30

SCALE: 1" = 30'

FEBRUARY 25, 2025

EX - 1



PRIVATE STREET 'B'
INTERNAL PRIVATE STREET
(PUBLIC ACCESS OVERLAY)

KATHY W. ALEXANDER
DB 1572 PG 480
TAX PARCEL 07057009J

SHANNAMARA HOA
DB 1415 PG 499
TAX PARCEL 07054004F

STEVENS MILL RD.
60' PUBLIC R/W
PER D.B. 3619-90 AND
D.B. 186 PG. 194

PROPOSED
TRAFFIC SIGNAL

2030 - AVG QUEUE (360')

2030 - MAX QUEUE (515')