

SUBDIVISION REPORT - CONCEPT

► FILE #: 4-SC-19-C AGENDA ITEM #: 6

POSTPONEMENT(S): 4/11/2019 **AGENDA DATE: 6/13/2019**

SUBDIVISION: TENNOVA MEDICAL PARK

APPLICANT/DEVELOPER: TENNOVA MEDICAL PARK

OWNER(S): Community Health Systems

TAX IDENTIFICATION: 106 K C 01702, 016 106DA008 View map on KGIS

JURISDICTION: City Council District 2
STREET ADDRESS: 0 Middlebrook Pike

LOCATION: South side of Middlebrook Pike, West side of Old Weisgarber Road

SECTOR PLAN: Northwest City

GROWTH POLICY PLAN: Urban Growth Area (Inside City Limits)

WATERSHED: Fourth Creek

APPROXIMATE ACREAGE: 108.17 acres

ZONING: A-1 (General Agricultural) & O-1 (Office Medical & Related Services)

► EXISTING LAND USE: Vacant land

► PROPOSED USE: Medical Office Park

SURROUNDING LAND

This site is the sole remaining large tract along Middlebrook Pike within the

City that has not been developed. The area to the north has been developed as an office park and has attracted a number of medical and medical related

uses (Provision, KOC, etc.). The West Hills neighborhood shares the

western boundary of this site.

► NUMBER OF LOTS: 6

USE AND ZONING:

SURVEYOR/ENGINEER: Brad Salsbury / S & ME, Inc.

ACCESSIBILITY: Access is provided by Middlebrook Pk., a 4 lane median divided arterial

street and via Old Weisgarber Rd., a local street with a pavement width of

16' to 19' within a 40' wide right-of-way.

SUBDIVISION VARIANCES

REQUIRED:

STAFF RECOMMENDATION:

► POSTPONE the Concept Plan to the July 11, 2019 Planning Commission meeting as recommended by Staff (Applicant is requesting approval).

Staff is recommending postponement of this proposal until the July 2019 meeting so staff can meet with the applicant to discuss concerns with the design of the Middlebrook Pike and Dowell Springs Blvd intersection improvements, and the design of the new road between this intersection and the proposed roundabout.

COMMENTS:

This proposal is to subdivide this 108-acre site into 6 lots and new private right-of-ways to provide access

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within the site. The property is zoned O-1 and A-1. The portion of the property being developed is O-1 which permits professional offices and medical offices without further review by the Planning Commission. Only uses listed as "uses permitted on review" will require approval by the Planning Commission, such as hospitals. In 2013 the Planning Commission approved a use-on-review for a new 300-bed hospital with up to 100,000 sqft of medical office building (12-A-13-UR). The property owner is no longer moving forward with the development as proposed in 2013. According to the traffic impact study submitted by the applicant (see Exhibit B), the anticipated uses in the development include two hospitals (150-beds and 100-beds), an 11,000 sqft free-standing emergency room, and 230,000 sqft of medical office building. Any use determined to be a hospital as defined by the zoning ordinance will require a new use-on-review approval by the Planning Commission when it is proposed. The A-1 zoned portion of the site, which is on the south side of the creek to the rear of the property, is not proposed to be developed at this time.

The new internal road system is proposed to be private with a 100' right-of-way for the portion of the road with the center median across from Dowell Springs Blvd and a 60' right-of-way for the remainder of the road west of the roundabout. The development will have two access points to Middlebrook Pike as part of this approval, and there is one proposed access to Old Weisgarber Rd that must be approved when Lot 5 is proposed to be developed. The main access to the site will be at the Dowell Springs Blvd intersection and will include two inbound lanes and two outbound lanes (one combined left turn and thru, and one dedicated right turn). Other improvements to this intersection include two turn lanes in the westbound median and a right turn lane on the eastbound shoulder. The secondary access to the site is west of the Dick Lonas Ln intersection and is right-in and right-out only. At TDOT's requires, this access is located west of the Dick Lonas Ln intersection because otherwise it will increase the need for a traffic signal at this intersection which is not desirable because of the proximity the existing traffic signal at Dowell Springs Blvd. Sidewalks will be installed on both sides of the internal roads and along the Middlebrook Pike frontage. The sidewalks installed in phases as noted on the Concept Plan.

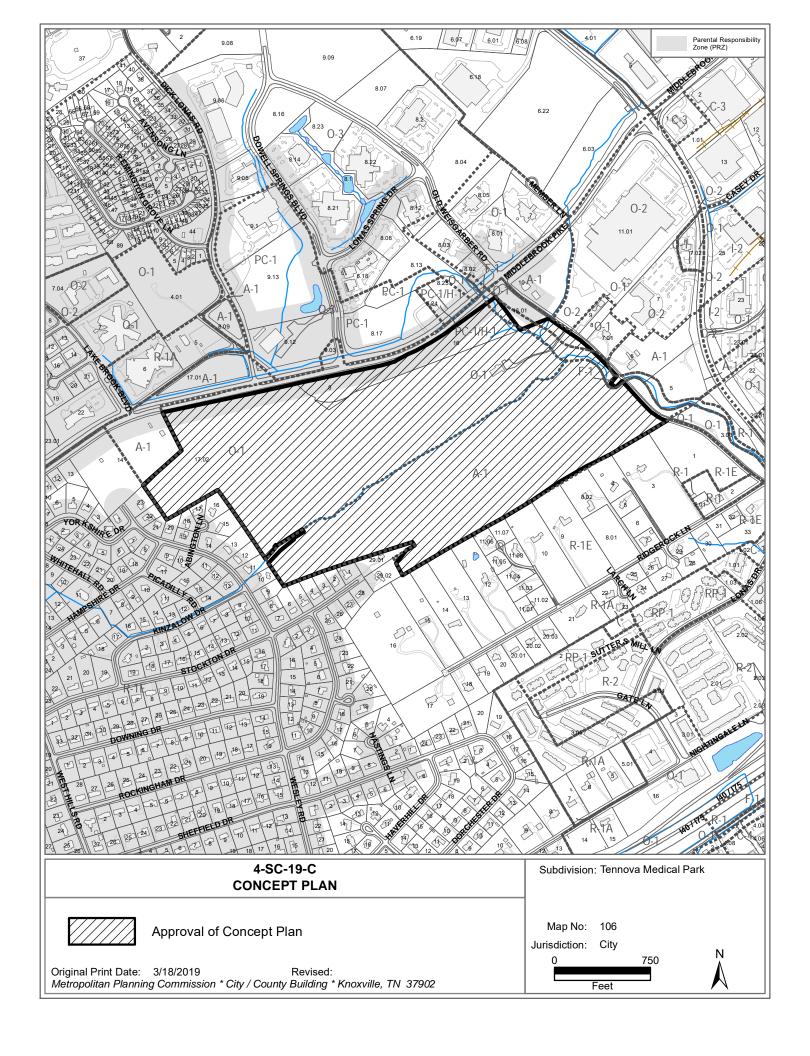
A 60' wide greenway easement is proposed along the north side of the creek that runs through the middle of the site from the western site boundary to Old Weisgarber Rd to the east. This greenway was a requirement of the 2013 use-on-review approval and is identified in the City of Knoxville Greenway Corridor Feasibility & Assessment (2016). Exhibit A shows the proposed route through the site labeled as "Proposed Hospital". On the west side of the site, the greenway connects to the northern terminus of Wesley Rd, which dead ends into property owned by KUB for an electrical substation. An easement of 200'-250' across the KUB property would be required to make this connection feasible. The applicant proposes to connect to Wesley Rd over a gas easement between three residential properties, southeast of Abington Ln. While this route is the most direct connection to the West Hills neighborhood, it poses the most direct impact on adjacent houses and would physically cross property that is not publicly owned.

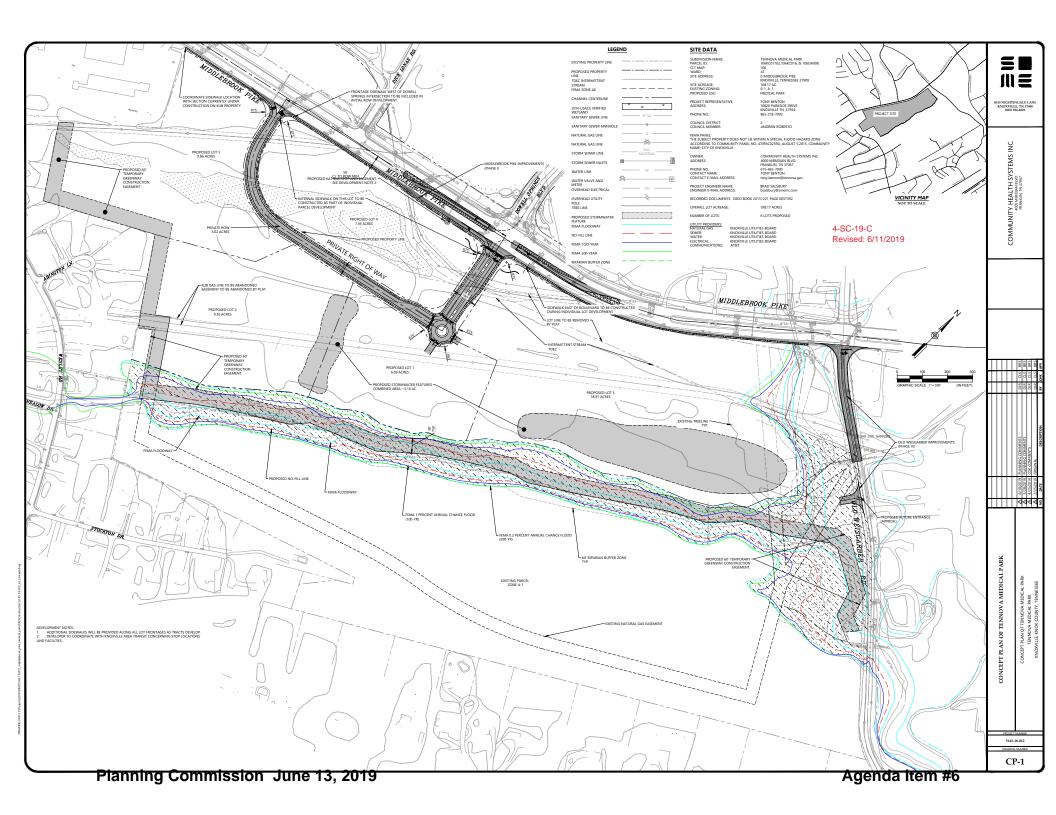
ESTIMATED TRAFFIC IMPACT: A traffic impact study was prepared by the applicant. The findings of that study were used in formulating the recommendations of this staff report.

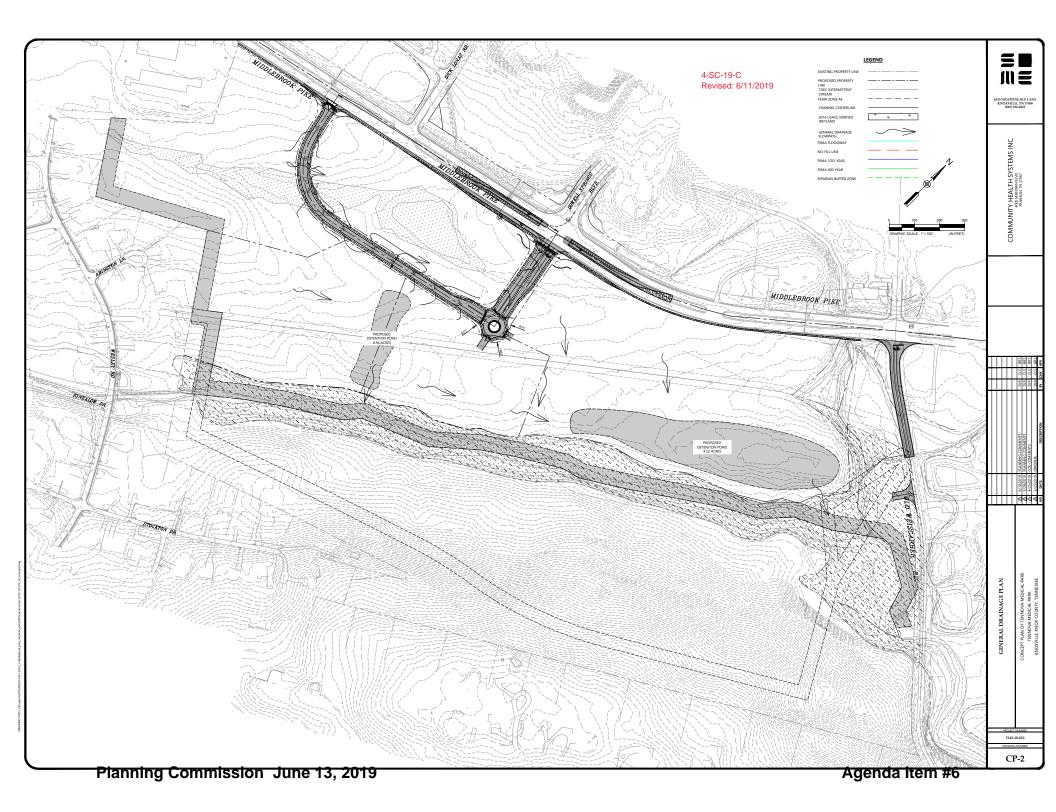
ESTIMATED STUDENT YIELD: Not applicable.

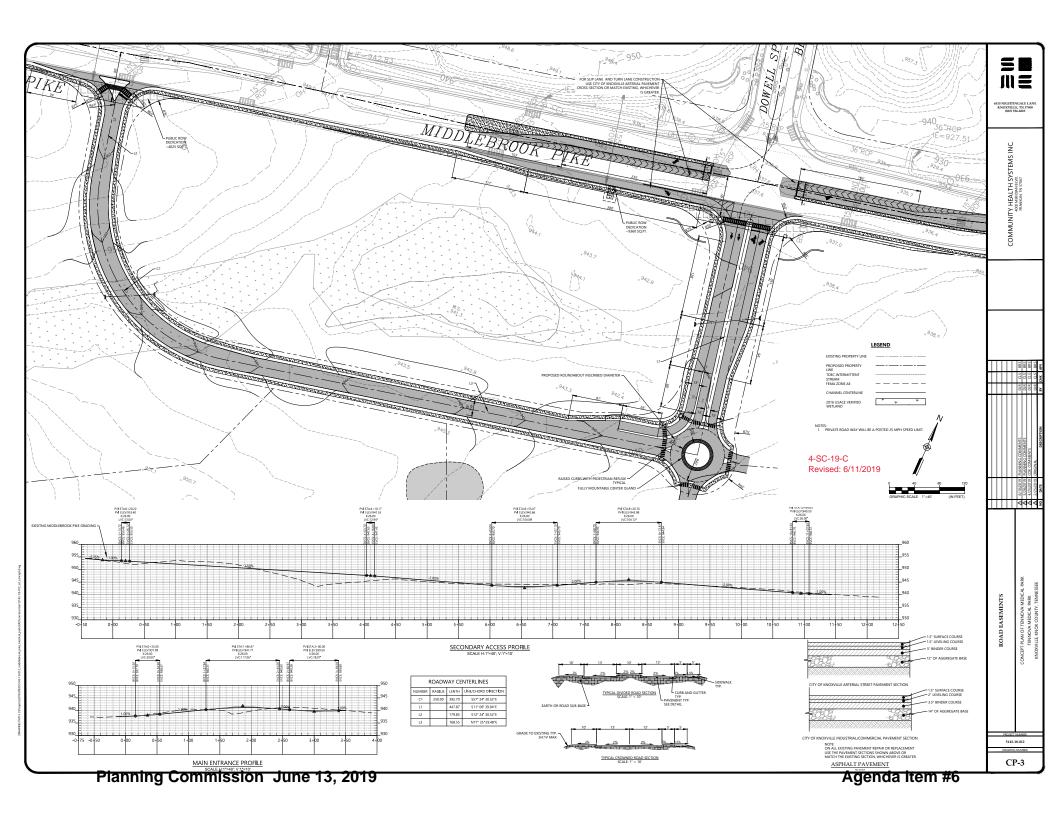
Knoxville-Knox County Planning Commission's approval or denial of this request is final, unless the action is appealed to Knox County Chancery Court. The date of the Knox County Chancery Court appeal hearing will depend on when the appeal application is filed.

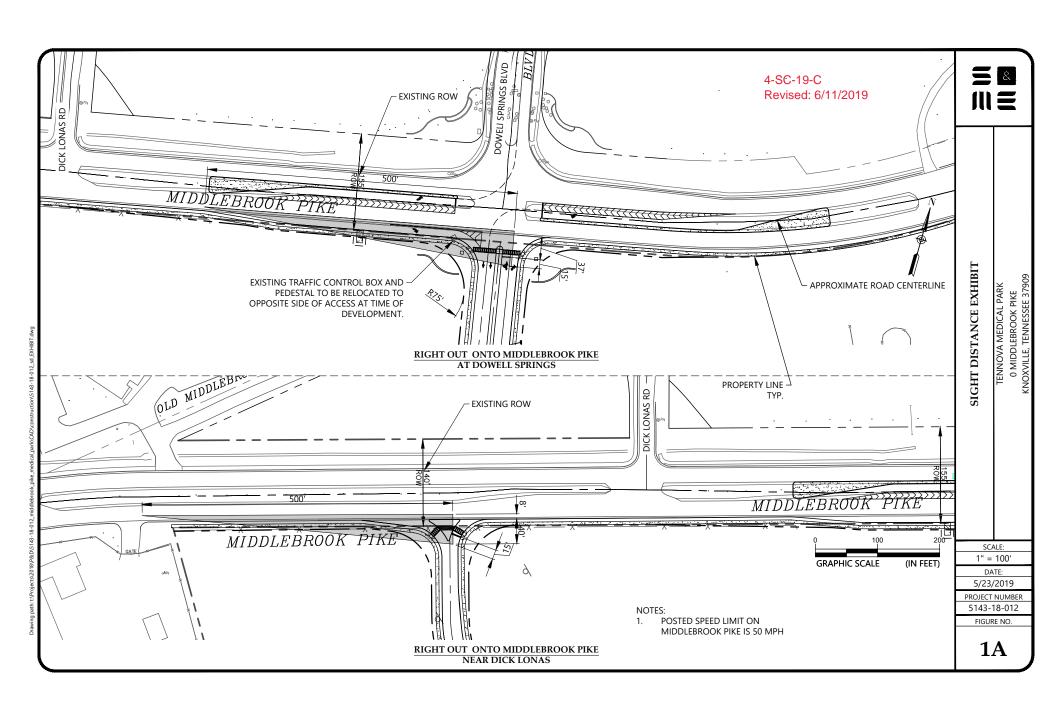
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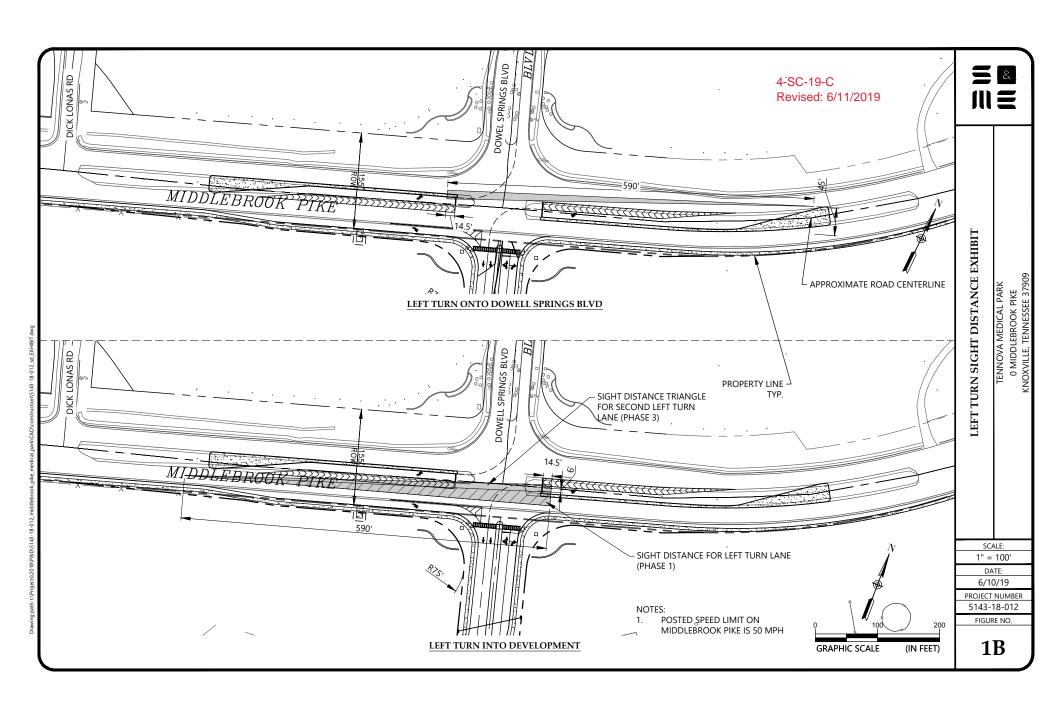


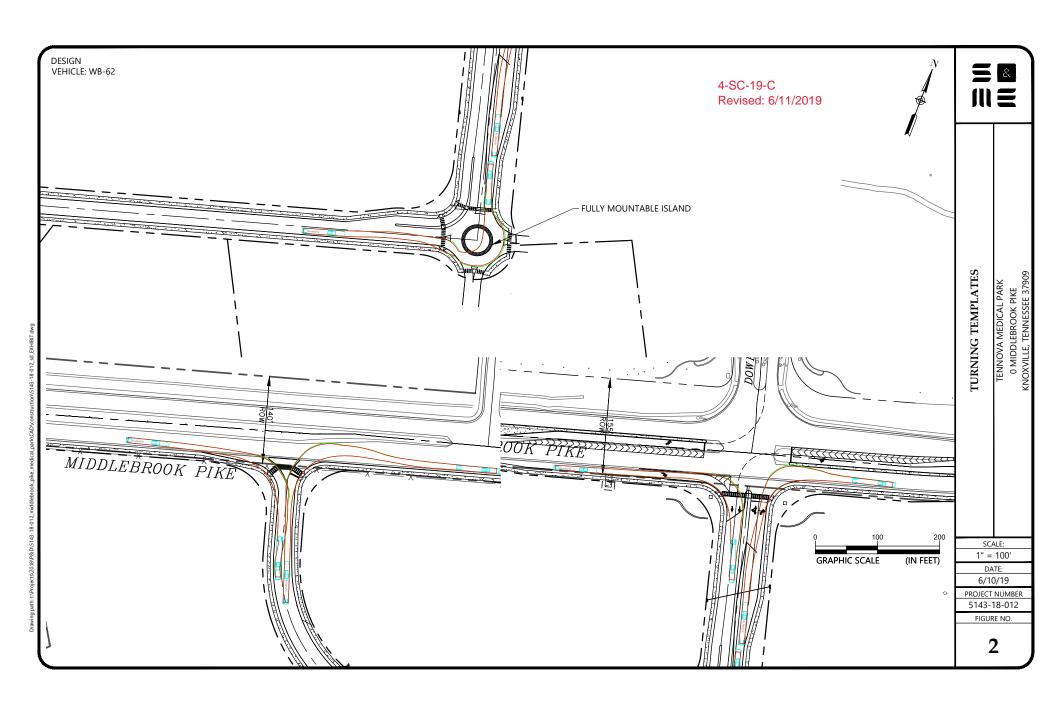


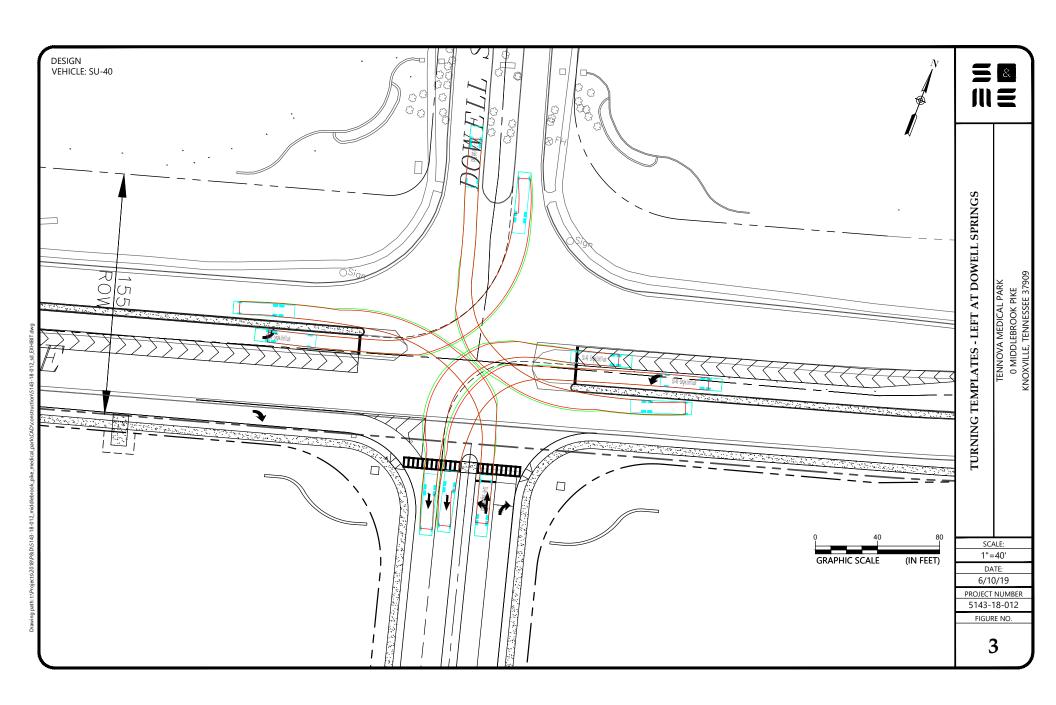


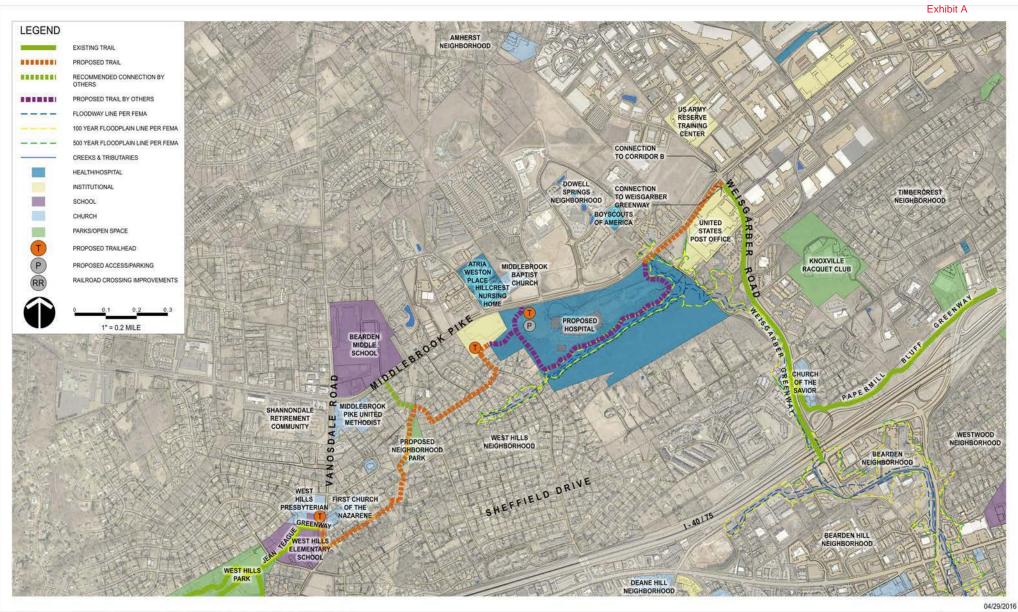




















Tennova Middlebrook Pike Medical Park Traffic Impact Study Knoxville, TN S&ME Project No. 514318012

4-SC-19-C

Revised: 6/11/2019

PREPARED FOR

Community Health Systems 4000 Meridian Blvd Franklin, TN 37067

PREPARED BY

S&ME, Inc. 6515 Nightingale Lane Knoxville, TN 37909

April 2019, Revised May and June 2019



June 10, 2019

Community Health Systems Professional Services Corporation 4000 Meridian Blvd Franklin, TN 37067

Attention:

Mr. Dean Tiratto

Reference:

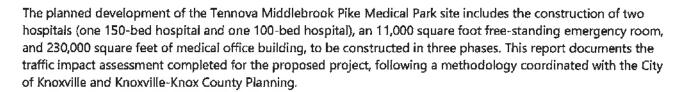
Tennova Middlebrook Pike Medical Park

Traffic Impact Study

Knoxville, TN

S&ME Project No. 514318012

Dear Mr. Tiratto:



Based on the analysis, the proposed project is anticipated to generate a net total of 13,096 daily trips, with 955 trips in the AM peak period, and 1,001 trips in the PM peak period. The existing traffic volumes, no-build traffic volumes (for each phase year: 2020, 2023, and 2027), and build-out traffic volumes were analyzed using Synchro to determine the impacts of the project on the local roadway network. The major deficiency noted throughout the study is at the intersection of Middlebrook Pike/Weisgarber Road, where the westbound left-turn lane operates at LOS F in the AM peak period in both the existing and future conditions. However, the proposed project trips do not cause additional impacts over the impacts caused by the growth in background traffic.

Please contact us with any questions or comments related to this report or the project design.

Sincerely,

S&ME, Inc.

Stephanie Shealey, PE, PTP

Stephanie Shealey

Project Engineer

Brad Salsbury, PE Project Manager

BRSV

Tennova Middlebrook Pike Medical Park Traffic Impact Study Knoxville, TN S&ME Project No. 514318012 4-SC-19-C Revised: 6/11/2019



1.0 Introduction

This traffic impact study has been prepared to evaluate impacts to the existing roadway network that may result from the development of the Tennova Middlebrook Pike Medical Park site in Knoxville, Tennessee. The project site is located on the south side of Middlebrook Pike (SR 169), west of Old Weisgarber Road (see **Figure 1-1**). The proposed development is planned to include two hospitals (150-beds and 100-beds), an 11,000 square foot Free-Standing Emergency Room, and 230,000 square feet of medical office building. The methodology and study requirements for this study were coordinated with Knoxville-Knox County Planning and City of Knoxville Engineering staff, with the methodology letter and methodology comments included as **Appendix I**. The conceptual site plan is included as **Appendix I**.



Figure 1-1 – Project Location & Proposed Access

Tennova Middlebrook Pike Medical Park
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5.0 Analysis

5.1 Intersection Analysis

The roadway network was analyzed for the following scenarios:

- Phase 1 No-Build (includes background growth to 2020)
- Phase 1 Build-Out (includes background growth to 2020 and Phase 1 traffic)
- Phase 2 No-Build (includes background growth to 2023 and Phase 1 traffic)
- Phase 2 Build-Out (includes background growth to 2023 and Phase 1 & 2 traffic)
- Phase 3 No-Build (includes background growth to 2027 and Phase 1 & 2 traffic)
- Phase 3 Build-Out (includes background growth to 2027 and Phase 1, 2, & 3 traffic)

Each of the study intersections was evaluated using Synchro 10 software, using Highway Capacity Manual methodologies, coded to represent the study network. All of the intersections were analyzed with the existing geometrics. A summary of each scenario is included as **Table 5-1**, with an overview of intersection level of service and delays for the existing conditions, Phase II and Phase III scenarios included as **Table 5-2**, and detailed intersection level of service and delays shown with the Synchro documentation in **Appendix VII – XII.** For brevity, the Phase I build out scenario were not included with Table 5-2, but can be found in the appendices.

Throughout the study periods, all of the intersections operate at or above capacity (level of service E or better) overall in both the AM and PM peak periods, until the Phase 3 No-Build Scenario, when the intersection of Middlebrook Pike and E Weisgarber Road operates at LOS F overall. However, the western approach to this intersection operates at LOS F in the AM peak period in all scenarios.

Significant improvements have been made at the intersection of Middlebrook Pike and E. Weisgarber Road in the past few years. These include extension of the eastbound right-turn lane (from a taper), and the addition of a second dedicated left-turn lane on the northbound approach. However, throughout all of the scenarios (including the existing conditions), the westbound Middlebrook Pike approach to E Weisgarber Road operates at LOS F in the AM peak period due to the volume of westbound left-turn vehicles. The volume in the AM peak period is projected to increase to 764 vehicles by Phase 3, and no project trips are assigned to the westbound left-turn movement. Based on FHWA 'rules of thumb', a triple left-turn lane should be considered when the volume is over 600 vehicles per hour, as it is at this intersection in the AM peak period; but due to the lack of space for a third receiving lane on the south leg of the intersection, this improvement is unlikely.

In the Phase 3 No-Build and Build-Out Scenarios, two additional approaches operate at LOS F in the PM Peak period, both at unsignalized intersections. The southbound Dick Lonas Road approach to Middlebrook Pike and the southbound Old Weisgarber Road approach to Lonas Road both operate at LOS F in the PM peak period for both the Phase 3 scenarios. For the Middlebrook Pike/Dick Lonas Road intersection, the volumes on Middlebrook Pike increase too high to provide sufficient gaps for the southbound left-turn. Signalization would be the only way to improve the level of service for the southbound approach, but without signalization, commuter traffic would learn that the left-turn is not feasible at this intersection and either change their primary route, or just make a right-turn onto Middlebrook Pike and find a place to u-turn further downstream. At the Old Weisgarber Road/Lonas Road intersection, the short distance between Old Weisgarber Road and E Weisgarber Road limits the opportunities for the southbound left-turn movement. However, with the average delay of ~150 seconds in the Phase 3 Build-Out Scenario, most vehicles making the turn from Old Weisgarber Road onto Lonas Drive are able

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to do so within 1-2 signal cycles, or the traffic pattern will change due to the delays and vehicles will take alternate routes to avoid the delay.

Table 5-1 - Summary of Scenarios and Findings

Scenario	Summary
Existing Conditions	 Current traffic volumes (2019) Existing deficiency at Middlebrook Pike @ East Weisgarber Rd Westbound approach in AM peak period
Phase 1 No Build	 Background traffic grown to 2020 Slight increase in delays. No new intersection approach deficiencies
Phase 1 Build Out	 Phase 1 projects, along with two Middlebrook site entrances, added to network Slight increase in delays. No new intersection approach deficiencies
Phase 2 No Build	 Background traffic grown to 2023, includes Phase 1 project trips Slight increase in delays. No new intersection approach deficiencies
Phase 2 Build Out	 Phase 2 project trips added to the network Slight increase in delays. No new intersection approach deficiencies
Phase 3 No Build	 Background traffic grown to 2027, includes Phase 1 & 2 project trips New deficiencies at Middlebrook Pike @ Vanosdale Rd / Francis Rd Eastbound approach in AM peak period Westbound approach in PM peak period New deficiencies at Middlebrook Pike @ East Weisgarber Rd Overall intersection in AM peak period Westbound approach in PM peak period New deficiencies at Lonas Dr @ Old Weisgarber Rd Southbound approach in PM peak period New deficiencies at Middlebrook Pike @ Dick Lonas Rd Southbound approach in PM peak period
Phase 3 Build Out	 Phase 3 project traffic, along with Old Weisgarber site entrance, added to network New deficiencies at Middlebrook Pike @ East Weisgarber Rd Eastbound approach in PM peak period

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Table 5-2 – Analysis Summary

	Stop Control	Intersection Conditions	Existing Scenario				Phase 2 Build-Out					Phase 3 No-Build					Phase 3 Build-Out					
Intersection			Overall	EB	WB	NB	SB	Overall	EB	WB	NB	SB	Overall	EB	WB	NB	SB	Overall	EB	WB	NB	
Middlebrook @		LOS	С	С	D	D	С	D	Е	С	D	С	Е	F	D	D	С	Е	F	D	Е	
Vanosdale	Signal	Delay (sec/veh)	34.6	33.2	36.6	41.4	28.9	46.0	58.0	34.3	50.4	31.7	59.6	87.9	36.1	53.8	34.4	66.0	101.8	36.5	56.1	
Middlebrook @		LOS	<u> </u>	A*	A*	С	В		A*	B*	C	C	00.0	A*	B*	D	С	0.0.0	A*	B*	E	+
Whitehall	TWSC	Delay (sec/veh)		8.3*	9.6*	17.5	12.7		8.6*	10.9*	24.9	16.7		8.8*	11.8*	32.0	20.2		8.9*	12.4*	35.9	
Middlebrook @		LOS	Α	A	A		D	Α	A	A		D	Α	A	A	02.0	D	Α	A	A	00.0	_
Lake Brook	Signal	Delay (sec/veh)	4.6	1.0	1.9		53.1	4.8	1.3	2.6		52.3	5.0	2.1	3.1		44.2	5.1	1.5	3.3		4
Middlebrook @		LOS	1.0	1.0	1.5		33.1	1.0	-	-	В	32.3	3.0		-	В	11.00	5.1	-	-	С	1
West Access	TWSC	Delay (sec/veh)							-	-	13.2			-	-	14.5			-	-	15.2	Ť
Middlebrook @		LOS		A*	-		В		A*	-	10.2	С		A*	-	11.5	С		A*	-	13.2	t
Dick Lonas	TWSC	Delay (sec/veh)		8.7*	-		14.8		9.1*	-		18.5		9.4*	_		22.3		9.5*	_		ı
Middlebrook @		LOS	Α	0.7 A	A		D	С).1 C	C	Е	10.5 E	D	J.4 D	C	Е	E E	С	9.5 D	В	Е	+
Dowell Springs ¹	Signal	Delay (sec/yeh)	3.7	1.2	3.8		54.2	33.3	31.1	31.0	66.3	58.0	35.6	35.5	31.4	66.3	61.4	29.1	39.5	10.6	70.0	$^{+}$
Middlebrook @		LOS	3.7 A	Α.	3.0 A		D D	C	B B	D D	F	D D	C C	33.3 B	D D	E	E E	B B	B	B	70.0	+
Dowell Springs ²	Signal	Delay (sec/veh)	3.7	1.2	3.8		54.2	30.0	16.0	40.8	62.9	54.8	31.1	18.0	40.9	66.3	61.4	18.9	18.1	12.1	70.0	$^{+}$
Middlebrook @		LOS	3.7 B	1.2 C	3.0 B	D	34.2 D	C	D D	40.8 C	D D	D D	C C	D D	40.9	E	D D	B	A A	12.1	70.0 D	+
	Signal		18.2	20.4	10.7	52.5	41.8		35.8	20.4	52.4	35.3	31.9	37.6	23.0	55.4	35.1	17.7	2.9	25.6	49.6	+
Old Weisgarber	_	Delay (sec/veh)			10.7			29.6		20.4 F			31.9		23.0 F			17.7 F		25.6 F		+
Middlebrook @	Signal	LOS	E	B	F	D	D	E	C		D	D	F	В		D	D		D		D	+
E Weisgarber	,	Delay (sec/veh)	65.8	19.4	89.6	47.7	53.9	77.2	24.8	106.6	51.7	51.6	88.3	15.4	129.4	52.1	54.3	96.3	45.7	131.5	54.0	+
E Weisgarber @	Signal	LOS	В	D	D	В	В	В	D	D	В	В	С	D	D	С	В	С	D	D	С	4
Lonas	- 3 -	Delay (sec/veh)	13.9	42.1	43.6	11.3	10.5	17.6	41.6	43.0	15.9	14.1	21.4	40.9	42.5	21.0	16.9	23.3	41.0	42.4	23.9	┸
Old Weisgarber @	TWSC	LOS		A*	-		С		Α*	-		С		A*	-		D		A*	-		4
Lonas	11150	Delay (sec/veh)		8.2*	-		16.9		8.6*	-		23.3		8.7*	-		28.5		8.8*	-		4
Old Weisgarber @ TWSC		LOS																	В		A*	
Project Access	TVVSC	Delay (sec/veh)																	10.9		7.9*	
Middlebrook @		LOS	D	С	D	С	D	D	С	E	С	D	E	D	F	С	D	Е	D	F	С	Τ
Vanosdale	Signal	Delay (sec/veh)	36.2	24.9	45.7	33.6	44.0	48.4	31.4	68.7	33.6	44.7	63.0	41.2	95.1	34.6	45.7	73.9	50.9	112.0	34.3	T
Middlebrook @		LOS		A*	A*	В	В		B*	A*	С	С		B*	A*	С	С		B*	A*	С	Ť
Whitehall	TWSC	Delay (sec/veh)		9.5*	8.4*	14.6	13.7		10.8*	8.8*	18.0	17.8		11.8*	9.0*	21.9	20.7		12.4*	9.1*	24.5	Ť
Middlebrook @		LOS	Α	Α	Α		E	Α	Α	Α		E	Α	Α	Α		Е	Α	Α	Α		t
Lake Brook	Signal	Delay (sec/veh)	6.4	0.6	1.7		56.2	6.9	0.7	2.9		58.9	8.9	1.0	5.7		61.3	9.3	1.2	6.7		4
Middlebrook @		LOS		0.0			00.0	5.0	-	-	В	0.0.0		-	-	В	0.10	0.10	-	-	В	t
West Access	TWSC	Delay (sec/yeh)							-	-	11.8			-	-	12.2			-	-	12.6	1
Middlebrook @		LOS		A*			С		B*	-	11.0	D		C*		12.2	F		C*		12.0	t
Dick Lonas	TWSC	Delay (sec/veh)		9.8*	-		17.4		11.7*			34.2		19.0*	-		367.5		20.7*	-		
Middlebrook @		LOS	С	A.	С		D D	С	C	В	Е	E	D	C C	С	Е	E	С	C C	С	Е	Ť
Dowell Springs ¹	Signal	Delay (sec/veh)	21.0	0.8	30.3		47.5	30.4	26.8	14.4	63.8	63.3	36.2	33.4	23.3	63.8	63.3	34.2	30.5	20.3	61.4	+
Middlebrook @	+	LOS	C C	Α	C 30.3		47.3 D	C C	20.0	B	65.6 F	65.5 F	C C	C 55.4	23.3	F	65.5 F	C C	C	C C	61.4 F	+
Dowell Springs ²	Signal	Delay (sec/veh)	21.0	0.8	30.3		47.5	29.4	20.8	17.2	63.8	63.3	34.3	25.3	25.4	63.8	63. 3	33.8	23.3	26.1	61.4	+
Middlebrook @	+	LOS	21.0 B	0.6 B	30.3 B	D	47.3 D	29.4 B	A A	B	05.0 D	D D	34.3 B	23.3 A	C 23.4	D 03.8	D D	33.0 B	23.3 A	20.1	D D	+
Old Weisgarber	Signal	Delay (sec/veh)	17.7	10.5	14.8	49.9	44.5	14.5	2.3	19.8	48.0	39.4	15.4	3.2	20.9	48.8	38.6	15.7	2.3	21.5	48.6	+
	+	LOS	17.7 D	D D	14.6	49.9 D	44.5 E	14.5 D	2.3 E	19.6 C	46.0 D	59.4 E	15.4 E	5.2 E	20.9 E	40.0 E	36.6 E	15.7 E	2.3 F	21.5 D	46.6 D	+
Middlebrook @	Signal		40.2	_				-				1	-			1	1		115.8	54.6		+
E Weisgarber @ Signal	-	Delay (sec/veh)	40.2 B	52.4	23.4 D	48.8	75.7	48.2	60.6	33.6	50.6	74.3	62.1	73.4	55.7	55.3	62.0	76.7			54.9	+
	Signal	LOS	_	C 24.5		B	B	C 21.5	C 22.0	D 41.1	C 22.2	D	D ACT	C 22.0	D 45.0	C 20.2	E	D	C 22.0	D 46.0	C 21.2	+
Lonas	-	Delay (sec/veh)	20.0	34.5	41.7	14.4	18.5	31.5	32.8	41.1	23.3	35.7	46.5	32.9	45.0	28.3	61.4	54.0	33.0	46.0	31.2	+
Old Weisgarber @	TWSC	LOS		A*	-		C		A*	-		E		A*	-		-		A*	-		4
Lonas		Delay (sec/veh)		8.3*	-		19.3		8.5*	-		37.3		8.8*	-		98.4		8.8*	-		#
Old Weisgarber @ TWSC	LOS																	В		A*	+	
Project Access		Delay (sec/veh)																	12.5		7.9*	1

¹With single left-turn lane on westbound approach

²With double left-turn lane on westbound approach

*Left turn movement only

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5.2 Queue Analysis

Queue lengths for the turn lanes were analyzed at the Dowell Springs Road, Old Weisgarber Road, and East Weisgarber Road intersections on Middlebrook Pike. The existing turn bay length, as well as the 95th percentile queues for each turn lane are shown in **Table 5-2** and **Table 5-3**, with documentation provided in **Appendix VII-XII**.

Table 5-3 – 95th Percentile Queues

				95	th Perce	entile (Queue (ft)	
Intersection	Turn Lane	Existing Length	Existing	Phase 1 No-Build	Phase 1 Build-Out	Phase 2 No-Build	Phase 2 Build-Out	Phase 3 No-Build	Phase 3 Build-Out
		AM Peak							
Middlebrook @	Eastbound Left-Turn	235	34	41	161	130	193	209	203
Dowell Springs ¹	Westbound Left-Turn	N/A	N/A	N/A	181	165	279	239	334
Middlebrook @	Eastbound Left-Turn	235	34	41	127	108	170	176	180
Dowell Springs ²	Westbound Left-Turn	N/A	N/A	N/A	120	113	156	146	164
Middlebrook @	Eastbound Left-Turn	75	21	21	31	29	25	24	27
Old Weisgarber	Westbound Left-Turn	120	6	5	9	10	9	9	15
	Eastbound Left-Turn	120	34	34	32	30	29	28	26
Middlebrook @	Westbound Left-Turn	210	445	456	456	492	492	542	542
East Weisgarber	Northbound Left-Turn	145	201	204	236	249	269	293	338
	Southbound Left-Turn	110	35	35	35	36	36	40	40
		PM Peak							
Middlebrook @	Eastbound Left-Turn	235	5	5	25	27	34	37	35
Dowell Springs ¹	Westbound Left-Turn	N/A	N/A	N/A	34	42	170	171	206
Middlebrook @	Eastbound Left-Turn	235	5	5	24	25	31	34	34
Dowell Springs ²	Westbound Left-Turn	N/A	N/A	N/A	53	53	110	110	127
Middlebrook @	Eastbound Left-Turn	75	6	6	7	9	10	10	9
Old Weisgarber	Westbound Left-Turn	120	8	8	8	1	10	9	15
	Eastbound Left-Turn	120	14	14	16	16	16	16	18
Middlebrook @	Westbound Left-Turn	210	308	317	317	345	391	431	420
East Weisgarber	Northbound Left-Turn	145	163	165	176	184	193	214	223
	Southbound Left-Turn	110	137	139	139	145	145	154	154

¹With single left-turn lane on westbound approach

²With double left-turn lane on westbound approach

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Of the three intersections, the only one in which the queue length exceeds the existing turn bay length is Middlebrook Pike & East Weisgarber Road. Such is the case for all scenarios. During both peak periods, this phenomenon is observed for the westbound and northbound left turning movements, and during the PM Peak hour, this also occurs with the southbound left turn lane. Queue lengths are often metered by an upstream signal, which explains some fluctuation in queue length as scenarios progress, despite volumes increasing.

At the intersection of Middlebrook Pike/Dowell Springs Boulevard, the eastbound left turn queue length shows noticeable increase with the introduction of the development, it remains well below the existing turn bay length. For the westbound left turning movement, a single turn lane of approximately 350 feet can accommodate the demand.

5.3 Turn Lane Warrants

The two stop-controlled access points into the site – the west access near Dick Lonas Rd and the access point on Old Weisgarber Rd – were evaluated using to determine if new turn lanes are warranted. The warrant analysis was performed in accordance with Report 457 of the National Highway Cooperative Research Program (NCHRP). For the west access, because it would be "right in, right out," it was only evaluated for a right turn bay warrant. For the Old Weisgarber access, the warrant analysis was performed for both types of turn bays. The turn lane warrant tables are shown in **Appendix XIII.**

For the west access on Middlebrook Pike, a right turn bay is warranted during both the AM and PM Peak periods for all phases. This is due to the high speed and volume of Middlebrook Pike as well as the trips generated from west of the campus.

For the Old Weisgarber access point, a northbound left turn bay is warranted due to anticipated demand during the AM Peak period. A right turn bay is not warranted during either peak period.

5.4 Pedestrian & Bicycle Accommodations

There are no existing sidewalks on Middlebrook Pike. Pedestrian accommodations will be provided within the site connecting the various land uses and parking lots, and along Middlebrook Pike as the project develops. There are no bicycle facilities within the study area.

5.5 Transit Availability

There are two bus routes surrounding the proposed project site. Detailed information on the bus routes, including full route maps and a detailed map of route near the project site, is included in **Appendix XIV**.

Route 19 serves the area surrounding I-40/75 between Weisgarber Rd/Northside Dr and I-640. There is an existing bus stop on the north side of Middlebrook Pike, just east of Old Weisgarber Road. Route 90 serves the area on the northwest side of Knoxville, from West Town Mall to Knoxville Center Mall. Connections are available from this route into downtown Knoxville. There are existing bus stops on both sides of Middlebrook Pike at Dowell Springs Boulevard, and on the north side of Middlebrook Pike, just east of Old Weisgarber Road.

The developer will coordinate with Knoxville Area Transit (KAT) to determine if either route can include a stop within the medical campus.

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5.6 Sight Distance

A separate summary report detailing the project sight distances was prepared to document the sight distance at the project access points. Sight distance for the proposed intersections was measured in the field in general accordance with AASHTO guidelines. The summary report has been included as **Appendix XV**.

5.7 Internal Circulation

The site is planned to have two primary connector roadways which provide access to the various uses within the project site. The main access drive will align with Dowell Springs Road at Middlebrook Pike. A secondary roadway will begin at the entrance west of Dick Lonas Road and connect to the Dowell Springs Road Access. In Phase 3, this roadway will be extended to Old Weisgarber Road. At the intersection of these two roadways, a small roundabout is proposed. An analysis of roundabout operations, using the Sidra analysis software with HCM methodologies, was completed for the Phase 3 scenario, to ensure that the roundabout can handle the internal site traffic. Although there will be some traffic which enters a parking lot prior to arriving at the roundabout, for purposes of a conservative analysis, it was assumed that all trips on the site would reach the roundabout. As shown in **Appendix XVI**, the roundabout operates at LOS A overall in both the AM and PM conditions, with all approaches operating at LOS A in both peak period (other than the eastern leg, from Old Weisgarber Road, which operates at LOS B in the PM peak period). Thus, a small single-lane roundabout should be sufficient to circulate traffic within the site. The Dowell Springs Entrance will be accessed via 2 lanes to the traffic circle with the right lane dedicated as a right turn for the loop road and access to the internal lots to the west. The exit at Dowell Springs will have 2 outbound lanes, one left/through and one as a dedicated right-turn onto Middlebrook Pike; the dedicated right-turn will have roughly 150 feet of storage.

5.8 Emergency Services

The proposed uses of the site are medically related and during public meetings, questions about the frequency of ambulance traffic within the surrounding neighborhoods has been brought up. The proposed rehabilitation/FSED uses do not typically rely on emergency vehicles for transport to/from their facilities. When needed, the most direct route to local hospitals will be down Middlebrook Pike/E. Weisgarber to the interstate. Historical data from similar facilities designed by S&ME staff, indicate relative few daily trips (1-5) by ambulatory services. Given this history and proposed usage, the ambulatory trips generated by the proposed development will be negligible compared to existing conditions within the area.

6.0 Recommendations

The combination of background growth and project trips leads to additional delays throughout the study area in each Phase. Due to the unpredictability of forecasting background growth with historical growth rates and project traffic volumes based off of published rates, it is proposed that the traffic study be updated prior to Phase 3, to verify the background growth and Phase 1 & 2 project trips.

6.1 Phase 1 & Phase 2

The addition of the Phase 1 and Phase 2 project trips, while increasing delays throughout the network, do not significantly impact the overall operations of the intersections in the study area. The only deficiency anticipated is the westbound approach at the intersection of Middlebrook Pike and E Weisgarber Road, which is deficient in the

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existing condition. The deficiency is caused by delays on the westbound left-turn movement, which has over 650 vehicles in the peak hour in the existing condition, and is estimated to grow to 706 by the Phase 2 build-out. The projected growth is completely based on background growth, as no project trips are included on the deficient movement. Recent improvements by TDOT have improved the eastbound and northbound legs of this intersection, which improves the operation of the overall intersection, leaving the westbound left-turn movement as the main deficiency.

6.2 Phase 3

In the Phase 3 No-Build and Build-Out Scenario, two stop-controlled intersections operate at LOS F. This is primarily due to an increase in volume on the through movements, which limit gaps for the stop-controlled intersections. At Dick Lonas Road, the Department of Transportation has indicated that a traffic signal would not be allowed; however, as traffic increases on Middlebrook Pike, and delays increase, it is anticipated that southbound left-turn vehicles would either make a right-turn and find a place to u-turn, or use Amherst Road, as an alternate route. At Old Weisgarber Road/Lonas Road, the southbound left-turn backs up due to the signal at Weisgarber Road/Lonas Road. While vehicles are expected to back-up along Old Weisgarber Road, they do not block any other intersections, and are able to clear through the Old Weisgarber Road/Lonas Road intersection when gaps are provided by the signal at Weisgarber Road/Lonas Road. As delays increase for this movement, it is anticipated that some vehicles which use Old Weisgarber Road as a cut-through from Middlebrook Pike to I-75 would find an alternative route.

6.3 Access Design

There are three proposed access points for the project site. Based on the results of the analysis, the proposed intersection geometry is as follows:

- West Entrance (west of Dick Lonas Road)
 - Right-in/Right-out
 - Single lane inbound and outbound
 - Right-turn lane proposed on Middlebrook Pike
- Dowell Springs Boulevard
 - Full access intersection
 - Two inbound lanes (one dedicated right-turn and one through at the traffic circle), two outbound lanes (dedicated one dedicated right-turn and one through/left-turn lane)
 - Build dual westbound left-turn lanes on Middlebrook Pike, but stripe it as a single left-turn lane until
 turning movement volumes warrant the second left-turn lane. The eastbound left-turn lane should be
 offset to the north to provide sight distance after the implementation of the projected dual left-turn
 lanes
- Old Weisgarber Road (Phase 3 only)
 - Full access intersection
 - Single lane inbound and outbound
 - Northbound left-turn lane

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6.4 Summary

There are some deficiencies seen in the network resulting from a combination of background conditions and the proposed project trips. For Phases 1 & 2, deficiencies are generally resulting from background growth and increases from project trips are mitigated through proposed improvements on Middlebrook Plke. Site related improvements will occur on Middlebrook Pike at both the west access and Dowell Springs Boulevard access. It is recommended that revised counts be performed during the completion of Phase II to evaluate the need for the dual westbound left-turn lanes at the Middlebrook Pike/Dowell Springs intersection.

Due to the uncertainty as far as the ultimate uses and the resulting traffic volumes generated by Phase 1&2, it is suggested that the traffic study be updated prior to the approval of Phase 3 to determine the specific impacts that will be associated with the development, and to fully develop improvements to Old Weisgarber Road.

4- Some and Grap anding Mail Find: Farnova Malifal Book (4-50-40-4)



Sherry Michienzi <sherry.michienzi@knoxplanning.org>

Fwd: Tennova Medical Park (4-SC-19-C)

1 message

Mike Reynolds <mike.reynolds@knoxplanning.org>

Fri, Apr 5, 2019 at 2:36 PM

To: Sherry Michienzi <sherry.michienzi@knoxplanning.org>, Dori Caron <dori.caron@knoxplanning.org>, Laura Edmonds <laura.edmonds@knoxplanning.org>

Postponement request for 4-SC-19-C until the June 13, 2019 Planning Commission meeting.

Mike Reynolds, AICP Senior Planner 865.215.3827





Knoxville-Knox County Planning | KnoxPlanning.org 400 Main Street, Suite 403 | Knoxville, TN 37902

----- Forwarded message ------

From: Brad Salsbury <bsalsbury@smeinc.com>

Date: Fri, Apr 5, 2019 at 2:04 PM

Subject: RE: Tennova Medical Park (4-SC-19-C)

To: Mike Reynolds <mike.reynolds@knoxplanning.org>

Please postpone to the June meeting.

Thanks,

Brad

Brad Salsbury

Sr. Project Manager

KNOXVILLE KNOX COUNTY METROPOLITAN PLANNING COMMISSION TENNESSEE Suite 403 • City County Building 4 0 0 Main Street Knoxville, Tennessee 37902 8 6 5 • 2 1 5 • 2 5 0 0 F A X • 2 1 5 • 2 0 6 8

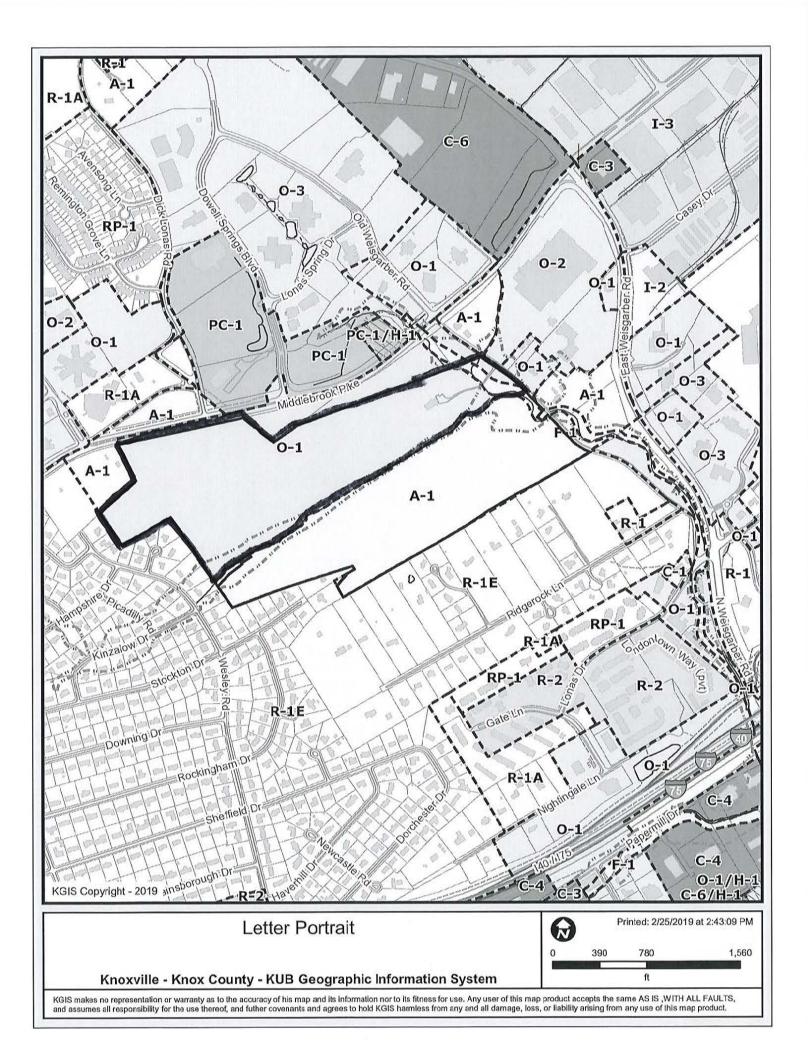
www.knoxmpc.org

SUBDIVISION - CONCEPT

Tennova Medical Park

Name of Applicant:	a Medical Park
LANNING Date Filed: 2/25/2019	Meeting Date: 4/11/2519
the 403 • City County Building Application Accepted by: M. 7	Psyne
0 0 Main Street Fee Amount: 850.60 File Num	ber: Subdivision - Concept 4-56-19-C
6 5 • 2 1 5 • 2 5 0 0	File Number: Development Plan
PROPERTY INFORMATION	PROPERTY OWNER/OPTION HOLDER
Subdivision Name: Tennova Medical Park	Name:
Unit/Phase Number:	Company: Community Health Systems
General Location: South side Middlebrock Pike from	Address: 4000 Meridian Blvd
KUB substation to Old Weisgarber Intersection	City: Franklin State: TN Zip: 37067
Tract Size: 108.17 acres No. of Lots: 6	
Zoning District: O-1/A-1	Telephone:615-465-7171
Existing Land Use: Vacant	Fax:
Planning Sector: Northwest City	E-mail:
Growth Policy Plan Designation:	PROJECT SURVEYOR/ENGINEER
Concus Tract: 45	PLEASE PRINT Name: Brad Salsbury
Traffic Zone: 157	Company: S&ME, Inc
Parcel ID Number(s): 106KC01702 & 106KC016	
	Address: 6515 Nightingale Lane
Jurisdiction: ⊠ City Council 2 District	City: Knoxville State: TN Zip: 37909
☐ County Commission District	Telephone: 865-603-8435
AVAILABILITY OF UTILITIES	Fax: n/a
List utility districts proposed to serve this subdivision: Sewer KUB	E-mail; _bsalsbury@smeinc.com
Water KUB	APPLICATION CORRESPONDENCE
Electricity KUB	All correspondence relating to this application (including
Gas KUB	plat corrections) should be directed to:
Telephone ATT	PLEASE PRINT
	Name: Brad Salsbury
TRAFFIC IMPACT STUDY REQUIRED ☐ No ☑ Yes	Company:S&ME, Inc
USE ON REVIEW ☐ No ☐ Yes Approval Requested:	Address: _6515 Nightingale Lane
☐ Development Plans in Planned District or Zone	City: Knoxville State: TN Zip: 37909
☐ Other (be specific):/	STATES AND STATES AND
	Telephone:865-934-6023
	Fax:
VARIANCE(S) REQUESTED	E-mail: bsalsbury@smeinc.com & Dean_Tiratto@chs.net
☑ No ☐ Yes (If Yes, see reverse side of this form)	E-Mail: Dealsbury@emeinc.com of Dean_matto@cns.net

VARIANCES	REQUESTED
1	
2. Justify variance by indicating hardship:	
4	
5	
6	
APPLICATION A	UTHORIZATION
I hereby certify that I am the authorized applicant, representing ALL property owners involved in this request or holders of option on same, as listed on this form. I further certify that any and all variances needed to meet regulations are requested above, or are attached. I understand and agree that no additional variances can be acted upon by the legislative body upon appeal and none will be requested. I hereby waive the requirement for approval or disapproval of the plat within sixty	Name: Tony Benton Address: 10820 Parkside Dave City: Knowille State: TN Zip: 37934
(60) days after its submission, in accordance with the provisions of Tennessee Code Annotated 13-3-404. Signature:	Telephone: 865-218-7092 Fax: 865-218-7091
Date: 2/22/2019	E-mail: Tony, Beaton a tennova, com



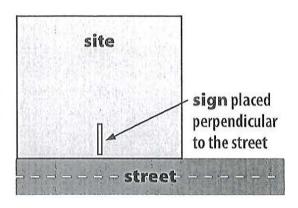
REQUIRED SIGN POSTING AGREEMENT

For all rezoning, plan amendment, concept plan, use on review, right-of-way closure, and street name change applications, a sign must be posted on the subject property, consistent with the adopted MPC Administrative Rules and Procedures.

At the time of application, MPC staff will provide a sign(s) to post on the property as part of the application process. If the sign(s) go missing for any reason and need to be replaced, then the applicant will be responsible for picking up a new sign(s) from the MPC offices. The applicant will be charged a fee of \$10 for each replacement sign.

LOCATION AND VISIBILITY

The sign must be posted in a location that is clearly visible from vehicles traveling in either direction on the nearest adjacent/frontage street. If the property has more than one street frontage, then the sign should be placed along the street that carries more traffic. MPC staff may recommend a preferred location for the sign to be posted at the time of application.



TIMING

The sign(s) must be posted 15 days before the scheduled MPC public hearing and must remain in place until the day after the meeting. In the case of a postponement, the sign can either remain in place or be removed and reposted 15 days before the next MPC meeting.

I hereby agree to post and remove the sign(s) provided on the subject property

consistent with the above guideli	ines and between the dates of:
3/27/19 (15 days before the MPC meeting)	and $4/12/19$ (the day after the MPC meeting)
Signature: Jum Pa	en en
Printed Name: Darren F	Roan
Phone: 559 361 7116	Email: droan@smeinc.com
Date: 2 /25/19	
MPC File Number:	-5B-19-C