TOWN OF NEEDHAM MASSACHUSETTS

PLANNING BOARD

500 Dedham Avenue Needham, MA 02492 617-455-7550

APPLICATION FOR SITE PLAN REVIEW

Project Determination: X Major P	roject
Minor P	roject
This application must be completed, signed, and submitted representative in accordance with the Planning Board's R Special Permit Granting Authority. Section 7.4 of the by	ules as adopted under its jurisdiction as a
Location of Property: 589 Highland Avenue, Needhan	ı, MA 02494
Name of Applicant: Wingate Development LLC	
Address: 63 Kendrick Street, Needham, MA 02494	Tel.#: 781 707 9209
Applicant is Owner Tenant Pur	chaser Agent/Attorney X
Property Owner's Name: Wingate at Needham, Inc.	
Address: 63 Kendrick Street, Needham, MA 02494 Tel	.#:
Characteristics of Property: Lot Area: 110,490 sq. f	t. Present Use: Nursing Home
Map #: <u>77</u> Parcel #: <u>1</u>	Zoning District: Elder Services Zoning District
Description of Project for Site Plan Review under Sectio	n 7.4. of the Zoning By-law:
The Applicant intends to convert the current Nurother use is proposed for the site. There will be no chang footprint of the building. An amendment to Special Perruse in the Elder Services District.	e to the grounds, exterior of the building, or
The current use was approved by Site Plan Specias amended by decisions dated August 9, 1994; August 8 December 17, 2013 (Minor Change).	al Permit Decision No. 93-3 dated July 27, 1993, 1995, June 3, 1997, March 15, 2011, and
Signature of Applicant (or his representative)	Evans Huber, Esq.
Address if not Applicant	Frieze Cramer Rosen & Huber LLP 60 Walnut Street, Wellesley, MA 02481
Owner's permission if other than applicant	Tel: 78 943 4000
SUMMARY OF PLANNING Received by Planning Board	
Hearing Date	
	Parties in Interest Notified of Public Hearing(date)
Granted(date)	Decision and Notices of the
Denied(date)	Decision sent(date)
Withdrawn(date)	Fee PaidFee Waived
NOTE: Reports on Minor Projects must be issued within	

FRIEZE CRAMER ROSEN & HUBER LLP

COUNSELLORS AT LAW

60 Walnut Street, Wellesley, Massachusetts 02481 781-943-4000 • FAX 781-943-4040

> EVANS HUBER 781-943-4043 EH@128LAW.COM

January 25, 2022

Via Electronic Mail and Overnight Mail

Members of the Needham Planning Board

And

Lee Newman
Director of Planning and Community Development
Public Services Administration Building
500 Dedham Ave
Needham, MA 02492

Re: 589 Highland Ave, Needham, Application for Amendment to Special Permit

Dear Planning Board Members and Ms. Newman:

I am writing on behalf of Wingate Development LLC and Wingate at Needham, Inc., with respect to the property at 589 Highland Avenue in Needham. The original Planning Board Decision authorizing the current use (nursing home) at this site, Site Plan Special Permit 93-3 dated July 27, 1993, was amended on August 9, 1994; August 8, 1995; June 3, 1997; March 15, 2011; and December 17, 2013 (Minor change). The original decision and amendments are collectively referred to herein as the "Special Permit."

Pursuant to Chapter 40A of the Massachusetts General Laws, the Needham Zoning By-Law, the Needham Planning Board Rules, and Section 4.2 of the Special Permit, the Applicant, Wingate Development LLC, and the Owner, Wingate at Needham, Inc., hereby submit an application, of which this letter is a part, requesting that the Special Permit be amended as described below.

The property is a 2.536-acre parcel (110,489 square feet) located at the corner of Highland Avenue and Gould Street. The property is located in the Elder Services zoning district and is currently improved with a two-story brick building housing a 142-bed skilled nursing facility.

FRIEZE CRAMER ROSEN & HUBERLLP

Needham Planning Board Members Lee Newman January 25, 2022 Page 2

The applicant and owner are proposing to redevelop the existing 142 bed, 57,000+/- sf Skilled Nursing facility to create 50 Independent Living Apartments consisting of studios, 1-bedroom and 2-bedroom apartments with full kitchens and washers and dryers. No other use is proposed for the site.

Per section 3.12.9 of the Bylaw, the parking requirement for Independent Living units is .5 spaces per unit, resulting in a required parking supply for this proposed redevelopment of 25 spaces. Wingate also anticipates 5 full time employees which would require an additional 2.5 spaces (1 space per 2 employees). The additional parking requirement would bring the total required to 28 spaces. As the existing number of spaces on this site is 98, there is more than sufficient existing parking to satisfy the bylaw requirement. By prior special permit, permission was granted to count 10 spaces on the adjacent property (known as "Lot A") towards the required parking total. However, because the required parking supply is decreasing so significantly, to 28, it will no longer be necessary to utilize those spaces on the adjacent property.

Please note that as indicated on the zoning table located on the site plan filed herewith, the building complies with all dimensional and setback requirements, and the parking areas comply with all dimensional and other requirements of section 5.1.3 of the Zoning Bylaw.

Also please note that, per the traffic analysis submitted herewith, the proposed 50 independent living units will generate less traffic during all time periods than the existing 142-bed nursing facility. On a typical weekday, the independent living units will generate a total of 260 fewer vehicle trips (entering and exiting), including fewer trips during the morning and afternoon peak hours. On Saturdays, it is expected that the independent living units will likewise generate fewer trips during the peak hour than the existing facility.

Pursuant to Section 3.12.10 of the Zoning By-Law, at least 10% of the Independent Living Apartments shall be Affordable Housing Units. Since the proposal includes the creation of fifty (50) Independent Living Units, five (5) will be designated as Affordable Housing Units.

The zoning relief required for this proposal is an Amendment to the existing Special Permit to allow a change of use to 50 Independent Living units in place of the current 142-bed skilled nursing facility. Various aspects of the existing Special Permit will become moot as a result.

In addition to the amendment to the Special Permit, Board approval is sought for the change in ownership of the property. The original Site Plan Special Permit No. 93-03, dated July 27, 1993, was issued to Continental Healthcare VII Limited Partnership. Section 4.5 of the Decision states that the Special permit shall niot be transferred or assigned without approval of the Board, after notice and a hearing. By decision dated March 15, 2011, approval was granted to transfer the Special Permit to NHP Properties Business Trust, and Section 4.5 of the Decision was amended accordingly. The current owner, Wingate at Needham, Inc. acquired the property in 2016. The applicant and owner now seek approval of the transfer to Wingate at Needham, Inc.

FRIEZE CRAMER ROSEN & HUBERLLP

Needham Planning Board Members Lee Newman January 25, 2022 Page 3

With respect to the floor plans, the Applicant reserves the right to revise said floor plans without the need for additional hearings or approvals, provided that the total square footage of the building does not increase, and the total number of independent living units does not exceed 50.

The Applicant certifies pursuant to the Zoning By-Law, Section 7.4 that the project can be constructed and/or that the proposed uses thereof can be commenced without need for the issuance of any variance from any provisions of the Zoning By-Law by the Zoning Board of Appeals.

This Application for Amendment to Special Permit includes the following documents:

- 1. This letter dated January 25, 2022 to the Planning Board and Planning Director.
- 2. The completed application form signed by myself on behalf of the applicant, and by the owner of the property, Wingate at Needham, Inc.
- 3. Traffic Analysis prepared by Ron Muller & Associates, 56 Teresa Road, Hopkinton, MA 01748, dated December 10, 2021.
- 4. Site Plan (including zoning table) for 589 Highland Avenue, Wingate Needham, Needham Mass, Dated January 12, 2022, prepared by R.E. Cameron & Associates, Inc., 681 Washington Street, Norwood, MA 02062.
- 5. Floor plans and unit plans dated January 19, 2022 prepared by The Architectural Team, Inc., 50 Commandant's Way, Chelsea, MA 02150.
- 6. Application fee to the Town of Needham in the amount of \$1,000.

Pursuant to the Board's Covid-19 procedures, these documents are being submitted electronically; additionally two (2) hard copies of the application (1 with original signatures) and all supporting materials, including wet-stamped plans, are being mailed to the Planning Department along with the application fee; and, lastly, one hard copy of (a) the Application for Amendment to Special Permit, (b) this letter, (c) the December 10, 2021 Ron Muller & Associates Traffic Analysis, and (d) all the plans (no smaller than 11 x 17), is being mailed to each Board member, and to Lee Newman.

The Applicant hereby requests, pursuant to Zoning By-Law Section 7.4.4, that the Planning Board waive the submission by Applicant of any of the required information not submitted herewith.

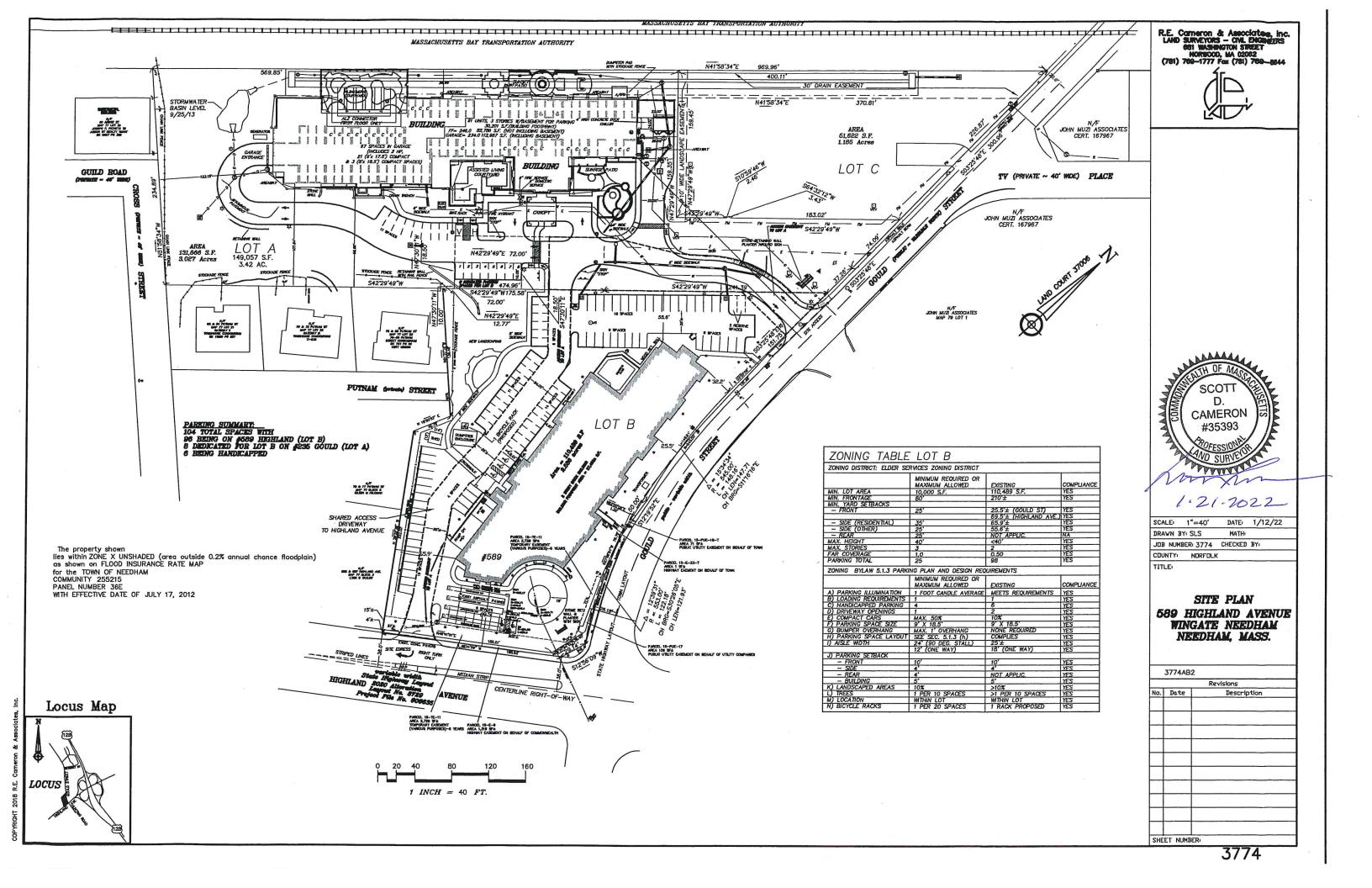
FRIEZE CRAMER ROSEN & HUBERLLP

Needham Planning Board Members Lee Newman January 25, 2022 Page 4

I would appreciate your scheduling this matter for hearing at the Board's March 1, 2022 meeting. Thank you for your cooperation.

Sincerely,

Evans Huber



© The Architectural Team, Inc.
50 Commandant's Way at Admiral's Hill
Chelsea MA 02150
O 617.889.4402
F 617.884.4329
architecturalteam.com

	t:
Revision:	
Architect of	of Record:
	HED ARCHITECTURE OF MASS
Drawn:	RP
Checked:	AS
Scale: Key Plan:	3/32" = 1'-0'

WINGATE AT
NEEDHAM
REHABILITATION

589 HIGHLAND AVENUE NEEDHAM, MA.

Sheet Name:

DEMOLITION OVERALL PLAN -BASEMENT

Project Number:

21056

Issue Date:

JANUARY 19, 2022

Sheet Number:

D1.00



10 DEMOLITION PLAN - BASEMENT Scale: 3/32" = 1'-0"



© The Architectural Team, Inc. 50 Commandant's Way at Admiral's Hill

Consultant:	
Revision:	



Drawn:	RP
Checked:	AS
Scale:	3/32" = 1'-0"
Key Plan:	

589 HIGHLAND AVENUE

OVERALL PLANS

JANUARY 19, 2022

© The Architectural Team, Inc. 50 Commandant's Way at Admiral's Hill Chelsea MA 02150 O 617.889.4402 F 617.884.4329 architecturalteam.com

Revision:

Architect of Record:

Drawn: RP

Checked: AS

Scale: 3/32" = 1'-0"

Key Plan:

Project Name:
WINGATE AT
NEEDHAM

589 HIGHLAND AVENUE NEEDHAM, MA.

REHABILITATION

Sheet Name:

PROPOSED OVERALL PLAN -BASEMENT

Project Number:

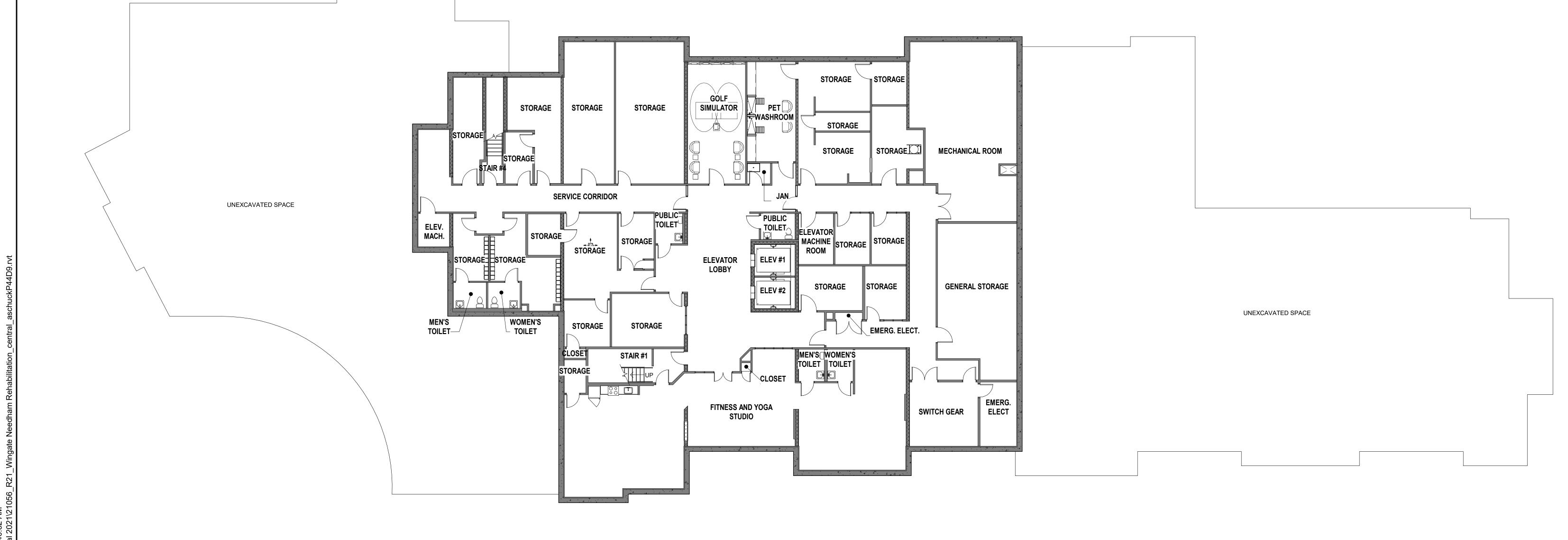
21056

Issue Date:

JANUARY 19, 2022

Sheet Number:

41.00



OVERALL FLOOR PLAN - BASEMENT
Scale: 3/32" = 1'-0"





50 Commandant's Way at Admiral's Hill

KEY TO SYMBOLS:

- EXISTING WALL TO REMAIN NEW PARTITION WALL. REFER TO WALL TYPE EXISTING MASONRY INFILL TO
- AREA OF SPECIFIC INFILL WORK TO BE PERFORMED. REFER TO KEYNOTES.
- X WALL TYPE. REFER TO SHEETS
- C. MAINTAIN 5'-0" DIA. TURNING RADIUS, DOOR PUSH/PULL, AND XX DOOR TYPE. REFER TO DOOR APPROACH/OPERATION CLEARANCES AS INDICATED ON THESE

GENERAL NOTES - UNIT

ELEMENTS IN FIELD.

DRAWINGS (SHOWN DASHED).

BASE UNITS SHOWN ON THESE DRAWINGS.

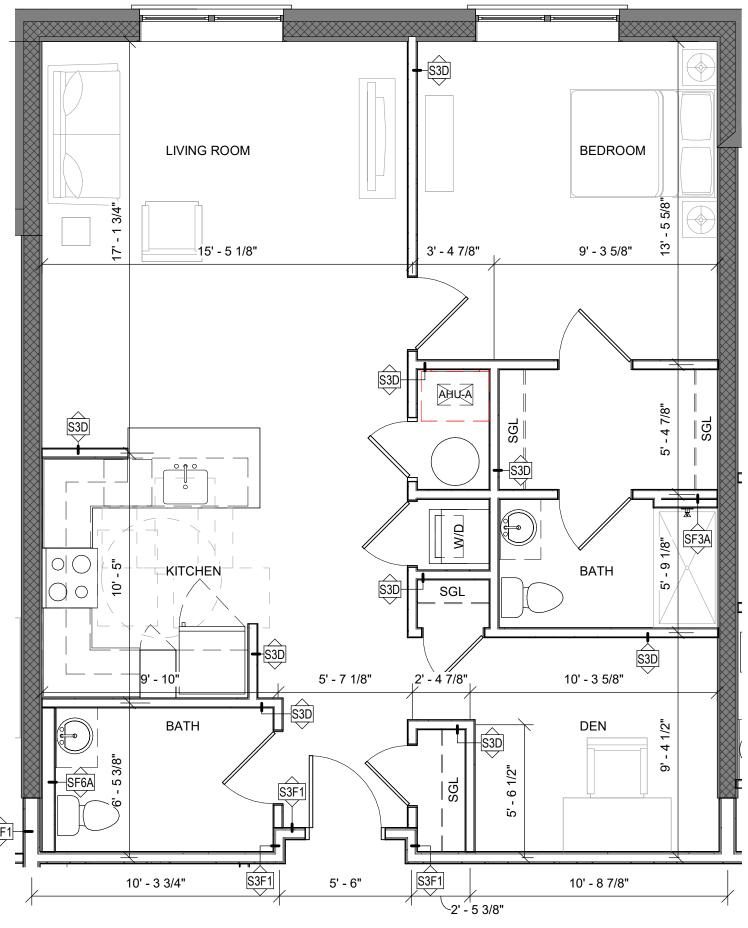
D. FURNITURE LAYOUT IS SHOWN FOR DIAGRAMMATIC PURPOSES

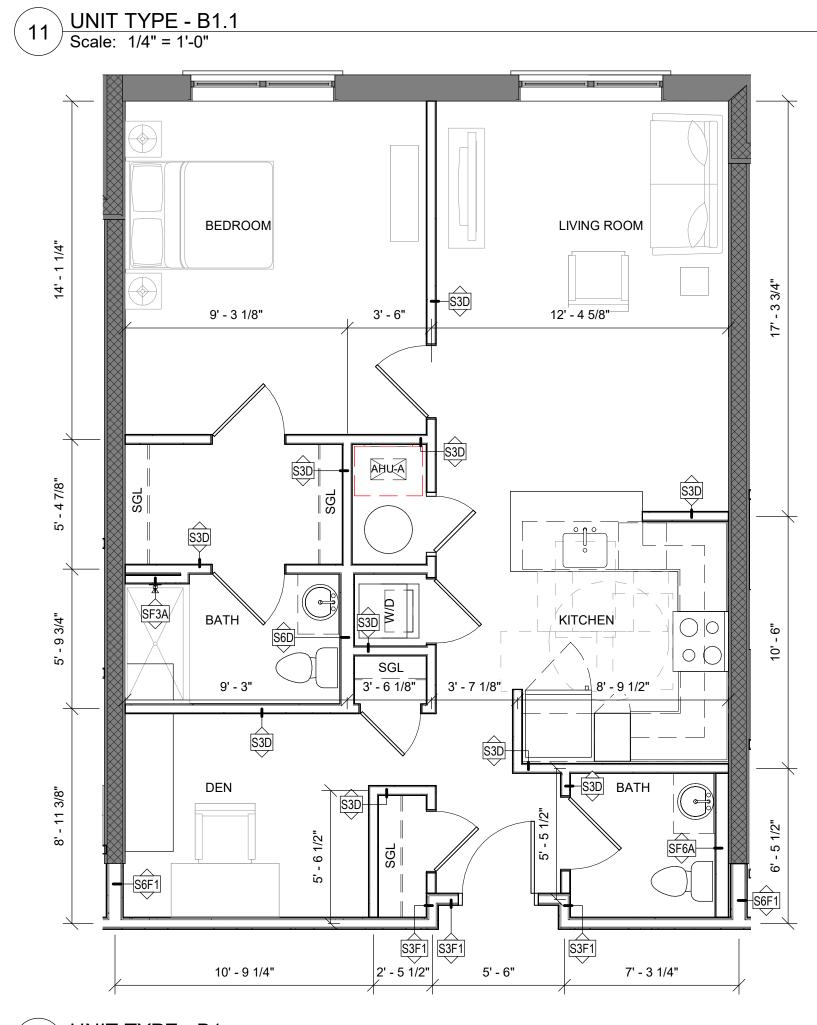
A. VERIFY ALL DIMENSIONS AND CONDITIONS OF EXISTING TO REMAIN ELEMENTS AND THEIR RELATIONSHIP WITH NEW

B. UNIT PLANS ARE INTENDED TO SHOW LAYOUT OF EACH BASE

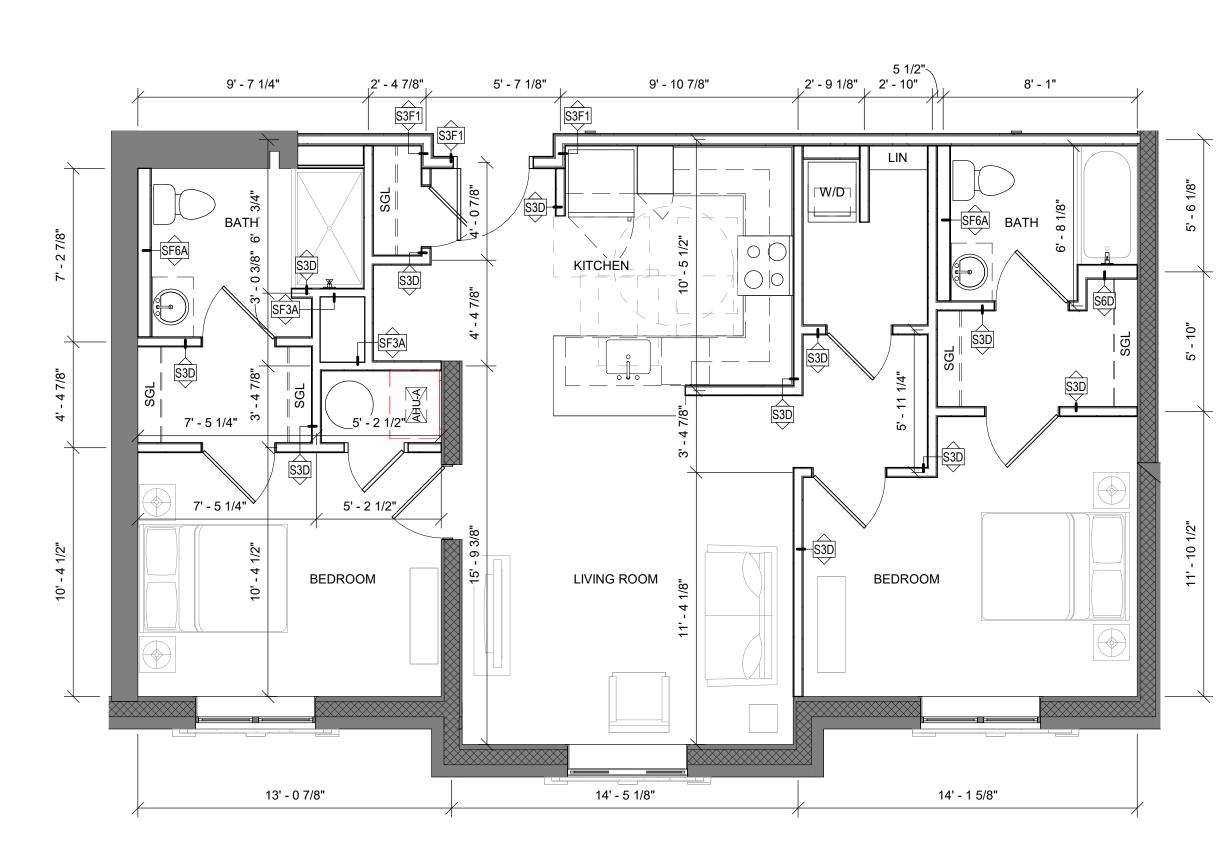
UNIT TYPE. UNIT TYPES SUFFIXED WITH ".X" ARE SIMILAR TO THE

- INDICATING FURNISHING DESIGN CONDITIONS. FURNITURE IS NOT IN CONTRACT.
- E. PROPERLY PREPARE ALL EXISTING TO REMAIN SURFACES TO RECEIVE NEW FINISHES.
- F. PROVIDE COMPLETE COMPARTMENTALIZATION (AIR-SEALING) OF UNIT INTERIORS BY WAY OF SEALING ALL INTERSECTIONS OF UNIT-TO-UNIT, UNIT-TO-CORRIDOR, AND EXTERIOR WALLS.
- G. PROVIDE COMPLETE NFPA 13 COMPLIANT FIRE PROTECTION SYSTEM THROUGHOUT DWELLING UNITS. REFER TO FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION.
- H. PROVIDE EMERGENCY CALL PULL STATIONS WITHIN EACH BEDROOM AND BATHROOM OF EACH UNIT. EMERGENCY CALL SYSTEM IS TO BE CONNECTED TO LIGHT ABOVE UNIT ENTRY DOOR ON CORRIDOR SIDE AND ANNUNCIATOR PANEL WITHIN MANAGEMENT OFFICE AND SHALL BE CAPABLE OF SENDING SIGNAL TO OFF-SITE LOCATION. REFER TO ELECTRICAL DRAWINGS.
- I. PROVIDE CEILING MOUNTED SMOKE AND CARBON MONOXIDE DETECTORS THROUGHOUT ALL UNITS. DEVICES ARE TO BE CONNECTED TO ANNUNCIATOR PANEL WITHIN MANAGEMENT OFFICE AND SHALL BE CAPABLE OF SENDING SIGNAL TO OFF-SITE LOCATION.
- J. REFER TO MECHANICAL DRAWINGS FOR CONCEALED EQUIPMENT, DUCTWORK, AND PIPING.
- K. REFER TO PLUMBING DRAWING FOR ADDITIONAL INFORMATION REGARDING PIPING, FITTINGS AND FIXTURES.
- L. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING LIGHT FIXTURES, RECEPTACLES, SWITCHING, TELEDATA, ETC...

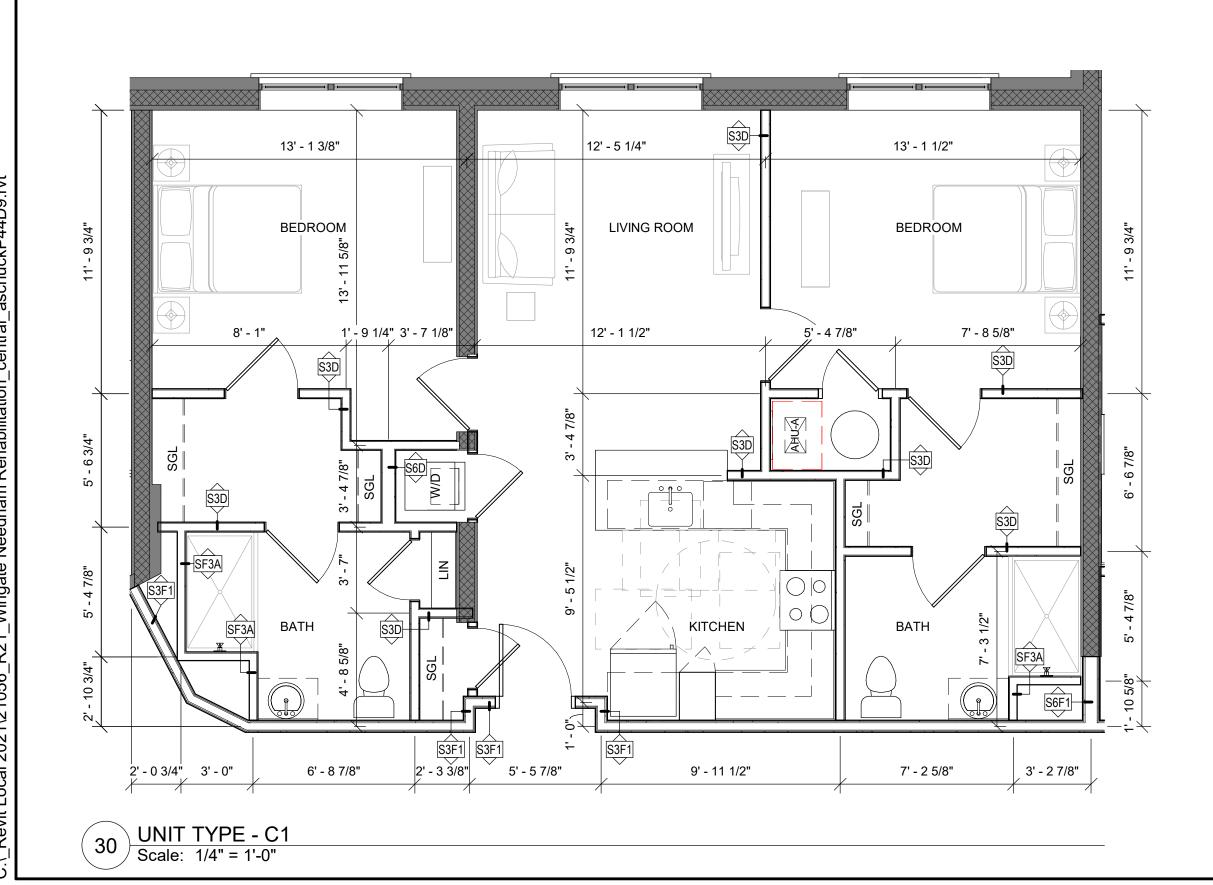


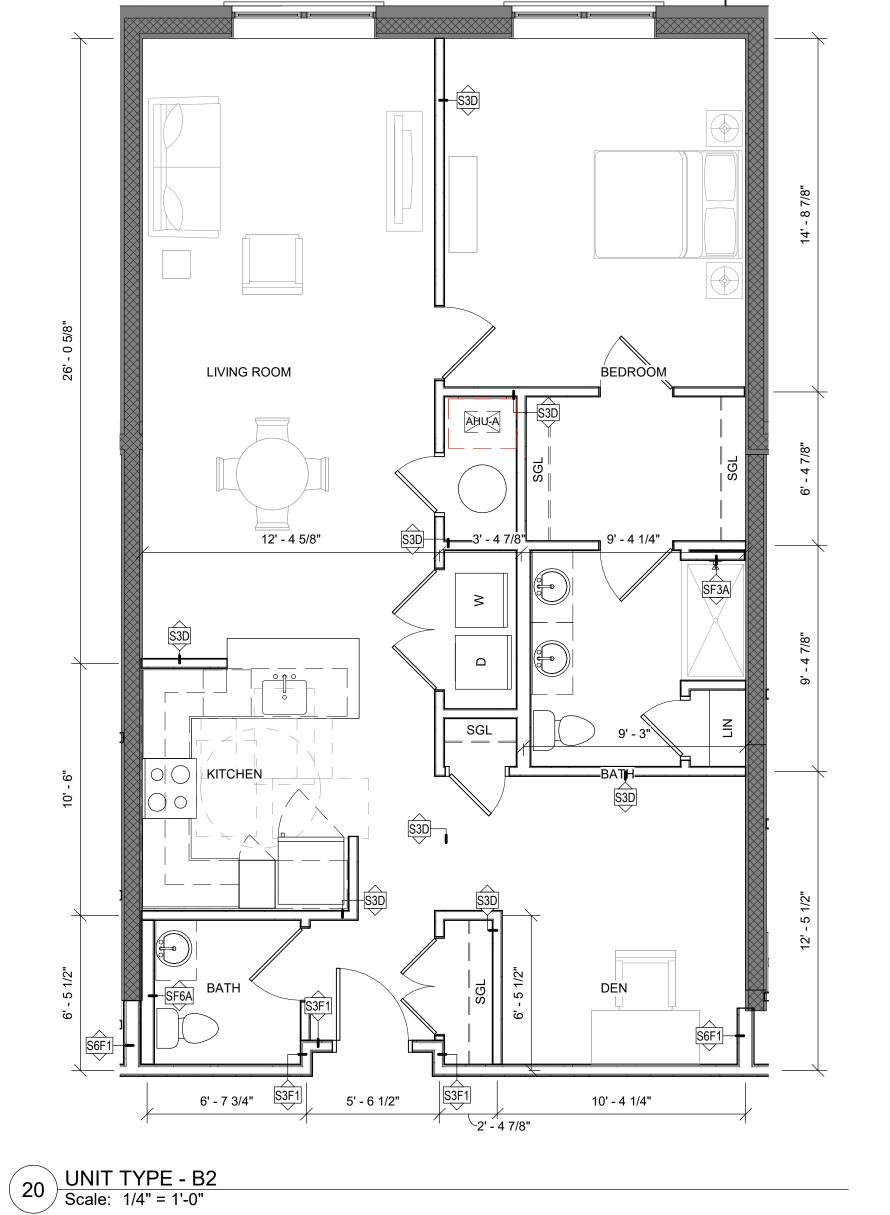


10 UNIT TYPE - B1
Scale: 1/4" = 1'-0"



31 UNIT TYPE - C2
Scale: 1/4" = 1'-0"

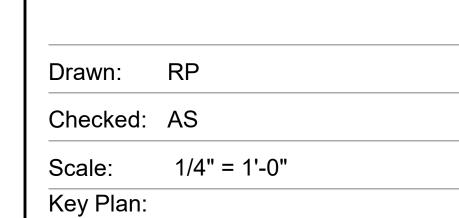




© The Architectural Team, Inc. 50 Commandant's Way at Admiral's Hill Chelsea MA 02150 **O** 617.889.4402 **F** 617.884.4329 architecturalteam com

aronnootaranoam.oom	
Consultant:	

Revision	:			
Architect	of Rec	ord:		
	No. of the last	DED ADO	I.a	
		EL D. 6/4		



Project Name:
WINGATE AT
NEEDHAM
REHABILITATION

589 HIGHLAND AVENUE NEEDHAM, MA.

Sheet Name:

ENLARGED UNIT PLANS

Project Number: 21056

Issue Date:

JANUARY 19, 2022

Sheet Number:

KEY TO SYMBOLS:

- EXISTING WALL TO REMAIN NEW PARTITION WALL. REFER TO WALL TYPE EXISTING MASONRY INFILL TO
- AREA OF SPECIFIC INFILL WORK TO BE PERFORMED. REFER TO KEYNOTES.
- XX DOOR TYPE. REFER TO DOOR
- X WALL TYPE. REFER TO SHEETS

GENERAL NOTES - UNIT

- A. VERIFY ALL DIMENSIONS AND CONDITIONS OF EXISTING TO REMAIN ELEMENTS AND THEIR RELATIONSHIP WITH NEW ELEMENTS IN FIELD.
- B. UNIT PLANS ARE INTENDED TO SHOW LAYOUT OF EACH BASE UNIT TYPE. UNIT TYPES SUFFIXED WITH ".X" ARE SIMILAR TO THE BASE UNITS SHOWN ON THESE DRAWINGS.
- C. MAINTAIN 5'-0" DIA. TURNING RADIUS, DOOR PUSH/PULL, AND APPROACH/OPERATION CLEARANCES AS INDICATED ON THESE DRAWINGS (SHOWN DASHED).
- D. FURNITURE LAYOUT IS SHOWN FOR DIAGRAMMATIC PURPOSES INDICATING FURNISHING DESIGN CONDITIONS. FURNITURE IS NOT IN CONTRACT.
- E. PROPERLY PREPARE ALL EXISTING TO REMAIN SURFACES TO RECEIVE NEW FINISHES. F. PROVIDE COMPLETE COMPARTMENTALIZATION (AIR-SEALING)
- OF UNIT INTERIORS BY WAY OF SEALING ALL INTERSECTIONS OF UNIT-TO-UNIT, UNIT-TO-CORRIDOR, AND EXTERIOR WALLS.
- G. PROVIDE COMPLETE NFPA 13 COMPLIANT FIRE PROTECTION SYSTEM THROUGHOUT DWELLING UNITS. REFER TO FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION.
- H. PROVIDE EMERGENCY CALL PULL STATIONS WITHIN EACH BEDROOM AND BATHROOM OF EACH UNIT. EMERGENCY CALL SYSTEM IS TO BE CONNECTED TO LIGHT ABOVE UNIT ENTRY DOOR ON CORRIDOR SIDE AND ANNUNCIATOR PANEL WITHIN MANAGEMENT OFFICE AND SHALL BE CAPABLE OF SENDING SIGNAL TO OFF-SITE LOCATION. REFER TO ELECTRICAL DRAWINGS.
- I. PROVIDE CEILING MOUNTED SMOKE AND CARBON MONOXIDE DETECTORS THROUGHOUT ALL UNITS. DEVICES ARE TO BE CONNECTED TO ANNUNCIATOR PANEL WITHIN MANAGEMENT OFFICE AND SHALL BE CAPABLE OF SENDING SIGNAL TO OFF-SITE LOCATION.
- J. REFER TO MECHANICAL DRAWINGS FOR CONCEALED EQUIPMENT, DUCTWORK, AND PIPING.
- K. REFER TO PLUMBING DRAWING FOR ADDITIONAL INFORMATION REGARDING PIPING, FITTINGS AND FIXTURES.
- INFORMATION REGARDING LIGHT FIXTURES, RECEPTACLES, SWITCHING, TELEDATA, ETC...

L. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL

12' - 6 1/2"

KITCHEN

5' - 11 1/2" 3' - 4 7/8

BATH

1' - 10 1/2" 5' - 2 1/2"

10 UNIT TYPE - D1
Scale: 1/4" = 1'-0"



© The Architectural Team, Inc. 50 Commandant's Way at Admiral's Hill Chelsea MA 02150 **O** 617.889.4402 **F** 617.884.4329 architecturalteam.com

`∩r	ารน	ltar	٦t٠	
ノロロ	เวน	ılaı	IL.	

_			
Re۱	110	10	n :
マレヽ	/ ∿		I I
101	/ 1 ~	\mathbf{v}	

Architect of Record:



Drawn:	RP
Checked:	AS
Scalor	1/4" - 1' 0"

Project Name:

Key Plan:

WINGATE AT NEEDHAM REHABILITATION

589 HIGHLAND AVENUE NEEDHAM, MA.

Sheet Name:

ENLARGED UNIT PLANS

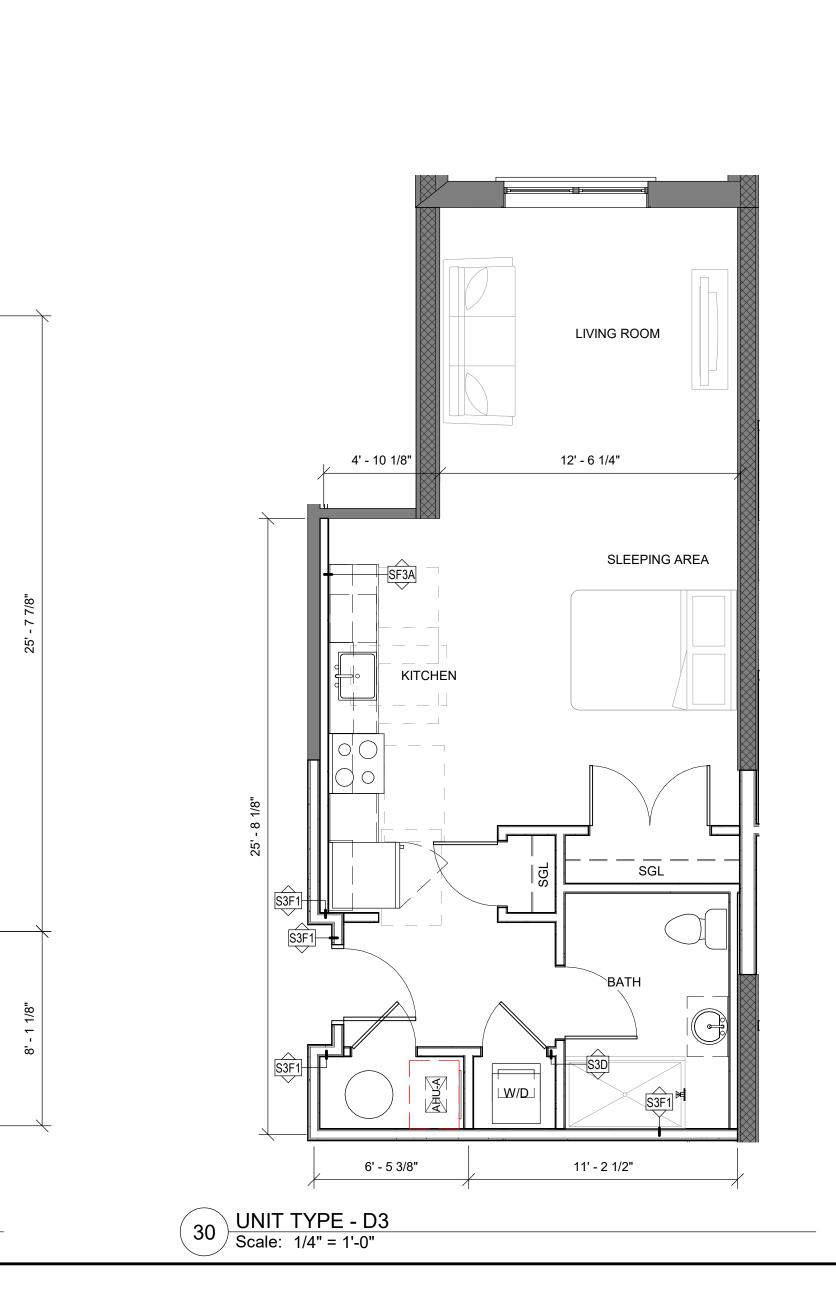
Project Number:

21056

Issue Date:

JANUARY 19, 2022

Sheet Number:



12' - 6 1/2"

KITCHEN

7' - 7 7/8"

7' - 9 5/8"

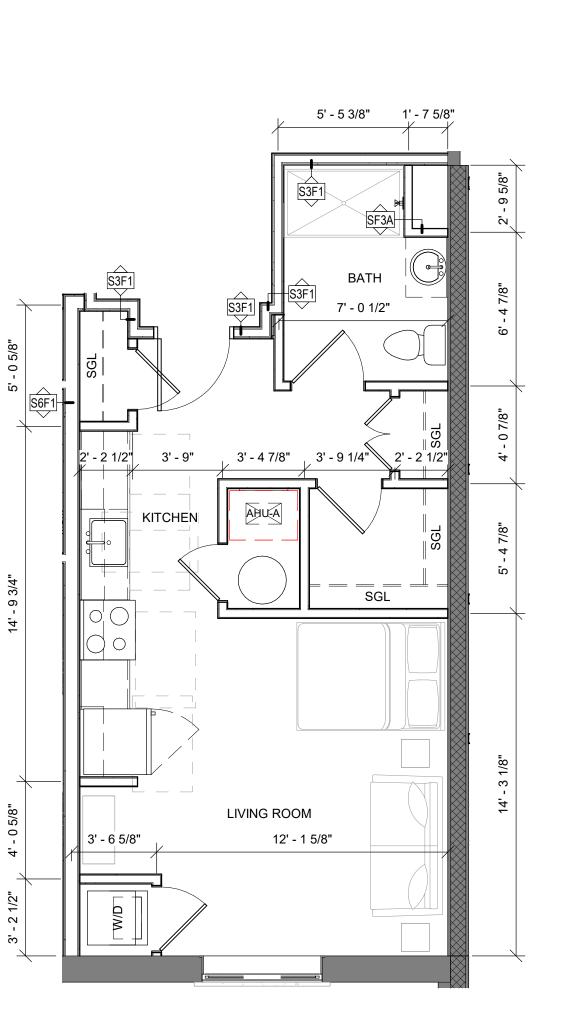
9' - 9 3/4"

40 UNIT TYPE - D4
Scale: 1/4" = 1'-0"

__ _ SGL __ _

LIVING ROOM

5' - 9"



20 UNIT TYPE - D2 Scale: 1/4" = 1'-0"



56 Teresa Road Hopkinton, MA 01748 Tel.: (508) 395-1576 Fax: (508) 435-2481 www.RonMullerAssociates.com

Ref.: 21044

December 10, 2021

Mr. David Feldman SVP Real Estate Development Wingate Healthcare 63 Kendrick Street Needham, MA 02494

Reg.: Proposed Independent Living Facility

Gould Street, Needham, MA

Dear David:

Ron Müller & Associates (RMA) has prepared this letter to document that conversion of the existing 142-bed skilled nursing facility into 50 independent senior living units will result in a reduction in site traffic generation. The existing building is located on Lot B at the corner of Gould Street and Highland Avenue in Needham, Massachusetts and will be renovated and remodeled into independent senior living units. No change in site access or parking is proposed. This letter also documents that the demand for on-site parking will be reduced and that the supply of parking is more than adequate to accommodate the anticipated demand.

The Institute of Transportation Engineers (ITE) *Trip Generation Manual*¹ was used to estimate the change in traffic from the proposed conversion project. The ITE manual provides trip generation rates for nursing facilities based on the number of beds (Land Use Code 620) as well as trip generation rates for independent living facilities based on the number of units (Land Use Code 252). A summary of the expected change in traffic generation is provided in Table 1 and the trip generation worksheets are attached to this letter.

¹ Trip Generation Manual, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.

Table 1
Trip Generation Comparison

Time Period	Existing Skilled Nursing Facility ^a	Proposed Independent Living Facility b	Change in Traffic
Weekday Daily	430	170	-260
Weekday AM Peak Hour Enter <u>Exit</u> Total	$\frac{14}{\frac{6}{20}}$	$\begin{array}{c} 1\\ \underline{9}\\ 10 \end{array}$	-13 <u>+3</u> -10
Weekday PM Peak Hour Enter <u>Exit</u> Total	$\begin{array}{c} 7 \\ \underline{13} \\ 20 \end{array}$	7 <u>6</u> 13	0 <u>-7</u> -7
Saturday Peak Hour Enter <u>Exit</u> Total	23 28 51	9 <u>8</u> 17	-14 -20 -34

^a ITE Land Use Code 620 (Nursing Home) trip rates applied to 142 beds.

As shown in the table, the proposed 50 independent living units will generate less traffic during all times periods than the existing 142-bed nursing facility. On a typical weekday, the independent living units will generate 260 fewer vehicle trips (total entering and exiting traffic) of which 10 fewer trips will occur during the weekday AM peak hour (one hour between 7:00 and 9:00 AM) and 7 fewer trips will occur during the weekday PM peak hour (one hour between 4:00 and 6:00 PM). During the Saturday peak hour (typically one hour between 11:00 AM and 2:00 PM), the proposed independent living units will generate 34 fewer trips than the existing nursing facility.

The existing nursing facility building currently provides 97 parking spaces on Lot B. Based on parking generation rates provided in the ITE *Parking Generation* manual,² the existing nursing facility has an average peak parking demand of 62 spaces and an 85th percentile peak parking demand of 73 spaces (Land Use Code 620). Using the ITE parking generates rates for senior adult housing (Land Use Code 252), the proposed 50 independent living units will have an average peak parking demand of 31 spaces and an 85th percentile peak parking demand of 34 spaces. Accordingly, the change to independent living units will reduce the parking demand on the site and more than adequate parking will be provided to accommodate the change in use.

^b ITE Land Use Code 252 (Senior Adult Housing – Attached) trip rates applied to 50 units.

² Parking Generation, 5th Edition; Institute of Transportation Engineers; Washington, DC; 2019.

Please feel free to contact me should you have any questions regarding these estimates or conclusions.

Sincerely,

Ron Müller & Associates

Ronald Müller, P.E.

Principal

Attachments

Institute of Transportation Engineers (ITE); 11th Edition Land Use Code (LUC) 620 - Nursing Home

Average Vehicle Trips Ends vs: Beds Independent Variable (X): 142

AVERAGE WEEKDAY DAILY

T = 3.06 * (X)

T = 434.52

T = 430 vehicle trips

with 50% (215 vpd) entering and 50% (215 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.10 * (X) + 5..42

T = 19.62

T = 20 vehicle trips

with 72% (14 vph) entering and 27% (6 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.11 * (X) + 3.98

T = 19.60

T = 20 vehicle trips

with 33% (7 vph) entering and 67% (13 vph) exiting.

SATURDAY DAILY

T = 2.32 * (X)

T = 329.44

T = 330 vehicle trips

with 50% (165 vpd) entering and 50% (165 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

T = 0.36 * (X)

T = 51.12

T = 51 vehicle trips

with 46% (23 vph) entering and 54% (28 vph) exiting.

Institute of Transportation Engineers (ITE); 11th Edition Land Use Code (LUC) 252 - Senior Adult Housing - Attached

Average Vehicle Trips Ends vs: Dwelling Units Independent Variable (X): 50

AVERAGE WEEKDAY DAILY

T = 2.89 * (X) + 24.82 T = 169.32 T = 170 vehicle trips with 50% (85 vpd) entering and 50% (85 vpd) exiting.

WEEKDAY AM PEAK HOUR OF ADJACENT STREET TRAFFIC

$$\begin{split} T &= 0.19 * (X) + 0.90 \\ T &= 10.40 \\ T &= 10 & \text{vehicle trips} \\ \text{with } 14\% \ (& 1 & \text{vph}) \text{ entering and } 66\% \ (& 9 & \text{vph}) \text{ exiting.} \end{split}$$

WEEKDAY PM PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.25 * (X) + 0.07 T = 12.57 $T = 13 \qquad \text{vehicle trips}$ with 56% (7 vph) entering and 44% (6 vph) exiting.

SATURDAY DAILY

T = 2.33 * (X) + 31.21 T = 147.71 T = 150 vehicle trips with 50% (75 vpd) entering and 50% (75 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

Ln T = 0.93 Ln (X) - 0.81 Ln T = 2.828 T = 16.91 T = 17 vehicle trips with 54% (9 vph) entering and 46% (8 vph) exiting.