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Project Name: Birchwood Terrace Transportation Demand Management (TDM) Plan

Date: April 8, 2022

Background

Birchwood Terrace

Birchwood Terrace is a 144-bed Skilled Nursing Facility (SNF) that provides short- and long-term care at [43 Starr Farm Road in Burlington, Vermont](#). The facility provides 24-hour nursing care, access to a physician 24 hours a day, meals, therapy, activities, housekeeping, and other miscellaneous services needed by residents. The nature of the facility and its license requirements include required staffing levels throughout the entire 24-hour day.

The facility currently has 73 parking spaces and is proposing to add an additional 25 parking spaces to address existing parking demand. No other change in services or additional construction is proposed, and as such, the number of trips to and from the facility is not expected to change.

What is a TDM Plan?

A Transportation Demand Management (TDM) plan ensures a broad set of transportation choices are available to employees and customers. Plans include various programs or incentives to encourage alternative modes of transportation. These plans can include educational components, such as providing brochures of local transit schedules or allowing organizations which promote alternative transportation modes to run workshops on site. The plans can include physical components, such as providing secure bike parking or shower facilities for nonmotorized commuters. They can be structured around annual, monthly, or special event incentives, such as subsidized transit passes, annual stipends to support bicycle maintenance, or special prizes during Ride to Work week. They often include a guaranteed ride home program.

Why do TDM?

A TDM plan is intended to reduce single-occupant vehicle travel and ensure employees have a broad set of options for commuting. These efforts reduce parking demand on site as well as congestion in the surrounding area. As it can cost over \$10,000 per parking spot to construct even simple surface parking, TDM measures are often very cost-effective strategies. Supporting the use of a variety of modes for commutes supports employee wellness, can improve employee access, and reduces environmental impacts of employee travel. In addition, The City

of Burlington requires a TDM plan for zoning applications in the Multimodal Mixed Use Parking District¹.

Previous Studies

In 2018, RSG completed an in-depth assessment of parking use and occupancy at Birchwood Terrace. That study found the facility had 168 employees with multiple staggered shifts, designed to meet license requirements as well as stagger parking needs. That study reported peak visiting hours are from 10:00 am to 1:00 pm and from 4:00 pm to 7:00 pm. This pre-COVID survey indicated as many as 20-25 visitors at peak times is not uncommon. The facility is also a clinical training location for the University of Vermont and Vermont Technical College. Classes include between 8 to 30 students and 1 to 4 instructors.

Based on schedule information, this study found a peak of 118 personnel on-site, not including visitors. However, their observations indicated roughly 72 vehicles were parked in employee parking with another 3-4 vehicles parked in the maintenance area, indicating “significant TDM measures, such as car-pooling and use of alternate modes, are already in place.” This study reported 33 of 168 employees were using alternate modes, reflecting roughly 20% of staff, as opposed to 5-10% which would be a more typical target.

Current Policies

Birchwood Terrace currently encourages alternate means of transportation, such as walking, biking, carpooling, or utilizing public transportation through a variety of measures. However, due to the nature of the business, employee shifts run 24-hours a day, with shifts starting or ending almost every hour of the day. The work schedule of their employees makes it challenging for employees to use alternative methods. Despite the challenges the work shifts impose, Birchwood Terrace currently has over 30 employees who utilize one of the above methods to travel to work. They maintain a company UBER account to assist with transportation, however Uber is not always available due to the early/late hours of shifts. In addition, the facility staggers shift start/stops to spread out the amount of traffic in the lot at any one time, and it is well-located with access to multimodal infrastructure.

Local Context

Birchwood Terrace is located less than 1000 feet of the North Avenue (#7) GMT line, with both northbound and southbound stops at the end of Starr Farm Road. This line currently runs from approximately 5:45 am to 10:45 pm Monday through Friday, 6:45 am to 10:45 pm Saturday, and 8:15 am to 6:15 pm Sundays.

The facility is proximate to the Island Line Trail, which crosses Starr Farm Road roughly 2000 feet southwest of Birchwood Terrace and provides connectivity to downtown Burlington as well as other bike network infrastructure. Sidewalks are present on Starr Farm Road between the facility and North Avenue. The sidewalk infrastructure extends from North Avenue into

¹ Sec. 8.1.16 Transportation Demand Management, Comprehensive Development Ordinance, City of Burlington, VT, December 16, 2020. <https://www.burlingtonvt.gov/sites/default/files/20201216%20ART08-Parking.pdf>

downtown Burlington. Parking at Birchwood Terrace is limited, which also serves to discourage single occupant vehicle travel.

Birchwood Terrace is located within the current service area for UBER and Lyft, as well as within the area served by the CATMA, a non-profit transportation management association serving Chittenden County. It is in the operating zone for greenride bikeshare, and it is also served by Car Share Vermont, although the closest car station is roughly 2.5 miles away.

Planned Measures

Birchwood Terrace has a proven history of a large percentage of employees using alternate modes of transportation despite operating 24 hours each day. They have achieved this mode share while providing a critical service to the community under tight margins and challenging conditions. Building on their existing tools and reinforcing them with new ones will continue to maximize employee use of alternative modes of transportation and minimize parking demand.

Based on the review of the Birchwood Terrace operations and its local context, the following measures are planned for each of the program elements:

Outreach & Education

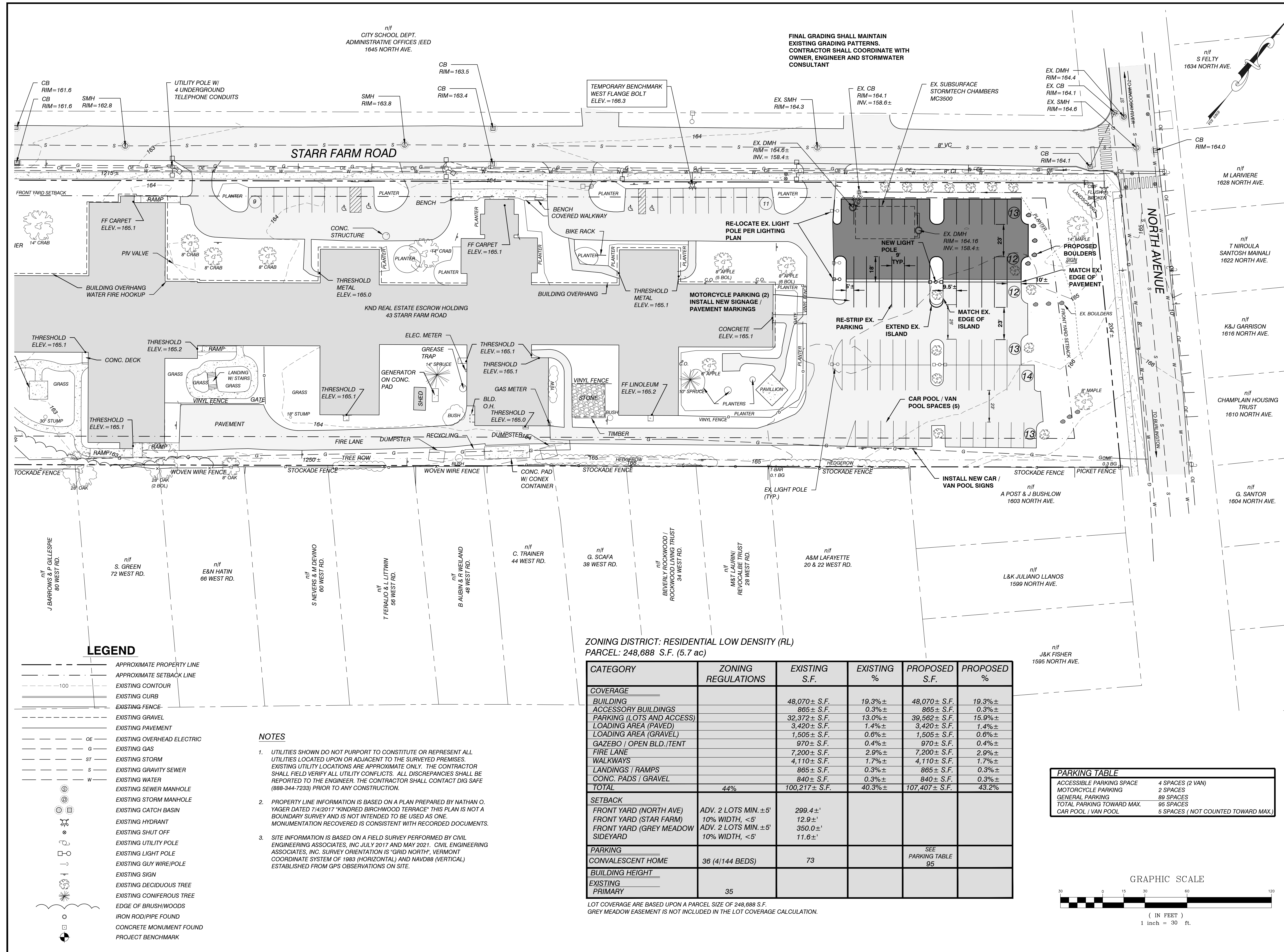
The Executive Director will serve as the Transportation Coordinator and will share materials regarding available transportation options to employees at the Second Quarter staff meeting, timed to encourage employees to shift to alternative modes as the weather improves and those behavioral changes are easier. She will also plan a breakfast for employees who participate in Way to Go! Or Bike to Work week, survey employees annually about how they get to work, and provide an annual report to the City.

TDM Strategies

Given the non-traditional, staggered schedules required to staff the facility, providing transit passes and car share memberships is not a suitable strategy for this location. Instead, Birchwood Terrace will:

1. Join CATMA
2. Implement a Guaranteed Ride Home program, paying the cab or Uber/Lyft fare if an emergency arises on a day an employee uses an alternative commute mode,
3. Provide sheltered bicycle parking,
4. Provide showers & changing facilities, and
5. Provide access to reduced-price transit passes through its membership with CATMA

Birchwood Terrace provides short-term bicycle parking for approximately eight bicycles via a rack at the front of the building's main entrance. Four longer-term informal bicycle parking spaces are available for staff at the rear of the building, proximate to the staff entrance. This location is enclosed on three sides, screened from the general public, and covered with a tent. Roughly two to three staff regularly park bicycles in this location, but use varies.



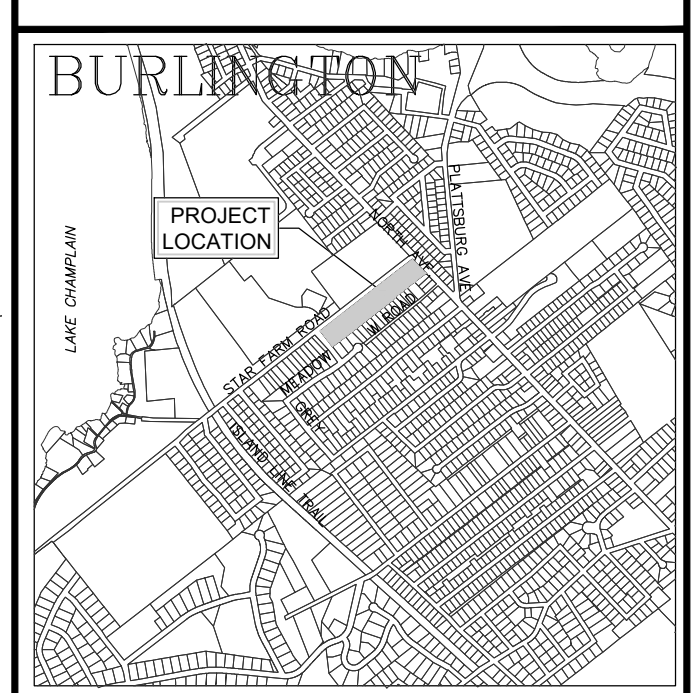
SITE ENGINEER:

 CIVIL ENGINEERING ASSOCIATES, INC.
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DRAWN
 MAB
 CHECKED
 MCK
 APPROVED
 CJG

CLIENT:
**BIRCHWOOD
 PROP LLC**
 c/o BIRCHWOOD
 OPERATIONS LLC
 43 STARR FARM ROAD
 BURLINGTON, VT

PROJECT:
**BIRCHWOOD
 TERRACE**
 43 STARR FARM ROAD
 BURLINGTON, VT



LOCATION MAP
 1" = 200'

DATE	CHECKED	REVISION
09/23/21	MLK	ZONING PERMIT
03/28/22	MLK	REVISIONS PER STAFF COMMENTS

**PARTIAL
 PROPOSED
 CONDITIONS SITE
 PLAN**

DATE
 09/23/2021
 SCALE
 1" = 30'
 PROJ. NO.
 17158
 DRAWING NUMBER
C2.0

LEGEND

---	APPROXIMATE PROPERTY LINE
---	APPROXIMATE SETBACK LINE
---	EXISTING CONTOUR
---	EXISTING CURB
---	EXISTING FENCE
---	EXISTING GRAVEL
---	EXISTING PAVEMENT
OE	EXISTING OVERHEAD ELECTRIC
G	EXISTING GAS
ST	EXISTING STORM
S	EXISTING GRAVITY SEWER
W	EXISTING WATER
W	EXISTING SEWER MANHOLE
W	EXISTING STORM MANHOLE
W	EXISTING CATCH BASIN
W	EXISTING HYDRANT
W	EXISTING SHUT OFF
W	EXISTING UTILITY POLE
W	EXISTING LIGHT POLE
W	EXISTING GUY WIRE/POLE
W	EXISTING SIGN
W	EXISTING DECIDUOUS TREE
W	EXISTING CONIFEROUS TREE
W	EDGE OF BRUSHWOODS
W	IRON ROD/PIPE FOUND
W	CONCRETE MONUMENT FOUND
W	PROJECT BENCHMARK

- NOTES**
- UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITY CONFLICTS. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL CONTACT DIG SAFE (888-344-7233) PRIOR TO ANY CONSTRUCTION.
 - PROPERTY LINE INFORMATION IS BASED ON A PLAN PREPARED BY NATHAN O. YAGER DATED 7/4/2017 "KINDRED BIRCHWOOD TERRACE" THIS PLAN IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS ONE. MONUMENTATION RECOVERED IS CONSISTENT WITH RECORDED DOCUMENTS.
 - SITE INFORMATION IS BASED ON A FIELD SURVEY PERFORMED BY CIVIL ENGINEERING ASSOCIATES, INC. JULY 2017 AND MAY 2021. CIVIL ENGINEERING ASSOCIATES, INC. SURVEY ORIENTATION IS "GRID NORTH", VERMONT COORDINATE SYSTEM OF 1983 (HORIZONTAL) AND NAVD88 (VERTICAL) ESTABLISHED FROM GPS OBSERVATIONS ON SITE.

ZONING DISTRICT: RESIDENTIAL LOW DENSITY (RL)
 PARCEL: 248,688 S.F. (5.7 ac)

CATEGORY	ZONING REGULATIONS	EXISTING S.F.	EXISTING %	PROPOSED S.F.	PROPOSED %
COVERAGE					
BUILDING		48,070 ± S.F.	19.3% ±	48,070 ± S.F.	19.3% ±
ACCESSORY BUILDINGS		865 ± S.F.	0.3% ±	865 ± S.F.	0.3% ±
PARKING (LOTS AND ACCESS)		32,372 ± S.F.	13.0% ±	39,562 ± S.F.	15.9% ±
LOADING AREA (PAVED)		3,420 ± S.F.	1.4% ±	3,420 ± S.F.	1.4% ±
LOADING AREA (GRAVEL)		1,505 ± S.F.	0.6% ±	1,505 ± S.F.	0.6% ±
GAZEBO / OPEN BLD./TENT		970 ± S.F.	0.4% ±	970 ± S.F.	0.4% ±
FIRE LANE		7,200 ± S.F.	2.9% ±	7,200 ± S.F.	2.9% ±
WALKWAYS		4,110 ± S.F.	1.7% ±	4,110 ± S.F.	1.7% ±
LANDINGS / RAMPS		865 ± S.F.	0.3% ±	865 ± S.F.	0.3% ±
CONC. PADS / GRAVEL		840 ± S.F.	0.3% ±	840 ± S.F.	0.3% ±
TOTAL	44%	100,217 ± S.F.	40.3% ±	107,407 ± S.F.	43.2% ±
SETBACK					
FRONT YARD (NORTH AVE)	ADV. 2 LOTS MIN. ±5'	299.4 ±'			
FRONT YARD (STAR FARM)	10% WIDTH, <5'	12.9 ±'			
FRONT YARD (GREY MEADOW)	ADV. 2 LOTS MIN. ±5'	350.0 ±'			
SIDEYARD	10% WIDTH, <5'	11.6 ±'			
PARKING					
CONVALESCENT HOME	36 (4/144 BEDS)	73		SEE PARKING TABLE	95
BUILDING HEIGHT					
EXISTING PRIMARY		35			

LOT COVERAGE ARE BASED UPON A PARCEL SIZE OF 248,688 S.F.
 GREY MEADOW EASEMENT IS NOT INCLUDED IN THE LOT COVERAGE CALCULATION.

PARKING TABLE

ACCESSIBLE PARKING SPACE	4 SPACES (2 VAN)
MOTORCYCLE PARKING	2 SPACES
GENERAL PARKING	89 SPACES
TOTAL PARKING TOWARD MAX.	95 SPACES
CAR POOL / VAN POOL	5 SPACES (NOT COUNTED TOWARD MAX.)

