


**TECHNICAL MEMORANDUM
PARKING STUDY**

PENN MEDICINE PRINCETON HEALTH CAMPUS
Township Of Plainsboro, Middlesex County, New Jersey

Prepared for
PENN MEDICINE PRINCETON HEALTH
Township Of Plainsboro, New Jersey

Prepared by
DTS Provident Design Engineering, LLP
One North Broadway
White Plains, New York

April 14, 2023
REVISED: September 14, 2023
REVISED: July 31, 2024
DTS Provident Project No. 0905


Charles (Carlito) S. Holt, P.E.
New Jersey P.E. #24GE04890500
Partner

TECHNICAL MEMORANDUM

TO:	Ms. Bonnie N. Flynn Director of Planning & Community Development	DATE:	April 14, 2023 Revised through 7/18/2024
FROM:	Carlito Holt, P.E., PTOE Partner	RE:	Parking Study Penn Medicine Princeton Health Campus, Plainsboro, NJ

Introduction

DTS Provident Design Engineering, LLP (DTS Provident) has prepared this Technical Memorandum to summarize the evaluation of existing/future parking conditions at the Penn Medicine Princeton Health (PMPH) Campus located along Plainsboro Road and Campus Road in Plainsboro Township, Middlesex County, New Jersey. The purpose of this evaluation is to verify that the parking provisions are consistent with the Amended Redevelopment Plan.

The parking evaluation contained in this Technical Memorandum considers the number of parking spaces required at the existing Health and Medical Office Complex (HMOC) component of the Campus, which consists of the Hospital, Medical Office Building and the former Health/Fitness Center, as well as the future number of parking spaces required as part of the Cancer Center expansion to the HMOC.

Based upon the information contained herein, it is the considered professional opinion of DTS Provident that the parking ratio contained in the Amended Redevelopment Plan for Medical Office Building (4 spaces per 1,000 sf) will be more than adequate to accommodate the proposed Cancer Center expansion based on the comparison of parking ratios to other sources. Furthermore, the parking currently provided at the HMOC, combined with the additional parking spaces to be constructed, will meet the future overall parking needs of the HMOC.

Existing & Future Parking Requirements

Based on the approved "Amended Preliminary and Final Major Site Plan" prepared by French & Parrello Associates on July 22, 2010, the total number of parking spaces required for the existing HMOC component of the Campus is 1,540 parking spaces. Recently, the approximately 48,000 square foot Health/Fitness Center portion of the HMOC was vacated and will be re-purposed via a portion of the proposed Cancer Center and fit-out of in the future to another healthcare-related space that is currently unknown at this time.

The proposed Cancer Center expansion would require four parking spaces for every 1,000 square feet of floor area. This parking ratio is based on the parking requirements contained in the Amended Redevelopment Plan for Medical Office space. Although the proposed Cancer Center would equal

approximately 200,000 square feet of total floor space, DTS Provident has taken into consideration the Township's interpretation of the parking requirement code that allows the facility size used in the required parking space calculations to be reduced by the amount of common space area (i.e., accessory/mechanical space). The total usable floor area for the proposed Cancer Center is based on the conceptual floor plans submitted by the Applicant.

DTS Provident took a similar approach with the future repurposing of the Health/Fitness Center space not displaced by Cancer Center expansion. Although the remaining portion of the Health/Fitness Center will equal approximately 32,000 square feet of total floor space, the Applicant has developed a conceptual clinical program for the remaining portion of the Health/Fitness Center space, identifying both usable and unusable space.

Copies of the conceptual layout plans for the proposed Cancer Center and re-purposed Health/Fitness Center are included in Attachment A. For purposes of this evaluation, DTS Provident utilized a space of 154,559 square feet for the proposed Cancer Center expansion (based on the conceptual floor plans prepared by the Applicant) and 28,210 square feet for the remaining portion of the Health/Fitness Center (based on the conceptual clinical program prepared by the Applicant) in determining the future parking requirements.

Using the required parking space parameters outlined above, the HMOC site would require a future parking space supply total of 2,272 parking spaces. This includes the 1,540 parking spaces that are required for the existing HMOC site and using a parking ratio of 4 parking spaces per 1,000 square feet for the 28,210 square foot re-purposed Health/Fitness Center space and the proposed 154,559 square foot Cancer Center expansion.

Existing & Future Parking Supply

The Total Parking Supply currently provided at the HMOC site is 1,539 parking spaces contained within the various surface parking lots surrounding the HMOC site. As a result of the Cancer Center expansion, the previously approved multi-level Parking Garage will be constructed within an existing surface parking lot just north of the existing HMOC building to accommodate both the loss of parking spaces due to the Cancer Center expansion as well as the additional parking demand created by patrons/staff of the proposed Cancer Center. The proposed Parking Garage will consist of a total of 1,161 parking spaces. The number of parking spaces that will be displaced by the Cancer Center expansion is 176 parking spaces and the number of parking spaces that will be displaced by construction of the proposed Parking Garage is 182 parking spaces.

Combining the existing parking space supply at the HMOC site (1,539 spaces) with the additional parking space supply created by the proposed Parking Garage (1,161 spaces), while discounting the number of parking spaces displaced by the Cancer Center expansion (176 spaces) and Parking Garage construction (182 spaces), results in a total future parking space supply of 2,342 parking spaces for the HMOC site, which exceeds the required future parking space supply as outlined above by 70 parking spaces.

Table No. 1 below summarizes the existing/future parking space requirements and supply as described above.

TABLE NO. 1 PARKING REQUIREMENTS & SUPPLY WITHOUT PARKING LOT P10 PENN MEDICINE PRINCETON HEALTH, PLAINSBORO, NEW JERSEY	
Parking Demand/Supply	Number of Parking Spaces
Required HMOC Parking (obtained from "Amended Preliminary and Final Major Site Plan", French & Parrello, 7/22/2010)	1,540
Vacant Fitness Center Space not displaced by Cancer Center (28,210 SF, see conceptual layout plan in Attachment A) <i>[using Amended Redevelopment Plan requirement of 4 spaces per 1,000 SF]</i>	+113
Required Cancer Center Expansion Parking (Proposed 154,559 SF) <i>[using Amended Redevelopment Plan requirement of 4 spaces per 1,000 SF]</i>	+619
Total Parking Required	2,272
Existing Parking Supply (excluding Lot P10)	1,539
Additional Supply (Proposed Parking Garage)	+1,161
Displaced Parking Supply (due to Cancer Center expansion)	-176
Displaced Parking Supply (due to Parking Garage structure)	-182
Total Parking Supply	2,342
Excess Parking Capacity	+70

Notes:

1. The displaced parking supply due to Cancer Center Expansion includes the spaces lost for the 10 landbanked parking spaces, thus providing a conservative analysis.
2. The total parking required takes no credit for provision of EV or EV Ready spaces, thus providing a conservative analysis.

Although not counted towards the parking space supply requirements contained in the Amended Redevelopment Plan, it is noted that the HMOC site also utilizes Parking Lot P10, typically referred to as the "Crescent Lot", located north of the HMOC in the Hospital Auxiliary District (HAD) to allow additional parking availability on the HMOC site to accommodate atypical surges in parking demand for less frequent hospital events (i.e. school bus accident that may bring a high number of parents to the Hospital).

Parking Lot P10 provides an additional 436 parking spaces, bringing the existing Total Parking Supply available to patrons/staff of the HMOC site to 1,975 parking spaces.

Accounting for the utilization of parking spaces within Parking Lot P10, the total future parking space supply for the HMOC site equals 2,778, which exceeds the required future parking space supply by 506 parking spaces.

Table No. 2 below summarizes the existing/future parking space requirements and supply while taking into account utilization of the existing/future parking spaces within Parking Lot P10.

TABLE NO. 2 PARKING REQUIREMENTS & SUPPLY WITH PARKING LOT P10 PENN MEDICINE PRINCETON HEALTH, PLAINSBORO, NEW JERSEY	
Parking Demand/Supply	Number of Parking Spaces
Required HMOC Parking (obtained from "Amended Preliminary and Final Major Site Plan", French & Parrello, 7/22/2010)	1,540
Vacant Fitness Center Space not displaced by Cancer Center (28,210 SF, see conceptual layout plan in Attachment A) <i>[using Amended Redevelopment Plan requirement of 4 spaces per 1,000 SF]</i>	+113
Required Cancer Center Expansion Parking (Proposed 154,559 SF) <i>[using Amended Redevelopment Plan requirement of 4 spaces per 1,000 SF]</i>	+619
Total Parking Required	2,272
Existing Parking Supply (excluding Lot P10)	1,539
Existing Parking Supply (Lot P10)	436
Additional Supply (Proposed Parking Garage)	+1,161
Displaced Parking Supply (due to Cancer Center expansion)	-176
Displaced Parking Supply (due to Parking Garage structure)	-182
Total Parking Supply	2,778
Excess Parking Capacity	+506

Notes:

1. The displaced parking supply due to Cancer Center Expansion includes the spaces lost for the 10 landbanked parking spaces, thus providing a conservative analysis.
2. The total parking required takes no credit for provision of EV or EV Ready spaces, thus providing a conservative analysis.

Proposed Cancer Center Parking Demand

The Amended Redevelopment Plan identifies a Medical Office Building Parking Ratio of 4 parking spaces for every 1,000 square feet of gross floor area. In order to verify that this Parking Ratio is adequate to support the proposed Cancer Center, the following sources were referenced:

- Actual observed parking ratios at two existing Memorial Sloan Kettering Cancer Center facilities
- Parking Count Demand Model utilizing anticipated staffing and patient visitations

The following is a summary for each of these sources:

Observed Memorial Sloan Kettering Cancer Center Facilities

DTS Provident conducted Parking Accumulation Surveys at two existing Memorial Sloan Kettering Cancer Center facilities located in Middletown, New Jersey and Montvale, New Jersey. The facilities are outpatient cancer care centers similar to the proposed Cancer Center expansion within the HMOC component of the PMPH Campus.

Based on Site Plans obtained for the two facilities, the Middletown, New Jersey facility consists of a 245,080 square foot cancer care center while the Montvale, New Jersey facility consists of a 150,000 square foot cancer care center. The Site Plans are contained in Attachment B for reference. The square footage used for determining the required parking is noted on each Site Plan.

DTS Provident also researched the Township of Middletown's and Borough of Montvale's Zoning Code to determine their off-street parking requirements. Both municipal codes require 1 parking space per 300 square feet. The definitions for 'Floor Area' are contained in Attachment B.

The Applicant filed Open Public Records Act (OPRA) requests with the municipalities to obtain floor plans for each facility to help determine which space is accounted for on the Site Plans; however, the requests were denied due to security concerns. In order to further verify the similarity in uses between the two surveyed facilities and the proposed Cancer Center, the websites for each existing facility were researched. The following lists the services provided at each existing facility:

Middletown, NJ Facility

- surgical, medical, and radiation oncology consultations
- outpatient surgical and endoscopic procedures
- chemotherapy
- immunotherapy
- radiation treatment
- gastroenterology clinic and procedures
- interventional radiology procedures, including image-guided biopsies and venous access placement
- mammography, ultrasound, MRI, CT, and PET imaging
- clinical trials

- services at our specialty breast center, including services for at-risk patients
- a cancer-specific retail pharmacy
- supportive services, including rehabilitation, genetic counseling, pain management, lymphedema therapy, social work, and nutrition
- a thyroid nodule assessment program to look for thyroid cancer and determine whether treatment is needed

Montvale, NJ Facility

- surgical, medical, and radiation oncology consultations
- chemotherapy
- immunotherapy
- radiation treatment
- mammography, ultrasound, MRI, CT, and PET imaging
- clinical trials
- a cancer-specific retail pharmacy
- supportive services, including rehabilitation, lymphedema therapy, genetic counseling, social work, and nutrition

The Parking Accumulation Surveys were conducted at each facility between the hours of 10:00 AM and 8:30 PM at 30-minute intervals. The results of the Parking Accumulation Surveys indicate that the Middletown, New Jersey facility experienced a peak parking demand of 507 parking spaces while the Montvale, New Jersey facility experienced a peak parking demand of 330 parking spaces. Utilizing the square footage indicated on the above-referenced Site Plans, the peak parking demand of 507 occupied parking spaces counted at the Middletown, NJ facility results in a peak parking demand ratio of 2.07 parking spaces per 1,000 square feet while the peak parking demand of 330 occupied parking spaces counted at the Montvale, NJ facility results in a peak parking demand ratio of 2.20 parking spaces per 1,000 square feet.

Copies of the Parking Accumulation Surveys at the existing Memorial Sloan Kettering Cancer Center facilities are contained in Attachment C.

Parking Count Demand Model

A final source considered by DTS Provident is a Parking Count Generator Model prepared by the PMPH Consultant Team. The Model estimates a peak parking demand for the proposed Cancer Center expansion based on assumptions on various patient programming parameters such as the number of program spaces in the expansion, visit/session duration (time in treatment), and session overlap duration (how early a patient arrives prior to a visit), as well as accounting for staff parking accommodations. The Model conservatively assumes a visit/session duration of between 30 – 160 minutes and a session overlap duration of between 10 – 120 minutes, depending on the program visited. Based on the Model, the proposed Cancer Center expansion would require a total of 430 parking spaces, or 2.78 parking spaces per 1,000 square feet of usable floor area. A copy of the Parking Count Generator Model is contained in Attachment D.

Table No. 3 below summarizes a comparison of the parking ratio contained in the Amended Redevelopment Plan for a Medical Office Building to the various other sources of parking ratios outlined above.

TABLE NO. 3 PARKING DEMAND RATIO COMPARISON - CANCER CENTER FACILITY PENN MEDICINE PRINCETON HEALTH, PLAINSBORO, NEW JERSEY			
Source		Parking Demand Ratio (Spaces/1,000sf GFA)	Parking Demand for a 154,559 sf Facility (Spaces)
Amended Redevelopment Plan		4.00	619
Parking Accumulation Surveys (conducted at existing Memorial Sloan Kettering Cancer Center facilities)	Middletown, NJ Facility	2.07	320
	Montvale, NJ Facility	2.20	341
Parking Count Demand Model		2.78	430

As shown in Table No. 3 above, the parking ratios obtained from actual parking accumulation surveys at existing similar facilities and estimates obtained from a Parking Count Demand Model prepared by the PMPH Team all indicate the 4.0 parking ratio will be more than adequate to support the proposed Cancer Center use. Additionally, the future total parking supply of 2,342 parking spaces will provide a surplus of 348 to 369 parking spaces on the HMOC Campus even when considering the repurposing of the Health/Fitness Center and applying the observed parking ratios. The surplus parking when factoring in the additional P10 Lot parking spaces would be 784 to 805 parking spaces. Based on the foregoing, the proposed parking to be provided in association with the Cancer Center expansion will be more than adequate to accommodate the proposed use, as well as create surplus parking to support existing operations and repurposing of the portion of the Health/Fitness Center not displaced by the Cancer Center. This is even further supported by the extremely conservative parking demand model.

Conclusions

Based on the foregoing, it is the considered professional opinion of DTS Provident that the parking ratio contained in the Amended Redevelopment Plan for Medical Office Building (4 spaces per 1,000 sf) will be more than adequate to accommodate the proposed Cancer Center expansion based on the comparison of parking ratios to other sources. Furthermore, the parking currently provided at the HMOC, combined with the additional parking spaces to be constructed, will meet the future overall parking needs of the HMOC, which includes the repurposing of the portion of the Health/Fitness Center not displaced by the Cancer Center.

cc: Jim Watson, P.E.
Lou Ploskonka, P.E.
Trishka Cecil
Ron Yake
PMPH Team
Tom Letizia

https://divneytungschwalbe.sharepoint.com/sites/DTSP/Shared Documents/General/PDE Q/PROJECTS-DTSP/0905 - Penn Medicine Cancer Center Traffic and Parking Study/Memo/Parking Tech Memo_2023-04-14_REV2.docx

ATTACHMENTS

ATTACHMENT 'A'

**Conceptual Layout Plans/Program – Proposed Cancer Center & Re-purposed Health/Fitness
Center**

PMPH – Cancer Center

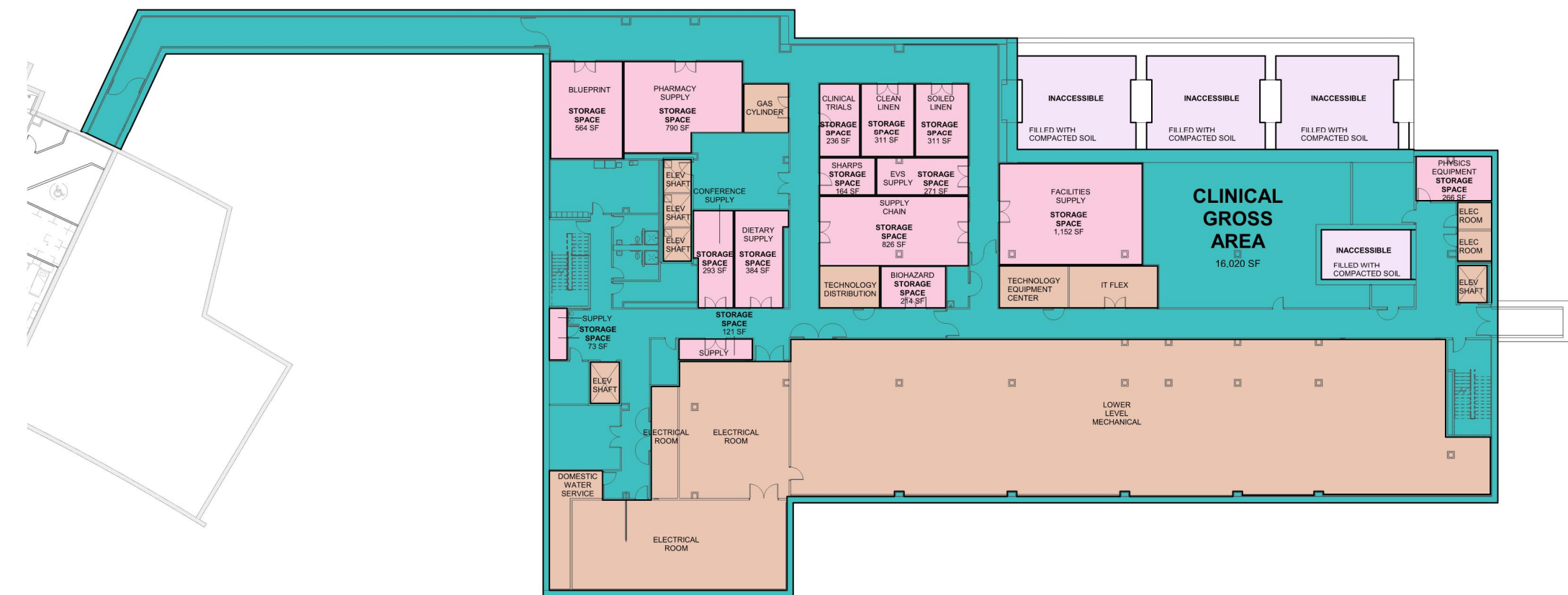
Cancer Center Floor Area Plans

AREA AVAILABLE FOR TREATMENT CARE

FLOOR	SPACE TYPE	AREA (GSF)	AREA (GSF)	
LOWER LEVEL	CLINICAL	16,020 GSF		
	STORAGE		5,976 GSF	
	UNOCCUPIED		13,271 GSF	
FLOOR 1	CLINICAL	43,016 GSF		
	UNOCCUPIED		2,154 GSF	
FLOOR 2	CLINICAL	32,347 GSF		
	UNOCCUPIED		3,308 GSF	
FLOOR 3	CLINICAL	33,586 GSF		
	UNOCCUPIED		2,098 GSF	
FLOOR 4	CLINICAL	26,585 GSF		
	UNOCCUPIED		2,180 GSF	
PENTHOUSE	UNOCCUPIED		23,734 GSF	
TOTAL		151,555 GSF	52,721 GSF	204,276 GSF



LEVEL 1 - TOWNSHIP FLOOR AREA PLAN
SCALE 1/16" = 1'-0"



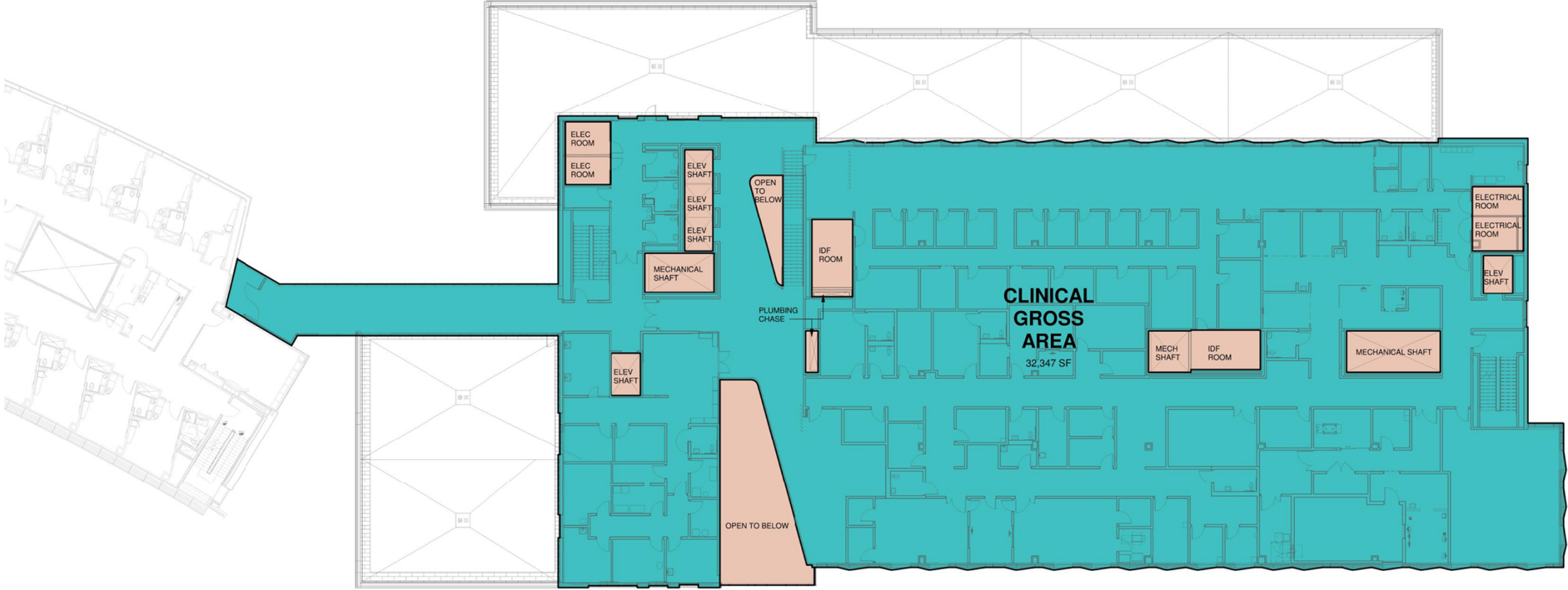
LOWER LEVEL - TOWNSHIP FLOOR AREA PLAN
SCALE 1/16" = 1'-0"

PMPH – Cancer Center

Cancer Center Floor Area Plans



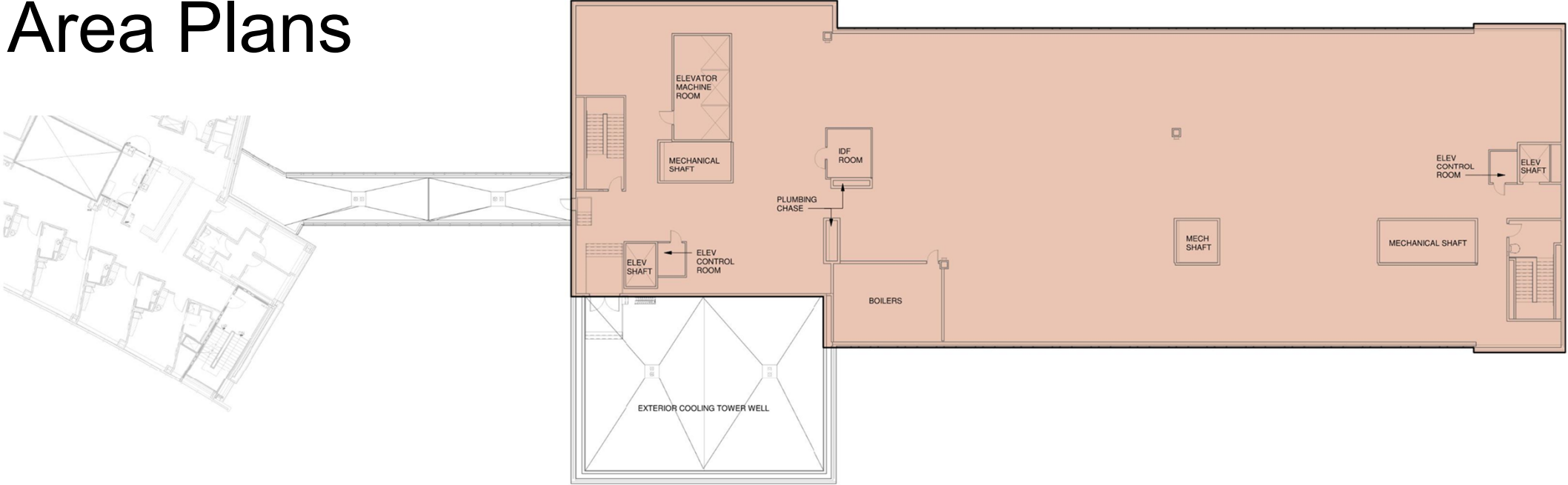
LEVEL 3 - TOWNSHIP FLOOR AREA PLAN
SCALE 1/16" = 1'-0"



LEVEL 2 - TOWNSHIP FLOOR AREA PLAN
SCALE 1/16" = 1'-0"

PMPH – Cancer Center

Cancer Center Floor Area Plans

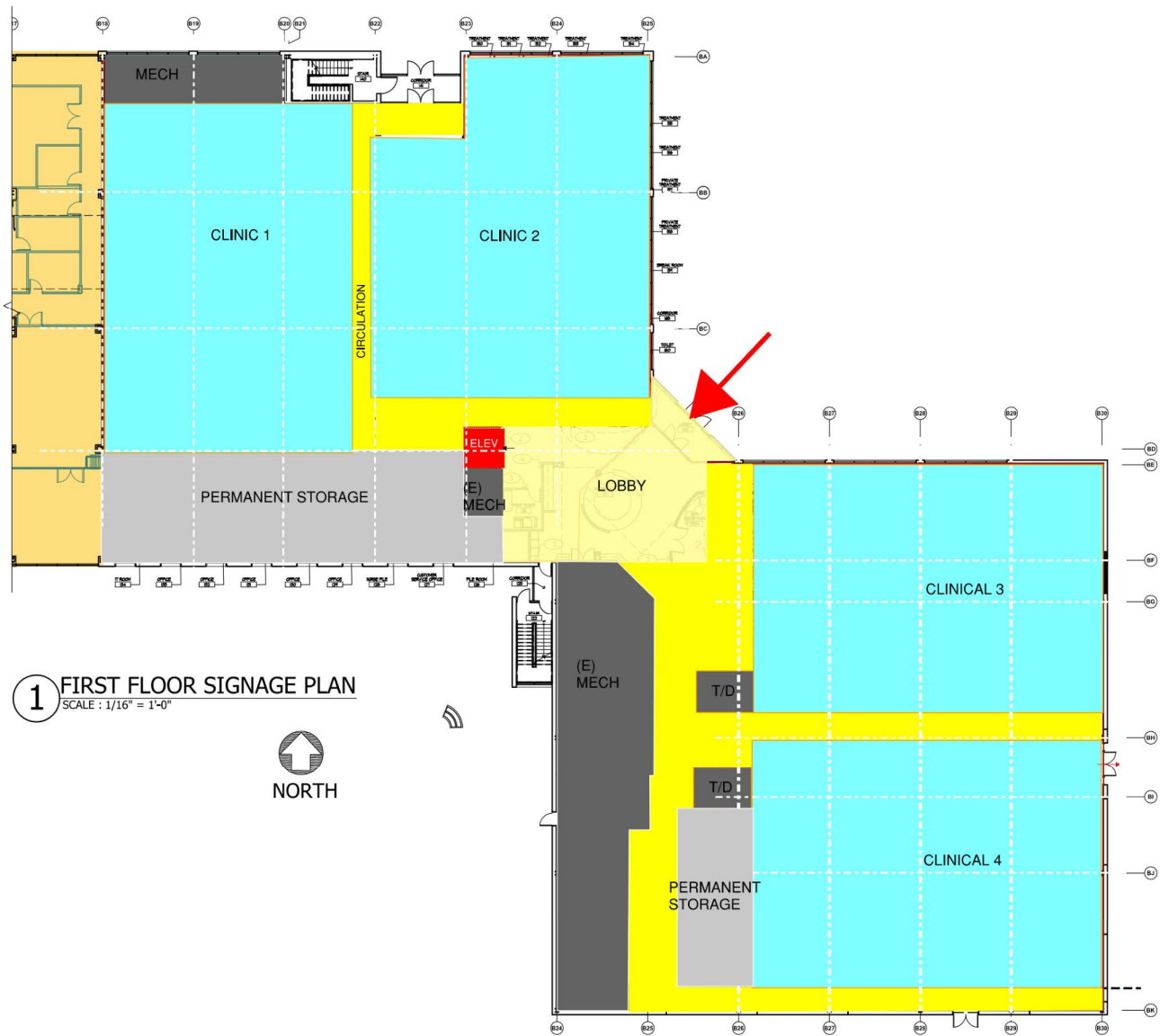
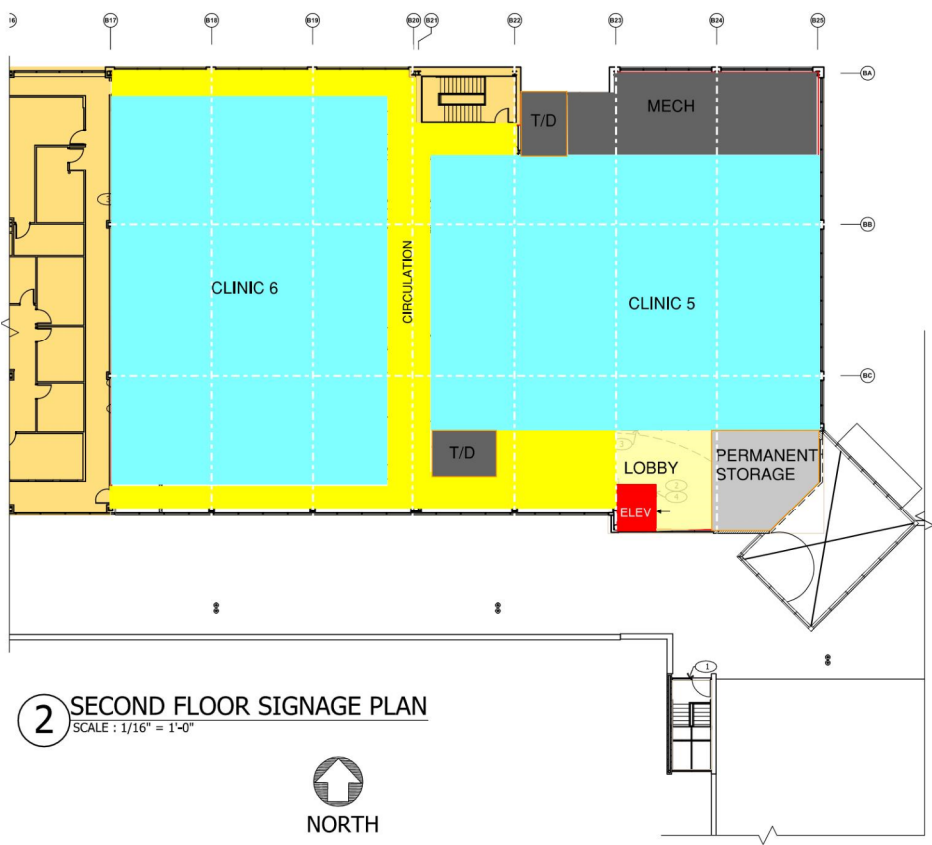


PENTHOUSE - TOWNSHIP FLOOR AREA PLAN
SCALE 1/16" = 1'-0"



LEVEL 4 - TOWNSHIP FLOOR AREA PLAN
SCALE 1/16" = 1'-0"

PMPH – Cancer Center Fitness Center Floorplans



AREA AVAILABLE FOR TREATMENT CARE

FLOOR 1	33,000 SF
CLINICAL SPACE	20,370 SF
MECHANICAL SPACE	3,120 SF
PERMANENT STORAGE	3,300 SF
BUILDING CIRCULATION	6,210 SF
FLOOR 2	15,000 SF
CLINICAL SPACE	10,150 SF
MECHANICAL SPACE	1,205 SF
PERMANENT STORAGE	455 SF
BUILDING CIRCULATION	3,190 SF
TOTAL OF FLOOR 1 & 2	48,000 SF
TOTAL USEABLE AREA	39,920 SF
TOTAL NON-ACTIVITY AREA	8,080 SF

ATTACHMENT 'B

Site Plans & Zoning Code Definitions – Memorial Sloan Kettering Cancer Center Facilities

**MEMORIAL
SLOAN-KETTERING
CANCER CENTER**
480 RED HILL ROAD
MIDDLETOWN, NJ

**SITE/CIVIL, GEOTECHNICAL, & TRAFFIC ENGINEERING,
LANDSCAPE ARCHITECTURE & SURVEYING
LANGAN ENGINEERING AND
ENVIRONMENTAL SERVICES**
619 RIVER DRIVE CENTER
ELMWOOD PARK, NJ 07407-1338
1.201.794.6900
1.201.794.0366
1.201.794.9964

N.J. CERTIFICATE OF AUTHORIZATION NO. 24GA27996400

STRUCTURAL ENGINEERING
STRATFORD ENGINEERING
57 WEST 38TH STREET, 10TH FLOOR
NEW YORK, NY 10018
1 646.723.1280
F 212.401.4722

M.E.P. ENGINEERING
SYSKA HENNESSY GROUP
105 COLLEGE ROAD E.
PRINCETON, NJ 08540
1 609.378.0235
1 609.514.3907

IT / AV / SECURITY
SHEN MILSOM WILKE, LLC
417 FIFTH AVENUE
NEW YORK, NY 10016
t 212.725.6800

ACOUSTICS
CERAMI & ASSOCIATES
404 FIFTH AVENUE
NEW YORK, NY 10018
t 212.370.1776
f 212.370.1736

LIGHTING CONSULTANT
SBILD STUDIO
 132 W. 36TH STREET
 NEW YORK, NY 10018
 1 212.391.4230
 1 212.391.4231

VAN DEUSEN & ASSOCIATES
7 PENN PLAZA, SUITE 404
NEW YORK, NY 10001
t 212.688.9090
f 212.688.9099

CODE CONSULTANT
CODE CONSULTANTS, INC.
215 WEST 40TH STREET, 15TH FLOOR
NEW YORK, NY 10018
t 212.216.9596
f 212.216.9619

FOODSERVICE CONSULTANT
ROMANO GATLAND
58 ALBANY AVENUE, SUITE 201
AMITYVILLE, NY 11701
1516.724.0541
1631.226.7175

C

SUPPLY CHAIN ENGINEERING
ST. ONGE COMPANY
1400 WILLIAMS ROAD
YORK, PENNSYLVANIA 17402
1717.840.8181
1717.840.8182

5	CIVIL AND LANDSCAPE GMP	06.06.2014
4	DCA SCHEMATIC SUBMISSION	04.29.2014
3	SCHEMATIC DOH SUBMISSION	04.16.2014
2	CIVIL AND LANDSCAPE PERMITTING SUBMISSION	01.22.2014
1	FINAL DD SOUTH & NORTH BUILDINGS - CIVIL AND LANDSCAPE	01.17.2014
NO	ISSUE	DATE

Date	01.22.2014
Job Number	032672.000
Drawn	EDH
Checked	KJM
Approved	CMH

Sheet

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CO 1-10

OF 24

[illegible]

*Valet spaces provided for outpatient use are excluded in the required ADA parking calculation. ADA Spaces Required = (395 spaces - 34 valet Spaces) * 0.10 = 36 Spaces

*1 Van Accessible Space is required for every 6 standard accessible Parking Spaces.



BERGEN REGIONAL

FLOOR AREA

BASEMENT:	22,500	BGSF
1ST FLOOR:	62,000	BGSF
2ND FLOOR:	60,500	BGSF
TOTAL EXISTING AREA:	145,000	BGSF

NEW LINEAR ACCELERATOR ADDITION:	5,000	BGSF
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TOTAL PROPOSED

PARKING

EXISTING SPACES:	558 SPACES
REDUCED FOR LINEAR ACCELERATOR:	-10 SPACES
REDUCED FOR RESTRIPING FROM 8'-6" WIDE SPACES TO 9'-0" WIDE SPACES:	-41 SPACES
TOTAL PARKING SPACES:	507 SPACES

PARKING RATIO:
507 SPACES / 150,000 BGSF =
1 SPACE / 296 BGSF

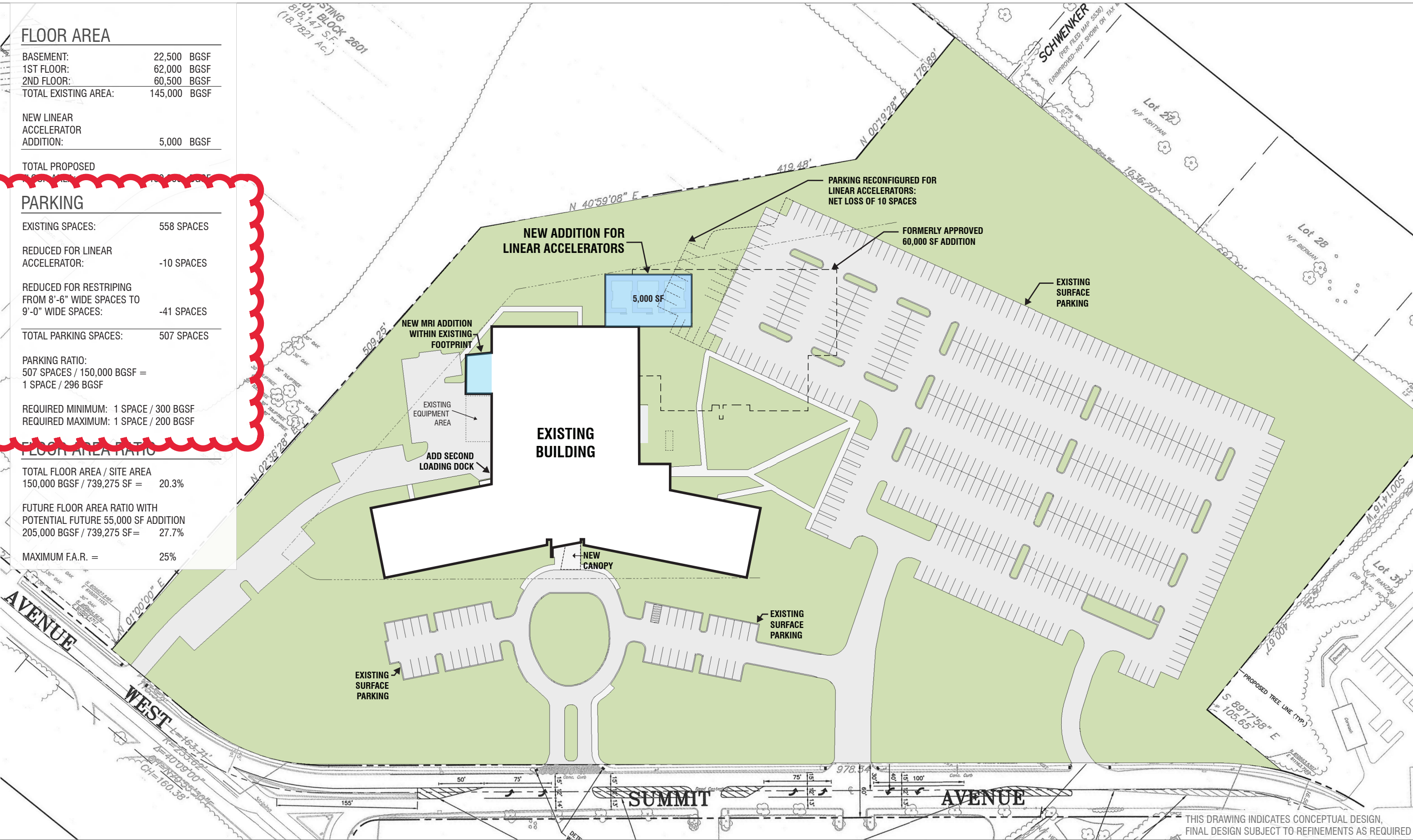
REQUIRED MINIMUM: 1 SPACE / 300 BGSF
REQUIRED MAXIMUM: 1 SPACE / 200 BGSF

FLOOR AREA RATIO

TOTAL FLOOR AREA / SITE AREA
150,000 BGSF / 739,275 SF = 20.3%

FUTURE FLOOR AREA RATIO WITH
POTENTIAL FUTURE 55,000 SF ADDITION
205,000 BGSF / 739,275 SF = 27.7%

MAXIMUM F.A.R. = 25%



MEMORIAL SLOAN KETTERING CANCER CENTER
DESIGN + CONSTRUCTION DEPARTMENT
FACILITIES MANAGEMENT DIVISION
1233 York Avenue SR201 New York NY 10065

APRIL 15, 2015

PROPOSED SITE PLAN WITH FORMERLY APPROVED ADDITION



© EwingCole 2015



§ 540-627 Off-street parking.

- (47) Data center: one space per 600 square feet of gross floor area.
[Amended 10-15-2012 by Ord. No. 2012-3071]
- (48) Health care facility: one space per 300 square feet of gross floor area.
[Amended 10-15-2012 by Ord. No. 2012-3071]

**FLOOR AREA, GROSS**

The sum of the gross horizontal areas of the floor or several floors of a building measured between the outside face of exterior walls. In the case of residential structures, such area shall be finished in accordance with the requirements of the building code. Any cellar, garage, crawl space, unfinished attic or space of any nature, or accessory building shall not be included. Any space with a clear ceiling height of four feet or more, but less than the minimum ceiling height prescribed in the building code for the type of building concerned, shall not be included when in excess of 10% of the floor area which complied with such prescribed ceiling heights. In the case of bi-level multistory buildings, the first floor area shall be considered to be the first level or levels of the structure over the full perimeter of the structure which are above the average finished grade of the adjoining ground, and constructed on other than a concrete slab or other such floor. Any floor area which is located at grade or on such a slab may, however, be included in the calculations of total floor area, provided it complies with the other terms of this definition. In the case of all multistory buildings, the first floor area shall be considered to be the first level or levels of the structure extending over the full perimeter of the structure and which is above the average finished grade of the adjoining ground, whether or not such level is constructed on a concrete slab or other such floor.

Article VIII **Off-Street Parking and Loading**



§ 400-57 Off-street parking in B-1 and B-2 Business Districts.

☐ § 400-58 **Off-street parking in OR-1, OR-2, OR-3 and OR-4 Districts.**

[Amended 11-10-1981 by Ord. No. 81-740; 1-31-2012 by Ord. No. 2012-1350]

- A.** Except for fitness centers and hotels, as pursuant to § **400-59**, and for assisted living residences pursuant to § **400-24E(3)**, all uses in the OR-1, OR-2, OR-3 and OR-4 Office and Research Districts shall provide a minimum of one parking space for each 300 square feet of building floor area and a maximum of one parking space for every 200 square feet of building floor area.
[Amended 2-28-2017 by Ord. No. 2017-1423]



§ 400-8 Definitions and word usage.

FLOOR AREA

For the purpose of this chapter, the aggregate area of all floors, using the outside wall dimensions of all buildings, including the basement and cellar area. To the extent that the basement space within a building is used for mechanical equipment such as heating and ventilating apparatus or dead storage and is not devoted to the principal use of the building or to the extent that the on-grade level or basement or cellar levels of a parking garage are devoted to off-street parking, such floor areas, including aisles, ramps and maneuvering space, shall be excluded.

[Amended 1-31-2012 by Ord. No. 2012-1350]

ATTACHMENT 'C'

Parking Accumulation Surveys – Memorial Sloan Kettering Cancer Center Facilities

PARKING ACCUMULATION SURVEY
MEMORIAL SLOAN KETTERING CANCER CENTER, MIDDLETOWN, NEW JERSEY

INVENTORY - PARKING SPACE SUPPLY								
STRIPED SPACES	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
	459	82	73	33	70	119	91	3
TOTAL - SUPPLY								
								930

WEDNESDAY, NOVEMBER 30, 2022								
OCCUPIED SPACES								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
10:00 AM	202	55	63	22	3	54	45	0
10:30 AM	201	52	69	20	4	61	55	0
11:00 AM	206	55	64	17	4	61	55	1
11:30 AM	206	57	65	12	4	56	53	2
12:00 PM	209	46	65	13	4	55	51	1
12:30 PM	210	50	66	9	4	57	49	2
1:00 PM	205	51	70	10	4	58	49	1
1:30 PM	208	45	66	13	7	54	46	1
2:00 PM	204	51	70	13	4	54	47	0
2:30 PM	197	41	70	16	5	53	49	1
3:00 PM	197	39	70	15	5	56	46	2
3:30 PM	192	34	71	15	3	53	41	1
TOTAL								
								444
								462
								463
								455
								444
								447
								448
								440
								443
								432
								433
								410

WEDNESDAY, NOVEMBER 30, 2022								
PERCENT OCCUPIED								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
10:00 AM	44%	67%	86%	67%	4%	45%	49%	0%
10:30 AM	44%	63%	95%	61%	6%	51%	60%	0%
11:00 AM	45%	67%	88%	52%	6%	51%	60%	33%
11:30 AM	45%	70%	89%	36%	6%	47%	58%	67%
12:00 PM	46%	56%	89%	39%	6%	46%	56%	33%
12:30 PM	46%	61%	90%	27%	6%	48%	54%	67%
1:00 PM	45%	62%	96%	30%	6%	49%	54%	33%
1:30 PM	45%	55%	90%	39%	10%	45%	51%	33%
2:00 PM	44%	62%	96%	39%	6%	45%	52%	0%
2:30 PM	43%	50%	96%	48%	7%	45%	54%	33%
3:00 PM	43%	48%	96%	55%	7%	47%	51%	67%
3:30 PM	42%	41%	97%	45%	4%	45%	45%	33%
TOTAL								
								48%
								50%
								50%
								49%
								48%
								48%
								48%
								47%
								48%
								46%
								47%
								44%

THURSDAY, DECEMBER 01, 2022								
OCCUPIED SPACES								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
10:00 AM	188	51	70	23	4	60	49	0
10:30 AM	196	56	71	30	3	63	49	0
11:00 AM	204	63	71	24	6	63	75	1
11:30 AM	200	61	70	27	6	58	48	1
12:00 PM	192	49	64	19	5	59	48	0
12:30 PM	200	46	65	15	4	50	47	0
1:00 PM	203	48	68	16	4	54	47	1
1:30 PM	200	45	67	17	4	56	43	1
2:00 PM	198	46	72	18	4	58	50	0
2:30 PM	191	37	71	13	4	55	43	0
3:00 PM	189	36	60	16	4	54	55	1
3:30 PM	192	35	51	11	5	44	42	2
TOTAL								
								445
								468
								507
								471
								436
								427
								441
								433
								446
								414
								415
								382

THURSDAY, DECEMBER 01, 2022								
PERCENT OCCUPIED								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
10:00 AM	41%	62%	96%	70%	6%	50%	54%	0%
10:30 AM	43%	68%	97%	91%	4%	53%	54%	0%
11:00 AM	44%	77%	97%	83%	9%	53%	82%	33%
11:30 AM	44%	74%	96%	82%	9%	49%	53%	33%
12:00 PM	42%	60%	88%	58%	7%	50%	53%	0%
12:30 PM	44%	56%	89%	45%	6%	42%	52%	0%
1:00 PM	44%	59%	93%	48%	6%	45%	52%	33%
1:30 PM	44%	55%	92%	52%	6%	47%	47%	33%
2:00 PM	43%	56%	99%	55%	6%	49%	55%	0%
2:30 PM	42%	45%	97%	39%	6%	46%	47%	0%
3:00 PM	41%	44%	82%	48%	6%	45%	60%	33%
3:30 PM	42%	43%	70%	33%	7%	37%	46%	67%
TOTAL								
								48%
								50%
								55%
								51%
								47%
								46%
								47%
								47%
								48%
								45%
								45%
								41%

WEDNESDAY, MARCH 15, 2023								
OCCUPIED SPACES								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
4:00 PM	169	45	42	9	4	45	33	1
4:30 PM	191	34	49	8	4	45	25	1
5:00 PM	176	26	41	6	4	37	22	1
5:30 PM	124	23	35	4	3	30	19	0
6:00 PM	95	16	23	3	3	30	19	0
6:30 PM	65	10	12	3	3	17	18	0
7:00 PM	49	6	9	2	3	11	16	0
7:30 PM	41	4	5	0	3	5	16	0
8:00 PM	40	1	3	0	3	3	15	0
TOTAL								
								348
								357
								313
								238
								189
								128
								96
								74
								65

WEDNESDAY, MARCH 15, 2023								
PERCENT OCCUPIED								
START TIME	LOT A	LOT B	LOT C	LOT D	LOT E	LOT F	LOT G	LOT H
4:00 PM	37%	55%	58%	27%	6%	38%	36%	33%
4:30 PM	42%	41%	67%	24%	6%	38%	27%	33%
5:00 PM	38%	32%	56%	18%	6%	31%	24%	33%
5:30 PM	27%	28%	48%	12%	4%	25%	21%	0%
6:00 PM	21%	20%	32%	9%	4%	25%	21%	0%
6:30 PM	14%	16%	16%	9%	4%	14%	20%	0%
7:00 PM	11%	7%	12%	6%	4%	9%	18%	0%
7:30 PM	9%	5%	7%	0%	4%	4%	18%	0%
8:00 PM	9%	1%	4%	0%	4%	3%	16%	0%
TOTAL								
								37%
								34%
								26%
								20%
								14%
								10%
								8%
								7%

LEGEND

Overall Peak Hour

PARKING ACCUMULATION SURVEY
MEMORIAL SLOAN KETTERING CANCER CENTER, MONTVALE, NEW JERSEY

INVENTORY - PARKING SPACE SUPPLY			
STRIPED SPACES	<u>LOT A (LARGE LOT IN BACK)</u>	<u>LOT B (FRONT OF BUILDING)</u>	<u>LOT C (LOADING DOCK)</u>
	474	48	3
			TOTAL - SUPPLY
			525

WEDNESDAY, JANUARY 11, 2023			
OCCUPIED SPACES			
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>
10:00 AM	294	32	1
10:30 AM	295	33	1
11:00 AM	291	32	0
11:30 AM	286	28	1
12:00 PM	290	31	1
12:30 PM	247	32	0
1:00 PM	265	32	0
1:30 PM	276	30	0
2:00 PM	275	32	1
2:30 PM	260	33	0
3:00 PM	266	33	0
3:30 PM	249	35	0
			TOTAL
			284

WEDNESDAY, JANUARY 11, 2023			
PERCENT OCCUPIED			
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>
10:00 AM	62%	67%	33%
10:30 AM	62%	69%	33%
11:00 AM	61%	67%	0%
11:30 AM	60%	58%	33%
12:00 PM	61%	65%	33%
12:30 PM	52%	67%	0%
1:00 PM	56%	67%	0%
1:30 PM	58%	63%	0%
2:00 PM	58%	67%	33%
2:30 PM	55%	69%	0%
3:00 PM	56%	69%	0%
3:30 PM	53%	73%	0%
			TOTAL
			62%

THURSDAY, JANUARY 12, 2023			
OCCUPIED SPACES			
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>
10:00 AM	252	39	0
10:30 AM	275	34	0
11:00 AM	280	39	0
11:30 AM	287	42	1
12:00 PM	278	35	0
12:30 PM	267	32	0
1:00 PM	263	34	0
1:30 PM	272	36	0
2:00 PM	269	37	1
2:30 PM	260	36	0
3:00 PM	251	31	0
3:30 PM	229	35	0
			TOTAL
			291

THURSDAY, JANUARY 12, 2023			
PERCENT OCCUPIED			
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>
10:00 AM	53%	81%	0%
10:30 AM	58%	71%	0%
11:00 AM	59%	81%	0%
11:30 AM	61%	88%	33%
12:00 PM	59%	73%	0%
12:30 PM	56%	67%	0%
1:00 PM	55%	71%	0%
1:30 PM	57%	75%	0%
2:00 PM	57%	77%	33%
2:30 PM	55%	75%	0%
3:00 PM	53%	65%	0%
3:30 PM	48%	73%	0%
			TOTAL
			55%

WEDNESDAY, MARCH 15, 2023			
OCCUPIED SPACES			
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>
4:00 PM	234	32	0
4:30 PM	217	31	0
5:00 PM	188	30	0
5:30 PM	149	22	0
6:00 PM	124	20	0
6:30 PM	97	15	0
7:00 PM	83	14	0
7:30 PM	66	11	0
			TOTAL
			266

WEDNESDAY, MARCH 15, 2023			
PERCENT OCCUPIED			
START TIME	<u>LOT A</u>	<u>LOT B</u>	<u>LOT C</u>
4:00 PM	49%	67%	0%
4:30 PM	46%	65%	0%
5:00 PM	40%	63%	0%
5:30 PM	31%	46%	0%
6:00 PM	26%	42%	0%
6:30 PM	20%	31%	0%
7:00 PM	18%	29%	0%
7:30 PM	14%	23%	0%
			TOTAL
			51%

LEGEND
 Overall Peak Hour

ATTACHMENT 'D'

Parking Count Generator Model

PMPH Simple Parking Count Generator

Floor	Type	Program Spaces in Building	Vehicles / Session	Session Overlap (min)	Visit Length (min)	Vehicles at Session Transition
4	Infusion	30	30	20	160	60
3	Clinic Exam	36	36	20	60	72
1	Rad Onc Vaults (3 vaults, HDR, CT Sim)	5	5	10	30	10
1	Rad Onc Exam	9	9	20	30	18
1	Conference Center	2	10	20	30	20
2	Integrative Therapy/Lymphodema	6	6	20	30	12
2	IR Shell	1	1	120	60	3
2	Pet/CT	1	1	120	60	3
2	CT	1	1	60	60	2
2	Ultrasound	2	2	30	30	4
2	Chest Xray	1	1	30	30	2
2	MRI	1	1	30	30	2
2	Multipurpose Procedure	1	1	60	30	3

Patient Load	211
Programed Staff	210
Staff accommodated Off Site	0
Net Parking Required	421