Baystate MRI and Imaging Center, LLC - Significant Amendment
January 2026

Narrative

10.5.d   Provide a detailed narrative, comparing the approved project to the proposed Significant Change, and the rationale for such change.

<u>Background:</u>

Baystate MRI and Imaging Center, LLC, ("BMIC") ("Applicant"), seeks Determination of Need ("DON") Amendment approval for the addition of two (2) days of mobile positron emission tomography ("PET/CT") services at 80 Wason Avenue, Springfield, MA 01107, for a total of five (5) days of such services per week. The Applicant is a joint venture between Baystate Health and Shields Health that operates a Department of Public Health licensed clinic for the provision of PET/CT services.

Baystate Health is an independent, not-for-profit, regional health system, based in Springfield, Massachusetts, offering high-value, high-quality primary, secondary and tertiary care as well as specialty care, home health, community care, emergency, urgent care and preventive and wellness services. Baystate Health is committed to providing all patients with equitable access to quality care regardless of race, ethnicity, preferred language, disability, gender identity or sexual orientation.

Shields Health was founded in 1972 in Brockton, Massachusetts. Dedication to high quality and advanced care in a local setting quickly became a signature attribute of the Shields business model. Shields Health introduced Massachusetts' first independent regional MRI center in 1986 and, today, it manages numerous MRI and PET/CT facilities throughout New England, many of which are joint venture partnerships with community hospitals. While most Shields Health locations operate as licensed clinics, many of those clinics are either on a partner hospital's campus or proximate to the hospital's facilities, thereby enabling coordinated, seamless, and highly accessible care. A dedicated focus on operational and management services expertise in outpatient settings allows Shields to provide cost savings to patients, employers, insurance providers, and joint venture partners.

BMIC is both a part of, and a product of, Shields Imaging of Massachusetts, LLC, a consortium that received DON approval in 2002 for Project #4-4886, to acquire a PET/CT unit to provide services at three host sites. The consortium was comprised of Shields Imaging of Springfield, LLC, Shields Imaging of Eastern Massachusetts, LLC, and Shields Imaging of Worcester, LLC, and the host sites offering the mobile PET/CT services included Baystate Medical Center, South Shore Hospital, and UMass Memorial Medical Center. Pursuant to a DoN amendment approved on August 9, 2006, each of the host sites was licensed as a separate clinic, one for each member of the original consortium. The three licensed clinics that now hold the approvals to provide PET/CT pursuant to Project #4-4886 are Baystate MRI and Imaging Center, LLC ("BMIC"), Shields Imaging of Eastern Massachusetts, LLC (SIEM), and UMass Memorial MRI and Imaging Center (UMMIC).

The Applicant currently operates a mobile PET/CT service three (3) days per week at Baystate MRI and Imaging Center on Sunday from 7:00 AM to 4:00 PM, Monday from 7:00 AM to 8:30 PM, and Thursday from 7:00 AM to 8:30 PM. However, demand for the Applicant's PET/CT services has increased,

resulting in the need for additional PET/CT capacity at this location.

Proposed Project:

The Applicant seeks approval for two additional (i.e., a total of 5) PET/CT service days per week, to meet the need for increased access to PET/CT services for the Applicant's patient panel. As described below, demand has significantly increased for the Applicant's PET/CT scans over the past five years. The Applicant's data demonstrates an increased need for access to PET/CT at the clinic, a need that is underscored by the fact that the Applicant's location is currently experiencing an average wait time of 17.1 days from referral to the date of a scan.

Two additional days of service at the Applicant's location will reduce wait times for the Applicant's patients, thereby reducing delays in care and improving both quality of care and patient (and provider) satisfaction. As PET/CT is increasingly and effectively utilized to detect and monitor high acuity and progressive diseases such as cancer, heart disease, and neurological abnormalities, timely imaging is an essential element of patient treatment plans. For example, PET/CT scans are now frequently utilized by the Applicant to facilitate the diagnosis or existence of solid tumors, prostate cancer, neuroendocrine cancer, cardiac sarcoidosis, Alzheimer's disease, and amyloid plaque. Moreover, cancer screening standards for lung, prostate, breast and colorectal cancer now contemplate follow up PET/CT exams post screening to determine malignancy; and patients with diagnosed malignancies are then monitored throughout their treatment using the same PET/CT technology that established the malignancy. PET/CT serves this role in a noninvasive manner and in an outpatient (generally lower cost) setting.

The Applicant anticipates still further increases in demand for PET/CT services as the population of its patient panel ages, since age is a significant risk factor for cancer, cardiovascular disease and Alzheimer's disease. Based on 2025 data, 70% percent of the Applicant's patients are age 65 or older and 94% percent are age 50 or older. The over 65 population in the Applicant's PSA has been growing consistently, increasing 14% over the past 5 years, and 29% over the past 10 years, with 5, 10 and 15 year growth forecasted at 11%, 16% and 13% respectively.[1]

The nature of the conditions experienced by patients who present to the Applicant, and the age of those patients and the Applicant's patient panel, make it especially important that the Applicant be able to offer its patients timely and convenient access to PET/CT services. The additional two days of service the Applicant is seeking will allow it to meet the need for patients requiring PET/CT services and will obviate the need for those patients to otherwise have to travel to another, less convenient facility or be subject to extended wait times with the Applicant. The Applicant projects the two additional days of service it is seeking will result in approximately 3,002 scans in year 1 post-DON; 3,453 scans in year 2; 3,971 scans in year 3, 4,566 scans in year 4, and 5,250 in year 5. By increasing capacity two additional days per week, the Applicant will be able to accommodate the needs of its patient panel, for whom PET/CT is an integral modality as part of their diagnosis and treatment planning, particularly for cancers.

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[1] Mass Donahue Institute V2024 Population Projections, May 2024, accessed excel data file online 10/27/25

<u>Patient Panel Demographics:</u>

A. <u>Patient Age:</u>

Seventy percent of the Applicant's patients are age 65 or older and twenty-four percent are age 50-64, with only six percent younger than 50.

Age range	2022	2023	2024	2025 *(9 months annualized)*
65+	1,044	1,256	1,546	1,597
50-64	317	356	456	547
18-49	96	131	117	144
TOTAL	**1,457**	**1,743**	**2,119**	**2,288**

B. <u>Patient Gender:</u>

Fifty-nine percent of the Applicant's patients are male, and forty-one percent are female. The Applicant does not collect patient sexual orientation data.

Gender	2022	2023	2024	2025 *(9 months annualized)*
Male	782	1,018	1,207	1,339
Female	675	728	912	949
Total	**1,457**	**1,743**	**2,119**	**2,288**

C. <u>Patient Race:</u>

The Applicant collects patient race data, however only 24% of the patients provided their race.

Race	2022	2023	2024	2025 *(9 months annualized)*
Not collected/ declined to specify	1,270	1,326	1,573	1,737
White	166	370	502	489
Other races - grouped to meet HIPAA compliance	21	30	23	25
African American	0	17	21	36
Total	**1,457**	**1,743**	**2,119**	**2,288**

D. Patient Ethnicity:

The Applicant collects patient ethnicity data, however only 24% of the patients provided their ethnic backgrounds.

Ethnicity	2022	2023	2024	2025 *(9 months annualized)*
Not collected/ declined to specify	1,266	1,249	1,581	1,741
Not Hispanic	173	447	483	491
Hispanic	18	47	55	56
Total	**1,457**	**1,743**	**2,119**	**2,288**

E. Patient Origin:

In 2025, the Applicant's patients resided in 7 different states with 97% of the patients residing in Massachusetts. Seventy-six percent of the Applicant's 2025 patients live in 18 towns in Massachusetts as detailed in the table below. These 18 towns comprise the Applicant's primary service area (PSA).

Town	2022	2023	2024	2025 *(9 months annualized)*
Springfield	255	325	387	424
Chicopee	124	147	173	200
Westfield	100	114	148	161
Holyoke	50	82	98	105
Ludlow	57	68	84	99
West Springfield	67	83	88	87
Longmeadow	37	37	49	71
East Longmeadow	38	53	59	69
Wilbraham	34	58	54	68
South Hadley	43	44	53	65
Feeding Hills	30	41	44	61
Agawam	49	51	64	61
Belchertown	38	41	55	56
Greenfield	35	42	45	51
Ware	30	31	42	44
Palmer	29	40	45	40
Southwick	29	19	41	39
Monson	28	31	35	39
Patients - PSA Towns	**1,073**	**1,307**	**1,564**	**1,740**
Other Patients	**384**	**436**	**555**	**548**
Total Patients	**1,457**	**1,743**	**2,119**	**2,288**

D. Payer Mix:

The Applicant's patients are predominantly covered by Medicare plans (sixty-five percent in 2025) which is consistent with the patient age demographic.

Payer Mix	2022	2023	2024	2025 *(9 months annualized)*
Medicare (Medicare Fee for Service and Commercial plans)	880	1,078	1,375	1,476
Commercial	305	373	439	460
MassHealth and Managed Medicaid	204	198	207	243
Other	68	94	98	109
TOTAL	**1,457**	**1,743**	**2,119**	**2,288**

Historical Scan Volume:

The Applicant defines its fiscal year as January to December, therefore Fiscal Year and Calendar Year cover the same months. The Applicant has experienced the following scan volume over the past 5 years, an increase of 52% over 5 years:

Scan Volume	2022	2023	2024	2025 *(9 months annualized)*
FDG PET/CT	1,576	1,715	1,891	1,864
PSMA PET/CT	108	251	396	481
Amyloid PET/CT	0	0	108	132
Cardiac PET/CT	35	29	33	32
PET/CT Scans	**1,719**	**1,995**	**2,428**	**2,509**

Forecasted Scan Volume:

The Applicant projects PET/CT scan volumes for the first five years of project implementation to be as follows:

Forecasted Volume	2026	2027	2028	2029	2030
FDG PET/CT	2,230	2,565	2,949	3,392	3,900
PSMA PET/CT	576	662	762	876	1,007
Amyloid PET/CT	158	182	209	240	276
Cardiac PET/CT	38	44	51	58	67
PET/CT Scans	**3,002**	**3,453**	**3,971**	**4,566**	**5,250**

The Applicant used proprietary forecasting tools available through its Healthcare Advisory Board membership to forecast PET/CT growth per year for the next 5 years in the Applicant's market. The

Advisory Board forecasting tool incorporates assumptions for PET/CT market trends related to population changes including aging, shifts in site of care from HOPDs to free standing facilities, changes in treatment, screening guidelines and coverage for diagnoses that have PET/CT use indications for staging of diseases. The Applicant has also incorporated assumptions related to growth in Baystate Health's local cardiac, neuroendocrine cancer, prostate cancer and memory care programs.

Aging population and wider use and adoption of PET/CT driving increasing need:

The recent and anticipated growth in the aging population in the Applicant's service area, as well as new and emerging uses for PET/CT scan technology are significant factors in the anticipated growth in PET/CT scan volume in the Applicant's service area. Seventy percent of the Applicant's patients are age 65 or older and twenty-four percent are age 50-64, with only six percent younger than 50. While the overall population in the 18 cities and towns that comprise the Applicant's primary service area is forecasted to be decrease over the next 5-20 years, there is significant population growth forecasted in the population aged 65 and older over the next 5-20 years as detailed in the tables below.[2]

As stated above, age is an important risk factor for cancers and is, consequently, a primary predicter of increased use of PET/CT scanning. This is confirmed by a National Cancer Institute report, coupled with studies relating to PET/CT and its uses for cancer detection, treatment, and monitoring. The National Cancer Institute states that advancing age is the most important risk factor for cancer overall and for many individual cancer types, and that the incidence rates for cancer overall climb steadily as age increases, from fewer than 26 cases per 100,000 people in age groups under age 20, to about 350 per 100,000 people among those aged 45–49, to more than 1,000 per 100,000 people in age groups 60 years and older.[3]

PET/CT is one of the most common and rapidly expanding medical imaging techniques used in oncology, and PET/CT has proved cost-effective and its clinical use will continue to grow with the increased use of new tracers.[4] Additionally, PET/CT is performed routinely to investigate a number of common cancers such as lung cancer, Lymphoma, head and neck cancer, breast cancer, gastrointestinal tract malignancies, esophageal cancer, melanoma, and colorectal, pancreatic, gynecological, urinary tract, prostate, and testicular cancer.[5]

Studies also show that PET/CT has become a valuable tool in cardiac applications. Specifically, FDG PET-CT imaging has become a standard for myocardial viability assessment.[6] And studies also show that aging and elderly populations are particularly susceptible to cardiovascular disease with age being an independent risk factor for cardiovascular disease.[7]

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[2] UMass Donahue Institute V2024 Population Projections, May 2024, accessed excel data file online 10/27/25 https://donahue.umass.edu/business-groups/economic-public-policy-research/massachusetts-population-estimates-program/population-projections

[3] National Cancer Institute website, Age and Cancer Risk, accessed online 01/07/2026 https://www.cancer.gov/about-cancer/causes-prevention/risk/age

[4] National Library of Medicine website, PET/CT in oncology accessed online 01/07/2026 https://pmc.ncbi.nlm.nih.gov/articles/PMC4952129/

[5] National Library of Medicine website, PET/CT in oncology accessed online 01/07/2026 https://pmc.ncbi.nlm.nih.gov/articles/PMC4952129/

[6] National Library of Medicine website, Growing applications of FDG PET-CT imaging in non-oncologic conditions, accessed online 01/07/2026 https://pmc.ncbi.nlm.nih.gov/articles/PMC4449487/

[7] National Library of Medicine website, Cardiovascular Risks Associated with Gender and Aging, accessed online 01/07/2026 https://pmc.ncbi.nlm.nih.gov/articles/PMC6616540/

Applicant Primary Service Area towns	2025 Forecast	2030 Forecast	2035 Forecast	2040 Forecast	2045 Forecast
Population count (all ages)	504,892	502,034	494,600	483,559	469,601
Population count (ages >=65)	105,890	117,896	122,748	120,024	114,053

Applicant Primary Service Area towns		5 year change	10 year change	15 year change	20 year change
Population (all ages)		-0.6%	-2.0%	-4.2%	-7.0%
Population (ages >=65)		+11.3%	+15.9%	+13.3%	+7.7%

<u>Increasing wait times due to growing need:</u>

The Applicant has been experiencing increasing wait times (date of referral to date of scan) for PET/CT scans given the limitations of its current 3 day schedule. The Applicant's average wait times for PET/CT scans have increased 24% from 2022 (13.8 days) to 2025 (17.1 days). Timely access to diagnosis and treatment is very important to patients and referring providers, and even more so for cancer related cases.

With the expansion to a 5 day schedule, the Applicant expects that it will be able to reduce wait times to an average of 7 to 10 days, prioritizing the new diagnoses for closer to 7 days.