



# CERTIFICATE OF NEED APPLICATION

## BLACK RIVER SKILLED NURSING

On Behalf Of

PB REAL ESTATE HOLDINGS, LLC & BLACK RIVER SKILLED  
NURSING, LLC



Project No. 6205 NS

85-bed Skilled Nursing Facility

Submitted to:

Missouri Health Facilities Review Committee

May 2, 2025

Submitted by:

Richard Hill

Attorney At Law

Lashly & Baer, P.C.

714 Locust Street

St. Louis, MO 63101

Project Name: Black River Skilled NursingProject No: 6205 NSProject Description: 85 Bed SNF

Done	Page	N/A	Description
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**Divider I. Application Summary:**

- |        |  |
|--------|--|
| ✓ 3    | 1. Applicant Identification and Certification (Form MO 580-1861)   |
| ✓ 4    | 2. Representative Registration (Form MO 580-1869)  |
| ✓ 5-7  | 3. Proposed Project budget (Form MO 580-1863) and detail sheet with documentation of costs.  |
| ✓ 8-13 | 4. Provide documentation from MO Secretary of State that the proposed owner(s) and operator(s) are registered to do business in MO.  |
| ✓ 2    | 5. State if the license of the proposed operator or any affiliate of the proposed operator has been revoked within the previous five (5) years.  |
| ✓      | 6. If the license of the proposed operator or any affiliate of the proposed operator has been revoked within the previous 5 years, provide the name and address of the facility whose license was revoked.   |
| ✓ 2    | 7. State if the Medicare and/or Medicaid certification of any facility owned or operated by the proposed operator or any affiliate of the proposed operator has been revoked within the previous 5 years.  |
| ✓      | 8. If the Medicare and/or Medicaid certification of any facility owned or operated by the proposed operator or any affiliate of the proposed operator has been revoked within the previous 5 years, provide the name and address of the facility whose Medicare and/or Medicaid certification was revoked. |

**Divider II. Proposal Description:**

- |         |   |
|---------|---|
| ✓ 15    | 1. Provide a complete detailed project description.   |
| ✓ 15    | 2. Provide a timeline of events for the project, from CON issuance through project completion.  |
| ✓ 18    | 3. Provide a legible city or county map showing the exact location of the proposed facility.  |
| ✓ 18-21 | 4. Provide a site plan for the proposed project.  |
| ✓ 22    | 5. Provide preliminary schematic drawings for the proposed project.   |
| ✓ 23-24 | 6. Provide evidence that architectural plans have been submitted to the Department of Health and Senior Services.   |
| ✓ 15    | 7. Provide the proposed square footage.   |
| ✓ 25-37 | 8. Document ownership of the project site, or provide an option to purchase.  |
| ✓ 16    | 9. Define the community to be served.   |
| ✓ 16    | 10. Provide projected year population for the 15-mile radius service area.  |
| ✓ 16    | 11. Identify specific community problems or unmet needs the proposal would address.   |
| ✓ 16    | 12. Provide historical utilization for each of the past three (3) <b>FULL</b> years and utilization projections through the first three (3) <b>FULL</b> years of operation of the new LTC beds. |
| ✓ 16    | 13. Provide the methods and assumptions used to project utilization.  |
| ✓ 16-17 | 14. Document that consumer needs and preferences have been included in planning this project and describe how consumers had an opportunity to provide input.                                    |
| ✓ 39-63 | 15. Provide copies of any petitions, letters of support or opposition received.   |
| ✓ 38    | 16. Document that providers of similar health services in the proposed 15-mile radius have been notified of the application by a public notice in the local newspaper.                          |
| ✓ 64-66 | 17. Document that providers of all affected facilities in the proposed 15-mile radius were addressed letters regarding the application.   |

**Divider III. Service Specific Criteria and Standards:**

- |          |  |
|----------|--|
| ✓ 68-77  | 1. For ICF/SNF beds, address the population-based bed need methodology of fifty-three (53) beds per one thousand (1,000) population age sixty-five (65) and older.   |
| ✓        | 2. For RCF/ALF beds, address the population-based bed need methodology of twenty-five (25) beds per one thousand (1,000) population age sixty-five (65) and older.   |
| ✓        | 3. For LTCH beds, address the population-based bed need methodology of one-tenth (0.1) bed per one thousand (1,000) population.  |
| ✓ 68-101 | 4. Document any alternate need methodology used to determine the need for additional beds such as Alzheimer's, mental health or other specialty beds.  |
| ✓        | 5. For any proposed facility which is designed and operated exclusively for persons with acquired human immunodeficiency syndrome (AIDS) provide information to justify the need for the type of beds being proposed.                  |
| ✓        | 6. If the project is to add beds to an existing facility, has the facility received a Notice of Noncompliance within the last 18 months as a result of a survey, inspection or complaint investigation? If the answer is yes, explain. |

**Divider IV. Financial Feasibility Review Criteria and Standards:**

- |           |   |
|-----------|---|
| ✓ 103     | 1. Document that the proposed costs per square foot are reasonable when compared to the latest "RS Means Construction Cost data"  |
| ✓ 105-106 | 2. Document that sufficient financing is available by providing a letter from a financial institution or an auditor's statement indicating that sufficient funds are available.   |
| ✓ 107     | 3. Provide Service-Specific Revenues and Expenses (Form MO 580-1865) for the latest three (3) years, and projected through three (3) <b>FULL</b> years beyond project completion.   |
| ✓ 103     | 4. Document how patient charges are derived.  |
| ✓ 103     | 5. Document responsiveness to the needs of the medically indigent.  |
| ✓ 103     | 6. For a proposed new skilled nursing or intermediate care facility, what percentage of your admissions would be Medicaid eligible on the first day of admission or become Medicaid eligible within 90 days of admission? |
| ✓         | 7. For an existing skilled nursing or intermediate care facility, what percentage of your admissions are Medicaid eligible on the first day of admission or becomes Medicaid eligible within 90 days of admission.        |



## **DIVIDER I**

### **APPLICATION SUMMARY**

## **DIVIDER I. APPLICATION SUMMARY**

**1. Applicant Identification and Certification (Form MO 580-1861)**

See attached.

**2. Representative Registration (Form 580-1869)**

See attached.

**3. Proposed Project Budget (Form MO 580-1863) and detail sheet with documentation of costs.**

See attached.

**4. Provide documentation from MO Secretary of State that the proposed owner(s) and operator(s) are registered to do business in MO.**

See attached.

**5 State if the license of the proposed operator or any affiliate of the proposed operator has been revoked within the previous five (5) years.**

Neither the operator nor any affiliate of the operator has had their license revoked within the previous five (5) years.

**6. If the license of the proposed operator or any affiliate of the proposed operator has been revoked within the previous 5 years, provide the name and address of the facility whose license was revoked.**

Not applicable.

**7. State if the Medicare and/or Medicaid certification of any facility owned or operated by the proposed operator or any affiliate of the proposed operator has been revoked within the previous 5 years.**

No facility owned or operated by the operator or any affiliate of the operator has had its Medicare and/or Medicaid certification revoked within the previous 5 years.

**8. If the Medicare and/or Medicaid certification of any facility owned or operated by the proposed operator or any affiliate of the proposed operator has been revoked within the previous 5 years, provide the name and address of the facility whose Medicare and/or Medicaid certification was revoked.**

Not applicable.



## Certificate of Need Program

# APPLICANT IDENTIFICATION AND CERTIFICATION

The information provided must match the **Letter of Intent** for this project, without exception.

### 1. Project Location (Attach additional pages as necessary to identify multiple project sites.)

Title of Proposed Project <b>Black River Skilled Nursing</b>	Project Number <b>6205 NS</b>
Project Address <small>(Street/City/State/Zip Code)</small> <b>2670 Shelby Road, Poplar Bluff, MO 63901</b>	County <b>Butler</b>

### 2. Applicant Identification (Information must agree with previously submitted Letter of Intent.)

List All Owner(s): <small>(List corporate entity.)</small>	Address <small>(Street/City/State/Zip Code)</small>	Telephone Number
PB Real Estate Holdings, LLC	300 N. Walnut Suite A, Dexter, MO 63841	573-614-7472

List All Operator(s): <small>(List entity to be licensed or certified.)</small>	Address <small>(Street/City/State/Zip Code)</small>	Telephone Number
Black River Skilled Nursing, LLC	300 N. Walnut Suite A, Dexter, MO 63841	573-614-7472

### 3. Ownership (Check applicable category.)

- |  |                                      |                                 |  |
|--|--------------------------------------|---------------------------------|--|
| <input type="checkbox"/> Nonprofit Corporation | <input type="checkbox"/> Individual  | <input type="checkbox"/> City   | <input type="checkbox"/> District                    |
| <input type="checkbox"/> Partnership           | <input type="checkbox"/> Corporation | <input type="checkbox"/> County | <input checked="" type="checkbox"/> Other <u>LLC</u> |


### 4. Certification

In submitting this project application, the applicant understands that:

- (A) The review will be made as to the community need for the proposed beds or equipment in this application;
- (B) In determining community need, the Missouri Health Facilities Review Committee (Committee) will consider all similar beds or equipment within the service area;
- (C) The issuance of a Certificate of Need (CON) by the Committee depends on conformance with its Rules and CON statute;
- (D) A CON shall be subject to forfeiture for failure to incur an expenditure on any approved project six (6) months after the date of issuance, unless obligated or extended by the Committee for an additional six (6) months;
- (E) Notification will be provided to the CON Program staff if and when the project is abandoned; and
- (F) A CON, if issued, may not be transferred, relocated, or modified except with the consent of the Committee.

We certify the information and data in this application as accurate to the best of our knowledge and belief by our representative's signature below:


### 5. Authorized Contact Person (Attach a Contact Person Correction Form if different from the Letter of Intent.)

Name of Contact Person <b>Richard Hill</b>	Title <b>Attorney</b>
Telephone Number <b>314-621-2939</b>	Fax Number <b>314-621-6844</b>
E-mail Address <b>rhill@lashlybaer.com</b>	
Signature of Contact Person 	Date of Signature <b>5/2/25</b>



## Certificate of Need Program

**REPRESENTATIVE REGISTRATION**

(A registration form must be completed for <b>each</b> project presented.)	
Project Name <b>Black River Skilled Nursing</b>	Number <b>6205 NS</b>
(Please type or print legibly.)	
Name of Representative <b>Richard Hill</b>	Title <b>Attorney</b>
Firm/Corporation/Association of Representative (may be different from below, e.g., law firm, consultant, other) <b>Lashly &amp; Baer, P.C.</b>	Telephone Number <b>314-621-2939</b>
Address (Street/City/State/Zip Code) <b>714 Locust Street, St. Louis, MO 63101</b>	
Who's interests are being represented? (If more than one, submit a separate Representative Registration Form for each.)	
Name of Individual/Agency/Corporation/Organization being Represented <b>PB Real Estate holdings, LLC; Black River Skilled Nursing, LLC</b>	Telephone Number <b>573-614-7472</b>
Address (Street/City/State/Zip Code) <b>300 N. Walnut Suite A, Dexter, MO 63841</b>	
Check one. Do you: <input checked="" type="checkbox"/> Support <input type="checkbox"/> Oppose <input type="checkbox"/> Neutral	Relationship to Project: <input type="checkbox"/> None <input type="checkbox"/> Employee <input checked="" type="checkbox"/> Legal Counsel <input type="checkbox"/> Consultant <input type="checkbox"/> Lobbyist <input type="checkbox"/> Other (explain):
Other Information:  _____ _____	  _____ _____
I attest that to the best of my belief and knowledge the testimony and information presented by me is truthful, represents factual information, and is in compliance with §197.326.1 RSMo which says: <i>Any person who is paid either as part of his normal employment or as a lobbyist to support or oppose any project before the health facilities review committee shall register as a lobbyist pursuant to chapter 105 RSMo, and shall also register with the staff of the health facilities review committee for every project in which such person has an interest and indicate whether such person supports or opposes the named project. The registration shall also include the names and addresses of any person, firm, corporation or association that the person registering represents in relation to the named project. Any person violating the provisions of this subsection shall be subject to the penalties specified in § 105.478, RSMo.</i>	
Original Signature 	Date <b>5/2/25</b>

MO 580-1869 (11/01)





## Certificate of Need Program

**PROPOSED PROJECT BUDGET****Description****Dollars****COSTS:\****(Fill in every line, even if the amount is "\$0".)*

1. New Construction Costs ***	\$9,099,465
2. Renovation Costs ***	\$0
<b>3. Subtotal Construction Costs</b> (#1 plus #2)	<b>\$9,099,465</b>
4. Architectural/Engineering Fees	\$175,000
5. Other Equipment (not in construction contract)	\$0
6. Major Medical Equipment	\$0
7. Land Acquisition Costs ***	\$650,000
8. Consultants' Fees/Legal Fees ***	\$350,000
9. Interest During Construction (net of interest earned) ***	\$425,000
10. Other Costs ***	\$300,535
<b>11. Subtotal Non-Construction Costs</b> (sum of #4 through #10)	<b>\$1,900,535</b>
<b>12. Total Project Development Costs</b> (#3 plus #11)	<b>\$11,000,000 **</b>

**FINANCING:**

13. Unrestricted Funds	\$2,500,000
14. Bonds	\$0
15. Loans	\$8,500,000
16. Other Methods (specify)	\$0
<b>17. Total Project Financing</b> (sum of #13 through #16)	<b>\$11,000,000 **</b>

18. New Construction Total Square Footage	40,973
19. New Construction Costs Per Square Foot *****	\$222
20. Renovated Space Total Square Footage	0
21. Renovated Space Costs Per Square Foot *****	\$0

\* Attach additional page(s) detailing how each line item was determined, including all methods and assumptions used. Provide documentation of all major costs.

\*\* These amounts should be the same.

\*\*\* Capitalizable items to be recognized as capital expenditures after project completion.

\*\*\*\* Include as Other Costs the following: other costs of financing; the value of existing lands, buildings and equipment not previously used for health care services, such as a renovated house converted to residential care, determined by original cost, fair market value, or appraised value; or the fair market value of any leased equipment or building, or the cost of beds to be purchased.

\*\*\*\*\* Divide new construction costs by total new construction square footage.

\*\*\*\*\* Divide renovation costs by total renovation square footage.

**Black River Skilled Nursing**  
**Poplar Bluff - New SNF**  
**Budget Detail**

	<b>A</b>	<b>B</b>	<b>C</b>
	<b>Line Item Description</b>	<b>Amount</b>	<b>CON Cost Category</b>
<b>1</b>	Site Development	\$700,000.00	New Construction
<b>2</b>	Building Construction	\$8,399,465.00	New Construction
<b>3</b>	Architects & Engineering	\$175,000.00	Architectural / Engineering Fees
<b>4</b>	Land Purchase	\$650,000.00	Land Acquisition
<b>5</b>	Consultants and Experts	\$350,000.00	Consultants' Fees / Legal Fees
<b>6</b>	Interest	\$425,000.00	Interest During Construction
<b>7</b>	Contingency	\$300,535.00	Other Costs
<b>8</b>	<b>Total</b>	<b>\$11,000,000.00</b>	

<b>Black River Skilled Nursing</b>			\$/SF	Total
<b>Tim Fleeman Construction</b>	Main Floor	40973	\$205.00	\$8,399,465
<b>11657 St. Hwy ZZ</b>	Other	0	\$0	\$0
<b>Dexter, MO</b>				

<b>New Construction Costs</b>		
Building Construction		\$8,399,465
Site Development		\$700,000
<b>Total for Line 1</b>		<b>\$9,099,465</b>
<b>Total Construction Costs</b>		<b>\$9,099,465</b>



**State of Missouri**  
**Denny Hoskins, Secretary of State**  
Corporations Division  
PO Box 778 / 600 W. Main St., Rm. 322  
Jefferson City, MO 65102

**LC014617851**  
**Date Filed: 3/17/2025**  
**Denny Hoskins**  
**Missouri Secretary of State**

## Articles of Organization

(Submit with filing fee of \$105.00)

1. The name of the limited liability company is

PB REAL ESTATE HOLDINGS, LLC

(Must include "Limited Liability Company," "Limited Company," "LC," "L.C.," "L.L.C.," or "LLC")

2. The purpose(s) for which the limited liability company is organized:

To transact any and all lawful business for which a limited liability company may be organized under the Missouri Limited Liability Company Act.

3. The name and address of the limited liability company's registered agent in Missouri is:

<u>Sean P. Clancy</u>	<u>7733 Forsyth Blvd Ste 400</u>	<u>Saint Louis, MO 63105-1817</u>
<small>Name</small>	<small>Street Address: May not use PO Box unless street address also provided</small>	<small>City/State/Zip</small>

4. The management of the limited liability company is vested in: ☒ managers ☐ members (check one)

5. The events, if any, on which the limited liability company is to dissolve or the number of years the limited liability company is to continue, which may be any number or perpetual: Perpetual

(The answer to this question could cause possible tax consequences, you may wish to consult with your attorney or accountant)

6. The name(s) and street address(es) of each organizer (PO box may only be used in addition to a physical street address):

(Organizer(s) are not required to be member(s), manager(s) or owner(s))

<i>Name</i>	<i>Address</i>	<i>City/State/Zip</i>
<u>Clancy, Sean P.</u>	<u>7733 Forsyth Blvd Ste 400</u>	<u>Saint Louis MO 63105-1817</u>

7. ☐ Series LLC (OPTIONAL) Pursuant to Section 347.186, the limited liability company may establish a designated series in its operating agreement. The names of the series must include the full name of the limited liability company and are the following:

New Series:

☐ The limited liability company gives notice that the series has limited liability.

New Series:

☐ The limited liability company gives notice that the series has limited liability.

New Series:

☐ The limited liability company gives notice that the series has limited liability.

(Each separate series must also file an Attachment Form LLC 1A.)

Name and address to return filed document:

Name: Jeanetta Stowe

Address: Email: jls@rgsz.com

City, State, and Zip Code: \_\_\_\_\_



8. Principal Office Address (OPTIONAL) of the limited liability company (PO Box may only be used in addition to a physical street address):

300 N Walnut St

Dexter, MO 63841-1748

*Address (PO Box may only be used in conjunction with a physical street address)*

*City/State/Zip*

9. The effective date of this document is the date it is filed by the Secretary of State of Missouri unless a future date is otherwise indicated: ;

*(Date may not be more than 90 days after the filing date in this office)*

In Affirmation thereof, the facts stated above are true and correct:

(The undersigned understands that false statements made in this filing are subject to the penalties provided under Section 575.040, RSMo)

**All organizers must sign:**

Sean P. Clancy

SEAN P. CLANCY

03/17/2025

*Organizer Signature*

*Printed Name*

*Date of Signature*

# STATE OF MISSOURI



**Denny Hoskins**  
**Secretary of State**

## CERTIFICATE OF ORGANIZATION

WHEREAS,

***PB REAL ESTATE HOLDINGS, LLC***  
***LC014617851***

filed its Articles of Organization with this office on the 17th day of March, 2025, and that filing was found to conform to the Missouri Limited Liability Company Act.

NOW, THEREFORE, I, Denny Hoskins, Secretary of State of the State of Missouri, do by virtue of the authority vested in me by law, do certify and declare that on the 17th day of March, 2025, the above entity is a Limited Liability Company, organized in this state and entitled to any rights granted to Limited Liability Companies.

IN TESTIMONY WHEREOF, I hereunto set my hand and cause to be affixed the GREAT SEAL of the State of Missouri.  
Done at the City of Jefferson, this 17th day of March, 2025.

*Denny Hoskins*  
Secretary of State





**State of Missouri**  
**Denny Hoskins, Secretary of State**  
 Corporations Division  
 PO Box 778 / 600 W. Main St., Rm. 322  
 Jefferson City, MO 65102

**LC014617852**  
**Date Filed: 3/17/2025**  
**Denny Hoskins**  
**Missouri Secretary of State**

## Articles of Organization

(Submit with filing fee of \$105.00)

1. The name of the limited liability company is

BLACK RIVER SKILLED NURSING, LLC

(Must include "Limited Liability Company," "Limited Company," "LC," "L.C.," "L.L.C.," or "LLC")

2. The purpose(s) for which the limited liability company is organized:

To transact any and all lawful business for which a limited liability company may be organized under the Missouri Limited Liability Company Act.

3. The name and address of the limited liability company's registered agent in Missouri is:

<u>Sean P. Clancy</u>	<u>7733 Forsyth Blvd Ste 400</u>	<u>Saint Louis, MO 63105-1817</u>
<i>Name</i>	<i>Street Address: May not use PO Box unless street address also provided</i>	<i>City/State/Zip</i>

4. The management of the limited liability company is vested in: ☒ managers ☐ members (check one)

5. The events, if any, on which the limited liability company is to dissolve or the number of years the limited liability company is to continue, which may be any number or perpetual: Perpetual

(The answer to this question could cause possible tax consequences, you may wish to consult with your attorney or accountant)

6. The name(s) and street address(es) of each organizer (PO box may only be used in addition to a physical street address):

(Organizer(s) are not required to be member(s), manager(s) or owner(s))

<i>Name</i>	<i>Address</i>	<i>City/State/Zip</i>
<u>Clancy, Sean P.</u>	<u>7733 Forsyth Blvd Ste 400</u>	<u>Saint Louis MO 63105-1817</u>

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☐ The limited liability company gives notice that the series has limited liability.

New Series:

☐ The limited liability company gives notice that the series has limited liability.

New Series:

☐ The limited liability company gives notice that the series has limited liability.

(Each separate series must also file an Attachment Form LLC 1A.)

Name and address to return filed document:

Name: Jeanetta Stowe

Address: Email: jls@rgsz.com

City, State, and Zip Code: \_\_\_\_\_

8. Principal Office Address (OPTIONAL) of the limited liability company (PO Box may only be used in addition to a physical street address):

300 N Walnut St

Dexter, MO 63841-1748

*Address (PO Box may only be used in conjunction with a physical street address)*

*City/State/Zip*

9. The effective date of this document is the date it is filed by the Secretary of State of Missouri unless a future date is otherwise indicated: :

*(Date may not be more than 90 days after the filing date in this office)*

In Affirmation thereof, the facts stated above are true and correct:

(The undersigned understands that false statements made in this filing are subject to the penalties provided under Section 575.040, RSMo)

**All organizers must sign:**

Sean P. Clancy

*Organizer Signature*

SEAN P. CLANCY

*Printed Name*

03/17/2025

*Date of Signature*



# STATE OF MISSOURI



**Denny Hoskins**  
**Secretary of State**

## CERTIFICATE OF ORGANIZATION

WHEREAS,

***BLACK RIVER SKILLED NURSING, LLC***  
***LC014617852***

filed its Articles of Organization with this office on the 17th day of March, 2025, and that filing was found to conform to the Missouri Limited Liability Company Act.

NOW, THEREFORE, I, Denny Hoskins, Secretary of State of the State of Missouri, do by virtue of the authority vested in me by law, do certify and declare that on the 17th day of March, 2025, the above entity is a Limited Liability Company, organized in this state and entitled to any rights granted to Limited Liability Companies.

IN TESTIMONY WHEREOF, I hereunto set my hand and cause to be affixed the GREAT SEAL of the State of Missouri.  
Done at the City of Jefferson, this 17th day of March, 2025.

*Denny Hoskins*  
Secretary of State



## **DIVIDER II**

### **PROPOSAL DESCRIPTION**

## **DIVIDER II. PROPOSAL DESCRIPTION**

**1. Provide a complete detailed project description.**

The Applicant seeks to construct an 85-bed skilled nursing facility that consists of approximately 40,973 square feet. The new facility will be named Black River Skilled Nursing, and will consist of 65 private rooms for standard skilled nursing facility beds. The facility will also be constructed with a 20 semi-private bed memory care unit to accommodate residents with Alzheimer's or other memory care needs.

**2. Provide a timeline of events for the project, from the issuance of the CON through project completion.**

CON Approval	July 14, 2025
Bidding and Construction Contracts Awarded	September 2025
Commence Construction	October 2025
Complete Construction	August 2027
First Resident Move In	September 2027

**3. Provide a legible city or county map showing the exact location of the proposed facility.**

See attached.

**4. Provide a site plan for the proposed project.**

See attached.

**5. Provide preliminary schematic drawings for the proposed project.**

See attached.

**6. Provide evidence that architectural plans have been submitted to the Department of Health and Senior Services.**

See attached.

**7. Provide the proposed gross square footage.**

The total proposed square footage for the facility is estimated at approximately 40,973 square feet.



**8. Document ownership of the project site, or provide an option to purchase.**

See attached.

**9. Define the community to be served.**

The community to be served is the 65 and older population located within a 15-mile radius of the proposed site.

**10. Provide projected year population for the 15-mile radius service area.**

There will be approximately 9,289 individuals aged 65 or older in the service area surrounding the project, based on the State of Missouri's 2030 population estimates.

**11. Identify specific community problems or unmet needs the proposal would address.**

The elderly population continues to increase over time and more elderly people will be seeking skilled nursing services in their community. The project will include a memory care unit designed to serve patients with Alzheimer's disease and other memory deficiencies.

**12. Provide historical utilization for each of the past three (3) FULL years and utilization projections through the first three (3) FULL years of operation of the new LTC beds.**

The proposed facility does not currently exist, and as such, there is no historical utilization. Please see the projected utilization below.

Year 1 – 49.9% Occupancy; 15,489 resident days

Year 2 – 80.0% Occupancy; 24,820 resident days

Year 3 – 80.0% Occupancy; 24,820 resident days

**13. Provide the methods and assumptions used to project utilization.**

The Applicant projected utilization based on its knowledge of its own operations, residents originating from Poplar Bluff in its existing facilities located in Southeast Missouri, and its experience in providing senior care in the Southeast Missouri region.

**14. Document that consumer needs and preferences have been included in planning this project and describe how consumers had an opportunity to provide input.**

This application is submitted in response to requests received by the Applicant from Poplar Bluff City officials to establish a new, locally owned skilled nursing facility in Poplar Bluff, Missouri. The Applicant currently operates several facilities in Southeast Missouri. A number of its existing residents originated in Poplar Bluff, Missouri, before traveling up to 25 miles to reside in the Applicant's facilities across Southeast Missouri. In addition, the Applicant has hosted several informational meetings seeking input from potential residents, individuals, and businesses in the Poplar Bluff area seeking information related to consumer needs and preferences. Please also see the attached notification published in



the Daily American Republic on April 24, 2025, which invites consumers to submit commentary with respect to this project. Please also see the letters appended to this application.

**15. Provide copies of any petitions, letters of support or opposition received.**

See attached.

**16. Document that providers of similar health services in the proposed 15-mile radius have been notified of the application by a public notice in the local newspaper.**

Please see the attached notification published in the Daily American Republic on April 24, 2025, which invites consumers to submit commentary with respect to this project.

**17. Document that providers of all affected facilities in the proposed 15-mile radius were addressed letters regarding the application.**

Please see attached for a signed and notarized attestation of compliance, an example copy of the letter that was sent to all facilities in the 15-mile radius, and a list of those facilities that were provided notice.

## Location Map

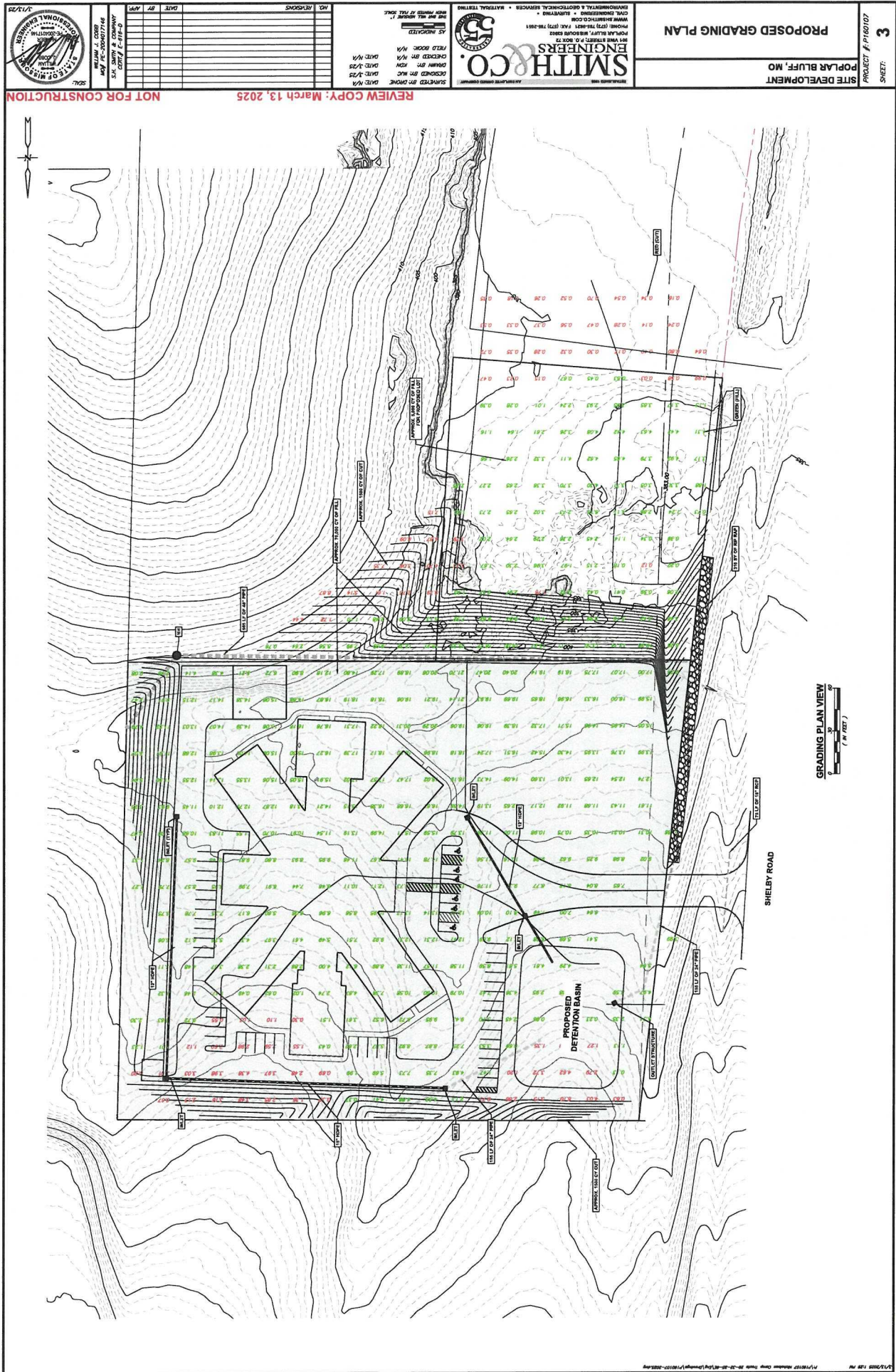
















**Hill, Richard W.**

---

**From:** Ben Sells <ben@paradigmsenior.com>  
**Sent:** Thursday, April 17, 2025 2:44 PM  
**To:** Hill, Richard W.  
**Subject:** FW: Black River Skilled Nursing-Poplar Bluff  
**Attachments:** Poplar Bluff CON-Floor Plan.pdf; P160107-2025-CONCEPT PACKAGE.pdf

Here is what we submitted to state Architect.

**Benjamin Sells, BSB, LNHA**  
**CEO**  
**Paradigm Senior Management**  
**300 N. Walnut**  
**Dexter, Mo 63841**  
**Phone: 573-614-7472**



**From:** Jackie Paradigm Senior <jackie@paradigmsenior.com>  
**Sent:** Thursday, April 17, 2025 2:42 PM  
**To:** Carrie.Schaumburg@health.mo.gov; David.East@health.mo.gov  
**Cc:** Ben Sells <ben@paradigmsenior.com>  
**Subject:** Black River Skilled Nursing-Poplar Bluff

Ms. Schaumburg and Mr. East,

Please see the attached architectural plans as a preliminary submission for the CON purposes for the Black River Skilled Nursing facility in Poplar Bluff, MO.

Thank You,

*Jackie Bevill*  
*Executive Assistant*  
**Paradigm Senior Management**  
**300 N. Walnut**  
**Dexter, MO 63841**  
**Off: 573-614-7472**  
**Fax: 833-471-3364**



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## **OPTION AGREEMENT**

THIS OPTION AGREEMENT (this "Agreement") is made and entered into as of March 18<sup>th</sup>, 2025 (the "Effective Date"), by and between James and Stacy Nicholson, ("Seller"), and PB REAL ESTATE HOLDINGS, LLC, Missouri limited liability company ("Purchaser") (Seller and Purchaser are at times hereinafter referred to individually as a "Party" and collectively as the "Parties").

### **RECITALS**

WHEREAS, Seller is the owner of certain real estate located at 2670 Shelby Rd Poplar Bluff, Mo together with all improvements located thereon, as more thoroughly described in Exhibit A ("Real Property"); and,

WHEREAS, Purchaser desires to acquire the Real Property upon the terms and conditions set forth herein (the "Transaction").

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants and agreements hereinafter set forth, the Parties hereto agree as follows.

### **AGREEMENT**

1. Option; Option Period. Seller hereby grants to Purchaser the exclusive and irrevocable option to purchase the Real Property on the terms and conditions set forth herein (the "Option"). The term of the Option begins on the Effective Date and will expire seven (7) days following the date on which the Missouri Health Facilities Review Committee hears and votes on a project to establish a long-term care facility on the Real Property (the "Option Period").
2. Option Consideration. Upon the Effective Date and as consideration for the Option, Purchaser shall pay to Seller the sum of Ten Dollars (\$10.00) ("Option Consideration"). The Option Consideration shall be non-refundable, and if the Transaction proceeds to closing, the Option Consideration shall be credited against the Purchase Price at closing. The closing of the Transaction shall be referred to herein as "Closing."
3. Exercise of Option. Purchaser may exercise the Option by giving written notice (an "Exercise Notice") to Seller before the expiration of the Option Period. Upon delivery of an Exercise Notice, this Agreement will become a binding purchase and sale contract between the Parties. Nothing in this Agreement is intended or shall operate to require or obligate Purchaser to purchase the Real Property prior to Purchaser's delivery of the Exercise Notice or the satisfaction of Purchaser's closing conditions in Section 15 hereof.
4. Purchase Price; Closing. Subject to any adjustments set forth elsewhere in this Agreement, the purchase price for the Real Property under the Option shall be Six Hundred and Fifty Thousand Dollars (\$650,000.00) (the "Purchase Price"). After crediting any prorations or adjustments required by this Agreement, Purchaser shall pay the balance of the Purchase Price in readily available funds to Seller at the Closing ("Cash Due at Closing"). If Purchaser provides the Exercise

## **OPTION AGREEMENT**

Notice, the Closing shall occur on a date as agreed by the Parties in writing, however, no later than August 1, 2025 ("Closing Date"). The Closing shall be deemed to have occurred and to be effective as between the Parties as of the Effective Time. For purposes of this Agreement, the term "Effective Time" shall mean 11:59:59 P.M. Central Time of the day immediately preceding the Closing Date.

5. Title Review.

5.1 Promptly following the Effective Date, and at Purchaser's cost, Purchaser shall order Stoddard County Title ("Title Company") to issue to Purchaser a current preliminary title report related to the Real Property ("Preliminary Title Report") together with readable copies of all instruments of record referred to therein. Purchaser may order an ALTA survey at Purchaser's sole cost and expense (the "Survey"), a copy of which shall be provided to Title Company (all references to Survey herein shall be interpreted to reference the Survey only to the extent Purchaser actually orders such a Survey as set forth in this sentence).

5.2 Purchaser shall review the Preliminary Title Report (together with copies of all documents constituting exceptions to title) and Survey. If Purchaser objects to any matters in the Preliminary Title Report or Survey (the "Title Objections"), Purchaser shall notify Seller in writing ("Purchaser's Objection Notice") within ten (10) days after receipt of the Preliminary Title Report (the "Title Objection Deadline"). If Purchaser fails to so issue a Purchaser's Objection Notice by the Title Objection Deadline, Purchaser shall be deemed to have approved the condition of title to the Property as reflected in the Preliminary Title Report and/or Survey. Seller shall have the right, but not the obligation, to cause the removal of such exception to title or to cause the Title Company to commit to issuance of an endorsement reasonably acceptable to Purchaser insuring against such exception to title.

5.3 In the event Seller determines that it is unable or unwilling to remove any one or more of such Title Objections and exception(s) to title, Seller shall so notify Purchaser in writing ("Seller's Election to Not Correct Exceptions") within five (5) business days after it receives Purchaser's Objection Notice. Failure of Seller to so notify Purchaser within such 5-business day period shall be deemed Seller's election to remove such Title Objections and exceptions to title and/or to cause the Title Company to commit to issuance of an endorsement reasonably acceptable to Purchaser insuring against such Title Objections and exceptions to title at Seller's cost and expense.

5.4 In the event Seller timely provides Purchaser with Seller's Election to Not Correct Exceptions, Purchaser may, at its option, terminate this Agreement within five (5) business days after Purchaser receives Seller's Election to Not Correct Exceptions. Failure of Purchaser to so notify Seller within such 5-business day period shall be deemed Purchaser's election not to terminate this Agreement, and constitute Purchaser's waiver of the Title Objections and election to proceed to Closing. If Purchaser terminates this Agreement as permitted herein, this Agreement will be terminated and neither Party will have any further rights hereunder, except for those that expressly survive termination.

**OPTION AGREEMENT**

5.5 Notwithstanding anything contained herein to the contrary, Purchaser shall not be required to object to, and Seller shall be required to pay off at the Closing, any and all title exceptions or encumbrances that may be cleared through the payment of money, including without limitation, any financing obtained or assumed by Seller and secured by a mortgage covering the Property, any mechanic's or materialmen's liens, any tax or judgment lien, any monetary liens, judgments, security interests and other matters identified in the Title Report with Survey ("Monetary Liens"); and Seller shall be entitled to utilize the Purchase Price proceeds to effectuate any or all of the foregoing.

5.6 If the Commitment is amended or supplemented after Purchaser has submitted its objections to Seller, the same time periods, procedures and notices for objections and clearance of title shall apply to matters disclosed thereby. The "Permitted Exceptions" shall include: (1) any condition of title to the Property as reflected in the Preliminary Title Report and/or Survey for which Purchaser does not issue Purchaser's Objection Notice; (2) any condition of title to the Property as reflected in the Preliminary Title Report and/or Survey waived by operation of this Section, except for Monetary Liens; and, (3) in no instance shall Monetary Liens be considered Permitted Exceptions.

6. Title; Deed. At Closing, Seller shall deliver to the Title Company a special warranty deed, in the form attached hereto as Exhibit B and made a part hereof (the "Deed"), conveying fee simple marketable title to the Project, free and clear of all encumbrances, subject only to the Permitted Exceptions.

7. Seller's Deliveries at Closing. On or before the Closing, Seller shall deliver to Title Company the following documents and any other documents reasonably requested by Purchaser and/or the Title Company necessary to close the transaction under this Agreement, including but not limited to (collectively referred to as the "Seller's Deliveries"):

7.1 The Deed, subject only to Permitted Exceptions, if any;

7.2 A bill of sale transferring any personal property described in Schedule 7.2 to Purchaser;

7.3 Full releases of all mortgages, deeds of trust and other financing instruments affecting the Real Property, duly executed by the holders thereof, acknowledged and in proper form for recording

7.4 An affidavit, in the form attached hereto as Exhibit C, stating Seller's U.S. taxpayer identification number and that Seller is a "United States person", as defined by Internal Revenue Code Section 1445(f)(3) and Section 7701(b);

7.5 A certificate of Seller dated as of the Closing Date certifying that the representations and warranties of Seller set forth herein remain true and correct in all material respects as of the Closing Date;

## **OPTION AGREEMENT**

7.6 Such other documents, forms, certifications, instructions or items as Purchaser or Title Company may reasonably request to effectuate the transactions contemplated hereby.

8. Purchaser's Deliveries at Closing. On or before the Closing, Purchaser shall deliver to Title Company the following items and documents, and any other documents reasonably requested by Purchaser and/or the Title Company necessary to close the transaction under this Agreement, including but not limited to (collectively referred to as the "Purchaser's Deliveries"):

8.1 The Cash Due at Closing subject to any adjustments as otherwise noted herein, by wire transfer, cashier's check, or other form of immediately available funds acceptable to the Title Company;

8.2 A certificate of Purchaser dated as of the Closing Date certifying that the representations and warranties of Purchaser set forth herein remain true and correct in all material respects as of the Closing Date.

8.3 Such other documents, forms, certifications, instructions or items as Seller or Title Company may reasonably request to effectuate the transactions contemplated hereby.

9. Risk of Loss and Condemnation. If all or any part of the Real Property is condemned or any condemnation action or proceeding is commenced prior to Closing, Purchaser may, at its option and upon written notice to Seller, either: (a) terminate this Agreement, at which time all obligations owing by either Party hereunder shall be extinguished; or (b) complete the purchase, with all condemnation proceeds and claims being assigned to Purchaser.

10. Costs and Prorations. Any real property taxes, water rates, sewer charges, rents, and expenses related to the ownership of the Real Property shall be prorated and adjusted on the basis of the actual days in the calendar year, Seller to pay all such expenses relating to periods through the date of Closing, including the Closing Date, and Purchaser to pay all such expenses relating to periods following the Closing Date. If exact information is not available, shall be estimated based on the most recent information available. If, after netting together all credits due each party hereunder, there is a net credit due: (a) Purchaser, such credit shall reduce, the Cash Due at Closing; or (b) Seller, such credit shall increase, the Cash Due at Closing. On or before Closing, Seller shall pay or cause to be paid any and all unpaid taxes for prior years. Seller will provide to Purchaser such real property tax information for the Real Property as Purchaser requests.

11. Access and Inspection. Between the Effective Date and the expiration of the Option Period (the "Inspection Period"), Purchaser and its agents, employees, contractors, representatives and other designees may enter the Project upon 48 hours prior notice to Seller to inspect the Real Property and conduct soil tests, surveys, mechanical and structural engineering studies, and any other investigations, examinations, tests and inspections as Purchaser may reasonably require to assess the condition of the Real Property, all of which will be performed at Purchaser's sole cost and expense. Upon completion thereof, Purchaser shall, at its sole expense, cause the Real Property to be restored to substantially the same condition it was in prior to such entry (unless Purchaser closes its acquisition of the Real Property, in which event Purchaser need not make such

#### **OPTION AGREEMENT**



restoration), and shall indemnify and hold Seller harmless of and from all claims for bodily injury or property damage which may be asserted against Seller by reason of the foregoing entry and activities.

12. Default; Remedies. In the event either Party is in default of any provision hereof, the non-defaulting Party, as a condition precedent to its remedies, must give the defaulting Party written notice of the default. The defaulting Party shall have thirty (30) days from receipt of such notice to cure the default. If the default is timely cured, this Agreement shall continue in full force and effect. If the default is not timely cured, the non-defaulting Party may pursue its applicable remedies set forth below:

12.1 If Purchaser defaults under this Agreement, Seller may, at its option: (a) terminate this Agreement and neither Party will have any further rights hereunder, except for those that expressly survive termination; and/or, (b) pursue any other legal or equitable remedy, including without limitation, a suit for specific performance.

12.2 If Seller defaults under this Agreement, Purchaser may, at its option: (a) terminate this Agreement and neither Party will have any further rights hereunder, except for those that expressly survive termination; and/or, (b) pursue any other legal or equitable remedy, including without limitation, a suit for specific performance.

13. Seller's Representations and Warranties. Each of the representations and warranties contained in this Section shall be deemed to be material to and to have been relied upon by Purchaser, and shall be binding and enforceable against Seller notwithstanding any independent investigation made by Purchaser. Seller hereby warrants and represents as of the Effective Date and Seller will reaffirm as of the Closing, unless stated otherwise, that:

13.1 Organization and Standing. Seller is a individual duly organized and validly existing under the laws of the State of its formation.

13.2 Capacity; Authority; Consents. Seller has full power, legal capacity and authority to execute and deliver this Agreement, to consummate the transactions contemplated hereby and to perform its obligations under this Agreement. The execution and delivery of this Agreement, the consummation of the transactions contemplated hereby and the performance of the obligations hereunder have been duly authorized by Sellers, and no other proceedings by Seller are necessary. This Agreement constitutes, and each other instrument to be executed and delivered by Seller pursuant to the terms of this Agreement will constitute, valid and binding obligations of Seller, enforceable against Seller in accordance with their respective terms. The individual(s) executing and delivering this Agreement on Seller's behalf are duly authorized and empowered to bind the Seller as contemplated hereby.

13.3 Interim Operations. From the Effective Date until Effective Time, Seller shall: (i) maintain its current insurance policies in full force and effect; (ii) not create any lien or encumbrance upon or affecting title to the Real Property without Purchaser's prior written consent; (iii) not take any action which will or would cause any of the

## OPTION AGREEMENT

representations or warranties in this Agreement to become untrue or be violated; (iv) materially perform all of its obligations in respect of the Real Property whether pursuant to any contracts, or other requirements affecting the Real Property; (v) promptly inform Purchaser in writing of any material event adversely affecting the ownership, use, occupancy, operation, management or maintenance of the Real Property, whether or not insured against; and (vi) not solicit, accept or provide factual information or negotiate with respect to, any offer to purchase any of the Real Property from any person or entity other than Purchaser.

13.4 No Violation. Neither the execution and delivery by Seller of this Agreement nor the consummation of the transactions contemplated hereby nor compliance with any of the material provisions hereof by Seller will violate conflict with or result in a breach of any material provision of the Articles of Incorporation, bylaws or other organizational documents of Seller. Seller is not in violation of any statute, rule, regulation or order of any court or Federal, State, or local governmental agency or instrumentality having jurisdiction over it or the Real Property, the violation of which would have a material adverse effect on the ownership of the Real Property. The transactions contemplated hereby shall not: (i) require the consent, waiver, authorization or approval of any governmental authority, domestic or foreign, or of any other person, entity or organization, or (ii) conflict with or result in any breach or violation of the terms and conditions of, or constitute (or with notice or lapse of time, or both, constitute) a default under applicable Federal, State, local, or foreign statute, regulation, order, judgment or decree.

13.5 Environmental Condition. Seller has no knowledge of any previous or present generation, storage, disposal or existence of any hazardous waste on the Real Property. Seller has not received any notice and does not know of any notice given to any party in the chain of title to the Real Property, by any person or authority claiming violation of or requiring compliance with any laws involving hazardous waste. To Seller's knowledge, no investigation, administrative order, consent order or agreement, litigation or settlement with respect to hazardous waste located on, about or under all or a portion of the Real Property is pending, proposed, threatened or anticipated. The term "hazardous waste" shall mean "hazardous waste," "toxic substances" or other similar or related terms as defined or used from time to time in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. Sections 9601, et seq.), the Hazardous Materials Transportation Act, as amended (49 U.S.C. Sections 1801, et seq.), the Resource Conservation and Recovery Act, as amended (42 U.S.C. Sections 6921, et seq.) and regulations adopted thereunder.

13.6 Litigation. After commercially reasonable investigation consistent with entering into an Agreement of this type, Seller has no knowledge of any: (i) claims or suits currently pending or threatened against Seller relating to the Real Property; (ii) judgments unsatisfied against Seller or consent decrees or injunctions to which Seller is subject, or any pending or threatened action, suit, proceeding or investigation, at law or in equity, or otherwise in, for or by any court or governmental board, commission, agency, department or officer to which Seller is a party relating to the Real Property; (iii) order, judgment,

#### **OPTION AGREEMENT**

decree or governmental restriction to which it is subject which adversely affects the Real Property or which would prevent the transaction contemplated by this Agreement, and to the best of Seller's knowledge, it is not in violation of any law, order, writ, injunction or decree of any court, governmental department or instrumentality (including applicable environmental protection legislation and regulations); and (iv) Seller is not aware of any claim, action or proceeding now pending or threatened against Seller which will, or could: (a) prevent or delay consummation of the transactions contemplated by this Agreement, or (b) either individually and in the aggregate have a material adverse effect on the Real Property.

13.7 Taxes. There is no pending or, to Seller's knowledge, threatened, proceedings against Seller with respect to the assessment or collection of taxes pertaining to the Real Property.

13.8 Special Assessments. After commercially reasonable investigation consistent with entering into an Agreement of this type, Seller has no knowledge of any (i) pending or threatened special assessments affecting the Real Property, or (ii) any contemplated improvements affecting the Real Property that would reasonably be expected to result in special assessments affecting the Real Property.

13.9 Access to Property. Seller has no knowledge of any Federal, State, county, municipal, or other governmental plans to change the highway or road system in the vicinity of the Real Property or to restrict or change access from any such highway or road to the Real Property.

13.10 Occupancy Rights. After commercially reasonable investigation consistent with entering into an Agreement of this type, Seller has no knowledge of any occupancy rights (written or oral), leases or tenancies presently affecting the Real Property.

13.11 No Brokers or Finders. Neither Seller nor any affiliate of Seller has engaged any finder or broker in connection with the transactions contemplated hereby. Seller shall pay any and all finder's and broker's fees.

13.12 Title to Real Property. Seller has good and marketable title to the Real Property and shall convey the Real Property free and clear of all leases, liens and security interests, except for the Permitted Liens. All instruments which Seller shall deliver to Purchaser shall be sufficient to sell, convey, transfer, assign and deliver to Purchaser all of Seller's right, title and interest in and to the Real Property.

13.13 Full Disclosure. All of the Seller's warranties, representations and covenants in this Agreement: (i) constitute a material part of the consideration hereunder; (ii) are true and complete, current and accurate as of the date hereof; (iii) shall be true and complete, current and accurate as of the Effective Time; and, (iv) and shall survive the Closing for a period of twenty-four (24) months. None of the statements, representations or warranties of Seller misstates or omits any fact which would make such statements, representations or warranties incomplete, misleading or incorrect in any material respect.

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14. Purchaser's Representations and Warranties. Each of the representations and warranties contained in this Section shall be deemed to be material to and to have been relied upon by Seller, and shall be binding and enforceable against Purchaser notwithstanding any independent investigation made by Seller. Purchaser hereby warrants and represents as of the Effective Date and Seller will reaffirm as of the Closing, unless stated otherwise, that:

14.1 Organization and Standing. Purchaser is a limited liability company duly organized and validly existing under the laws of the State of its formation.

14.2 Capacity; Authority; Consents. Purchaser has full power, legal capacity and authority to execute and deliver this Agreement, to consummate the transactions contemplated hereby and to perform its obligations under this Agreement. The execution and delivery of this Agreement, the consummation of the transactions contemplated hereby and the performance of the obligations hereunder have been duly authorized by Purchaser's members and managers, and no other proceedings by Purchaser are necessary. This Agreement constitutes, and each other instrument to be executed and delivered by Purchaser pursuant to the terms of this Agreement will constitute, valid and binding obligations of Purchaser, enforceable against Purchaser in accordance with their respective terms. The individual(s) executing and delivering this Agreement on Purchaser's behalf are duly authorized and empowered to bind the Purchaser as contemplated hereby

15. Purchaser's Closing Conditions. Purchaser shall not be obligated to proceed with the Closing unless and until each of the following conditions has been either fulfilled or waived in writing by Purchaser:

15.1 Purchaser has obtained, prior to the Closing, Certificate of Need approval from the Missouri Health Facilities Review Committee to establish a long-term care facility on the Property.

15.2 The Real Property is adequately zoned to permit use as a long-term care facility.

15.3 Seller shall terminate at Closing leasehold interests of any type or nature in and to the Real Property, so that upon Closing, the Project will be delivered to Purchaser free and clear of all leasehold interests, tenancies or rights to possession of any type or nature.

15.4 Purchaser shall have completed to its sole satisfaction any environmental audits, inspections or tests as Purchaser may elect to perform or cause to be performed.

15.5 Purchaser shall be satisfied that gas, electricity, water, sanitary sewer, storm drainage and other utilities are available to the Real Property.

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15.6 Seller shall have removed, at its expense, all equipment, personal property and other items of any kind or nature from the Real Property which are not being purchased by Purchaser under this Agreement.

15.7 Seller shall have performed all of its obligations required to be performed hereunder on or before Closing, including but not limited to the provision of the Seller's Deliveries.

15.8 There shall exist no pending or threatened actions, suits, arbitrations, claims, attachments, proceedings, assignments for the benefit of creditors, insolvency, bankruptcy, reorganization or other proceedings, against or involving Seller that would materially and adversely affect Seller's ability to perform its obligations under this Agreement.

15.9 Purchaser shall have conducted, immediately prior to the Closing, a re-inspection of the Real Property which confirms that no material change has occurred from the date of the original Real Property inspection.

15.10 The representations and warranties made on the Effective Date and remade on and as of the Closing Date by Seller in this Agreement shall be true, correct and complete in all material respects.

15.11 Seller shall be in good standing and the Real Property shall be free of all liens, with the exception of the Permitted Exceptions.

In the event that any of the foregoing conditions shall not have been fulfilled on or before the Closing, then Purchaser may elect, upon notice to Seller, to either: (a) terminate this Agreement and neither Party shall have any further liability or obligation to the other except for any provision of this Agreement that is expressly intended to survive the termination of this Agreement; or, (b) waive any one or more of the foregoing conditions and proceed to Closing.

16. Closing Costs. Notwithstanding anything to the contrary contained herein, Closing costs shall be paid as follows:

16.1 By Seller: (a) expenses of placing title in condition as required by this Agreement; (b) preparation of the conveyance deed, affidavits, and any other documents required to convey title; (c) one half the escrow fee, if any; (d) all commission and related finder's fees and/or commissions; and, (e) Seller's attorneys' fees.

16.2 By Purchaser: (a) any and all documentary stamp and recording fees for the recording of the deed or other recording fees; (b) the cost of a standard ALTA Owner's Title Policy; (c) Purchaser's attorneys' fees; (d) the costs of conducting the Survey (if any); and, (e) one half the escrow fee, if any.

1. Notices. All notices and communications required or permitted to be given hereunder shall be in writing via electronic "email" transmission with a copy mailed by certified

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or registered mail, postage prepaid, or by Federal Express, Airborne Express, or similar overnight delivery service, addressed as follows:

If to Purchaser:

PB REAL ESTATE HOLDINGS, LLC  
300 N. Walnut  
Dexter, MO 63841  
Attn: Ben Sells  
Email: ben@paradigmsenior.com

With a copy to:

Lashly & Baer, P.C.  
714 Locust Street  
St. Louis, MO 63101  
Attn: Richard Hill  
Email: rhill@lashlybaer.com

If to Seller:

James I. Nicholson  
Stacy J Nicholson  
702 Pine St  
Poplar Bluff, Mo 63901  
Email: fivetwelveproperties@icloud.com

Notice shall be deemed to have been given upon transmission. Notice may be sent by counsel for Seller or Purchaser.

17. Entire Agreement. This Agreement contains the entire agreement between Seller and Purchaser, and there are no other terms, conditions, promises, undertakings, statements or representations, either written or oral or express or implied, concerning the sale contemplated by this Agreement.

18. Successors and Assigns. Except as set forth in this Section, Purchaser shall have no right to assign this Agreement. Purchaser may assign this Agreement to an affiliate of Purchaser (a "Designee"), provided that (a) any such assignment is for the purpose of such Designee taking title at the Closing to the Property, (b) Purchaser shall not be released from its liability hereunder in connection with or as a result of any such assignment to such Designee, and (c) Purchaser provides written notice to Seller of any such proposed assignment to such Designee not later than five (5) business days prior to the Closing Date; provided, however, that no such assignment shall relieve Purchaser of its obligations hereunder. This Agreement shall inure to the benefit of and bind the parties hereto and their respective executors, heirs, administrators, successors and assigns.

19. Attorney's Fees; Court Costs. In any action or proceeding arising out of this Agreement, the prevailing party shall be entitled to recover court costs and attorneys' fees from the non-prevailing party incurred by such party in enforcing its rights hereunder.

20. Dates of Performance. If any date for performance of any obligation hereunder falls on a Saturday, Sunday or nationally established holiday, the time for performance of such obligation shall be extended until the next business day following such date.

**OPTION AGREEMENT**



21. Severability; Waiver. If any provision of this Agreement is held to be illegal, invalid or unenforceable, such provision shall be fully severable. This Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision had never comprised a part hereof. No waiver of any provision of this Agreement will be valid unless in writing and signed by the Party against whom such waiver is sought to be enforced. A waiver or consent by a Party on any occasion is effective only in that instance and will not be construed as a bar to or waiver of any right on any other occasion.

22. Counterparts: Non-Paper Records. This Agreement may be signed or otherwise authenticated in any number of counterparts and by different parties to this Agreement on separate counterparts, each of which, when so authenticated, shall be deemed an original, but all such counterparts shall constitute one and the same Agreement. Any signature or other authentication delivered by facsimile or electronic transmission shall be deemed to be an original signature hereto.

23. Governing Law. This Agreement shall be governed in all respects by the internal laws of the State of Missouri.

24. Confidentiality.

24.1 “Confidential Information” means business or technical information, including all third-party information, disclosed by Seller to Purchaser, in whatever form or medium, tangible or intangible, in connection with this Agreement or in connection with any of the activities contemplated by this Agreement. Notwithstanding the above, the Purchaser shall not have liability to Seller with regard to any Confidential Information that: (a) is shown by written documentation to already have been in the possession of, known to, or independently developed by the Seller prior to disclosure hereunder and prior to Seller having an obligation of confidentiality with respect to such Confidential Information, in each case provided that, to the extent such Confidential Information was obtained by Seller from a third party, such third party did not commit a breach of an obligation of confidence with respect to such Confidential Information, or (b) becomes publicly available through no fault or breach of the Seller. Without limiting the foregoing, the Parties expressly agree that this Agreement constitutes Confidential Information.

24.2 Purchaser shall hold and maintain in strictest confidence the Confidential Information. Without limiting the generality of the foregoing statement, absent written consent of the Seller: (a) Purchaser shall provide the Confidential Information only to those employees, affiliates and independent contractors who have a legitimate “need to know” as reasonably necessary to perform such Party’s respective obligations and exercise its rights under this Agreement and who are bound in writing or otherwise to exercise the degree of care imposed by this Agreement with respect to the Confidential Information; (b) Purchaser shall only use the Confidential Information through its employees, affiliates and independent contractors as reasonably necessary to perform its respective obligations and exercise its rights under this Agreement; (c) Purchaser may disclose this Agreement to the Missouri Health Facilities Review Committee; (d) Purchaser shall not otherwise disclose the Confidential Information to any third party; (e) Purchaser shall protect the confidentiality of the Confidential Information with at least the same degree of care the Purchaser uses to safeguard its own proprietary information, and in any event, shall

#### **OPTION AGREEMENT**



exercise not less than the standard of care necessary to maintain and protect confidential status for the Confidential Information; and (f) Purchaser shall store the Disclosing Party's Confidential Information in a safe and secure location.


25. Rights to Fill-Dirt. In exchange for the Purchase Price and other good consideration, the receipt and sufficiency of which is hereby acknowledged by the Seller, for a period of one (1) year following the Closing Date, Seller shall allow and permit Purchaser to enter the premises located south of 2670 Shelby Rd ("Dirt Location") to remove and relocate fill-dirt from the Dirt Location to the Real Property. Seller expressly disclaims any and all warranties or guarantees regarding the quality of any such fill-dirt.
26. Reverse 1031 Exchange. Purchaser may structure the acquisition of the Real Property as part of a reverse tax-deferred exchange pursuant to Section 1031 of the Internal Revenue Code and applicable treasury regulations (the "Exchange"). Purchaser shall provide reasonable notice to Seller of its intent to effectuate the Exchange and any reasonable documentation necessary to facilitate the Exchange, including but not limited to the use of an exchange accommodation titleholder ("EAT"). Purchaser may designate or assign an EAT to temporarily take title to the Real Property in accordance with the "safe harbor" provisions of Revenue Procedure 2000-37, and Seller hereby consents to such designation or assignment. Seller agrees to reasonably cooperate in good faith with Buyer in structuring and effectuating the Exchange.

[The remainder of the page is intentionally left blank.]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

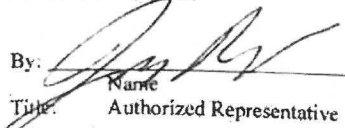
**PURCHASER:**

**PB REAL ESTATE HOLDINGS, LLC,**  
a Missouri limited liability company

By:  3/18/2025  
Ben Seis  
Title: Authorized Representative

**SELLER:**

**SELLER NAME,**  
a Missouri Entity Type

By:  3-18-2025  
Name  
Title: Authorized Representative

 3.18.2025

**AFFIDAVIT OF PUBLICATION**

**STATE OF MISSOURI}**

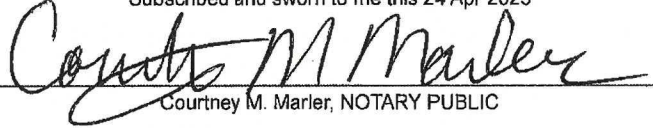
**COUNTY OF BUTLER} SS.**

I, **Heather Deering**, being duly sworn according to law, state that I am **Advertising Manager** of the **Daily American Republic**, a three-day-a-week newspaper of general circulation in the Counties of Butler, Ripley, Carter, Wayne, Stoddard, Dunklin, Reynolds and New Madrid; which newspaper has been admitted to the Post Office as second class matter in the City of Poplar Bluff, Missouri, the city of publication; which newspaper has been published regularly and consecutively for a period of three years and has a list of bona fide subscribers voluntarily engaged as such who have paid or agreed to pay stated price for a subscription for a definite period of time and that such newspaper has complied with provisions of Section 493.050, Revised Statutes of Missouri 1969. The affixed notice appeared in said newspaper in the following consecutive issues.

4/24/2025

  
Heather Deering ADVERTISING MANAGER

Subscribed and sworn to me this 24 Apr 2025

  
Courtney M. Marler, NOTARY PUBLIC

My commission expires

Nov. 30, 2026

**Publication Fee: \$24.14**

PB Real Estate Holdings, LLC and Black River Skilled Nursing, LLC are seeking Certificate of Need approval to develop and construct an 85-bed skilled nursing facility at 2670 Shelby Road, Poplar Bluff, MO 63901. If you have any comments or concerns, please feel free to direct them to Richard Hill at 714 Locust Street, Saint Louis, MO 63101, (314) 621-2939, or [rhill@lashlybaer.com](mailto:rhill@lashlybaer.com).  
(April 24, 2025)

**COURTNEY M MARLER**  
Notary Public - Notary Seal  
STATE OF MISSOURI  
Butler County  
My Commission Expires: Nov. 30, 2026  
Commission # 22479269





## MISSOURI SENATE

**JASON BEAN**  
DISTRICT 25

March 25, 2025

Missouri Certificate of Need Program  
Attention: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

**RE: *New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Ms. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri. This company already has a strong, established presence in the region with other facilities in neighboring communities and counties. Due to their positive reputation, many citizens in Poplar Bluff actually utilize their facilities in neighboring communities – this project would allow them to return home to the top-rated facility they deserve.

I strongly urge the Missouri Health Facilities Review Committee to recognize the need for this skilled nursing facility, and to vote in support of this project. The committee should note the anticipated \$9.5million investment by Paradigm that will bring imminent economic development benefits, as well as their partnership with Three Rivers College to provide hands-on training opportunities for students, helping to build a skilled workforce for the future

Thank you for your time and attention to this matter. Please do not hesitate to contact me if you need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Bean".

Senator Jason Bean  
25th District

ROOM 321, STATE CAPITOL, JEFFERSON CITY, MO 65101  
PHONE (573) 751-4843 - JASON.BEAN@SENATE.MO.GOV



## MISSOURI SENATE

JEFFERSON CITY

**JAMIE BURGER**

SENATOR, DISTRICT 27

March 6, 2025

Missouri Certificate of Need Program

Attn: Alison Dorge

P.O. Box 570

Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

A handwritten signature in black ink that reads "Jamie Burger".

Senator Jamie Burger  
Senatorial District 27th

CAPITOL OFFICE  
State Capitol  
201 West Capitol Avenue  
Room 303-B  
Jefferson City, Mo. 65101  
Tele: (573) 751-4039  
hardy.billington@house.mo.gov



MAJORITY WHIP  
Ex-officio member of all House  
committees  
  
Administration and Accounts  
Financial Institutions  
Rules – Legislative  
Veterans and Armed Forces

## **HARDY BILLINGTON**

State Representative  
District 152

March 19, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

RE: Proposed Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living

Dear Ms. Dorge,

As the State Representative for Missouri House District 152, which includes Poplar Bluff, I am writing to voice my enthusiastic support for Paradigm Senior Management's ("Paradigm") proposal to construct a cutting-edge, 85-bed skilled nursing facility in our community. The residents of Poplar Bluff urgently need a modern long-term care option, and Paradigm's plan would meet this demand admirably.

Paradigm brings a wealth of experience in building and operating skilled nursing facilities, and I am confident their expertise will result in a top-quality addition to our area. This project promises to be a significant and much-needed asset for the people of Poplar Bluff and Missouri House District 152.

I strongly urge the Missouri Health Facilities Review Committee (MHFRC) to recognize the critical need for this facility and to vote in favor of its approval.

Thank you for your time and thoughtful consideration of this important matter.

Sincerely,

A handwritten signature in black ink that reads "Hardy Billington". The signature is written in a cursive style with a large, stylized "H" and "B".

Rep. Hardy Billington  
Missouri House of Representatives, District 152



**CAPITOL OFFICE**  
State Capitol • Room 115-G  
201 West Capitol Avenue  
Jefferson City, MO 65101-6806  
Tele: (573) 751-1494  
Steve.Jordan@house.mo.gov



**COMMITTEES**  
Conservation & Natural Resources  
Government Efficiency  
Transportation

**MISSOURI HOUSE OF  
REPRESENTATIVES**  
**Steve Jordan**  
State Representative  
District 151

April 7, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

**RE: *New Skilled Nursing Facility in Poplar Bluff, Missouri***  
***Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Kindest regards,

A handwritten signature in black ink that reads "Steve W. Jordan".

Steve Jordan  
State Representative  
151<sup>st</sup> District



**CITY OF POPLAR BLUFF**  
CITY HALL, 501 VINE STREET  
POPLAR BLUFF, MISSOURI 63901

March 12, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

**RE: *New Skilled Nursing Facility in Poplar Bluff, Missouri***  
***Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

Shane Cornman  
Mayor, City of Poplar Bluff



March 6, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

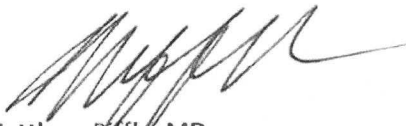
I have been in private practice in Poplar Bluff for 37 years. I have noticed a significant deterioration in the overall quality of our local skilled nursing facilities. I think our population deserves better. I welcome a new product.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,



Matthew Riffle, MD.

Program Director

Internal Medicine

Poplar Bluff Regional Medical Center

[mriffle@sfmtc.net](mailto:mriffle@sfmtc.net)





April 1, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Johnna Craft", with a large, stylized initial "J".

Johnna Craft  
Risk Management & Compliance Officer



1111 West Pine Street  
Poplar Bluff, Missouri 63901  
573.785.7761

Email: [info@poplarbluffchamber.org](mailto:info@poplarbluffchamber.org)  
Website: [www.poplarbluffchamber.org](http://www.poplarbluffchamber.org)

March 13, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

RE: New Skilled Nursing Facility in Poplar Bluff, Missouri

Paradigm Senior Living

Dear Mrs.Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,



# Butler County Commission

SECOND FLOOR - ROOM 203 - BUTLER COUNTY COURTHOUSE  
POPLAR BLUFF, MO 63901

VINCE LAMPE  
PRESIDING COMMISSIONER

RALPH STUCKER  
EASTERN DISTRICT

LARRY WELLS  
WESTERN DISTRICT

Phones: 573-686-8081  
573-686-8069

March 6, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

**RE: *New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

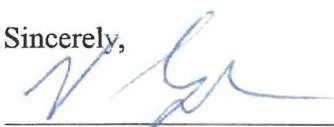
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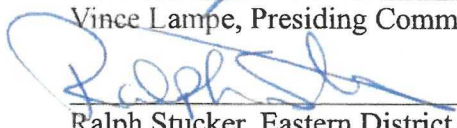
Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

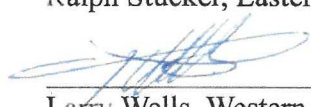
I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

  
\_\_\_\_\_  
Vince Lampe, Presiding Commissioner

  
\_\_\_\_\_  
Ralph Stucker, Eastern District Commissioner

  
\_\_\_\_\_  
Larry Wells, Western District Commissioner





**Office of Butler County Treasurer**  
**Tammy Marler**

Tammy Marler, Treasurer  
573-686-8083 Office  
573-300-0749 Cell  
[tammy@butlercotreasurer.com](mailto:tammy@butlercotreasurer.com)

Lisa Larmie, Deputy  
573-686-8083 Office  
573-714-4783 Cell  
[lisa@butlercotreasurer.com](mailto:lisa@butlercotreasurer.com)

March 6, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

A handwritten signature in blue ink that reads "Tammy Marler".

Tammy Marler  
Butler County Treasurer  
100 N Main, Room 103  
Poplar Bluff, MO 63901  
573-686-8083



## **Office of Butler Recorder of Deeds**

Butler County Recorder of Deeds  
Debby Lundstrom  
100 N. Main Street  
Courthouse  
Poplar Bluff, MO 63901  
573-686-8086

March 13, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

Debby Lundstrom



Lorrie Duckworth  
Stoddard County Public Administrator  
PO Box 347  
Bloomfield, MO 63825  
Phone 573-568-3830 Fax 573-568-2374  
Tonya McClelland – Deputy/Accounting  
Betty Justice – Human Resources

---

March 18, 2025

Missouri Certificate of Need Program

Attn: Alison Dorge

P.O. Box 570

Jefferson City, Missouri 65102

**RE:     *New Skilled Nursing Facility in Poplar Bluff, Missouri***

***Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri. I have had the privilege of working with Paradigm when seeking difficult placements of my ward's. They always strive to assist in any way they can. They truly care for the people that are placed with them as well as their employees.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

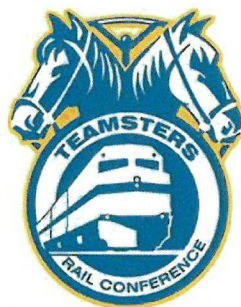
Sincerely,

A handwritten signature in cursive script that reads "Lorrie Duckworth".

Lorrie Duckworth

Stoddard County Public Administrator





Cory Henry  
2011 Wayne 332  
Patterson, MO 63956  
573-778-2589

March 14, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

Cory Henry  
Missouri Legislative Director  
BMWED/Teamster Rail Conference

Christopher R. Montgomery, MD  
225 Physicians Park Dr.  
Poplar Bluff, Mo 63901

March 6, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

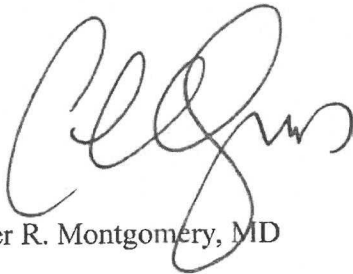
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Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Montgomery", written over the printed name.

Christopher R. Montgomery, MD



## Zion Lutheran Church

450 North Main Street  
Poplar Bluff, Missouri 63901  
Church Office: (573) 785-3936  
Church Fax: (573) 785-7273  
P. O. Box 3955, 63902

April 28, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

**RE: *New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

Congregational President

AW42725



April 28, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. There has not been such a facility built in our community in a long time.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a welcomed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the demand for this skilled nursing facility in Poplar Bluff, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

  
Joey McLane

March 18, 2025

Missouri Certificate of Need Program

Attn: Alison Dorge

P.O. Box 570

Jefferson City, MO 65102

RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living

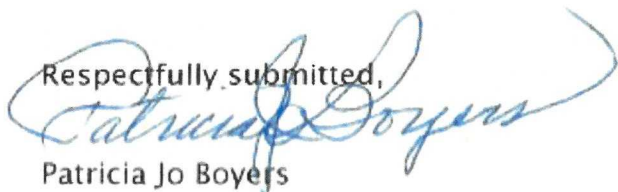
Dear Mrs. Dorge,

Please accept this correspondence as *formal support* of Paradigm Senior Management's proposal to construct a new, state of the art, 85-bed skilled nursing facility here in my hometown of Poplar Bluff, Missouri. We are seriously in desperate need of a new, long-term care facility such as this one proposed by Paradigm.

It is my understanding that Paradigm has a proven track record of developing, operating and maintaining several skilled nursing facilities. Having had personal experience with the choices available in Poplar Bluff, I welcome the fulfillment of this much needed facility.

It is my distinct honor to add my name to the growing list of businesses and community leaders supporting this endeavor and I urge the MHFRC to vote in *SUPPORT OF THIS PROJECT*.

Respectfully submitted,



Patricia Jo Boyers

President/CEO & Co-Founder

BOYCOM Cablevision, Inc.



## HEARTLAND ENGINEERING

891 Mockingbird Lane  
Poplar Bluff, MO 63901

Poplar Bluff, MO Office  
(573) 718-4627  
Cape Girardeau, MO Office  
(573) 275-9261

March 6, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

**RE:    *New Skilled Nursing Facility in Poplar Bluff, Missouri***  
***Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

Bob Summers, PE  
Owner

[www.HeartlandEngineers.com](http://www.HeartlandEngineers.com)



**BOYEROSA CATTLE RANCCCH**

**1780 County Road 450**

**Poplar Bluff, MO 63901**

**573-712-7866**

March 16, 2025

Missouri Certificate of Need Program

Attn: Alison Dorge

P.O. Box 570

Jefferson City, MO 65102

RE: New Skilled Nursing Facility in Poplar Bluff, MO  
Paradigm Senior Living

Dear Mrs. Dorge:

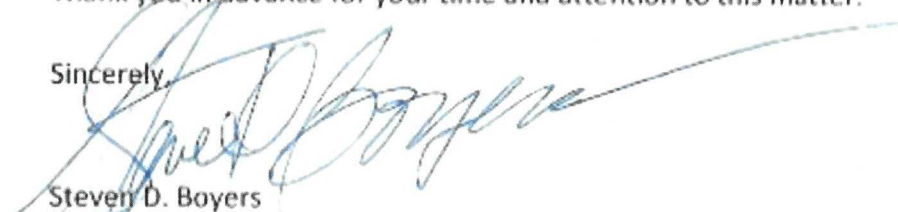
This letter is written in support of Paradigm Management's proposal to construct a brand new, state of the art, 85 bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a much needed addition to the community in Poplar Bluff and the surrounding county.

I urge the MHFRG to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you in advance for your time and attention to this matter.

Sincerely,



Steven D. Boyers  
Co-Owner & Operator  
BOYEROSA CATTLE RANCH  
1780 CR 450  
Poplar Bluff, MO 63901

March 14, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

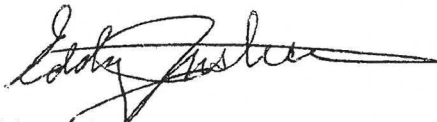
This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Eddy Justice", with a long horizontal flourish extending to the right.

Eddy Justice  
Insurance Agent  
Poplar Bluff, MO



March 12, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Vinnie Clubb', written over a horizontal line.

Vinnie Clubb

President Wayne County Missouri Farm Bureau  
Board Director Ozark Foothills Cattlemen's Association  
Wayne County MU Extension Council Member

92 Wayne 341C  
Piedmont, Missouri 63957  
(573) 944-0298





March 6, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

I am writing to you in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

We have worked with Paradigm on other projects they have and can attest to their ability to provide quality care to residents in needy areas. Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read "Abe Funk", with a stylized flourish at the end.

Abe Funk, PharmD, Owner

John's Pharmacy  
909 W Pine St.  
Poplar Bluff, MO 63901



Reid Forrester  
30 Old Hickory Ln  
Poplar Bluff Mo. 63901

April 3, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

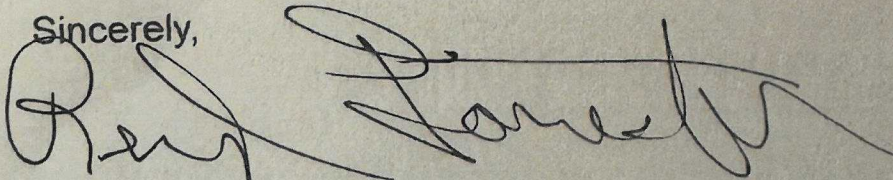
Dear Mrs. Dorge:

The undeniable necessity for a modern long-term care facility in Poplar Bluff, Missouri is crystal clear. Paradigm Senior Management's proposal shines as a beacon of hope for the community, offering a much-awaited solution to the existing gap in care services.

With Paradigm's sterling reputation in developing and managing skilled nursing facilities, the envisioned 85-bed facility promises to be a game-changer for Poplar Bluff. It is imperative for the MHFRC to acknowledge the pressing demand for this establishment and wholeheartedly endorse this crucial project for the betterment of the community.

Thank you for your time and attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Reid Forrester", written over a horizontal line.

Reid Forrester



CHRISTINE SISK  
672 County Road 301  
Poplar Bluff, MO. 63901

March 6, 2025

Missouri Certificate of Need Program  
Attn: Alison Dorge  
P.O. Box 570  
Jefferson City, Missouri 65102

***RE: New Skilled Nursing Facility in Poplar Bluff, Missouri  
Paradigm Senior Living***

Dear Mrs. Dorge:

This letter is written in support of Paradigm Senior Management's ("Paradigm") proposal to construct a brand new, state of the art, 85-bed skilled nursing facility in Poplar Bluff, Missouri. The community in Poplar Bluff is in serious need of a new long-term care facility such as the one proposed by Paradigm.

Paradigm has a proven track record of developing and operating skilled nursing facilities. The addition of this new facility will be a fantastic, and much needed addition to the community in Poplar Bluff, Missouri.

I urge the MHFRC to recognize the need for this skilled nursing facility, and to vote in support of this project.

Thank you for your time and attention to this matter.

Sincerely,

A handwritten signature in cursive script that reads "Christine".

Christine Sisk



I am writing to share my sincere support for a new nursing facility in Poplar Bluff. I used to be a resident at a larger home in Poplar Bluff, but moved away from Poplar Bluff because I understand that all of the current facilities in Poplar Bluff seem to be ran poorly and in even worse physical conditions. I was especially saddened by the smell of urine and feces when I entered the nursing home, that I called my home. I am so happy to have found a great home that is newer, well maintained and clean and free of odors. It is sad that I had to move forty miles away from a town that I loved due to no nursing homes that are as nice as the current home I am in. It would be my wish that the friends I left behind be given the same opportunity to live in the comforts and smell free environments that I currently am in. It would be my wish to share these sentiments at the forum if travel were not such a current hinderance. If anyone would like to come and visit me and hear me out, you can please visit me at Winchester Nursing Center in Bernie, Mo.

  
Arlene Nielsen



LASHLY & BAER, P.C.  
ATTORNEYS AT LAW

RICHARD W. HILL  
Licensed in Missouri and Illinois  
DIRECT: 314 436.8317  
[rhill@lashlybaer.com](mailto:rhill@lashlybaer.com)

MISSOURI  
714 Locust Street  
St. Louis, MO 63101-1699  
TEL: 314 621.2939  
FAX: 314 621.6844  
[www.lashlybaer.com](http://www.lashlybaer.com)

ILLINOIS  
20 East Main Street  
Belleville, IL 62220-1602  
TEL: 618 233.5587  
By Appointment Only

April 29, 2025

Aspire Senior Living Poplar Bluff  
Attn: Administrator  
3001 May St  
Poplar Bluff, MO 63901

**Re: Black River Skilled Nursing – CON Project No. 6205 NS**

To Whom it May Concern

Please be advised that PB Real Estate Holdings, LLC and Black River Skilled Nursing, LLC will submit and/or have submitted a Certificate of Need application to develop and construct an 85-bed skilled nursing facility at 2670 Shelby Road, Poplar Bluff, Missouri 63901.

Very truly yours,

Richard W. Hill

RWH/kb

**Black River Skilled Nursing**  
**Poplar Bluff - New SNF**  
**Facility Notice List**

	A	B	C	D	E
	County	Facility Name	Address	City	Zip
1	Butler	Aspire Senior Living Poplar Bluff	3001 May St	Poplar Bluff	63901
2	Butler	Cedargate Healthcare	2350 Kanell Blvd	Poplar Bluff	63901
3	Butler	Manor, The	2071 Barron Rd	Poplar Bluff	63901
4	Butler	Oakdale Care Center	2702 Debbie Ln	Poplar Bluff	63901
5	Butler	Westwood Hills Health & Rehabilitation Center	3100 Warrior Lane	Poplar Bluff	63901



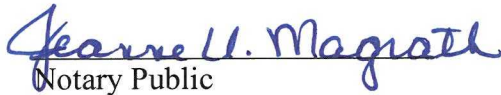
**Attestation of Compliance**

I, Richard Hill, certify that, to the best of my knowledge and belief, I have followed all applicable regulations regarding notifying surrounding facilities of the application submitted to the Missouri Health Facilities Review Committee by PB Real Estate Holdings, LLC and Black River Skilled Nursing, LLC for the establishment of a 85-bed skilled nursing facility at 2670 Shelby Road, Poplar Bluff, MO 63901 by letter dated April 29, 2025.

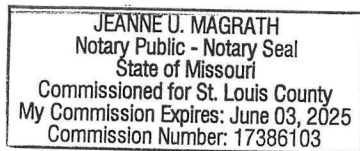
Signature: 

Date: 5/1/25

I, Jeanne Magrath, a notary public in and for said State do hereby certify that Richard Hill, whose name is signed to the writing above, has this day acknowledged the same before me.

  
Notary Public

Date: 5/1/25



### **DIVIDER III**

### **SERVICE SPECIFIC CRITERIA AND STANDARDS**

### **DIVIDER III. SERVICE SPECIFIC CRITERIA AND STANDARDS**

- 1. For ICF/SNF Beds, address the population-based need methodology of fifty-three (53) beds per one thousand (1,000) population age sixty-five (65) and older.**

The Department of Health and Senior Services provided the maps and 2030 population data for individuals aged 65 and older for those zip codes and cities within 15 miles of the proposed facility. The population data, facilities list, and calculations are attached (See Schedules 1 through 3).

$$\text{Unmet need} = [(R \times P) - U]$$

$$R = \text{CON Need Coefficient for RCF / ALF} = 53/1,000$$

$$P = \text{2030 Population aged 65 and older in 15-mile radius} = 9,289$$

$$U = \text{\# of SNF/ICF beds in 15-mile radius} = 520$$

$$\text{Unmet Need} = [(0.053) \times 9,289] - 520 = 28 \text{ SNF Bed Excess}$$

- 2. For RCF/ALF Beds, address the population-based need methodology of twenty-five (25) beds per one thousand (1,000) population age sixty-five (65) and older.**

Not applicable.

- 3. For LTCH Beds, address the population-based be need methodology of one-tenth (0.1) bed per one thousand (1,000) population.**

Not applicable.

- 4. Document any alternative need methodology used to determine the need for additional beds such as Alzheimer's, mental health or specialty beds.**

The excess of beds in the 15-mile radius does not express the actual need for skilled nursing beds. The Applicants respectfully request that the Committee utilize its discretion under 19 CSR 60-50.420(10) and 19 CSR 60-50.430(8) to find a need for this project as otherwise set forth below.

#### **Unavailable Beds**

There exist 29 skilled nursing beds in the service area that are licensed, but reported by the facilities themselves as unavailable. Subtracting these acknowledged unavailable beds, as has long been the history of this Committee, from the bed inventory results in a larger bed need in the service area, as set forth below:

$$\text{Unmet Need} = [(0.053) \times 9,289] - 520 + 29 = \mathbf{1 \text{ SNF Bed Need}}$$

These 29 unavailable beds are reported by the Operator as unavailable. This generally results from a facility that is licensed for 2 beds in a single room, the Operator utilizing that room for single occupancy, and reporting the extra bed as unavailable for occupancy.



As various applicants have testified to the Committee, the reported unavailable bed number is always an underestimate because some Operators still report the extra bed as available for occupancy – despite the fact that the room has only been utilized as a single occupancy room for a significant amount of time. These second beds, which are allegedly available, are not truly available for occupancy and should not be counted in the inventory of available beds. There are several facilities in the service area that, on the face of their six quarter occupancy numbers, are likely partaking in such a course of action. Removing these additional unavailable beds from the inventory results in an even larger bed need in the service area, as set forth below.

$$\text{Unmet Need} = [(0.053) \times 9,289] - 520 + 29 + 157 = \mathbf{158 \text{ SNF Bed Need}}$$

Please see Schedules 4 and 5, as attached hereto, for these unavailable bed calculations.

#### Memory Care Need

There is a significant unmet need for additional memory care beds in the service area, apart and aside from the calculations set forth above. According to the Alzheimer’s Association, more than one in nine people aged 65 and older has Alzheimer’s disease. Please see those facts and figures attached hereto.

As discussed above, there is a population of 9,289 individuals that are aged 65 and older in the service area, and if we multiply that number by the Alzheimer’s Association’s Alzheimer’s incidence percentage, we find that approximately 1,012 individuals in the service area will suffer from Alzheimer’s disease. Utilizing a conservative estimate of 10% of people afflicted with Alzheimer’s disease will require a memory care bed, we arrive at a memory care bed need of 101 beds.

The State of Missouri requires facilities that offer memory care services to the public to register with the Department of Health and Senior Services (“DHSS”) as such. There are 0 beds in the service area registered as such with DHSS.

When we subtract the actual beds registered with DHSS in the service area from the anticipated need, we arrive at a need for **101 additional memory care beds** in the 15 mile radius. The Applicant’s proposed addition addresses a small portion of that unmet need.

$$\text{Unmet Need} = [(R \times P) - U]$$

$$R = 1/9 = 0.1111$$

$$P = 2030 \text{ Population age 65 and older in 15-mile radius} = 9,289$$

$$U = \# \text{ of memory care beds in 15-mile radius} = 0$$

$$\text{Unmet Need} = (0.1111 \times 9,289 \times 0.10) - 0 = \mathbf{101 \text{ Memory Care Bed Need}}$$

The Applicant's request is "a drop in the bucket" compared to this additional need for memory care beds.

For the foregoing reasons, it is Applicant's opinion that there is a significant need in the service area for additional skilled nursing beds, particularly those that serve memory care patients, i.e., **between 101 and 158 additional beds are needed.**

5. **For any proposed facility which is designed and operated exclusively for person with acquired human immunodeficiency syndrome (AIDS) provide information to justify the need for the type of beds being proposed.**

Not applicable.

6. **If the project is to add beds to an existing facility, has the facility received a Notice of Noncompliance within the last 18 months as a result of a survey, inspection or complaint investigation? If the answer is yes, explain.**

Not applicable.

**Table 1 - Standard MHFRC Analysis**

	A	B
1	2030 65+ Population in 15 Mile Radius (1)	9,289
2	SNF / ICF Need Ratio	0.053
3	Line 1 * Line 2	492
4	Total Beds	520
5	SNF Licensed Beds (2)	520
6	ICF Licensed Beds (2)	0
7	CON Approved Beds (2)	0
8	<b>Standard MHFRC Need [Line 3 - Line 4]</b>	<b>-28</b>

**Notes**

- 1 See Schedule 2.
- 2 See Schedule 3.

**Table 2 - Alternative Need Analysis**

	A	B
1	Standard MHFRC Need	-28
2	Reported Unavailable Beds	29
3	Additional Unavailable Beds	157
4	<b>Alternative Need Conclusion</b>	<b>158</b>

**Notes**

- 3 See Table 1 - Standard MHFRC Analysis.
- 4 See Schedule 4.
- 5 See Schedule 5.

**Table 3 - Memory Care Analysis**

	A	B
1	2030 65+ Population in Service Area (6)	9,289
2	Alzheimer's Incidence Percentage (7)	10.9%
3	2030 65+ Population with Alzheimer's (8)	1,012
4	Estimate of Those with Alzheimer's Seeking Memory Care Beds	10%
5	Estimated Need for Memory Care Beds (9)	101
6	Total Memory Care Beds (10)	0
7	<b>Unmet Need For Memory Care Beds</b>	<b>101</b>

**Notes**

- 6 See Table 1 - Standard MHFRC Analysis.
- "2024 Alzheimer's Disease Facts and Figures" Alzheimer's Association,
- 7 <https://www.alz.org/getmedia/76e51bb6-c003-4d84-8019-e0779d8c4e8d/alzheimers-facts-and-figures.pdf>, p. 22 (accessed 4/21/25).
- 8 Line 1 multiplied by Line 2.
- 9 Line 3 multiplied by Line 4.
- 10 See Schedule 6.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Black River Skilled Nursing														
2	Poplar Bluff - New SNF														
3	Population Analysis														
4	POPULATION 65+			City in Zip	Project Number:		Project Address:		2670 Shelby Rd, Poplar Bluff, MO 63901						
5		Zip In Radius	Pop in Zip		City Pop	% of City in Zip	City Pop in ZIP	Total Cities' Pop in Zip	Zip Pop W/O Cities' Pop	% of Zip Area in Radius	Zip Pop in Radius W/O Cities' Pop	% City in Zip & Radius	City Pop in Zip & Radius	Total Cities' Pop in Zip & Radius	Zip Pop w City Pop in Zip & Radius
6	1	63901	7,596	Harviell	33	5%	2	3,443	4,153	100%	4,153	5%	2	3,443	7,596
7				Poplar Bluff	3,441	100%	3,441	0				100%	3,441	0	
8															
9	2	63932	219	Broseley	18	100%	18	18	201	65%	131	100%	18	18	149
10							0	0					0	0	
11							0	0					0	0	
12	3	63936	115	Dudley	11	100%	11	11	104	15%	16	0%	0	0	16
13							0	0					0	0	
14							0	0					0	0	
15	4	63937	533	Ellsinore	85	100%	85	85	448	5%	22	0%	0	0	22
16							0	0					0	0	
17							0	0					0	0	
18	5	63939	270	Fairdealing	83	30%	25	25	245	45%	110	30%	25	25	135
19							0	0					0	0	
20							0	0					0	0	
21	6	63940	299	Fisk	80	100%	80	80	219	90%	197	100%	80	80	277
22							0	0					0	0	
23							0	0					0	0	
24	7	63943	157	Grandin	33	100%	33	56	101	25%	25	0%	0	0	25
25				Hunter	23	100%	23	0				0%	0	0	
26							0	0					0	0	
27	8	63944	274	Greenville	127	100%	127	127	147	5%	7	0%	0	0	7
28							0	0					0	0	
29							0	0					0	0	
30	9	63945	402	Fairdealing	83	35%	29	49	353	95%	335	35%	29	49	384
31				Harviell	33	60%	20	0				60%	20	0	
32							0	0					0	0	
33	10	63952	57	Mill Spring	27	100%	27	27	30	5%	2	0%	0	0	2
34							0	0					0	0	
35							0	0					0	0	
36	11	63953	143	Fairdealing	83	35%	29	106	37	25%	9	35%	29	29	38
37				Naylor	77	100%	77	0				0%	0	0	
38							0	0					0	0	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Black River Skilled Nursing														
2	Poplar Bluff - New SNF														
3	Population Analysis														
4	POPULATION 65+			Project Number:			Project Address:			2670 Shelby Rd, Poplar Bluff, MO 63901					
5		Zip In Radius	Pop in Zip	City in Zip	City Pop	% of City in Zip	City Pop in ZIP	Total Cities' Pop in Zip	Zip Pop W/O Cities' Pop	% City in Zip & Radius	City Pop in Zip & Radius	Total Cities' Pop in Zip & Radius	Zip Pop w City Pop in Zip & Radius		
39	12	63954	165	Harviell	33	40%	13	66	99	45%	44	0	0	44	
40				Neelyville	53	100%	53					0			
41							0					0			
42	13	63960	617	Puxico	209	100%	209	209	408	10%	41	0	0	41	
43							0					0			
44							0					0			
45	14	63961	297	Quilin	85	100%	85	85	212	20%	42	0	0	42	
46							0					0			
47							0					0			
48	15	63967	460	Williamsville	46	100%	46	46	414	75%	311	46	46	357	
49							0					0			
50							0					0			
51	16	63962	6				0	0	6	100%	6	0	0	6	
52							0					0			
53							0					0			
54	17	63966	588				0	0	588	25%	147	0	0	147	
55							0					0			
56							0					0			
57			12,198		4,663		4,433	4,433	7,765		5,599	3,689	3,689	9,289	

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
County	Facility Name	Address	City	Zip	CON Approved Beds	Licensed SNF Beds	Licensed ICF Beds	Total Licensed Beds	3rd Qtr 2023 Occup %	4th Qtr 2023 Occup %	1st Qtr 2024 Occup %	2nd Qtr 2024 Occup %	3rd Qtr 2024 Occup %	4th Qtr 2024 Pat Days	4th Qtr 2024 Occup Days	4th Qtr 2024 Occup %	Average Occup %
1 Butler	Aspire Senior Living Poplar Bluff	3001 May St	Poplar Bluff	63901	0	120	0	120	46.4%	44.3%	44.8%	39.2%	38.3%	9,200	3,995	43.4%	42.7%
2 Butler	Cedargate Healthcare	2350 Kanell Blvd	Poplar Bluff	63901	0	108	0	108	52.1%	55.3%	51.8%	49.8%	55.1%	9,138	4,865	53.2%	52.9%
3 Butler	Manor. The	2071 Barron Rd	Poplar Bluff	63901	0	90	0	90	65.0%	65.9%	72.3%	76.0%	73.4%	8,280	6,171	74.5%	71.2%
4 Butler	Oakdale Care Center	2702 Debbie Ln	Poplar Bluff	63901	0	70	0	70	85.9%	94.2%	96.4%	90.1%	81.2%	6,440	5,397	83.8%	88.6%
5 Butler	Westwood Hills Health & Rehabilitation Center	3100 Warrior Lane	Poplar Bluff	63901	0	132	0	132	46.3%	50.0%	48.7%	48.7%	55.5%	12,144	6,481	53.4%	50.4%
6	Total				0	520	0	520									



Black River Skilled Nursing  
 Poplar Bluff - New SNF  
 Reported Unavailable Bed Analysis

Schedule 4

	A	B	C	D	E	F	G	H	I	J
	County	Facility Name	Address	City	Zip	Licensed SNF Beds	4th Qtr 2024 Pat Days	4th Qtr 2024 Occup Days	Total Available Licensed Beds [Col. G / 92]	Reported Unavailable Beds [Col. F - Col. I]
1	Butler	Aspire Senior Living Poplar Bluff	3001 May St	Poplar Bluff	63901	120	9,200	3,995	100	20
2	Butler	Cedargate Healthcare	2350 Kanell Blvd	Poplar Bluff	63901	108	9,138	4,865	99	9
3	Butler	Manor, The	2071 Barron Rd	Poplar Bluff	63901	90	8,280	6,171	90	0
4	Butler	Oakdale Care Center	2702 Debbie Ln	Poplar Bluff	63901	70	6,440	5,397	70	0
5	Butler	Westwood Hills Health & Rehabilitation Center	3100 Warrior Lane	Poplar Bluff	63901	132	12,144	6,481	132	0
6	Total					520				29

Black River Skilled Nursing  
 Poplar Bluff - New SNF  
 Additional Unavailable Bed Analysis

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
County	Facility Name	Address	City	Zip	Licensed SNF Beds	3rd Qtr 2023 Occup %	4th Qtr 2023 Occup %	1st Qtr 2024 Occup %	2nd Qtr 2024 Occup %	3rd Qtr 2024 Occup %	4th Qtr 2024 Pat Days	4th Qtr 2024 Occup Days	4th Qtr 2024 Occup %	Average Occup %	Unavailability Percentage	Unavailable Beds [Col. F * Col. P]	Reported Unavailable Beds [Sch. 4, Col. J]	Additional Unavailable Beds [Col. O - Col. R]
1	Butler Aspire Senior Living Poplar Bluff	3001 May St	Poplar Bluff	63901	120	46.4%	44.3%	44.8%	39.2%	38.3%	9,200	3,995	43.4%	42.7%	57.3%	69	20	49
2	Butler Cedargate Healthcare	2350 Kanell Blvd	Poplar Bluff	63901	108	52.1%	55.3%	51.8%	49.8%	55.1%	9,138	4,865	53.2%	52.8%	47.2%	51	9	42
3	Butler Westwood Hills Health & Rehabilitation Center	3100 Warrior Lane	Poplar Bluff	63901	132	46.3%	50.0%	48.7%	48.7%	55.5%	12,144	6,481	53.4%	50.4%	49.6%	65	0	65
4	Total				360													157

Black River Skilled Nursing  
 Poplar Bluff - New SNF  
 Memory Care Bed Analysis

Schedule 6

	A	B		C	D	E	F	G	H
	County	Facility Name	Address	City	Zip	Licensed SNF Beds	Alz. Special Care Unit?	Memory Care Beds	
1	Butler	Aspire Senior Living Poplar Bluff	3001 May St	Poplar Bluff	63901	120	No	0	
2	Butler	Cedargate Healthcare	2350 Kanell Blvd	Poplar Bluff	63901	108	No	0	
3	Butler	Manor, The	2071 Barron Rd	Poplar Bluff	63901	90	No	0	
4	Butler	Oakdale Care Center	2702 Debbie Ln	Poplar Bluff	63901	70	No	0	
5	Butler	Westwood Hills Health & Rehabilitation Center	3100 Warrior Lane	Poplar Bluff	63901	132	No	0	
6	Total					520		0	



# 2024 ALZHEIMER'S DISEASE FACTS AND FIGURES

## SPECIAL REPORT

### MAPPING A BETTER FUTURE FOR DEMENTIA CARE NAVIGATION





## About this report

*2024 Alzheimer's Disease Facts and Figures* is a statistical resource for U.S. data related to Alzheimer's disease, the most common cause of dementia. Background and context for interpretation of the data are contained in the Overview. Additional sections address prevalence, mortality and morbidity, caregiving, the dementia care workforce, and the use and costs of health care and services. The Special Report provides a comprehensive look into dementia care navigation, revealing significant insights into the experiences and challenges faced by caregivers and health care workers in helping people living with Alzheimer's or other dementia navigate the health care system.

The statistics, facts, figures, interpretations and statements made in this report are based on currently available data and information as cited in this report, all of which are subject to revision as new data and information become available.



## Specific information in this year's *Alzheimer's Disease Facts and Figures* includes:

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Brain changes that occur with Alzheimer's disease (page 8).

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Risk factors for Alzheimer's dementia (page 15).

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Number of Americans with Alzheimer's dementia nationally (page 22) and for each state (page 26).

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Lifetime risk for developing Alzheimer's dementia (page 28).

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Proportion of women and men with Alzheimer's and other dementias (page 28).

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Number of deaths due to Alzheimer's disease nationally (page 35) and for each state (page 38), and death rates by age (page 40).

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Number of family caregivers, hours of care provided, and economic value of unpaid care nationally (page 43) and for each state (page 47).

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The impact of caregiving on caregivers (page 48).

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The impact of COVID-19 on dementia caregiving (page 55).

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Members of the paid workforce involved in diagnosing, treating and caring for people with Alzheimer's or other dementias (page 59).

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Expected home health and personal care aide job growth, 2020-2030 (page 63).

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National cost of care for individuals with Alzheimer's or other dementias, including costs paid by Medicare and Medicaid and costs paid out of pocket (page 71).

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Medicare payments for people with dementia compared with people without dementia (page 72).

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Care navigator services that would be valuable to dementia caregivers (page 105).

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The Appendices detail sources and methods used to derive statistics in this report.

When possible, specific information about Alzheimer's disease is provided; in other cases, the reference may be a more general one of "Alzheimer's or other dementias." This report keeps the racial and ethnic terms and other population identifiers used in source documents when describing study findings.



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## Overview

Alzheimer's begins 20 years or more before memory loss and other symptoms develop.





Alzheimer's disease is a type of brain disease, just as coronary artery disease is a type of heart disease. It is caused by damage to nerve cells (neurons) in the brain. The brain's neurons are essential to all human activity, including thinking, talking and walking.

In Alzheimer's disease, the neurons damaged first are those in parts of the brain responsible for memory, language and thinking, which is why the first symptoms tend to be memory, language and thinking problems. Although these symptoms are new to the individual affected, the brain changes that cause them are thought to begin 20 years or more before symptoms start.<sup>1-8</sup> When symptoms become severe enough to interfere with a person's ability to perform everyday tasks, a person is said to have Alzheimer's dementia.

Individuals with mild symptoms often may continue to work, drive and participate in their favorite activities, with occasional help from family members and friends. However, Alzheimer's disease is a progressive disease, meaning it gets worse with time. How quickly it progresses and what abilities are affected vary from person to person. As time passes, more neurons are damaged and more areas of the brain are affected. Increased help from family members, friends and professional caregivers is needed to carry out everyday activities. Eventually, people may need help with activities of daily living. These are activities a person typically performs without assistance, including getting into and out of a bed or chair, bathing, dressing, using the toilet, eating and grooming.

Individuals living with Alzheimer's dementia may develop changes in mood, personality or behavior. One behavior of special concern is wandering. For the person with dementia, wandering is likely an intentional effort to reach a destination. However, they may not be able to retrace their steps and may become lost. Wandering puts individuals at risk of significant injury and death.<sup>9</sup>

### Alzheimer's Disease or Dementia?

Many people wonder what the difference is between Alzheimer's disease and dementia.

*Dementia is an overall term for a particular group of symptoms.* The characteristic symptoms of dementia are difficulties with memory, language, problem-solving and other thinking skills that affect a person's ability to perform everyday activities. Changes to the brain cause dementia, and many different brain changes can lead to dementia (see Table 1, page 6).

*Alzheimer's disease is one cause of dementia.* The brain changes of Alzheimer's disease include the excessive accumulation of the protein fragment beta-amyloid and an abnormal form of the protein tau, as well as damage to and destruction of neurons. The brain changes of Alzheimer's disease are the most common contributor to dementia. Dementia caused by Alzheimer's disease is called Alzheimer's dementia.

Eventually, the neuronal damage of Alzheimer's extends to parts of the brain that enable basic bodily functions such as walking and swallowing. Because of mobility limitations, individuals may spend most of their time in a wheelchair or on a bed. This loss of mobility, along with cognitive limitations, means they often require around-the-clock care. Ultimately, Alzheimer's disease is fatal, although many people die of other conditions before Alzheimer's becomes fatal. Studies indicate that people age 65 and older survive an average of four to eight years after a diagnosis of Alzheimer's dementia, yet some live as long as 20 years.<sup>10-18</sup> Many factors influence how long



Table 1

## Common Causes of Dementia\*

Cause	Brain changes
<b>Alzheimer's disease</b>	Accumulation of the protein beta-amyloid outside neurons and twisted strands of the protein tau inside neurons are hallmarks. They are accompanied by the death of neurons and damage to brain tissue. Inflammation and atrophy of brain tissue are other changes.
<b>Cerebrovascular disease</b>	Blood vessels in the brain are damaged and/or brain tissue is injured from not receiving enough blood, oxygen or nutrients. People with these changes who develop dementia symptoms are said to have vascular dementia.
<b>Frontotemporal degeneration (FTD)</b>	Nerve cells in the front and temporal (side) lobes of the brain die and the lobes shrink. Upper layers of the cortex soften. Abnormal amounts or forms of tau or transactive response DNA-binding protein (TDP-43) are present.
<b>Hippocampal sclerosis (HS)</b>	HS is the shrinkage and hardening of tissue in the hippocampus of the brain. The hippocampus plays a key role in forming memories. HS brain changes are often accompanied by accumulation of the misfolded protein TDP-43.
<b>Lewy body disease</b>	Lewy bodies are abnormal aggregations (or clumps) of the protein alpha-synuclein in neurons. When they develop in a part of the brain called the cortex, dementia can result. This is called dementia with Lewy bodies or DLB.
<b>Mixed pathologies</b>	When an individual shows the brain changes of more than one cause of dementia, "mixed pathologies" are considered the cause. When these pathologies result in dementia symptoms during life, the person is said to have mixed dementia or mixed etiology dementia.
<b>Parkinson's disease (PD)</b>	Clumps of the protein alpha-synuclein appear in an area deep in the brain called the substantia nigra. These clumps are thought to cause degeneration of the nerve cells that produce the chemical dopamine. <sup>29</sup> As PD progresses, alpha-synuclein can also accumulate in the cortex.

\*This table describes the most common causes of dementia. Emerging causes such as limbic-predominant age-related TDP-43 encephalopathy (LATE) are under active investigation.



Percentage of dementia cases	Symptoms
Alzheimer's is the most common cause of dementia, accounting for an estimated 60% to 80% of cases. Most individuals also have the brain changes of one or more other causes of dementia. <sup>21,22</sup> This is called mixed pathologies, and if recognized during life is called mixed dementia.	Difficulty remembering recent conversations, names or events; apathy; and depression are often early symptoms. Communication problems, confusion, poor judgment and behavioral changes may occur next. Difficulty walking, speaking and swallowing are common in the late stages of the disease.
About 5% to 10% of individuals with dementia show evidence of vascular dementia alone. <sup>21,22</sup> However, it is more common as a mixed pathology, with most people living with dementia showing the brain changes of cerebrovascular disease and Alzheimer's disease. <sup>21,22</sup>	Slowed thoughts or impaired ability to make decisions, plan or organize may be the initial symptoms, but memory may also be affected. People with vascular dementia may become less emotional and have difficulty with motor function, especially slow gait and poor balance.
About 60% of people with FTD are ages 45 to 60. <sup>23</sup> In a systematic review, FTD accounted for about 3% of dementia cases in studies that included people 65 and older and about 10% of dementia cases in studies restricted to those younger than 65. <sup>24</sup>	Typical early symptoms include marked changes in personality and behavior and/or difficulty with producing or comprehending language. Unlike Alzheimer's, memory is typically spared in the early stages of disease.
HS is present in about 3% to 13% of people with dementia. <sup>25</sup> It often occurs with the brain changes of other causes of dementia. An estimated 0.4% to 2% of dementia cases are due to HS alone. <sup>25</sup>	The most pronounced symptom of HS is memory loss, and individuals are often misdiagnosed as having Alzheimer's disease. HS is a common cause of dementia in individuals age 85 or older.
About 5% of older individuals with dementia show evidence of DLB alone, but most people with DLB also have the brain changes of Alzheimer's disease. <sup>26</sup>	Early symptoms include sleep disturbances, well-formed visual hallucinations and visuospatial impairment. These symptoms may change dramatically throughout the day or from day to day. Problems with motor function (similar to Parkinson's disease) are common. Memory loss may occur at some point in the disease.
More than 50% of people diagnosed with Alzheimer's dementia who were studied at Alzheimer's Disease Research Centers had mixed dementia. <sup>22</sup> In community-based studies, the percentage is considerably higher. <sup>21</sup> Mixed dementia is most common in people age 85 or older. <sup>27,28</sup>	Symptoms vary depending on the combination of brain changes present.
A systematic review found that 3.6% of dementia cases were due to PD and 24.5% of people with PD developed dementia. <sup>30</sup>	Problems with movement (slowness, rigidity, tremor and changes in gait) are common symptoms of PD. Cognitive symptoms may develop later in the disease, typically years after movement symptoms.



individuals live after receiving a diagnosis. They include age at diagnosis, how far the disease has progressed at diagnosis, whether the individual has other health conditions such as diabetes or kidney disease that may limit remaining lifespan and complicate care and treatment, and whether the individual has mixed dementia — the brain changes of not only Alzheimer's disease but also another type of dementia.

There is no proven way to prevent Alzheimer's disease, and there is currently no cure. However, because of the large number of people living with Alzheimer's and other dementias worldwide (more than 55 million)<sup>19</sup> and the devastating effect of dementia on individuals, families, communities and health care systems, finding ways to prevent, slow, better manage and cure Alzheimer's and other dementias is a top priority for research centers around the globe.

### Brain Changes of Alzheimer's Disease

A healthy adult brain has billions of neurons, each with long, branching extensions. These extensions enable individual neurons to form connections with other neurons. At such connections, called synapses, information flows in tiny bursts of chemicals that are released by one neuron and taken up by another neuron. The brain contains trillions of synapses. They allow signals to travel rapidly through the brain. These signals are the basis of memories, thoughts, sensations, emotions, movements and skills.

Over the years, researchers have identified many changes in the brain that may interfere with chemical signaling and lead to problems with thinking, learning and everyday function that arise as a result of Alzheimer's disease. The accumulation of the protein fragment beta-amyloid into clumps (called beta-amyloid plaques) *outside* neurons and the accumulation of an abnormal form of the protein tau (called tau tangles) *inside* neurons are two of several brain changes associated with Alzheimer's disease.

Beta-amyloid and tau have different roles in Alzheimer's. Plaques and smaller accumulations of beta-amyloid may damage neurons by interfering with neuron-to-neuron communication at synapses. Inside neurons, tau tangles block the transportation of nutrients and other molecules essential for the normal function and survival of neurons while harming connections between neurons.

Beta-amyloid and tau accumulation are followed by damage to and destruction of neurons (called neurodegeneration) and other brain cells. Neurodegeneration, along with beta-amyloid and tau accumulation, are key features of Alzheimer's disease. The presence of toxic beta-amyloid and tau proteins is

believed to activate immune system cells in the brain called microglia. Microglia try to clear the toxic proteins and debris from dead and dying cells. Chronic inflammation may set in when the microglia can't keep up with all that needs to be cleared.

Another brain change associated with Alzheimer's disease is atrophy (decreased brain volume) resulting from neurodegeneration and other factors. While some degree of brain atrophy is common in older age, even in people who are cognitively healthy, atrophy is accelerated in people with Alzheimer's dementia.<sup>20</sup> Normal brain function is further compromised by decreases in the brain's ability to metabolize glucose, its main fuel.

### Timing of Brain Changes

Researchers have gained insight into the timing of these brain changes. Among people with rare genetic mutations that cause Alzheimer's disease for whom long-term data have been collected, researchers have found that levels of beta-amyloid significantly increased starting 22 years before symptoms were expected to develop (individuals with these genetic mutations usually develop symptoms at the same or nearly the same age as their parent with Alzheimer's).<sup>5</sup> In another study, abnormal levels of the neurofilament light chain protein, a biomarker of neurodegeneration, were also found to start 22 years before symptoms were expected to develop.<sup>7</sup> A third group of researchers found that levels of different types of tau protein increase when beta-amyloid clumps together as amyloid plaques, and that levels of these types of tau increase as early as two decades before the characteristic mature tau tangles of Alzheimer's disease appear.<sup>8</sup> Researchers also found that glucose metabolism starts decreasing 18 years before expected symptom onset, and brain atrophy begins 13 years before expected symptom onset.<sup>5</sup>

### Brain Changes as Biomarkers

These brain changes are biomarkers of Alzheimer's disease. Biomarkers are biological changes that can be measured to indicate the presence or absence of a disease or the risk of developing a disease. For example, the level of glucose in blood is a biomarker of diabetes, and cholesterol level is a biomarker of cardiovascular disease risk. Great progress has been made in measuring Alzheimer's disease biomarkers. For example, we can now identify abnormal levels of beta-amyloid and tau in cerebrospinal fluid (CSF, the fluid surrounding the brain), and an imaging technique known as positron emission tomography (PET) can produce pictures showing where beta-amyloid and tau have accumulated in the brain. In addition, many research groups are working on blood tests for Alzheimer's disease. If these blood tests prove effective they could simplify and greatly speed-up diagnosis of Alzheimer's.

Table 2

## Signs of Alzheimer's Dementia Compared With Typical Age-Related Changes\*

Signs of Alzheimer's Dementia	Typical Age-Related Changes
<b>Memory loss that disrupts daily life:</b> One of the most common signs of Alzheimer's dementia, especially in the early stage, is forgetting recently learned information. Others include asking the same questions over and over, and increasingly needing to rely on memory aids (for example, reminder notes or electronic devices) or family members for things that used to be handled on one's own.	Sometimes forgetting names or appointments, but remembering them later.
<b>Challenges in planning or solving problems:</b> Some people experience changes in their ability to develop and follow a plan or work with numbers. They may have trouble following a familiar recipe or keeping track of monthly bills. They may have difficulty concentrating and take much longer to do things than they did before.	Making occasional errors when managing finances or household bills.
<b>Difficulty completing familiar tasks:</b> People with Alzheimer's often find it hard to complete daily tasks. Sometimes, people have trouble driving to a familiar location, organizing a grocery list or remembering the rules of a favorite game.	Occasionally needing help to use microwave settings or record a television show.
<b>Confusion with time or place:</b> People living with Alzheimer's can lose track of dates, seasons and the passage of time. They may have trouble understanding something if it is not happening immediately. Sometimes they forget where they are or how they got there.	Getting confused about the day of the week but figuring it out later.
<b>Trouble understanding visual images and spatial relationships:</b> For some people, having vision problems is a sign of Alzheimer's. They may also have problems judging distance and determining color and contrast, causing issues with driving.	Vision changes related to cataracts.
<b>New problems with words in speaking or writing:</b> People living with Alzheimer's may have trouble following or joining a conversation. They may stop in the middle of a conversation and have no idea how to continue or they may repeat themselves. They may struggle with vocabulary, have trouble naming a familiar object or use the wrong name (e.g., calling a watch a "hand clock").	Sometimes having trouble finding the right word.
<b>Misplacing things and losing the ability to retrace steps:</b> People living with Alzheimer's may put things in unusual places. They may lose things and be unable to go back over their steps to find them. They may accuse others of stealing, especially as the disease progresses.	Misplacing things from time to time and retracing steps to find them.
<b>Decreased or poor judgment:</b> Individuals may experience changes in judgment or decision-making. For example, they may use poor judgment when dealing with money or pay less attention to grooming or keeping themselves clean.	Making a bad decision or mistake once in a while, such as neglecting to schedule an oil change for a car.
<b>Withdrawal from work or social activities:</b> People living with Alzheimer's disease may experience changes in the ability to hold or follow a conversation. As a result, they may withdraw from hobbies, social activities or other engagements. They may have trouble keeping up with a favorite sports team or activity.	Sometimes feeling uninterested in family and social obligations.
<b>Changes in mood, personality and behavior:</b> The mood and personalities of people living with Alzheimer's can change. They can become confused, suspicious, depressed, fearful or anxious. They may be easily upset at home, at work, with friends or when out of their comfort zones.	Developing very specific ways of doing things and becoming irritable when a routine is disrupted.

\*For more information about the symptoms of Alzheimer's, visit [alz.org](http://alz.org).



## Alzheimer's Disease Continuum

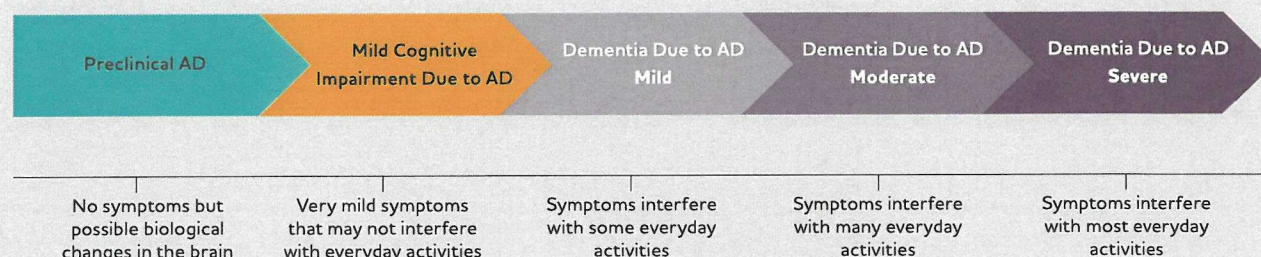
The progression of Alzheimer's disease from brain changes that are unnoticeable by the person affected to brain changes that cause problems with memory and thinking, and eventually physical disability, is called the Alzheimer's disease continuum.

On this continuum, there are three broad phases: preclinical Alzheimer's disease, mild cognitive impairment (MCI) due to Alzheimer's disease and dementia due to Alzheimer's disease, also called Alzheimer's dementia (see Figure 1).<sup>40-43</sup> The Alzheimer's dementia phase is further broken down into mild, moderate and severe dementia.

While we know the Alzheimer's disease continuum starts with preclinical Alzheimer's disease (no symptoms) and ends with severe Alzheimer's dementia (severe symptoms), how long individuals spend in each part of the continuum varies. The length of each part of the continuum is influenced by age, genetics and other factors.<sup>44</sup>

Figure 1

### Alzheimer's Disease (AD) Continuum\*



\*Although these arrows are of equal size, the components of the AD continuum are not equal in duration.

#### Preclinical Alzheimer's Disease

In this phase, individuals may have measurable brain changes that indicate the earliest signs of Alzheimer's disease, but they have not yet developed symptoms such as memory loss or difficulty thinking. Examples of Alzheimer's brain changes that might be detected in this phase include abnormally increased levels and distribution of beta-amyloid and tau and decreased metabolism of glucose as shown on positron emission tomography (PET) scans, as well as changes in tau protein in cerebrospinal fluid (CSF).<sup>45-47</sup> When the early changes of Alzheimer's disease occur, the brain compensates for them, enabling individuals to continue to function normally.

Although research settings have the tools and expertise to identify some of the early brain changes of Alzheimer's disease, additional research is needed to fine-tune the tools' accuracy before they become available for widespread use in hospitals, doctors' offices and other clinical settings. It is important to note that not all individuals with evidence of Alzheimer's-related brain changes go on to develop symptoms of MCI or dementia due to Alzheimer's disease before their deaths, even if they live for many years or decades after these biomarkers are detected.<sup>48-50</sup>



### **MCI Due to Alzheimer's Disease**

People with MCI due to Alzheimer's disease have biomarker evidence of Alzheimer's brain changes plus new but subtle symptoms such as problems with memory, language and thinking. These cognitive problems may be noticeable to the individual, family members and friends, but not to others, and they may not interfere with the individual's ability to carry out everyday activities.

Everyone who develops Alzheimer's dementia first experiences MCI, although it might not be recognized or diagnosed because of the subtlety of symptoms. Among those with MCI, about 15% develop dementia after two years.<sup>51</sup> About one-third develop dementia due to Alzheimer's within five years.<sup>52</sup> However, some individuals with MCI do not have additional cognitive decline or revert to normal cognition. Among population-based studies, a systematic review and meta-analysis reported a reversion rate of 26%.<sup>53</sup> Identifying which individuals with MCI are more likely to develop dementia is a major goal of current research.

### **Dementia Due to Alzheimer's Disease**

Dementia due to Alzheimer's disease is characterized by noticeable memory, language, thinking or behavioral symptoms that impair a person's ability to function in daily life, combined with biomarker evidence of Alzheimer's-related brain changes. As Alzheimer's disease progresses, individuals commonly experience multiple types of symptoms that change with time. These symptoms reflect the degree of damage to neurons in different parts of the brain. The pace at which symptoms of dementia advance from mild to moderate to severe differs from person to person.

#### ***Mild Alzheimer's Dementia***

In the mild stage of Alzheimer's dementia, most individuals are able to function independently in many areas but are likely to require assistance with some activities to maximize independence and remain safe. They may still be able to drive, work and participate in their favorite activities. They may need more time to complete common daily tasks.

Paying bills and making financial decisions may be especially challenging. The U.S. Social Security Administration notes that people living with dementia are at an especially high risk of becoming victims of fraud and financial abuse.<sup>54</sup> This may be because handling finances is a particularly complex cognitive activity made even harder by declines in executive function. Executive function comprises the higher-level cognitive skills used to control and coordinate other cognitive abilities and behaviors.<sup>55</sup> Declines in executive function can play out as difficulty planning, organizing and carrying out tasks, as well as poor judgment, socially inappropriate behavior, and inability to understand how one's behavior or choices affect others.<sup>56</sup> Impaired executive function not only makes it challenging for individuals with Alzheimer's dementia to manage finances, but may also make them especially vulnerable to financial abuse and scams because their ability to discern between well-intentioned and ill-intentioned behavior and language in others may be diminished.

#### ***Moderate Alzheimer's Dementia***

In the moderate stage of Alzheimer's dementia, which is often the longest stage, individuals experience more problems with memory and language, are more likely to become confused, and find it harder to complete multistep tasks such as bathing and dressing. They may become incontinent at times, begin to have problems recognizing loved ones, and start showing personality and behavioral changes, including suspiciousness and agitation.

#### ***Severe Alzheimer's Dementia***

In the severe stage of Alzheimer's dementia, individuals' ability to communicate verbally is greatly diminished, and they are likely to require around-the-clock care. Because of damage to areas of the brain involved in movement, individuals may be unable to walk. As a result, they may spend most of their time in a wheelchair or bed. This loss of mobility increases their vulnerability to physical complications including blood clots, skin infections and sepsis (a condition that triggers body-wide inflammation that can result in organ failure). Damage to areas of the brain that control swallowing makes it difficult to eat and drink. This can result in individuals swallowing food into the trachea (windpipe) instead of the esophagus (food pipe). As a result, food particles may be deposited in the lungs and cause a type of lung infection called aspiration pneumonia. Aspiration pneumonia is a contributing cause of death among many individuals with Alzheimer's dementia (see Mortality and Morbidity section, page 34).



## When Dementia-Like Symptoms Are Not Dementia

It is important to note that some individuals have dementia-like symptoms without the progressive brain changes of Alzheimer's or other degenerative brain diseases. Causes of dementia-like symptoms include depression, untreated sleep apnea, delirium, side effects of medications, Lyme disease, thyroid problems, head injury, blood clots or tumors in the brain, certain vitamin deficiencies and excessive alcohol consumption. Unlike Alzheimer's and other dementias, the dementia caused by these conditions often may be reversed with treatment.

The differences between normal age-related cognitive changes and the cognitive changes of Alzheimer's disease can be subtle (see Table 2, page 9). People experiencing cognitive changes should seek medical help to determine if the changes are normal for their age, are reversible, or may be a symptom of Alzheimer's or another dementia.

## Mixed Dementia

Many people with dementia have brain changes associated with more than one cause.<sup>21, 31-36</sup> This is called mixed dementia. Some studies report that the majority of people with the brain changes of Alzheimer's disease also have the brain changes of a second cause of dementia on autopsy.<sup>21, 22</sup> One autopsy study showed that of 447 older people who were believed to have Alzheimer's dementia when they died, only 3% had the brain changes of Alzheimer's disease alone, while 15% had the brain changes of an entirely different cause of dementia, and 82% had the brain changes of Alzheimer's disease plus at least one other cause of dementia.<sup>21</sup> Studies suggest that mixed dementia is the norm, not just for those diagnosed with Alzheimer's dementia but also for those diagnosed with other types of dementia.<sup>37, 38</sup>

Mixed dementia is especially common at advanced ages.<sup>31, 39</sup> For example, those age 85 or older are more likely than those younger than 85 to have evidence of two or more causes of dementia.<sup>27, 28</sup> Having Alzheimer's brain changes plus brain changes of another type of dementia increases one's chances of having dementia symptoms in one's lifetime compared with having Alzheimer's brain changes alone.<sup>21, 31</sup> Mixed dementia may also account for the wide variety of memory and

thinking problems experienced by people living with dementia. It is currently not possible to determine with certainty which symptoms are due to which dementia.

## Treatments

### Drug Treatments

A total of eight drugs are available for the treatment of Alzheimer's disease. Two of these drugs change the underlying biology of Alzheimer's and slow cognitive and functional decline in some individuals. A third such drug was under review by the FDA for potential approval at press time. Six additional drugs have been approved that treat the symptoms of Alzheimer's dementia.

### Treatments to Slow Alzheimer's Disease

The drugs aducanumab and lecanemab change the underlying biology of Alzheimer's disease and delay disease progression. They do this by helping remove plaques and a form of beta-amyloid called protofibrils that plays a role in the development of beta-amyloid plaques. Earlier this year, the manufacturer of aducanumab announced that the drug was being discontinued.<sup>57</sup> The manufacturer said aducanumab is being discontinued in order for the company "to reprioritize its resources in Alzheimer's disease." Aducanumab is not being discontinued for reasons related to safety or efficacy. People who are now receiving the drug as part of a clinical trial will continue to have access to aducanumab until May 1, 2024, and aducanumab will continue to be available until November 1, 2024, for people who are now receiving it by prescription.

Focusing on lecanemab, clinical trials of the drug showed moderate slowing of cognitive and functional decline in individuals with mild cognitive impairment (MCI) or mild dementia due to Alzheimer's.<sup>58</sup> Only individuals with MCI or mild dementia due to Alzheimer's and evidence of beta-amyloid buildup in the brain based on brain imaging or CSF analysis were eligible to participate in clinical trials of lecanemab. Lecanemab is not a cure for Alzheimer's disease and not appropriate for all individuals living with Alzheimer's. Safety and effectiveness have only been established in individuals living with MCI due to Alzheimer's disease and mild dementia due to Alzheimer's disease.

It's important to note that while clinical trials showed statistically significant differences in cognitive outcomes between people randomized to receive lecanemab and those randomized to receive placebo, the benefits of lecanemab in the short term may be imperceptible to those receiving them. Because lecanemab has been approved fairly recently, we don't know its effectiveness over the long term, although extension studies, in which people who volunteer for a clinical trial continue to receive treatment after a trial is completed, are underway.



Anti-amyloid treatments such as aducanumab and lecanemab can have side effects. They can cause serious allergic reactions as well as amyloid-related imaging abnormalities (ARIA), infusion-related reactions, headaches and falls.

ARIA is a common side effect that does not usually cause symptoms but can be serious. It is typically a temporary swelling in areas of the brain and usually resolves over time. Some people may also have small spots of bleeding in or on the surface of the brain along with swelling. Most people with swelling who experience ARIA do not have symptoms. Those who do experience symptoms of ARIA may have headache, dizziness, nausea, confusion and vision changes. Management of ARIA may include discontinuation of the medication either temporarily or indefinitely.

Individuals with two copies of the APOE-e4 gene are at higher risk of developing ARIA.<sup>59</sup> The FDA encourages APOE-e4 testing before starting treatment. Prior to testing, doctors should discuss with patients the risk of ARIA and the implications of genetic testing results.

These are not all the possible side effects. Individuals should talk with their doctors to develop a treatment plan that is right for them, including weighing the benefits and risks of all approved therapies.

Appropriate use recommendations have been developed to guide physicians in determining which individuals should and should not receive treatment with lecanemab.<sup>59</sup> The recommendations also discuss ARIA monitoring and management, key points to share with individuals living with dementia and their care partners, and incorporating treatments into clinical practice.

A variety of other treatments targeting the underlying biology of Alzheimer's disease are being developed. They address many of the known brain changes associated with Alzheimer's disease, including but not limited to tau accumulation, inflammation, altered cell metabolism and oxidative stress (damage from toxic oxygen molecules).<sup>60,61</sup> As of January 1, 2023, 156 clinical trials were underway testing additional disease-modifying therapies.<sup>62</sup>

#### ***Treatments to Address Cognitive and Behavioral Symptoms***

Five of these eight drugs — donepezil, rivastigmine, galantamine, memantine and memantine combined with donepezil — are aimed at treating cognitive symptoms. They do not affect the underlying brain changes that cause Alzheimer's, nor do they slow or stop the course of the disease. With the exception of memantine, they treat symptoms by increasing the amount of chemicals called neurotransmitters in the brain. Neurotransmitters help brain cells communicate with each other. Memantine protects the brain from excessive levels of a

neurotransmitter called glutamate, which overstimulates neurons and can damage them. These five drugs may have side effects, such as headaches and nausea. These are not all the possible side effects. As with lecanemab, individuals should talk with their doctors to develop a treatment plan that is right for them, including weighing the benefits and risks of all approved therapies.

One of the eight drugs, brexpiprazole, has been approved by the FDA to treat agitation that can occur in Alzheimer's. Agitation is common in Alzheimer's disease, with 60% of people with MCI and 76% of people with Alzheimer's dementia experiencing agitation.<sup>63</sup> Brexpiprazole is thought to lessen agitation through its effects on dopamine and serotonin receptors in the brain. Brexpiprazole is also FDA-approved for the treatment of major depressive disorder. It's important to note that brexpiprazole is an atypical antipsychotic drug. Atypical antipsychotics have been associated with an increased risk of stroke and death in older patients with dementia-related psychosis.<sup>64, 65</sup> Non-drug interventions should be tried first.

In addition to these eight drugs, the drug suvorexant, approved for insomnia, has been shown in clinical trials to be effective in treating problems with falling asleep and staying asleep that can occur in people with mild to moderate Alzheimer's disease. Suvorexant inhibits the activity of orexin, a type of neurotransmitter involved in the sleep-wake cycle. Possible side effects include, but are not limited to, impaired alertness and motor coordination (including impaired driving), worsening of depression or suicidal thinking, complex sleep behaviors (such as sleep-walking and sleep-driving), sleep paralysis and compromised respiratory function.

Why insomnia and other sleeping problems occur in people living with Alzheimer's is unclear. However, researchers have found that Alzheimer's brain changes disrupt the sleep-wake cycle, leading to increased sleep fragmentation and wakefulness and decreased slow-wave sleep.<sup>66</sup> Researchers have also found that sleep abnormalities accelerate the accumulation of beta-amyloid and release of toxic tau in the brain, increasing the risk of dementia. In this way, sleep problems may be bidirectional, with Alzheimer's disease increasing the risk of sleep disturbances and sleep disturbances increasing the risk of Alzheimer's.<sup>66, 67</sup> More research is needed to better understand the relationship between sleep abnormalities and Alzheimer's. About one-quarter of people with dementia have problems sleeping, and the problems can worsen as the disease progresses.<sup>68</sup>

As of January 1, 2023, 31 clinical trials were underway testing additional agents to treat Alzheimer's cognitive, behavioral and neuropsychiatric symptoms.<sup>62</sup>



### Non-Drug Treatments

There are also non-drug treatments for the symptoms of Alzheimer's disease. Non-drug treatments do not change the underlying biology of the disease. They are often used with the goals of maintaining or improving cognitive function, overall quality of life and engagement, and the ability to perform activities of daily living.

Non-drug treatments include physical activity, memory and orientation exercises, music- and art-based therapies, and many others. Non-drug treatments may be used with a more specific goal of reducing behavioral and psychological symptoms such as depression, apathy, wandering, sleep disturbances, agitation and aggression. For example, a review and analysis of nonpharmacologic treatments for agitation and aggression in people with dementia concluded that non-drug interventions seemed to be more effective than pharmacologic interventions for reducing aggression and agitation.<sup>69</sup>

### Risk Factors for Alzheimer's Dementia

The vast majority of people who develop Alzheimer's dementia are age 65 or older. This is called late-onset Alzheimer's dementia. Experts believe that Alzheimer's dementia, like other common chronic diseases and

conditions, develops as a result of multiple factors rather than a single cause. Exceptions are cases of Alzheimer's related to trisomy 21 in Down syndrome and rare cases of Alzheimer's disease related to specific genetic mutations.

### Age, Genetics and Family History

The greatest risk factors for Alzheimer's dementia are older age,<sup>70, 71</sup> genetics — especially the e4 form of the apolipoprotein E (APOE) gene<sup>72, 73</sup> — and having a family history of Alzheimer's dementia.<sup>74-77</sup>

### Age

Age is the greatest of these three risk factors. The percentage of people with Alzheimer's dementia increases dramatically with age. Five percent of people age 65 to 74, 13.2% of people age 75 to 84, and 33.4% of people age 85 or older have Alzheimer's dementia (see Prevalence section, page 22). The aging of the population, including the baby-boom generation, will significantly increase the number of people in the United States with Alzheimer's dementia.<sup>78</sup> However, it is important to note that Alzheimer's dementia is not a normal part of aging, and older age alone is not sufficient to cause Alzheimer's dementia.<sup>79</sup>

## Actions to Proactively Manage Dementia

Proactive management of Alzheimer's and other dementias can improve the quality of life of affected individuals and their caregivers. Proactive management includes actions by the person living with dementia and their caregivers and actions by health care providers and other members of the health care workforce.

### Actions for the Person Living with Dementia and Their Caregivers

These actions include:

- Becoming educated about the disease.
- Maintaining a sense of self and relationships with others.
  - Identifying and participating in activities that are meaningful and bring purpose to one's life.
  - Identifying opportunities to connect with others living with dementia and their caregivers and participating in related activities.
- Planning for the future, including future health care needs, changes in employment and financial changes.

### Actions for Health Care Providers and Other Members of the Health Care Workforce

These actions include:

- Appropriate use of available treatment options.
- Effective management of coexisting conditions.
- Coordination of care among health care providers, other health care professionals and lay caregivers.
- Directing family caregivers to resources to help them learn how to manage the day-to-day needs of the individual living with dementia.

To learn more, see the Caregiving section (page 42) and Workforce section (page 58). Visit [alz.org](http://alz.org) to learn more about Alzheimer's disease, as well as practical information for living with Alzheimer's and being a caregiver.

Table 3

Percentage of African Americans, European Americans and American Indians with Specified APOE Pairs\*

APOE Pair	African Americans	European Americans	American Indians†
e3/e3	45.2	63.4	71.6 - 73.2
e3/e4	28.6	21.4	22.7 - 23.9
e3/e2	15.1	10.2	2.6 - 3.0
e2/e4	5.7	2.4	0.5
e4/e4	4.5	2.4	1.0 - 1.2
e2/e2	0.7	0.2	0.0 - 0.1

\*Data for APOE pairs in other populations are not available. Percentages do not total 100 due to rounding.

†Study provided a percentage for women and a percentage for men. Percentages represent the range for the two.

Created from data from Rajan et al.<sup>93</sup> and Kataoka et al.<sup>94</sup>

### Genetics

Researchers have found many genes that increase or decrease the risk of Alzheimer's dementia. In fact, in 2022 researchers identified 31 new genes that appear to affect biological processes known to be at play in Alzheimer's disease.<sup>80</sup> Of the many genes that increase risk, APOE-e4 has the strongest impact on risk of late-onset Alzheimer's dementia. APOE provides the blueprint for a protein that transports cholesterol in the bloodstream. Everyone inherits one of three forms (alleles) of the APOE gene — e2, e3 or e4 — from each parent, resulting in six possible APOE pairs: e2/e2, e2/e3, e2/e4, e3/e3, e3/e4 and e4/e4.

Having the e4 form of APOE increases one's risk of developing Alzheimer's dementia compared with having the e3 or e2 forms but does not guarantee that an individual will develop Alzheimer's dementia. Having the e2 form may decrease one's risk compared with having the e3 or e4 form. Individuals with the e2 form who develop Alzheimer's dementia generally do so later in life than those without the e2 form. The e3 form is thought to have a neutral effect on Alzheimer's dementia risk.

In general, the risk of developing Alzheimer's dementia increases with inheriting one copy of the e4 form and increases further still with inheriting two copies of the e4 form, compared with inheriting only copies of the e2 or e3 forms.<sup>79-81</sup> For example, based on data from a study in Europe and a study in the United States, of

people age 65-69, the risk of developing dementia by the early to mid-80s was 5% to 7% among those with no copies of the e4 form, 15% to 16% among those with one copy, and 31% to 40% among those with two copies.<sup>82</sup> In addition, those with the e4 form are more likely to have beta-amyloid accumulation and Alzheimer's dementia at a younger age than those with the e2 or e3 forms of the APOE gene.<sup>83</sup>

A meta-analysis including 20 published articles describing the frequency of the e4 form among people in the United States who had been diagnosed with Alzheimer's dementia found that 56% had one copy of the APOE-e4 gene, and 11% had two copies of the APOE-e4 gene.<sup>84</sup> Another study found that among 1,770 diagnosed individuals from 26 Alzheimer's Disease Research Centers across the United States, 65% had at least one copy of the APOE-e4 gene.<sup>85</sup>

Most of the research to date associating APOE-e4 with increased risk of Alzheimer's dementia has studied White individuals. Studies of this association in Black and Hispanic populations have had inconsistent results. For example, some have found that having the e4 allele did not increase risk among Black people,<sup>86-88</sup> while other studies have found that it significantly increased risk.<sup>89-92</sup> In addition, researchers have found differences in the frequency of APOE pairs among racial and ethnic groups. For instance, data show that a higher percentage of African Americans have at least one copy of the e4 allele (see Table 3) than European American and American Indian people.<sup>86, 87, 93, 94</sup> Among individuals of African ancestry who have one copy of e3 and one of e4, those with a particular variant of e3 called R145C are at increased risk of developing Alzheimer's dementia compared with those who do not have this variant.<sup>95</sup> Researchers have also found that another genetic factor, the ATP-binding cassette transporter (ABCA7) protein, doubles the risk of Alzheimer's dementia in Black people with ABCA7 compared with Black people without ABCA7.<sup>90</sup>

To better understand inconsistencies in the effect of APOE-e4 in Hispanic/Latino groups, one research team analyzed the effect of APOE-e4 in 4,183 individuals from six Latino backgrounds: Central American, Cuban, Dominican, Mexican, Puerto Rican and South American.<sup>96</sup>

This report keeps the racial, ethnic and other population identifiers used in source documents when describing findings from specific studies.



They found that the effect of APOE-e4 on cognitive decline differed among groups, suggesting that factors related to geographic background and genetic ancestry may alter the extent to which APOE-e4 contributes to cognitive decline.

These inconsistencies point to the need for more research to better understand the genetic mechanisms involved in Alzheimer's risk among different racial and ethnic groups.

#### Trisomy in Down Syndrome

In Down syndrome, an individual is born with three copies of chromosome 21 (called trisomy 21) instead of two. People with Down syndrome have an increased risk of developing Alzheimer's dementia, and this is believed to be related to trisomy 21. Chromosome 21 includes the gene that encodes for the production of the amyloid precursor protein (APP), which in people with Alzheimer's is cut into beta-amyloid fragments that accumulate into plaques. Having an extra copy of chromosome 21 may increase the production of beta-amyloid fragments in the brain.

Overall, people with Down syndrome develop Alzheimer's dementia at an earlier age than people without Down syndrome. By age 40, most people with Down syndrome have significant levels of beta-amyloid plaques and tau tangles in their brains.<sup>97</sup> According to the National Down Syndrome Society, about 30% of people with Down syndrome who are in their 50s, and about 50% of those in their 60s, have Alzheimer's disease dementia.<sup>98</sup> Emerging research suggests that Alzheimer's brain changes in people with Down syndrome may be even more common than these percentages indicate.<sup>99, 100</sup>

As with all adults, advancing age increases the likelihood that a person with Down syndrome will exhibit symptoms of Alzheimer's dementia. Life expectancy of people with Down syndrome has more than doubled in the last 70 years, which corresponds to a growing population of adults living with both this condition and dementia. Dementia is the leading cause of death for adults with Down syndrome.<sup>101</sup> Care for people with Down syndrome and dementia is especially challenging due to the intellectual, cognitive and communication impairments associated with Down syndrome that are present in addition to the cognitive impairments of dementia. Making advances in the care of people living with Down syndrome and dementia is stymied by the common exclusion of people with Down syndrome from research studies.

#### Genetic Mutations

An estimated 1% or less of people living with Alzheimer's dementia develop the disease as a result of mutations to any of three specific genes.<sup>102</sup> (A genetic mutation is an abnormal change in the sequence of chemical pairs that make up genes.) This is called dominantly inherited or autosomal dominant Alzheimer's dementia. These mutations involve the amyloid protein precursor gene and the genes for the presenilin 1 and presenilin 2 proteins. Symptoms tend to develop before age 65 and sometimes as young as age 30. Because of this, individuals with these mutations may also be referred to as having younger-onset Alzheimer's dementia. People who inherit an Alzheimer's mutation to these genes are virtually guaranteed to develop the disease if they live a normal life span.<sup>103</sup> However, rare cases of individuals who have one of these mutations and do not develop dementia symptoms until late life have recently been reported.<sup>104, 105</sup> The experiences of these individuals highlight the possibility of being resilient to Alzheimer's dementia despite genetic mutations, and point to new areas of investigation to better understand resilience.

#### Family History

A family history of Alzheimer's dementia is not necessary for an individual to develop the disease. However, individuals who have or had a parent or sibling (first-degree relative) with Alzheimer's dementia are more likely to develop the disease than those who do not have a first-degree relative with Alzheimer's dementia.<sup>74, 81</sup> Those who have more than one first-degree relative with Alzheimer's dementia are at even higher risk.<sup>77</sup> A large, population-based study found that having a parent with dementia increases risk independent of known genetic risk factors such as APOE-e4.<sup>106</sup> When diseases run in families, heredity (genetics) and shared non-genetic factors (for example, access to healthy foods and habits related to physical activity) may play a role.

#### Modifiable Risk Factors

Although age, genetics and family history cannot be changed, some risk factors can be changed or modified to reduce the risk of cognitive decline and dementia. Examples of modifiable risk factors are physical activity, smoking, education, staying socially and mentally active, blood pressure and diet. In fact, *The Lancet* Commission report on dementia prevention, intervention and care suggests that up to 40% of dementia cases may be attributable to modifiable risk factors.<sup>107</sup> A 2022 study found that nearly 37% of cases of dementia in the United States were associated with eight modifiable risk factors, the most common being midlife obesity, followed by physical inactivity and low educational attainment.<sup>108</sup>



In addition to *The Lancet* Commission report, a number of other influential reports point to the promising role of addressing these factors to reduce risk of dementia and cognitive decline. These include the 2019 World Health Organization (WHO) recommendations to reduce risk of cognitive decline and dementia and a report from the National Academy of Medicine.<sup>109, 110</sup> There are many potentially modifiable risk factors for Alzheimer's disease — too many to discuss in a single report. This section focuses on some of the modifiable risk factors with substantial supportive evidence identified in *The Lancet* Commission report, the WHO recommendations and the National Academy of Medicine report.

As mentioned earlier, most people living with dementia have the brain changes of Alzheimer's disease as well as another form of dementia (see mixed dementia, page 12), and it can be difficult to tell which brain changes are the cause of dementia. As a result, research linking risk factors to dementia is often assumed to support a link between risk factors and Alzheimer's disease. However, additional research is needed to disentangle risk factors that are specific to Alzheimer's disease from those that are specific to other causes of dementia.<sup>111</sup>

#### **Cardiovascular Health Factors**

Brain health is affected by the health of the heart and blood vessels. Although the brain makes up just 2% of body weight, it consumes 20% of the body's oxygen and energy supplies.<sup>112</sup> A healthy heart ensures that enough blood is pumped to the brain, while healthy blood vessels enable the oxygen- and nutrient-rich blood to reach the brain so it can function normally. One of the clearest examples of this relationship is how stroke, which occurs when a blood vessel in the brain is blocked or bursts, markedly increases dementia risk.<sup>113</sup>

Many factors that increase the risk of cardiovascular disease are also associated with a higher risk of dementia.<sup>114</sup> These factors include hypertension,<sup>91, 115-117</sup> diabetes<sup>118-120</sup> and smoking.<sup>121, 122</sup> Likewise, factors that decrease risk of cardiovascular disease are associated with decreased risk of dementia. Physical activity is an example of a modifiable factor that reduces risk of cardiovascular disease and may also reduce risk of dementia.<sup>123-133</sup> Although researchers have studied a wide variety of physical activities, they do not know if specific types of physical activity are more effective at decreasing risk, or how the frequency or duration of physical activity may influence the effectiveness of physical activity.

In addition to physical activity, many but not all studies suggest that consuming a heart-healthy diet may be associated with reduced dementia risk.<sup>134-142</sup> A heart-healthy diet emphasizes fruits, vegetables, whole grains, fish, chicken, nuts, legumes and healthy fats such as olive oil while limiting saturated fats, red meat and sugar. Examples of heart-healthy diets include but are not limited to the Mediterranean, DASH (Dietary Approaches to Stop Hypertension) and MIND (Mediterranean-DASH Intervention for Neurodegenerative Delay) diets.<sup>143-145</sup> However, a recent trial of the MIND diet did not show a difference in cognitive change for people following the diet compared with a control group over three years.<sup>141</sup> It's possible that dietary changes take many years to influence dementia risk. No single food, beverage, ingredient, vitamin or supplement has been proven to prevent or cure Alzheimer's or any other dementia.<sup>146</sup>

The risk of developing dementia in later life can be influenced by health factors present years and decades earlier. For example, midlife obesity,<sup>115, 147, 148</sup> hypertension<sup>91, 115-117</sup> and high cholesterol<sup>149</sup> are among the midlife factors associated with an increased risk of dementia in later life.

Today, researchers are looking at potential risk factors present even earlier in life, such as in young adulthood, to understand how health factors experienced throughout one's life span may affect later life cognitive health.<sup>150-154</sup> This life course approach offers the potential to inform preventive measures across multiple stages of life.

#### **Education**

Researchers have long reported that people with more years of formal education are at lower risk for Alzheimer's and other dementias than those with fewer years of formal education.<sup>86, 155-160</sup> Much of the research linking formal education to decreased risk of Alzheimer's dementia was conducted without the benefit of technological advances such as positron emission tomography (PET) imaging of the brain that might shed light on whether education affects Alzheimer's biomarkers such as beta-amyloid and tau accumulation that lead to dementia symptoms. More recent research incorporating these technological advances suggests that rather than reducing the risk of developing Alzheimer's brain changes, formal education may help sustain cognitive function in mid- and late life and delay the development of symptoms.<sup>161, 162</sup>

To that point, some researchers believe that having more years of education builds “cognitive reserve.” Cognitive reserve refers to the brain’s ability to make flexible and efficient use of cognitive networks (networks of neuron-to-neuron connections) to enable a person to continue to carry out cognitive tasks despite brain changes.<sup>163, 164</sup> The number of years of formal education is not the only determinant of cognitive reserve. Having a mentally stimulating job and engaging in other mentally stimulating activities may also help build cognitive reserve.<sup>165-170</sup>

Other researchers emphasize the indirect effects of the number of years of formal education, such as its effects on dementia risk through socioeconomic status (SES). SES typically is defined as access to economic resources, including income, education, employment and occupation, but also includes factors such as financial security and perceived social standing. Having fewer years of formal education is associated with lower median income and lower SES.<sup>171</sup> SES has many effects on one’s health that are relevant to dementia risk. Researchers report that lower SES is associated with being less physically active,<sup>172</sup> having a higher risk of diabetes,<sup>173-175</sup> and being more likely to have hypertension<sup>176</sup> and to smoke<sup>177</sup> — all of which are risk factors for dementia. In fact, in 2022 researchers reported that SES is associated with changes in brain anatomy, including gray matter volume, that may affect overall cognitive ability.<sup>178</sup>

In addition, lower SES may decrease one’s access to and ability to afford heart-healthy foods that support brain health; decrease one’s ability to afford health care or medical treatments, such as treatments for cardiovascular risk factors that are closely linked to brain health; and limit one’s access to physically safe housing and employment. Housing and employment conditions can also influence brain health—promoting activities and health care, as well as influence one’s exposure to substances that are toxic to the nervous system such as air pollution,<sup>179</sup> lead<sup>180</sup> and pesticides.<sup>181</sup>

It’s important to realize that SES is not a biological entity, but rather a social construct reflecting inequities in how individuals and populations are treated and have been treated over time. It also reflects inequities in the perceived social standing of individuals and populations based on factors largely outside of their control.

#### ***Social and Cognitive Engagement***

Additional studies suggest that remaining socially and cognitively active throughout life may support brain health and possibly reduce the risk of Alzheimer’s and other dementias.<sup>123, 182-190</sup> Socially and cognitively

stimulating activity might help build cognitive reserve. However, it is also possible that undetected cognitive impairment decreases one’s interest in and ability to participate in activities involving social and cognitive skills. In this case, the association may reflect the effect of cognitive impairment on social and cognitive engagement rather than the effect of engagement on dementia risk.<sup>188</sup> More research is needed to better understand the mechanisms that link social and cognitive engagement to dementia risk, along with types of activities that provide benefit.

#### ***Traumatic Brain Injury (TBI)***

TBI is a head injury caused by an external force that results in disruption of normal brain function.<sup>191</sup> TBI is associated with an increased risk of dementia.<sup>192-194</sup>

According to the Centers for Disease Control and Prevention (CDC), in 2020, people age 75 and older had the highest numbers and rates of TBI-related hospitalizations and deaths, accounting for about 32% of TBI-related hospitalizations and 28% of TBI-related deaths.<sup>195</sup> In 2018 and 2019, falls were the leading cause of TBI-related deaths among those 75 and older.<sup>191</sup>

Two ways to classify the severity of TBI are by the duration of loss of consciousness or post-traumatic amnesia<sup>196</sup> and by the individual’s initial score on the 15-point Glasgow Coma Scale.<sup>197</sup>

- *Mild TBI* (also known as a concussion) is characterized by loss of consciousness or post-traumatic amnesia lasting 30 minutes or less, or an initial Glasgow score of 13 to 15; about 75% of TBIs are mild.<sup>198</sup>
- *Moderate TBI* is characterized by loss of consciousness or post-traumatic amnesia lasting more than 30 minutes but less than 24 hours, or an initial Glasgow score of 9 to 12.
- *Severe TBI* is characterized by loss of consciousness or post-traumatic amnesia lasting 24 hours or more, or an initial Glasgow score of 8 or less.

Moderate and severe TBIs increase risk of dementia between 2- and 4-fold compared with risk among individuals without a history of moderate or severe TBI.<sup>199</sup> In this case, the cause of dementia is almost always brain damage attributable to the TBI, not Alzheimer’s disease. The risk of dementia increases with the number of TBIs sustained.<sup>192-194</sup> In addition, studies have found that people with a history of TBI who develop dementia do so at a younger age than those without a history of TBI.<sup>200, 201</sup> Whether TBI causes dementia, other conditions that lead to dementia, or both, is being investigated.



The relationship between TBI and chronic traumatic encephalopathy (CTE) is a growing area of research. Like Alzheimer's disease, CTE is characterized by tangles of an abnormal form of the protein tau in the brain. Beta-amyloid plaques may also be present, with one study indicating that more than 50% of individuals with CTE had beta-amyloid plaques.<sup>202, 203</sup> The brain changes of CTE can only be identified at autopsy. The greatest risk factor for developing CTE-related brain changes is repetitive brain trauma — repeated, forceful blows to the head that do not, individually, result in symptoms.<sup>204</sup> Among former amateur and professional football players, the odds of developing CTE increased 30% per year played.<sup>205</sup> A review of published articles examining CTE suggests that the relationship between these repeated impacts and CTE is likely causal.<sup>206</sup>

#### **Other Risk Factors**

As mentioned earlier, there are many potentially modifiable risk factors for dementia. Among those with growing supportive evidence are the following.

#### Sleep

Among the many factors being studied is inadequate sleep or poor sleep quality.<sup>207-209</sup> Researchers have found that an important function of sleep is the removal of toxic beta-amyloid and other substances from the brain.<sup>210, 211</sup> Inadequate or poor sleep may compromise the brain's ability to remove beta-amyloid and other toxins, enabling levels of toxins to remain elevated. In addition, poor sleep quality such as that caused by obstructive sleep apnea may increase risk by interfering with blood flow to the brain and normal patterns of brain activity that promote memory and attention.<sup>212, 213</sup> As discussed earlier, many researchers believe that the relationship between sleep and Alzheimer's disease is bidirectional, meaning that not only may poor sleep increase one's risk of Alzheimer's, but also that the brain changes of Alzheimer's may increase the risk of poor sleep.<sup>214-216</sup> For example, increases in beta-amyloid and tau may interrupt the sleep-wake cycle,<sup>217</sup> leading to increased sleep fragmentation and wakefulness and decreased slow-wave sleep.<sup>63</sup> Poor sleep may have similar bidirectional relationships with other causes of dementia, including poor cerebrovascular health.<sup>218</sup>

#### Air Pollution

There is also rapidly emerging evidence on how exposure to toxicants in the environment, especially air pollution, may be related to dementia risk. A number of different air pollutants have been studied in relation to cognition, cognitive decline and dementia itself. The most consistent and rigorous results concern fine particulate matter (PM) air pollution. PM consists of tiny solid particles and liquid droplets generated by fuel

combustion, fires and processes that produce dust. PM<sub>2.5</sub>, particulate matter that is 2.5 microns in diameter or smaller, is small enough to be inhaled deeply into the lungs. This subset of PM particles has been shown to have the greatest health impact and is the focus in most studies. Based on its sweeping review in 2019, the U.S. Environmental Protection Agency judged long-term exposure to PM<sub>2.5</sub> as "likely to be causal" in relation to "nervous system effects."<sup>219</sup> Studies specific to dementia and related outcomes have reported that higher long-term exposure to PM<sub>2.5</sub> is associated with worse cognitive decline,<sup>179, 220</sup> reduced brain volumes<sup>179</sup> and increased rates of incident (newly onset) dementia.<sup>220-222</sup> Whether air pollution promotes the brain changes of Alzheimer's or other dementias is unclear.

#### Critical illness in older adults

A growing body of evidence suggests that critical illness and medical encounters such as hospitalization in older people increase their risk of long-term cognitive impairment and dementia.<sup>223-227</sup> There are a number of ways that critical illness and aspects of the hospital experience may affect the brain.<sup>228</sup> One example is that experiencing hospitalization may make older adults more vulnerable to the existing brain changes of dementia.<sup>229</sup> This is not to suggest that hospitalization should be avoided if one is ill; rather, researchers are focusing on specific aspects of hospitalization, such as prolonged sedation, immobilization, and lack of family engagement that may increase risk of cognitive impairment.<sup>228</sup> Furthermore, experiencing delirium — a sudden and transient state of confusion common in hospitalized older adults — has been linked to long-term cognitive decline and dementia.<sup>228, 230</sup> Modifying these aspects of hospitalization may decrease risk of cognitive decline. In addition, better preventive health measures and improved and expanded health care coordination may help to prevent critical illness and subsequent hospitalization and the negative cognitive outcomes that may follow.

Additional research is needed to build the evidence for these and other risk factors being investigated and, importantly, to determine how such risk factors may vary for different causes of dementia, across the lifecourse, and among different racial and ethnic groups.



## Looking to the Future

### Importance of Biomarkers

The discovery that Alzheimer's disease begins 20 years or more before the onset of symptoms suggests that there is a substantial window of time in which we may be able to intervene in the progression of the disease. Scientific advances are already helping the field to make progress in these presymptomatic years. For example, advances in the identification of biomarkers for Alzheimer's disease make it possible to identify individuals who have beta-amyloid accumulation in the brain and who may qualify for clinical trials of experimental treatments that aim to reduce the accumulated beta-amyloid and in doing so prevent or delay the onset of symptoms. Biomarkers also enable earlier detection of the brain changes of Alzheimer's disease, giving those affected the opportunity to address modifiable risk factors that may slow or delay cognitive decline. Biomarkers are already accelerating the development of new treatments by making it possible for clinical trials to specifically recruit individuals with the brain changes that experimental therapies target. In addition, biomarker, basic science and other research advances offer the potential to expand the field's understanding of which therapies or combination of therapies may be most effective at which points in the Alzheimer's disease continuum.

When validated biomarker tests become available for routine use in health care providers' offices and other clinical settings, it will be important to provide educational materials to help individuals and their families understand the risks and benefits of biomarker tests, make informed decisions about whether to have biomarker testing, and know what to expect in care after testing.<sup>231, 232</sup> On a broader scale, biomarker disclosure may have social and societal implications. For example, biomarker results that are positive for increased dementia risk and that are shared with others may result in individuals experiencing the social stigma and discrimination so often experienced by people living with dementia, even though individuals with increased risk may never develop dementia.<sup>233</sup> In addition, disclosure may well highlight the need for reform in societal areas such as health insurance coverage and costs, the capacity of the health care workforce, and health equity.<sup>233</sup>

### The Need for Increased Diversity in Research Participation

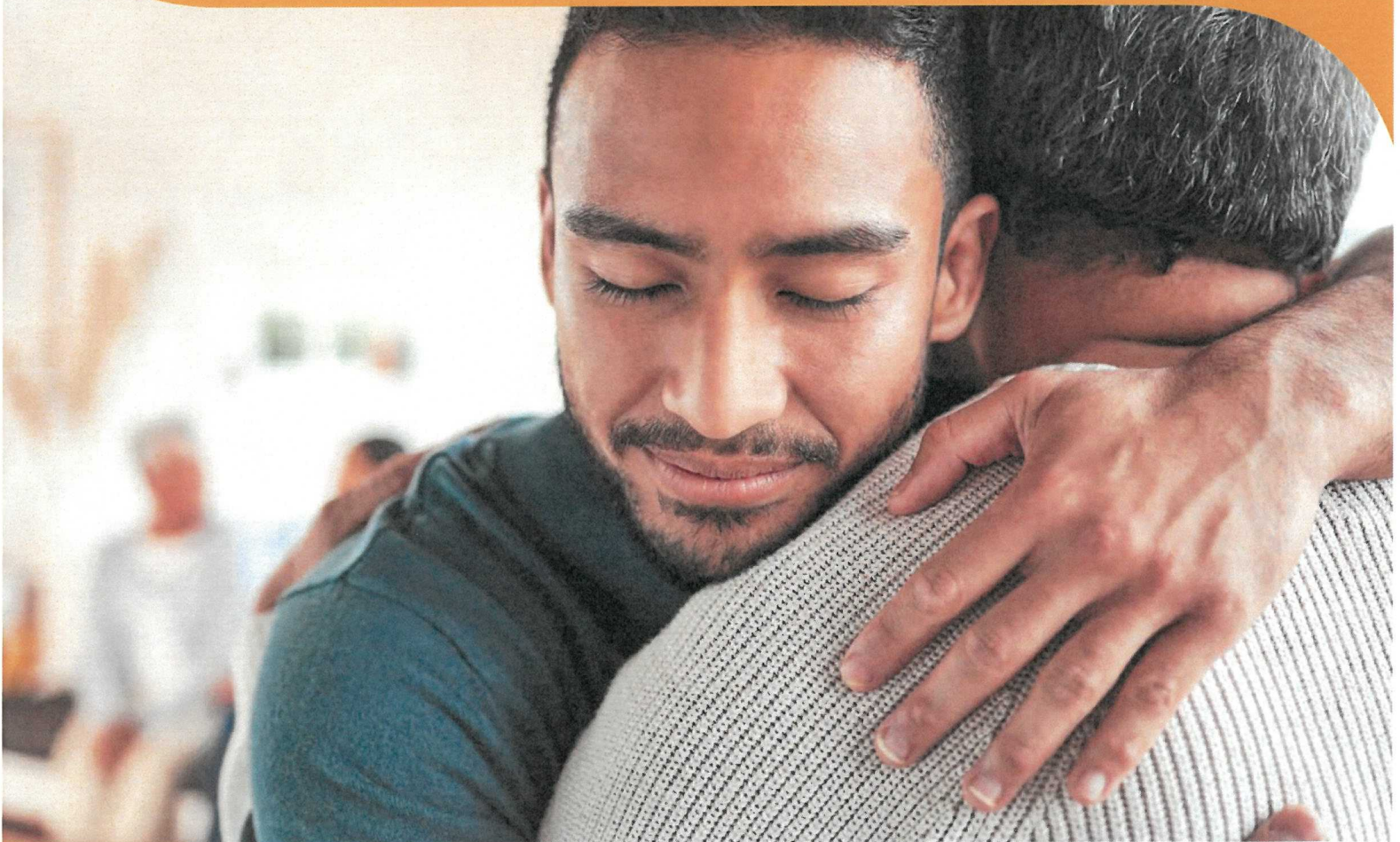
A fuller understanding of Alzheimer's — from its causes to how to prevent, manage and treat it — depends on crucial factors outside of biomarker, basic science and other research advances. Among these is the inclusion of participants from diverse racial and ethnic groups in research. The lack of inclusion has several consequences. First, without adequate data from diverse racial and ethnic groups, the current and future burden of Alzheimer's disease and Alzheimer's dementia in the United States cannot be accurately measured.<sup>234</sup> Such data is necessary because the populations of older adults from these groups make up nearly a quarter of the nation's older adult population, and that share is projected to grow.<sup>235</sup> Second, current data indicate that, compared with non-Hispanic White older adults, Black and Hispanic older adults are at increased risk for Alzheimer's dementia (see Prevalence section). Alzheimer's research with too few Black and Hispanic participants to reflect the proportion of these groups in the overall population largely ignores populations who bear the greatest risk. As a result, risk factors common in these populations but less common in non-Hispanic White older adults are likely to be poorly understood. In addition, lack of inclusion limits our ability to understand whether and how dementia risk factors and interventions work in populations that carry different baseline susceptibility to Alzheimer's disease including those with Down syndrome.

Inclusion is more than a matter of enrolling more participants from underrepresented groups. Increasing diversity among researchers and engaging with and seeking input from marginalized communities are also important. Improving inclusion in all of these ways expands the range of lived experiences among participants and the extent to which those experiences are known and become topics of investigation.<sup>236</sup> Only by improving representation in the participation and leadership of clinical trials, observational studies and other investigations will everyone have the potential to benefit from advances in dementia research.



## Prevalence

An estimated 6.9 million Americans are living with Alzheimer's dementia.





## Millions of Americans are living with Alzheimer's or other dementias. As the size of the U.S. population age 65 and older continues to grow, so too will the number and proportion of Americans with Alzheimer's or other dementias.

This section reports on the number and proportion of people with Alzheimer's dementia to describe the magnitude of the burden of Alzheimer's dementia on communities, health care systems and social safety nets. The prevalence of Alzheimer's dementia refers to the number and proportion of people in a population who have Alzheimer's dementia at a given point in time. Incidence refers to the number or rate of new cases per year, often expressed as the number of people per 100,000 who newly develop the condition in a year. This section reports estimates from several studies of the number of people and proportion of the population with Alzheimer's or other dementias. Those estimates vary depending on how each study was conducted.

The number and proportion of Americans with Alzheimer's or other dementias is expected to continue to grow in coming years because the risk of dementia increases with advancing age. The population of Americans age 65 and older is projected to grow from 58 million in 2022 to 82 million by 2050.<sup>237</sup> By 2030, all members of the baby-boom generation (Americans born between 1946 and 1964) will be age 65 or older,<sup>238</sup> the age range of greatest risk of Alzheimer's dementia;<sup>239</sup> in fact, the oldest members of the baby-boom generation turned age 75 in 2021. A number of recent studies have reported that the incidence rate of Alzheimer's and other dementias appears to have declined in recent decades (see "Trends in the Prevalence and Incidence of Alzheimer's Dementia Over Time" in this section). This decline in incidence has been attributed to improvements over the 20th century in modifiable risk factors for dementia, such as increased prevention and treatment of hypertension and greater educational attainment.<sup>240</sup> It is

unknown how COVID-19, including infection with SARS-CoV-2 (the virus that causes COVID-19), mortality from COVID-19, and changes in health care access resulting from the COVID-19 pandemic will influence the number and proportion of people in the U.S. with Alzheimer's dementia in years to come. However, even with this potentially lower incidence rate and the impact of COVID on people at risk of dementia, the absolute number of people with Alzheimer's and other dementias is expected to continue growing because of the large increase in the number of adults age 65 and older, the age group that is at increased risk of Alzheimer's and many other dementias.

### Prevalence of Alzheimer's and Other Dementias in the United States

An estimated 6.9 million Americans age 65 and older are living with Alzheimer's dementia in 2024.<sup>A2,241</sup> Seventy-three percent are age 75 or older (see Figure 2, page 23).<sup>241</sup>

Of the total U.S. population:

- About 1 in 9 people (10.9%) age 65 and older has Alzheimer's dementia.<sup>A2,241</sup>
- The percentage of people with Alzheimer's dementia increases with age: 5.0% of people age 65 to 74, 13.2% of people age 75 to 84, and 33.4% of people age 85 and older have Alzheimer's dementia.<sup>A2,241</sup> People younger than 65 can also develop Alzheimer's dementia. Although prevalence studies of younger-onset dementia in the U.S. are limited, researchers believe about 110 of every 100,000 people age 30 to 64 years, or about 200,000 Americans in total, have younger-onset dementia.<sup>242</sup>

The estimated number of people age 65 and older with Alzheimer's dementia comes from an updated study using the latest data from the 2024 population projections from the U.S. Census Bureau and the Chicago Health and Aging Project (CHAP), a population-based study of chronic health conditions of older people.<sup>241</sup>



## **DIVIDER IV**

### **FINANCIAL FEASIBILITY REVIEW CRITERIA AND STANDARDS**

#### **DIVIDER IV. FINANCIAL FEASIBILITY REVIEW CRITERIA AND STANDARDS**

- 1. Document that the proposed costs per square foot are reasonable when compared to the latest “RS Means Construction Cost data”.**

The 2025 RS Means Building Construction Cost Data for the median nursing home in Missouri (non-Kansas City, non-Saint Louis) at the median is \$196.45 per square foot, and at the 75<sup>th</sup> percentile is \$258.88 per square foot. The new construction cost per square foot for the project is \$222.09 per square foot.

- 2. Document that sufficient financing is available by providing a letter from a financial institution or an auditors statement indicating that sufficient funds are available.**

See attached.

- 3. Provide Service-Specific Revenues and Expenses (Form MO 580-1865) for the latest three (3) years, and projected through three (3) FULL years beyond project completion.**

See attached.

- 4. Document how patient charges are derived.**

Charges are based on the Applicant’s experience and knowledge of patient charges at facilities in the state of Missouri that are currently offering similar services.

- 5. Document responsiveness to the needs of the medically indigent.**

The Applicant has a history of working with residents and their families to address financial challenges by setting up payment plans or identifying alternate sources of funding.

- 6. For a proposed new skilled nursing or intermediate care facility, what percent of your admissions would be Medicaid eligible on the first day of admission or become Medicaid eligible within 90 days of admission?**

78%.

- 7. For an existing skilled nursing or intermediate care facility proposing to add beds, what percent of your admissions is Medicaid eligible on the first day of admission or becomes Medicaid eligible within 90 days of admission?**

Not applicable.

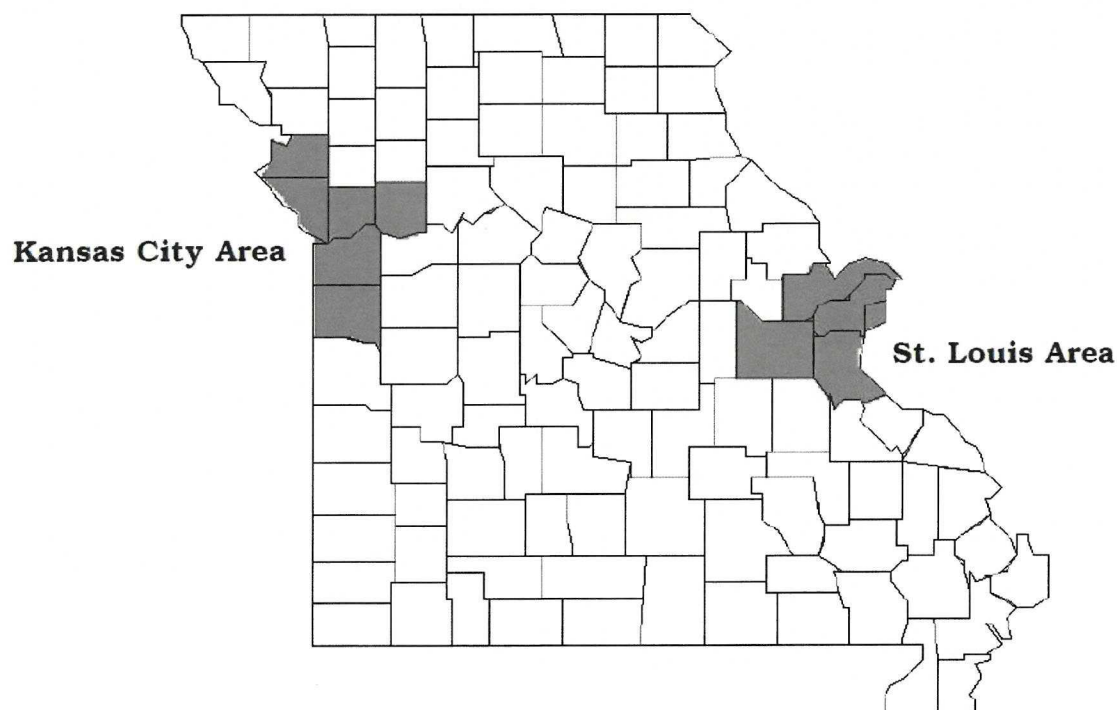
## RS Means Cost Data

### RS Means Cost Data Percentile Limits Total New Construction Project Costs\*

Source: 2025 RS Means Building Construction Cost Data

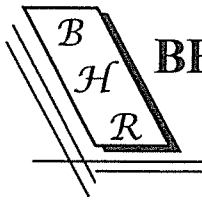
<u>Type of Facility</u>	<u>Percentile</u>	<u>St. Louis</u> <u>Area</u>	<u>Kansas City</u> <u>Area</u>	<u>Other Missouri</u> <u>Area</u>
<b>Hospital</b>	<b>3/4</b>	519.93	522.58	486.54
Cost Per Sq. Ft.	Median	480.69	483.14	449.82
<b>Nursing Home/ Assisted Living Facility**</b>	<b>3/4</b>	276.64	278.05	258.88
Cost Per Sq. Ft.	Median	209.93	211.00	196.45

\*\*Since 2017, nursing homes and assisted living facilities have been combined into one cost per square foot.



\* Renovation costs should not exceed 70% of total new construction project costs.





# BEUSSINK, HEY & ROE, P.C.

*Certified Public Accountants*

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April 28, 2025

Alison Dorge  
CON Program Coordinator  
Missouri CON Program  
P.O. Box 570  
Jefferson City, MO 65102

**Re: Letter of Financial Feasibility  
Certificate of Need Project #6205 NS**

Dear Mrs. Dorge,

I serve as CPA and auditor for Pack Capital Partners, and hereby confirm that Pack Capital Partners is the parent company of PB Real Estate Holdings, LLC.

I hereby provide this letter to confirm that Pack Capital Partners maintains sufficient operating reserves to cover the \$2,500,000 portion of the budget for CON project #6205 NS, and can transfer those funds through inter-company transfer to PB Real Estate Holdings, LLC.

Please do not hesitate to contact us should you require any further information.

Sincerely,

**Grant Eudy, CPA**  
Beussink, Hey & Roe, PC  
*Certified Public Accountants*  
16 South Silver Springs Road  
Cape Girardeau, MO 63703  
Telephone (573) 334-4988  
Fax (573) 334-8875



BANKS™

April 21, 2025

PB Real Estate Holdings, LLC  
C/O: Benjamin P. Sells  
300 N. Walnut St., Ste. A  
Dexter, MO 63841-1748

ATTN: Missouri Health Facilities Review Committee

RE: Black River Skilled Nursing Construction

To Whom It May Concern:

MRV Banks has pre-approved the request of PB Real Estate Holdings, LLC's construction financing up to \$11,000,000 for the skilled nursing facility. This pre-approval is subject to Board or Loan Committee Approval.

If you have any further questions, please feel free to contact me at (573) 883-8222.

Sincerely,

Jeremy W. Schlosser  
SVP/President of Private Banking  
MRV Banks  
101 S. Mount Auburn Rd.  
Cape Girardeau, MO 63703

[mrvbanks.com](http://mrvbanks.com)



Cape Girardeau • Festus/Crystal City • Ste. Genevieve • St. Charles



# Certificate of Need Program

## SERVICE-SPECIFIC REVENUES AND EXPENSES

**Project Title:** Black River Skilled Nursing

**Project #:** 6205 NS

### Historical Financial Data for Latest Three Full Years plus Projections Through Three Full Years Beyond Project Completion

Use an individual form for each affected service with a sufficient number of copies of this form to cover entire period, and fill in the years in the appropriate blanks.

	<b>Year</b>		
	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>
<b>Amount of Utilization:*</b>	15,498	24,820	24,820
<b>Revenue:</b>			
Average Charge**	\$298	\$273	\$273
Gross Revenue	\$4,612,205	\$6,765,932	\$6,765,932
Revenue Deductions	0	0	0
Operating Revenue	4,612,205	6,765,932	6,765,932
Other Revenue	0	0	0
<b>TOTAL REVENUE</b>	<b>\$4,612,205</b>	<b>\$6,765,932</b>	<b>\$6,765,932</b>
<b>Expenses:</b>			
Direct Expenses			
Salaries	2,121,919	2,655,923	2,655,923
Fees	293,432	682,309	682,309
Supplies	212,632	343,257	343,257
Other	1,451,890	1,825,552	1,825,552
<b>TOTAL DIRECT</b>	<b>\$4,079,873</b>	<b>\$5,507,041</b>	<b>\$5,507,041</b>
Indirect Expenses			
Depreciation	12,553	20,104	20,104
Interest***	1,859	0	0
Rent/Lease	570,000	720,000	720,000
Overhead****	0	0	0
<b>TOTAL INDIRECT</b>	<b>\$584,412</b>	<b>\$740,104</b>	<b>\$740,104</b>
<b>TOTAL EXPENSES</b>	<b>\$4,664,285</b>	<b>\$6,247,145</b>	<b>\$6,247,145</b>
<b>NET INCOME (LOSS):</b>	<b>-\$52,080</b>	<b>\$518,787</b>	<b>\$518,787</b>

\*Utilization will be measured in "patient days" for licensed beds, "procedures" for equipment, or other appropriate units of measure specific to the service affected.

\*\*Indicate how the average charge/procedure was calculated.

\*\*\*Only on long term debt, not construction.

\*\*\*\*Indicate how overhead was calculated.