















Bingham Office Center

Mortgage Loan Information

Mortgage Loan Seller: JPMCB
Original Principal Balance: \$31,000,000
Cut-off Date Principal Balance: \$31,000,000
% of Pool by IPB: 3.9%
Loan Purpose: Refinance

Borrower: Bingham Center Owner LLC

Sponsor(1): Farbman Group 4.253871% Interest Rate: 5/1/2017 Note Date: **Maturity Date:** 5/1/2027 Interest-only Period: 12 months **Original Term:** 120 months **Original Amortization:** 360 months **Amortization Type:** IO-Balloon

Call Protection: L(25),Grtr1%orYM(91),O(4)

Lockbox / Cash Management: Hard / Springing

Additional Debt: Yes
Additional Debt Balance: \$8,000,000
Additional Debt Type: Mezzanine Loan

Property Information

Single Asset / Portfolio: Single Asset

Title: Fee

Property Type - Subtype: Office – Suburban

Net Rentable Area (SF): 522,379

Location: Bingham Farms, MI

Year Built / Renovated: 1974 / N/A Occupancy: 84.1% **Occupancy Date:** 4/24/2017 **Number of Tenants:** 108 2014 NOI: \$3,544,747 2015 NOI: \$3,632,584 2016 NOI: \$3,752,136 TTM NOI (as of 3/2017)(2): \$3,879,529 **UW Economic Occupancy:** 83.6% **UW Revenues:** \$7,251,878 **UW Expenses:** \$3,017,488 UW NOI(2): \$4,234,390 UW NCF: \$3,645,181 Appraised Value / Per SF: \$52,000,000 / \$100

Appraisal Date: 3/7/2017

Escrows and Reserves ⁽³⁾							
Initial Monthly Initial Ca							
Taxes:	\$469,845	\$58,731	N/A				
Insurance:	\$0	Springing	N/A				
Replacement Reserves:	\$200,000	\$8,706	N/A				
TI/LC:	\$800,000	\$65,297	\$2,500,000				
Other:	\$305,292	\$0	N/A				

Financial Information					
Cut-off Date Loan / SF:	\$59				
Maturity Date Loan / SF:	\$49				
Cut-off Date LTV:	59.6%				
Maturity Date LTV:	49.2%				
UW NCF DSCR:	1.99x				
UW NOI Debt Yield:	13.7%				

Sources and Uses							
Sources	Proceeds	% of Total	Uses	Proceeds	% of Total		
Mortgage Loan	\$31,000,000	70.6%	Payoff Existing Debt	\$41,769,187	95.1%		
Mezzanine Loan	8,000,000	18.2	Upfront Reserves	1,775,137	4.0		
Sponsor Equity	4,907,562	11.2	Closing Costs	363,238	8.0		
Total Sources	\$43,907,562	100.0%	Total Uses	\$43,907,562	100.0%		

⁽¹⁾ For a full description of Sponsor, please refer to "The Loan Sponsor" below.

The Loan. The Bingham Office Center loan is secured by a first mortgage lien on the borrower's fee interest in a 522,379 square foot three-building Class B office property located in Bingham Farms, Michigan. The Bingham Office Center loan has a 10-year term and, subsequent to a one-year interest-only period, will amortize on a 30-year schedule. The previously existing debt was securitized in the GSMS 2007-GG10 transaction.

The Borrower. The borrowing entity for the Bingham Office Center mortgage loan is Bingham Center Owner LLC, a Delaware limited liability company and special purpose entity.

⁽²⁾ The increase in UW NOI from TTM NOI is primarily driven by approximately \$125,837 in underwritten contractual rent steps and approximately \$112,178 in underwritten base rent related to three new leases executed in early 2017 at the property.

⁽³⁾ For a full description of Escrows and Reserves, please refer to "Escrows and Reserves" below.

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The Loan Sponsor. The nonrecourse carve-out guarantor is The Farbman Family #2, LLC, an affiliate of the loan sponsor, Farbman Group. Farbman Group is a full-service real estate company with development, management, brokerage and planning services. Headquartered in Southfield, Michigan, the company manages over 25.0 million square feet of office, retail, multifamily and industrial space throughout seven states in the Midwest. The company employs over 200 people with offices across Michigan, Ohio, Illinois and Florida.

The loan sponsor purchased the Bingham Office Center property in 2006 for approximately \$38.5 million and has a total cost basis of approximately \$43.1 million. Since 2015, the loan sponsor has invested approximately \$327,000 (approximately \$0.63 per square foot) in building and land improvements.

The Property. The Bingham Office Center property consists of three, four-story interconnected Class B office buildings comprising 522,379 square feet. The property was constructed in 1974 and is situated on an approximately 23.9 acre site. The property features a fully staffed on-site management team, 24/7 security card entry system and after hours security, full-service cafeteria, 1,800 square foot conference room and training center and a sundry shop. Additionally, the property was awarded recognition by a building owner's association for buildings in its size category and location in 2013 and 2014. The award recognizes buildings that excel in both operations and management. The property features 1,621 surface parking spaces resulting in a parking ratio of approximately 3.1 spaces per 1,000 square feet of space. Access to the property is provided via Telegraph Road to the west.

As of April 24, 2017, the property was 84.1% occupied by 108 tenants. The largest tenant, Comcast, leases 72,053 square feet (13.8% of the net rentable area) through August 2019 and has been a tenant at the property since 2003. Comcast (NYSE: CMCSA) is a global media and technology company and is one of the nation's largest providers of video, high-speed internet and phone service. Comcast accounts for approximately 18.0% of the underwritten base rent at the property and its lease does not contain any renewal options remaining. The second largest tenant, Group Associates Inc. ("Group Associates"), leases 21,940 square feet (4.2% of the net rentable area) through January 2018 and has been a tenant at the property since 2007. Group Associates is a provider of benefits administration services for employers throughout the United States and clients range from local employers to Fortune 500 companies. The property currently serves as the company's headquarters. Group Associates accounts for approximately 5.4% of the underwritten base rent at the property and its lease does not contain any renewal options remaining. The third largest tenant, United Physicians Inc ("United Physicians"), leases 20,391 square feet (3.9% of the net rentable area) through October 2024 and has been a tenant at the property since 2014. United Physicians is one of Michigan's largest physician organizations, representing more than 2,400 physicians with medical staff privileges at hospitals throughout Southeastern Michigan. United Physicians accounts for approximately 4.0% of the underwritten base rent at the property and its lease contains two remaining five-year extension options.

The property is located in Bingham Farms, Michigan within the Detroit-Warren-Dearborn metropolitan statistical area and is approximately 19.8 miles northwest of the Detroit central business district. The property benefits from its proximity to major roadways, including Interstate 696, which is located approximately 2.0 miles south of the property and provides access to the surrounding areas. Additionally, the property is located approximately 28.6 miles north of Detroit Metropolitan Wayne County Airport. The property also benefits from its proximity to several restaurants and food outlets, including Qdoba, Biggby Coffee and DiBella's Subs, which are all located one block from the property. According to the appraisal, the estimated 2017 population within a one-, three- and five-mile radius is 5,136, 59,605 and 190,113, respectively, with a median household income of \$84,423, \$69,892 and \$74,658, respectively.

According to the appraisal, the property is located in the North Southfield office submarket of the greater Detroit market. According to the appraisal, as of year-end 2016, the North Southfield office submarket consisted of 87 buildings totaling approximately 9.7 million square feet of office space with an overall vacancy rate of 30.0% and average rents of \$19.49 per square foot. The appraisal identified five office properties as directly competitive with the Bingham Office Center property. The five properties were built between 1980 and 1986 and range in size from 154,063 square feet to 520,000 square feet. The competitive properties reported occupancies ranging from 61.4% to 93.0% with a weighted average of approximately 82.0%. Asking rents at the five competitive office properties ranged from \$13.51 to \$25.39 per square foot. Additionally, the appraisal identified four comparable office leases ranging in size from 8,300 square feet to 10,227 square feet and ranging in rent from \$16.50 to \$18.25 per square foot. The four comparable leases identified by the appraisal are leased at properties located within 17.0 miles of the Bingham Office Center property. Based on an analysis of the comparable leases identified, the appraisal concluded to office rents of \$15.75 per square foot, which is in line with the Bingham Office Center property's average rents of \$15.18 per square foot. Additionally, the appraisal did not identify any new supply that is expected to directly compete with the property.

Historical and Current Occupancy ⁽¹⁾						
2014	2015	2016	Current ⁽²⁾			
78.7%	73.3%	81.6%	84.1%			

- Historical Occupancies are as of December 31 of each respective year.
- Current Occupancy is as of April 24, 2017.

Tenant	Ratings ⁽²⁾ Moody's/S&P/Fitch	Tenant Summary ⁽¹⁾ Net Rentable Area (SF)	% of Total NRA	Base Rent PSF	% of Total Base Rent	Lease Expiration Date
Comcast	A3 / A- / A-	72,053	13.8%	\$16.68	18.0%	8/31/2019
Group Associates	NA / NA / NA	21,940	4.2%	\$16.41	5.4%	1/31/2018
United Physicians ⁽³⁾	NA / NA / NA	20,391	3.9%	\$12.92	4.0%	10/31/2024
Jacobs Engineering Group, Inc. (4)	NA / NA / NA	18,972	3.6%	\$15.50	4.4%	7/31/2021
Concentra Health Services, Inc.	NA / NA / NA	17,193	3.3%	\$17.10	4.4%	11/30/2017
Production Plus, Inc.	NA / NA / NA	11,538	2.2%	\$14.22	2.5%	11/30/2017
Bienenstock Court Reporting ⁽⁵⁾	NA / NA / NA	9,459	1.8%	\$15.25	2.2%	8/31/2021
Outdoor Hub, LLC ⁽⁶⁾	NA / NA / NA	9,152	1.8%	\$11.67	1.6%	3/31/2020
Identity Marketing	NA / NA / NA	8,452	1.6%	\$15.20	1.9%	10/31/2021
Wiss, Janney, Elstner Associates	NA / NA / NA	8,280	1.6%	\$16.20	2.0%	2/28/2021

- Based on the underwritten rent roll dated April 24, 2017.
- Ratings provided are for the parent company of the entity listed in the "Tenant" field whether or not the parent company guarantees the lease.
- United Physicians has the right to terminate its lease at any time after March 31, 2019, with 12 months' notice and the payment of a termination fee.

 Jacobs Engineering Group, Inc. has the right to terminate its lease at any time after July 31, 2019 but before October 31, 2020, with nine months' notice and the payment of a termination fee.
- Bienenstock Court Reporting has a one-time right to terminate its lease as of August 31, 2019, with a six months' notice and the payment of a termination fee. (5)
- Outdoor Hub, LLC has the right to terminate its lease at any time with 120 days' notice.

	Lease Rollover Schedule ⁽¹⁾⁽²⁾								
Year	Number of Leases Expiring	Net Rentable Area Expiring	% of NRA Expiring	Base Rent Expiring	% of Base Rent Expiring	Cumulative Net Rentable Area Expiring	Cumulative % of NRA Expiring	Cumulative Base Rent Expiring	Cumulative % of Base Rent Expiring
Vacant	NAP	83,116	15.9%	NAP	NAP	83,116	15.9%	NAP	NAP
2017 & MTM	29	71,771	13.7	\$1,128,178	16.9%	154,887	29.7%	\$1,128,178	16.9%
2018	30	114,103	21.8	1,686,287	25.3	268,990	51.5%	\$2,814,465	42.2%
2019	17	98,946	18.9	1,623,913	24.3	367,936	70.4%	\$4,438,378	66.6%
2020	15	51,986	10.0	764,547	11.5	419,922	80.4%	\$5,202,925	78.0%
2021	7	53,319	10.2	833,443	12.5	473,241	90.6%	\$6,036,367	90.5%
2022	7	19,315	3.7	264,559	4.0	492,556	94.3%	\$6,300,926	94.5%
2023	1	6,070	1.2	91,050	1.4	498,626	95.5%	\$6,391,976	95.8%
2024	1	20,391	3.9	263,501	4.0	519,017	99.4%	\$6,655,477	99.8%
2025	1	400	0.1	13,656	0.2	519,417	99.4%	\$6,669,133	100.0%
2026	0	0	0.0	0	0.0	519,417	99.4%	\$6,669,133	100.0%
2027	0	0	0.0	0	0.0	519,417	99.4%	\$6,669,133	100.0%
2028 & Beyond(3)	0	2,962	0.6	0	0.0	522,379	100.0%	\$6,669,133	100.0%
Total	108	522,379	100.0%	\$6,669,133	100.0%				

- (1) Based on the underwritten rent roll dated April 24, 2017.
- Certain tenants may have termination or contraction options (which may become exercisable prior to the originally stated expiration date of the tenant lease) that are not considered in the above Lease Rollover Schedule.
- 2028 & Beyond is inclusive of a 1,154 square foot building storage room and 1,808 square foot conference room with no attributable underwritten base rent.

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	Operating History and Underwritten Net Cash Flow						
	2014	2015	2016	TTM ⁽¹⁾	Underwritten	Per Square Foot	% ⁽²⁾
Rents in Place	\$6,120,838	\$6,025,438	\$6,217,518	\$6,312,995	\$6,669,133	\$12.77	77.5%
Vacant Income	0	0	0	0	1,309,077	2.51	15.2
Gross Potential Rent	\$6,120,838	\$6,025,438	\$6,217,518	\$6,312,995	\$7,978,210	\$15.27	92.7%
Total Reimbursements	547,553	491,416	459,290	521,986	624,446	1.20	7.3
Net Rental Income	\$6,668,391	\$6,516,854	\$6,676,808	\$6,834,981	\$8,602,656	\$16.47	100.0%
(Vacancy/Credit Loss)	0	0	0	0	(1,411,537)	(2.70)	(16.4)
Other Income	53,634	59,632	57,850	60,759	60,759	0.12	0.7
Effective Gross Income	\$6,722,025	\$6,576,486	\$6,734,658	\$6,895,740	\$7,251,878	\$13.88	84.3%
Total Expenses	\$3,177,278	\$2,943,902	\$2,982,522	\$3,016,212	\$3,017,488	\$5.78	41.6%
Net Operating Income ⁽³⁾	\$3,544,747	\$3,632,584	\$3,752,136	\$3,879,529	\$4,234,390	\$8.11	58.4%
Total TI/LC, Capex/RR	0	0	0	0	589,209	1.13	8.1
Net Cash Flow	\$3,544,747	\$3,632,584	\$3,752,136	\$3,879,529	\$3,645,181	\$6.98	50.3%

- (1) TTM represents the trailing 12-month period ended March 31, 2017.
- (2) % column represents percent of Net Rental Income for all revenue lines and represents percent of Effective Gross Income for the remainder of the fields.
- (3) The increase in Underwritten Net Operating Income from TTM Net Operating Income is primarily driven by approximately \$125,837 in underwritten contractual rent steps and approximately \$112,178 in underwritten base rent related to three new leases executed in early 2017 at the property.

Property Management. The property is managed by Farbman Group IV, LLC, a Michigan limited liability company and an affiliate of the loan sponsor.

Escrows and Reserves. At origination, the borrower deposited into escrow \$800,000 for future tenant improvements and leasing commissions, \$469,845 for real estate taxes, \$200,000 for replacement reserves, \$176,839 for outstanding tenant improvements and leasing commissions related to eight tenants and \$128,453 for free rent reserves related to five tenants.

Tax Escrows - On a monthly basis, the borrower is required to escrow 1/12 of the annual estimated tax payments, which currently equates to \$58,731.

Insurance Escrows - The requirement for the borrower to make deposits to the insurance escrow is waived so long as (i) no event of default has occurred and is continuing and (ii) the borrower provides satisfactory evidence that the property is insured as part of a blanket policy in accordance with the loan documents.

Replacement Reserves - On a monthly basis, the borrower is required to escrow \$8,706 (approximately \$0.20 per square foot annually) for replacement reserves. The reserve is not subject to a cap.

TI/LC Reserve - On a monthly basis, the borrower is required to escrow \$65,297 (approximately \$1.50 per square foot annually) for future tenant improvements and leasing commissions. The reserve is capped at \$2,500,000 (approximately \$4.79 per square foot). The borrower is also required to deposit any termination fee or other consideration payable to the borrower in connection with any tenant's election to exercise any early termination option contained in its respective lease or in connection with any other termination, amendment or modification of any lease, reduction of rents, shortening of the lease term or surrender of space, other than any termination fee in connection with the Comcast lease.

Comcast Reserve - During any Cash Sweep Event caused by a Comcast Trigger Event (each as defined below), all excess cash flow after payment of debt service, required reserves and operating expenses, together with any termination deposits received in connection with the Comcast lease, are required to be deposited into a tenant-specific reserve for tenant improvement and leasing commission obligations incurred with respect to the space leased by Comcast.

Lockbox / Cash Management. The Bingham Office Center loan is structured with a hard lockbox and springing cash management. At origination, the borrower was required to send tenant direction letters to all tenants at the property instructing them to deposit all rents and payments into the lender-controlled lockbox account. If there is no Cash Sweep Event in effect, all funds in the lockbox account are required to be transferred to or at the direction of the borrower. Upon the occurrence and during the continuance of a Cash Sweep Event, all funds in the lockbox account are required to be swept on each business day to a segregated cash management account under the control of the lender. The lender has been granted a first priority security interest in the cash management account.

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A "Cash Sweep Event" means the occurrence of (i) an event of default, (ii) any bankruptcy or insolvency action of the borrower or the property manager, (iii) the date on which the combined mortgage and mezzanine debt service coverage ratio (as calculated in the loan documents) falls below 1.20x based on the trailing three-month period immediately preceding the date of such determination or (iv) a Comcast Trigger Event.

A Cash Sweep Event may be cured by (a) with respect to clause (i) above, the lender has accepted a cure by the borrower of such event of default, (b) with respect to clause (ii) above, solely with respect to a bankruptcy or insolvency action of the property manager, if the borrower replaces the property manager within 60 days of such action, (c) with respect to clause (ii) above, solely with respect to an involuntary bankruptcy or insolvency action of the borrower, the guarantor or their affiliates that is not consented to or colluded in by such parties, if such action is discharged, stayed or dismissed within 60 days of the filing without any adverse consequences to the loan or the property, (d) with respect to clause (iii) above, the achievement of a combined mortgage and mezzanine debt service coverage ratio of at least 1.25x for two consecutive quarters based on the trailing three-month period immediately preceding the date of determination, and (e) with respect to clause (iv) above, the occurrence of a Comcast Trigger Event Cure (as defined below).

A "Comcast Trigger Event" means that 12 months prior to the expiration of the Comcast lease or any renewal of the lease, the borrower fails to either (i) renew 100% of the space demised by Comcast as of the origination date in accordance with the loan documents or (ii) renew at least 50% of the space demised to Comcast in accordance with the loan documents, provided that the combined mortgage and mezzanine debt service coverage ratio is greater than 1.25x based on the trailing three month period.

A "Comcast Trigger Event Cure" means the borrower's satisfaction of any of the following: (i) the renewal of the Comcast lease or the execution and delivery of one or more replacement leases for 100% of the space leased to Comcast as of the origination date, all in accordance with the loan documents, (ii) the renewal of the Comcast lease, or the execution and delivery of one or more replacement leases, in each case for 50% of the space leased to Comcast as of the origination date, provided that the combined mortgage and mezzanine debt service coverage ratio is greater than 1.25x based on the trailing three-month period and the funds on deposit in the Comcast reserve equal or exceed an amount equal to the product of \$10.00 multiplied by the square footage of the unleased space or (iii) the combined mortgage and mezzanine debt service coverage ratio is greater than 1.30x based on the trailing three-month period, provided that there are no free rent credit or outstanding tenant improvement obligations on the part of the borrower unless the borrower reserves for such amounts in accordance with the loan documents.

Partial Release. None.

Additional Debt. The \$8.0 million mezzanine loan is secured by direct equity interests in the borrower and is coterminous with the Bingham Office Center loan. The mezzanine loan is currently held by JPMCB but is expected to be sold to one or more third party investors. The mezzanine loan has a 9.50000% coupon and will be interest-only for the term of the loan. Including the mezzanine loan, the cumulative Cut-off Date LTV, cumulative UW NCF DSCR and cumulative UW NOI Debt Yield are 75.0%, 1.40x and 10.9%, respectively. The mortgage and mezzanine lenders are negotiating an intercreditor agreement.