

TWELVE OAKS MALL

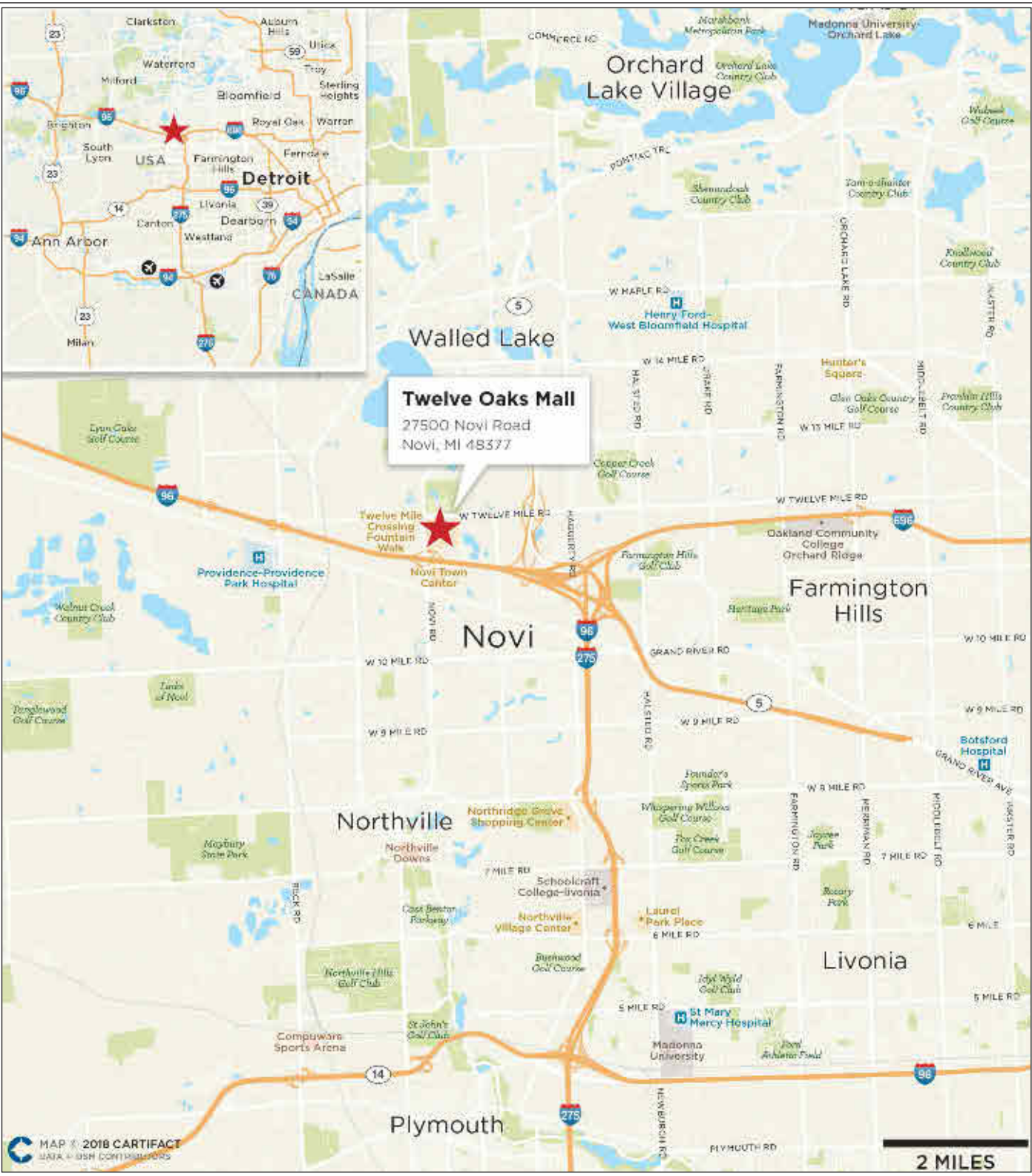








TWELVE OAKS MALL



Mortgaged Property Information		Mortgage Loan Information		
Number of Mortgaged Properties	1	Loan Seller	GSMC	
Location (City/State)	Novi, Michigan	Cut-off Date Principal Balance <sup>(4)</sup>	\$66,666,668	
Property Type	Retail	Cut-off Date Principal Balance per SF <sup>(3)</sup>	\$279.03	
Size (SF) <sup>(1)</sup>	716,771	Percentage of Initial Pool Balance	7.5%	
Total Occupancy as of 2/1/2018 <sup>(2)</sup>	96.2%	Number of Related Mortgage Loans	None	
Owned Occupancy as of 2/1/2018 <sup>(2)</sup>	91.9%	Type of Security	Fee Simple	
Year Built / Latest Renovation	1977 / 2007	Mortgage Rate	4.3985%	
Appraised Value	\$552,900,000	Original Term to Maturity (Months)	120	
		Original Amortization Term (Months)	360	
		Original Interest Only Period (Months)	NAP	

Sources and Uses					
Sources	\$	%	Uses	\$	%
Whole Loan Amount	\$200,000,000	66.7%	Loan Payoff	(6)	(6)
Subordinate Companion Loan Amount	100,000,000	33.3	Principal Equity Distribution	(6)	(6)
			Reserves	\$4,627,403	1.5%
			Closing Costs	853,367	0.3
Total Sources	\$300,000,000	100.0%	Total Uses	\$300,000,000	100.0%

- (1) Size (SF) does not include 802,453 SF for anchors which are not part of the collateral. Total SF inclusive of the non-collateral spaces is 1,519,224 SF.
- (2) Total Occupancy includes Macy's (300,212 SF), Sears (228,429 SF), JCPenney (148,812 SF) and Lord & Taylor (125,000 SF), which are not part of the collateral. Total Occupancy and Owned Occupancy includes three tenants that have executed leases but have not yet taken occupancy or begun paying rent. H&M (24,440 SF) has executed a lease to relocate to a new suite at the Twelve Oaks Mall Property and is anticipated to take occupancy and begin paying rent for the new suite in November 2018, lululemon athletica (5,392 SF) has executed a lease to relocate to a new suite at the Twelve Oaks Mall Property and is anticipated to take occupancy and begin paying rent for the new suite in June 2018, and Pinkberry (718 SF) has executed a lease and is anticipated to take occupancy and begin paying rent in March 2018. Total Occupancy and Owned Occupancy also includes seven tenants who are currently in occupancy at the Twelve Oaks Mall Property and have lease renewals out for signature, but not yet executed including Sephora (5,700 SF), J Jill (4,075 SF), Journeys (2,191 SF), Journeys Kidz (1,108 SF), GNC Livewell (954 SF), SGH Sunglass Hut (581 SF) and 3D Innovations (64 SF). Total Occupancy and Owned Occupancy also includes one tenant Bachrach (4,494 SF) who has filed for bankruptcy, but is currently in-place. We cannot assure you that these tenants will take occupancy, execute the renewals, begin paying rent or continue paying rent as anticipated or at all.
- (3) Calculated based on the aggregate outstanding principal balance of the Twelve Oaks Mall Senior Loans. See "—The Mortgage Loan" below.
- (4) The Cut-off Date Principal Balance of \$66,666,668 represents the non-controlling note A-1 of a \$300,000,000 whole loan.
- (5) See "—Escrows" below.
- (6) Prior to origination, the Twelve Oaks Mall Property did not secure a mortgage loan but was included in a pool of assets supporting corporate borrowing by The Taubman Realty Group Limited Partnership. The entities that own Twelve Oaks Mall and certain other TRG assets are guarantors under TRG's primary unsecured revolving credit facility (net balance of \$355 million as of September 30, 2017), \$475 million unsecured term loan, and \$300 million unsecured term loan, and are unencumbered assets under such facility and term loans. The proceeds of the Twelve Oaks Mall Whole Loan were used to repay a portion of TRG's primary unsecured revolving credit facility, fund reserves and pay origination costs. As of February 28, 2018, the Twelve Oaks Mall Property was no longer included in the pool of assets supporting the aforementioned unsecured loans and the related guaranties had been released.

- **The Mortgage Loan.** The mortgage loan (the "**Twelve Oaks Mall Loan**") is part of a whole loan (the "**Twelve Oaks Mall Whole Loan**") consisting of three senior *pari passu* notes (note A-1, note A-2 and note A-3) with an outstanding principal balance of \$200,000,000 (the "**Twelve Oaks Mall Senior Loans**") and three subordinate *pari passu* notes (note B-1, note B-2 and note B-3) with an outstanding principal balance of \$100,000,000 (collectively the "**Twelve Oaks Mall Subordinate Loan**"). The Twelve Oaks Mall Whole Loan has an aggregate outstanding principal balance of \$300,000,000 and is secured by a first mortgage encumbering the borrower's fee simple interest in a retail building in Novi, Michigan (the "**Twelve Oaks Mall Property**"). The Twelve Oaks Mall Loan (evidenced by note A-1), which represents a non-controlling interest in the Twelve Oaks Mall Whole Loan, has an outstanding principal balance as of the Cut-off Date of \$66,666,668 and represents approximately 7.5% of the Initial Pool Balance. The related companion loans (the "**Twelve Oaks Mall Companion Loans**"), evidenced by the controlling Twelve Oaks Mall Subordinate Loan and the non-controlling notes A-2 and A-3 of the Twelve Oaks Mall Senior Loans, have an outstanding principal balance as of the Cut-off Date of \$233,333,332. Note A-2 is currently held by Wells Fargo Bank, National Association ("**WFBNA**"), note A-3 is currently held by JPMorgan Chase Bank, National Association ("**JPM**") and notes B-1, B-2 and B-3 are currently held by Teachers Insurance and Annuity Association of America ("**TIAA**"). Notes A-2 and A-3 are each expected to be contributed to one or more future securitization transactions. The Twelve Oaks Mall Whole Loan was originated on February 28, 2018. The Twelve Oaks Mall Senior Loans have an interest rate of 4.3985% *per annum* and the Twelve Oaks Mall Subordinate Loan has an interest rate of 5.7500% *per annum* resulting in a weighted average interest rate of 4.8490% *per annum* on the Twelve Oaks Mall Whole Loan. The borrower utilized the proceeds of the Twelve Oaks Mall Whole Loan to fund reserves, pay origination costs, and return equity to TRG to partially prepay an existing corporate borrowing.

The Twelve Oaks Mall Whole Loan had an initial term of 120 months and has a remaining term of 120 months as of the Cut-off Date. The Twelve Oaks Mall Whole Loan requires payments of interest and principal sufficient to amortize the loan over a 30-year amortization schedule, and principal is applied to the Twelve Oaks Mall Senior Loans as set forth on Annex F of the Prospectus. The stated maturity date is the due date in March 2028. Voluntary prepayment of the Twelve Oaks Mall Whole Loan is prohibited prior to the due date in December 2027. At any time after the earlier to occur of (a) the third anniversary of the origination date of the Twelve Oaks Mall Whole Loan and (b) the second anniversary of the closing date of the securitization into which the last of the Twelve Oaks Mall Companion Loans are securitized, the Twelve Oaks Mall Whole Loan may be defeased in full with direct, non-callable obligations of the United States of America.

The following table outlines the Twelve Oaks Mall Companion Loans:

Note	Original Balance	Cut-off Date Balance	Note Holder(s)	Controlling Piece
Note A-1 .....	\$66,666,668	\$66,666,668	GSMS 2018-GS9	No
Note A-2 .....	66,666,666	66,666,666	WFBNA	No
Note A-3 .....	66,666,666	66,666,666	JPMCB	No
Note B-1 .....	33,333,333	33,333,333	TIAA	Yes
Note B-2 .....	33,333,334	33,333,334	TIAA	Yes
Note B-3 .....	33,333,333	33,333,333	TIAA	Yes
<b>Total</b>	<b>\$300,000,000</b>	<b>\$300,000,000</b>		

The Twelve Oaks Mall total debt capital structure is shown below:

### Twelve Oaks Mall Total Debt Capital Structure

		Interest Rate	Cumulative Cut-off Date Balance	Cumulative Cut-off Date Balance per SF	Cumulative Cut-off Date LTV <sup>(1)</sup>	Cumulative UW NOI / NCF Debt Yield <sup>(2)</sup>	Cumulative UW NOI / NCF DSCR <sup>(2)</sup>
Twelve Oaks Mall Whole Loan	Senior Loans						
	Twelve Oaks Mall Loan \$66,666,668 Note A-1	4.3985%	\$200,000,000	\$279.03	36.2%	15.3% / 15.0%	2.60x / 2.55x
	Twelve Oaks Mall Companion Loans \$133,333,332 Notes A-2 and A-3						
Subordinate Loans	Twelve Oaks Mall Subordinate Loan \$100,000,000 Notes B-1, B-2 and B-3	5.7500%	\$300,000,000	\$418.54	54.3%	10.2% / 10.0%	1.61x / 1.58x
	Implied Borrower Sponsor Equity <sup>(3)</sup> \$252,900,000		\$552,900,000	\$771.38			

(1) Based on the appraised value of \$552,900,000 as of December 14, 2017.

(2) Based on the UW NOI of \$30,594,826 and the UW NCF of \$30,011,109.

(3) Based on the appraised value of \$552,900,000, the Implied Borrower Sponsor Equity is \$252,900,000.

- **The Mortgaged Property.** The Twelve Oaks Mall Property is an approximately 1,519,224 SF super-regional mall, of which, 716,771 SF is collateral, located in Novi, Michigan. The Twelve Oaks Mall Property was constructed in 1977 and renovated in 2007. The Twelve Oaks Mall Property is anchored by Nordstrom which is collateral for the loan (on a ground lease) and four unowned anchor tenants including Macy's, JCPenney, Sears and Lord & Taylor. The Twelve Oaks Mall Property's tenants include Apple, Tumi, H&M, Soma, Banana Republic, lululemon athletica, Club Monaco, Hollister, Gap and Michael Kors. TRG has been the indirect owner of the Twelve Oaks Mall Property since it was constructed in 1977. The Twelve Oaks Mall Property underwent an expansion and renovation of approximately 322,000 SF in 2007 at a cost of approximately \$63 million that included adding Nordstrom as a fifth anchor tenant.

As of December 31, 2017, the comparable sales and occupancy cost for inline tenants (less than 10,000 SF (excluding Apple)) were approximately \$534 per SF and approximately 16.3%, respectively, while including Apple the comparable sales and occupancy cost for inline tenants (less than 10,000 SF) were approximately \$654 per SF and approximately 13.4%, respectively.

The following table presents certain information relating to the anchor tenants (of which, certain tenants may have co-tenancy provisions) at the Twelve Oaks Mall Property:

Tenant Name	Credit Rating (Fitch/MIS/S&P) <sup>(1)</sup>	Tenant GLA	% of Total GLA	Mortgage Loan Collateral Interest	Underwritten Total Rent	Underwritten Total Rent \$ per SF	Owned Anchor Tenant Lease Expiration	Tenant Sales \$ per SF <sup>(2)</sup>	Occupancy Cost	Renewal / Extension Options
<b>Anchor</b>										
Macy's	NR / Baa3 / BBB-	300,212	19.8%	No	\$315,223	\$1.05	NA	\$233	0.5%	NA
Sears	C / C / CC	228,429	15.0	No	\$6,000	\$0.03	NA	\$61	0.0%	NA
JCPenney	NR / NR / B+	148,812	9.9	No	\$170,294	\$1.14	NA	\$105	1.1%	NA
Lord & Taylor	NR / NR / NR	125,000	8.2	No	\$127,680	\$1.02	NA	\$147	0.7%	NA
Nordstrom	BBB+ / Baa1 / BBB+	167,000	11.0	Yes	\$20,000	\$0.12	2/28/2023	\$323	0.0%	8, 10-year options
<b>Total Anchors</b>		<b>969,453</b>	<b>63.8%</b>							
<b>Junior Anchors</b>										
H&M <sup>(3)</sup>	NR / NR / NR	24,440	1.6%	Yes	\$725,000	\$29.66	1/31/2029	\$280	18.6%	5, 2-year options
Forever 21	NR / NR / NR	22,996	1.5	Yes	\$1,476,160	\$64.19	1/31/2025	\$218	29.4%	NA
Victorias Secret	NR / NR / NR	14,798	1.0	Yes	\$1,221,544	\$82.55	1/31/2025	\$654	12.6%	NA
Pottery Barn	NR / NR / NR	10,299	0.7	Yes	\$206,816	\$20.08	1/31/2020	\$364	5.5%	NA
<b>Total Junior Anchors</b>		<b>72,533</b>	<b>4.8%</b>							
Occupied In-line <sup>(4)</sup>		418,045	27.5%	Yes	\$30,486,407	\$72.93				
Occupied Kiosk		747	0.0%	Yes	\$223,433	\$299.11				
Occupied Other		50	0.0%	Yes	\$43,200	\$864.00				
Vacant Spaces		58,396	3.8%	Yes	\$0	\$0.00				
<b>Total Owned SF</b>		<b>716,771</b>	<b>47.2%</b>							
<b>Total SF</b>		<b>1,519,224</b>	<b>100.0%</b>							

(1) Certain ratings are those of the parent company whether or not the parent guarantees the lease.

(2) Sales information presented with respect to the Twelve Oaks Mall Property is based upon information provided by the borrower and in certain instances, sales figures represent estimates as tenants are not required to report, or otherwise may not have timely reported sales. The borrower does not independently verify sale information because such information is self-reported. Anchor sales information represents estimates as of 2016. All other sales data is as of 2017.

(3) H&M (24,440 SF) has executed a lease to relocate to a new suite at the Twelve Oaks Mall Property and is anticipated to take occupancy and begin paying rent for the new suite in November 2018. Tenant Sales \$ per SF and Occupancy Cost is based on the SF for the old suite of 9,171 SF. H&M has the right to terminate its lease if the landlord does not deliver the new suite by March 2019.

(4) Includes one tenant Bachrach (4,494 SF) who has filed for bankruptcy, but is currently in-place. We cannot assure you that Bachrach will remain open.

## TWELVE OAKS MALL

The following table presents certain information relating to the major tenants (of which, certain tenants may have co-tenancy provisions) at the Twelve Oaks Mall Property based on initial lease expiration dates:

### Ten Largest Tenants Based on Underwritten Base Rent

Tenant Name	Credit Rating (Fitch/MIS/S&P) <sup>(1)</sup>	Tenant GLA	% of Owned GLA	UW Base Rent	% of Total UW Base Rent	UW Base Rent \$ per SF	Tenant Sales \$ per SF <sup>(2)</sup>	Occupancy Cost	Lease Expiration	Renewal / Extension Options
Forever 21	NR / NR / NR	22,996	3.2%	\$1,476,160	6.3%	\$64.19	\$218	29.4%	1/31/2025	NA
Victoria's Secret	NR / NR / NR	14,798	2.1	887,880	3.8	60.00	\$654	12.6%	1/31/2025	NA
H&M <sup>(3)</sup>	NR / NR / NR	24,440	3.4	725,000	3.1	29.66	\$280	18.6%	1/31/2029	5, 2-year options
Apple	NR / Aa1 / AA+	7,018	1.0	501,575	2.1	71.47	\$6,692	1.6%	1/31/2024	1, 5-year option
Express	NR / NR / NR	8,000	1.1	480,000	2.0	60.00	\$408	14.7%	1/31/2021	NA
American Eagle	NR / NR / NR	5,796	0.8	465,975	2.0	80.40	\$703	16.5%	1/31/2021	NA
Sephora <sup>(4)</sup>	NR / NR / A+	5,700	0.8	458,328	2.0	80.41	\$1,155	10.0%	1/31/2028	NA
Hollister	NR / NR / BB-	6,018	0.8	451,350	1.9	75.00	\$408	23.7%	4/30/2022	NA
Abercrombie & Fitch	NR / NR / BB-	9,817	1.4	441,765	1.9	45.00	\$199	33.6%	1/31/2021	NA
lululemon athletica <sup>(5)</sup>	NR / NR / NR	5,392	0.8	412,488	1.8	76.50	\$2,673	3.1%	1/31/2024	1, 5-year option
<b>Ten Largest Owned Tenants</b>		<b>109,975</b>	<b>15.3%</b>	<b>\$6,300,522</b>	<b>26.8%</b>	<b>\$57.29</b>				
Remaining Owned Tenants		548,400	76.5	17,177,403	73.2	31.32				
Vacant Spaces (Owned Space)		58,396	8.1	0	0.0	0.00				
<b>Totals / Wtd. Avg. All Owned Tenants</b>		<b>716,771</b>	<b>100.0%</b>	<b>\$23,477,925</b>	<b>100.0%</b>	<b>\$35.66</b>				

- (1) Certain ratings are those of the parent company whether or not the parent guarantees the lease.
- (2) Sales information presented with respect to the Twelve Oaks Mall Property is based upon information provided by the borrower and in certain instances, sales figures represent estimates as tenants are not required to report, or otherwise may not have timely reported sales. Because sales information is self-reported, such information is not independently verified by the borrower. Anchor sales information represents estimates as of 2016. All other sales data is as of 2017.
- (3) H&M (24,440 SF) has executed a lease to relocate to a new suite at the Twelve Oaks Mall Property and is anticipated to take occupancy and begin paying rent for the new suite in November 2018. Tenant Sales \$ per SF and Occupancy Cost are based on the SF and total rent for the old suite of 9,171 SF. H&M has the right to terminate its lease if the landlord does not deliver the new suite by March 2019.
- (4) Sephora is currently in occupancy and has a lease renewal out for signature.
- (5) lululemon athletica (5,392 SF) has executed a lease to relocate to a new suite at the Twelve Oaks Mall Property and is anticipated to take occupancy and begin paying rent for the new suite in June 2018. Tenant Sales \$ per SF and Occupancy Cost based on the SF and total rent for the old suite of 3,467 SF.

The following table presents certain information relating to the lease rollover schedule at the Twelve Oaks Mall Property based on initial lease expiration dates:

### Lease Expiration Schedule<sup>(1)</sup>

Year Ending December 31,	Expiring Owned GLA	% of Owned GLA	Cumulative % of Owned GLA	UW Base Rent	% of Total UW Base Rent	UW Base Rent \$ per SF	# of Expiring Leases
MTM	645	0.1%	0.1%	\$132,500	0.6%	\$205.43	2
2018	48,525	6.8	6.9%	120,932	0.5	2.49	16
2019	45,952	6.4	13.3%	1,421,451	6.1	30.93	20
2020	68,621	9.6	22.8%	2,995,226	12.8	43.65	28
2021	68,686	9.6	32.4%	3,185,639	13.6	46.38	21
2022 <sup>(2)</sup>	48,335	6.7	39.2%	3,048,766	13.0	63.08	19
2023	200,012	27.9	67.1%	2,099,433	8.9	10.50	13
2024 <sup>(3)</sup>	37,022	5.2	72.2%	2,193,775	9.3	59.26	9
2025	67,267	9.4	81.6%	4,260,592	18.1	63.34	12
2026	10,866	1.5	83.1%	754,087	3.2	69.40	7
2027	20,500	2.9	86.0%	1,363,232	5.8	66.50	10
2028 <sup>(4)</sup>	9,079	1.3	87.3%	798,168	3.4	87.91	4
2029 & Thereafter <sup>(5)</sup>	32,865	4.6	91.9%	1,104,125	4.7	33.60	2
Vacant	58,396	8.1	100.0%	0	0.0	0.00	0
<b>Total / Wtd. Avg.</b>	<b>716,771</b>	<b>100.0%</b>		<b>\$23,477,925</b>	<b>100.0%</b>	<b>\$35.66</b>	<b>163</b>

- (1) Calculated based on approximate square footage occupied by each Owned Tenant.
- (2) Includes one tenant Bachrach (4,494 SF) who has filed for bankruptcy, but is currently in-place. We cannot assure you that Bachrach will remain open.
- (3) lululemon athletica (5,392 SF) has executed a lease to relocate to a new suite at the Twelve Oaks Mall Property and is anticipated to take occupancy and begin paying rent for the new suite in June 2018.
- (4) Pinkberry (718 SF) has executed a lease and is anticipated to take occupancy and begin paying rent in March 2018.
- (5) H&M (24,440 SF) has executed a lease to relocate to a new suite at the Twelve Oaks Mall Property and is anticipated to take occupancy and begin paying rent for the new suite in November 2018.



The following table presents certain information relating to historical occupancy and estimated tenant sales at the Twelve Oaks Mall Property:

**Historical Leased %<sup>(1)</sup>**

	2015	2016	TTM 11/30/2017
Total Occupancy <sup>(2)</sup>	97.4%	97.5%	96.7%
Owned Occupancy <sup>(2)</sup>	94.6%	94.6%	92.9%

(1) As provided by the borrower.

(2) Reflects average for the indicated year ended December 31 unless specified otherwise.

**Historical In-line Sales<sup>(1)</sup>**

	2015	2016	2017
In-line Tenant (<10,000 SF) Sales per SF <sup>(2)</sup>	\$594	\$608	\$654
In-line Tenant (<10,000 SF) Sales per SF (excl. Apple) <sup>(2)</sup>	\$504	\$508	\$534

(1) As provided by the borrower.

(2) Sales per SF are as of December 31 unless otherwise indicated and excludes temporary tenants.

■ **Operating History and Underwritten Net Cash Flow.** The following table presents certain information relating to the historical operating performance and the Underwritten Net Cash Flow at the Twelve Oaks Mall Property:

**Cash Flow Analysis<sup>(1)</sup>**

	2015	2016	TTM 11/30/2017	Underwritten <sup>(2)(3)(4)</sup>	Underwritten \$ per SF
Base Rental Revenue	\$25,272,604	\$25,599,940	\$24,380,484	\$23,477,925	\$32.76
Overage / Percentage Rent	1,008,401	770,060	785,905	519,807	0.73
Kiosks / Temporary / Specialty	2,999,058	3,135,407	2,628,241	2,628,241	3.67
Operating Expenses (CAM)	11,697,019	11,762,631	11,404,267	11,024,024	15.38
Real Estate Tax Reimbursement	1,965,627	1,954,631	1,922,258	1,627,276	2.27
Utility Reimbursement	1,605,805	1,565,601	1,464,797	1,464,797	2.04
HVAC	2,223,605	2,230,123	2,129,206	2,129,206	2.97
Promotion Revenue	1,326,242	1,321,552	1,226,741	1,054,997	1.47
Mark to Market Rental Adjustment	0	0	0	(1,947,875)	(2.72)
Market Revenue from Vacant Units	0	0	0	4,724,224	6.59
Parking Revenue	16,669	17,337	25,268	25,484	0.04
Other Revenue	830,528	1,112,793	1,128,653	895,310	1.25
Gross Revenue	\$48,945,558	\$49,470,075	\$47,095,819	\$47,623,417	\$66.44
Vacancy Loss	0	0	0	(4,724,224)	(6.59)
Effective Gross Revenue	\$48,945,558	\$49,470,075	\$47,095,819	\$42,899,192	\$59.85
Real Estate Taxes	\$2,439,073	\$2,447,669	\$2,472,418	\$2,560,525	\$3.57
Insurance	342,324	344,741	206,068	285,766	0.40
Utilities	2,545,401	2,349,166	2,406,265	2,406,265	3.36
Repairs & Maintenance	2,176,631	2,024,697	1,923,513	1,923,513	2.68
Janitorial	812,648	822,755	831,148	831,148	1.16
Management Fee	1,790,090	1,882,962	1,895,625	1,072,480	1.50
Payroll (Office, Security, Maintenance)	1,032,397	1,134,181	1,160,575	1,160,575	1.62
General and Administrative - Direct	831,682	800,263	740,771	740,771	1.03
Other Expenses	1,278,147	1,394,533	1,323,323	1,323,323	1.85
Total Operating Expenses	\$13,248,393	\$13,200,966	\$12,959,706	\$12,304,366	\$17.17
<b>Net Operating Income</b>	<b>\$35,697,165</b>	<b>\$36,269,109</b>	<b>\$34,136,114</b>	<b>\$30,594,826</b>	<b>\$42.68</b>
Tenant Improvements	0	0	0	223,137	0.31
Leasing Commissions	0	0	0	223,137	0.31
Replacement Reserves	0	0	0	137,443	0.19
<b>Net Cash Flow</b>	<b>\$35,697,165</b>	<b>\$36,269,109</b>	<b>\$34,136,114</b>	<b>\$30,011,109</b>	<b>\$41.87</b>

(1) Certain items such as straight line rent, interest expense, interest income, lease cancellation income, depreciation, amortization, debt service payments and any other non-recurring or non-operating items were excluded from the historical presentation and are not considered for the underwritten cash flow.

(2) Underwritten cash flow based on contractual rents as of February 1, 2018 and contractual rent steps through February 28, 2019.

(3) Underwritten base rent includes 16 tenants that are paying reduced rent. The base rent in the leases is \$2,349,960 for these 16 tenants, and the UW base rent for these tenants is \$1,180,463.

(4) Includes one tenant Bachrach (4,494 SF) who has filed for bankruptcy, but is currently in-place. We cannot assure you that Bachrach will remain open.

- **Appraisal.** According to the appraisal, the Twelve Oaks Mall Property had an “as-is” appraised value of \$552,900,000 as of December 14, 2017.
- **Environmental Matters.** According to a Phase I environmental report, dated February 22, 2018, there are no recognized environmental conditions or recommendations for further action at the Twelve Oaks Mall Property other than the implementation of an asbestos operations and maintenance plan, disposing of the contents in accordance with state and local requirements of an unlabeled and abandoned 55-gallon drum located on the Twelve Oaks Mall Property.
- **Market Overview and Competition.** According to the appraisal, the Twelve Oaks Mall Property is a super-regional mall located in the Detroit-Warren-Livonia and Ann Arbor metropolitan statistical area. The Twelve Oaks Mall Property is located at the intersection of Twelve Mile Road and Novi Road and is less than one mile from Interstate 96. The total population within a 1-mile, 3-mile and 5-mile radius of the Twelve Oaks Mall Property is 1,655, 54,918 and 155,524 respectively. The average household income within a 1-mile, 3-mile and 5-mile radius of the Twelve Oaks Mall Property is \$108,440, \$116,114 and \$115,649, respectively. Fortune 500 companies located in the Southeast Michigan region include Ally, Autoliv, BorgWarner, DTE Energy, Ford Motor Company, General Motors and Kelly Services.

The following table presents certain information relating to the primary competition for the Twelve Oaks Mall Property:

**Competitive Set<sup>(1)</sup>**

	<b>Twelve Oaks Mall</b>	<b>The Somerset Collection</b>	<b>Westland Shopping Center</b>	<b>Fairlane Town Center</b>	<b>Southland Center</b>	<b>Briarwood Mall</b>
Distance from Subject	-	20 miles	16 miles	25 miles	30 miles	35 miles
Property Type	Super-Regional Mall	Super-Regional Mall	Super-Regional Mall	Super-Regional Mall	Super-Regional Mall	Super-Regional Mall
Year Built	1977	1968	1965	1976	1970	1973
Total GLA	1,519,224	1,790,000	1,055,000	1,850,000	925,000	1,040,000
Total Occupancy	96.2%	98%	90%	88%	90%	95%
Sales per SF <sup>(2)</sup>	\$654	\$820	\$400	\$425	\$400	\$550
Anchors & Jr. Anchors	Macy's, Sears, JCPenney, Lord & Taylor and Nordstrom	Macy's, Neiman Marcus, Nordstrom and Saks Fifth Avenue	JCPenney, Kohl's, Sears and Macy's (vacant)	JCPenney, Macy's, Sears and AMC Theatres	JCPenney, Macy's and Cinemark Theatres	JCPenney, Macy's, Sears and Von Maur

(1) Source: Appraisal.

(2) Represents sales for comparable in-line tenants for most recent period from appraisal, or for the subject property, reported by the tenants to the borrower sponsor and not independently verified.

- **The Borrower.** The borrower is TVO Mall Owner LLC, a Delaware limited liability company and single purpose entity. Legal counsel to the borrower delivered a non-consolidation opinion in connection with the origination of the Twelve Oaks Mall Whole Loan. The non-recourse carveout guarantor under the Twelve Oaks Mall Whole Loan is The Taubman Realty Group Limited Partnership, an indirect owner of the borrower.

Taubman Centers, Inc. (NYSE: TCO “**Taubman**”) is a Michigan corporation (incorporated in 1973) that operates as a self-administered and self-managed real estate investment trust. The Taubman Realty Group Limited Partnership (the Operating Partnership or TRG) is a majority-owned partnership subsidiary of Taubman that owns direct or indirect interests in all of Taubman’s real estate properties.

Taubman owns, leases, acquires, disposes of, develops, expands, and manages shopping centers and interests in shopping centers. Their owned portfolio of operating centers as of December 31, 2017 consisted of 24 urban and suburban shopping centers operating in the U.S., Puerto Rico, South Korea, and China. The centers range in size between 236,000 and 1.7 million SF of GLA and between 186,000 and 1.0 million SF of Mall GLA, with an average of 1.0 million and 0.5 million SF, respectively. The smallest center has approximately 60 stores, and the largest has over 275 stores with an average of 150 stores per shopping center.

- **Escrows.** On the origination date, the borrower funded an unfunded obligations reserve in the amount of \$4,627,403.

On each due date during a Twelve Oaks Mall Trigger Period or an event of default the borrower is required to fund certain reserve accounts including (i) a tax and insurance reserve in an amount equal to one-twelfth of the amount that the lender reasonably estimates will be necessary to pay taxes and insurance premiums over the then succeeding 12-month period, unless in the case of insurance premiums, the borrower is maintaining a blanket policy (ii) a tenant improvement and leasing commissions reserve in an amount equal to \$68,625, subject to a cap of \$1,647,000 (excluding any termination fees deposited) and (iii) a capital expenditure reserve in an amount equal to approximately \$11,438, subject to a cap of \$274,500.

In addition, on each due date during the continuance of a Twelve Oaks Mall Trigger Period (other than a Twelve Oaks Mall Trigger Period (Tier 1)), the related loan documents require an excess cash reserve as discussed under “*Lockbox and Cash Management*” below.

A “**Twelve Oaks Mall Trigger Period**” means any period from (a) the conclusion of any two consecutive 12-month periods ending on the last day of a fiscal quarter during which the net operating income of such 12-month periods is less than \$29,250,000 until the conclusion of the fourth consecutive 12-month period ending on the last day of a fiscal quarter thereafter during which the net operating income is equal to or greater than \$29,250,000 (such period a “**Twelve Oaks Mall Tier 1 Trigger Period**”), (b) the conclusion of any two consecutive 12-month periods ending on the last day of a fiscal quarter during which the net operating income is less than \$26,000,000 until the conclusion of the fourth consecutive 12-month periods ending on the last day of a fiscal quarter thereafter during which the net operating income is equal to or greater than \$26,000,000 (such period a “**Twelve Oaks Mall Tier 2 Trigger Period**”) or (c) the period during which a Twelve Oaks Mall Tier 1 Trigger Period but not also a Twelve Oaks Mall Tier 2 Trigger Period is occurring and during which any two anchor properties (other than Sears) have gone dark (such period a “**Twelve Oaks Mall Dark Anchors Trigger Period**”).

- **Lockbox and Cash Management.** The Twelve Oaks Mall Whole Loan is structured with a hard lockbox and springing cash management. The related loan documents require the borrower to direct tenants to pay rent directly to a lender-controlled lockbox account and all cash revenues relating to the Twelve Oaks Mall Property and all other money received by the borrower or the property manager with respect to the Twelve Oaks Mall Property (other than tenant security deposits required to be held in escrow accounts) be deposited into such lockbox account or cash management account within one business day of receipt. The borrower is permitted to maintain a bank account (the “**Kiosk Account**”) into which rents from persons who are parties to a license agreement or miscellaneous amounts received by the borrower that are not rents, payments, reimbursements or other amounts paid under any lease may be deposited. Any fund in excess of \$150,000 are required to be remitted from the Kiosk Account into a borrower-controlled account. During the continuance of a Twelve Oaks Mall Trigger Period or an event of default under the Twelve Oaks Mall Whole Loan, all amounts contained in the Kiosk Account that exceed \$50,000 are required to be remitted to the cash management account. During the continuance of a Twelve Oaks Mall Trigger Period or event of default under the Twelve Oaks Mall Whole Loan, all funds in the lockbox account are required to be swept into the cash management account on a daily basis and, so long as only a Twelve Oaks Mall Tier 1 Trigger Period is continuing, remitted to the borrower on each due date after payment of the monthly debt service payment and all required reserves. During a Twelve Oaks Mall Trigger Period (other than a Twelve Oaks Mall Tier 1 Trigger Period) or event of default under the Twelve Oaks Mall Whole Loan all amounts on deposit in the cash management account after payment of debt service, required reserves (if the lender so elects, with respect to the continuance of an event of default) and operating expenses, are required to be reserved in an excess cash flow reserve account.
- **Property Management.** The Twelve Oaks Mall Property is currently managed by The Taubman Company LLC, an affiliate of the borrower, pursuant to a management agreement. Under the related loan documents, the Twelve Oaks Mall Property is required to remain managed by The Taubman Company LLC, or any other management company approved by the lender and with respect to which a Rating Agency Confirmation has been received. The lender has the right to require the borrower to terminate the property manager and engage a new property manager selected by the lender upon (i) the acceleration of the Twelve Oaks Mall Whole Loan following the occurrence of an event of default under the Twelve Oaks Mall Whole Loan, (ii) a material default by the property manager and after the expiration of any applicable cure period or (iii) the filing of a bankruptcy petition or the occurrence of a similar event with respect to the property manager.

- **Release of Collateral.** Provided no event of default under the Twelve Oaks Mall Whole Loan documents is then continuing, the borrower is permitted to obtain the release of certain unimproved parcels or outlots each subject to the satisfaction of certain conditions set forth in the Twelve Oaks Mall Whole Loan documents, including among others, the delivery of a REMIC opinion. The borrower may not convey to third parties any release parcel that in the aggregate exceed 10% of the total acreage of all of the release parcels, without prior written consent from the lender.
- **Mezzanine or Secured Subordinate Indebtedness.** Not permitted.
- **Terrorism Insurance.** The borrower is required to maintain terrorism insurance in an amount equal to the full replacement cost of the Twelve Oaks Mall Property, as well as 18 months of rental loss and/or business interruption coverage, together with a 12-month extended period of indemnity following restoration. If TRIPRA is no longer in effect, then the borrower's requirement will be capped at insurance premiums equal to two times the amount of the insurance premium payable in respect of the property and business interruption/rental loss insurance required under the related loan documents. See *"Risk Factors—Terrorism Insurance May Not Be Available for All Mortgaged Properties"* in the Prospectus.