

Company Update JANUARY 2018





Forward-Looking Statements And Non-GAAP Financial Measures

FORWARD-LOOKING STATEMENTS: We make forward-looking statements in this presentation that are subject to risks and uncertainties. These forward-looking statements include information about possible or assumed future results of our business, financial condition, liquidity, results of operations, plans and objectives. When we use the words "believe," "expect," "anticipate," "estimate," "plan," "continue," "intend," "should," "may" or similar expressions, we intend to identify forward-looking statements. The forward-looking statements contained in this presentation reflect our current views about future events and are subject to numerous known and unknown risks, uncertainties, assumptions and changes in circumstances that may cause our actual results to differ significantly from those expressed in any forward-looking statement.

The forward-looking statements are based on our beliefs, assumptions and expectations of our future performance, taking into account all information currently available to us. Forward-looking statements are not predictions of future events. These beliefs, assumptions and expectations can change as a result of many possible events or factors, not all of which are known to us. Some of these factors are described in the quarterly report on Form 10-Q filed with the SEC on November 7, 2017 and the annual report on form 10-K filed with the SEC on February 28, 2017 under the headings "business," "risk factors," "properties," and "management's discussion and analysis of financial condition and results of operations," as applicable. You may get these documents for free by visiting EDGAR on the SEC website at www.sec.gov. If a change occurs, our business, financial condition, liquidity and results of operations may vary materially from those expressed in our forward-looking statements. Any forward-looking statement speaks only as of the date on which it is made. New risks and uncertainties arise over time, and it is not possible for us to predict those events or how they may affect us. Except as required by law, we are not obligated to, and do not intend to, update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

This presentation and the information contained herein are for informational purposes only and may not be relied upon for any purpose, including in connection with the purchase or sale of any of our securities. Such information does not constitute an offer to sell or a solicitation of an offer to buy any security described herein.

Non-GAAP Financial Measures: This presentation contains certain non-GAAP financial measures, such as funds from operations ("FFO"), Core FFO, net operating income ("NOI"), EBITDA, and Adjusted EBITDA, which are each defined in NSA's Quarterly Report on Form 10-Q for the period ended September 30, 2017 filed with the SEC. These non-GAAP financial measures are presented because NSA's management believes these measures help investors understand NSA's business, performance and ability to earn and distribute cash to its shareholders by providing perspectives not immediately apparent from net income (loss). These measures are also frequently used by securities analysts, investors and other interested parties. The presentation of FFO, Core FFO, NOI, EBITDA, and Adjusted EBITDA herein are not intended to be considered in isolation or as a substitute for, or superior to, the financial information prepared and presented in accordance with GAAP and should not be considered as alternative measures of liquidity. In addition, NSA's definitions and method of calculating these measures may be different from those used by other companies, and, accordingly, may not be comparable to similar measures as defined and calculated by other companies that do not use the same methodology as NSA. Reconciliations of these non-GAAP financial measures to their most directly comparable GAAP measures for the three months ended September 30, 2017 and 2016, June 30, 2017 and 2016 and March 31, 2017 and 2016 are available in the Appendix.



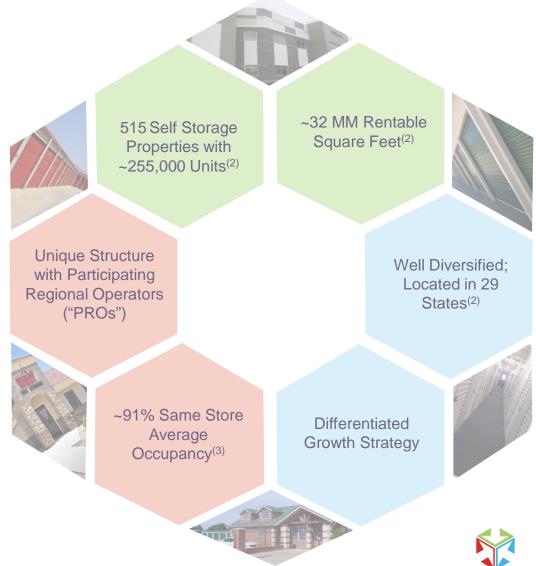
Investment Highlights: "NYSE: NSA"

| 1 | NSA's Institutional Quality Portfolio is Geographically Diversified |
|---|--|
| 2 | NSA's Differentiated Structure Provides Local Market Expertise and Strong Internal and External Growth Incentives with Downside Protection |
| 3 | NSA's Senior Management Team has Deep Industry Experience |
| 4 | NSA has Consistently Outperformed its REIT Peers on Various Metrics since its IPO |
| 5 | NSA's Flexible Capital Structure Supports Strong Future Growth |



National Storage Affiliates Overview

- National Storage Affiliates Trust ("NSA") is a publicly traded NYSE self-storage REIT; ticker symbol "NSA"
- NSA is the 6th largest operator of self-storage properties in the US(1)
- Institutional quality portfolio is broadly diversified across higher growth markets:
 - Only ~35% of NSA properties are in the top 20 MSAs where new supply pressure is greatest
 - Biggest focus in MSAs in Western and Southern growth states
- Positioned to deliver strong external and organic growth





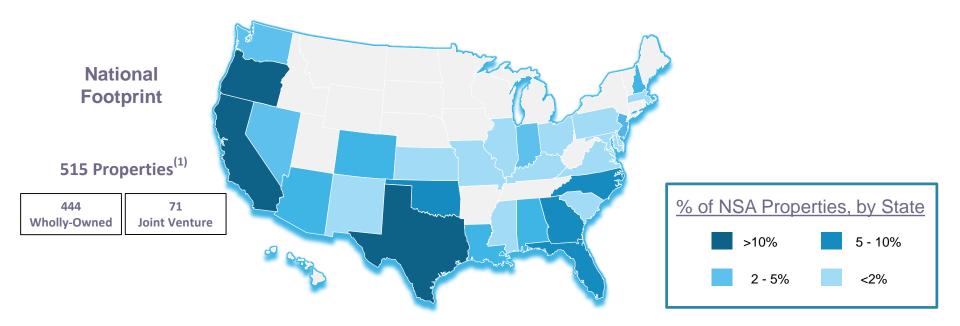
Source: Self-Storage 2017 Almanac, based on number of properties.

As of December 31, 2017.

As of September 30, 2017.

NSA'S Guiding Vision Unites Top Operators

NSA's unique strategy has successfully attracted eight of the most prominent storage operators with the common goal to drive significant organic and external growth























⁽¹⁾ As of December 31, 2017.

⁽²⁾ The iStorage brand is owned by NSA and is not a Participating Regional Operator.

NSA's Growth Since IPO

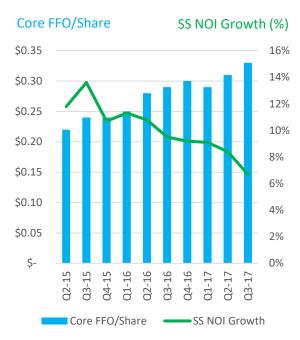
NSA's PRO Model has Delivered Transformational Growth*

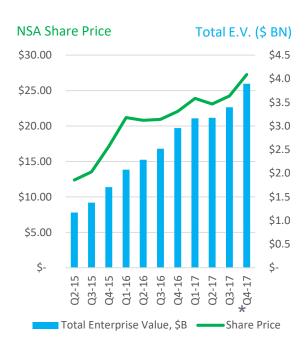
Growth in Total
Properties and
Rentable Square Feet⁽¹⁾

Growth in Core FFO/Share and Same Store NOI

Growth in Share Price and Total Enterprise Value⁽²⁾









⁽¹⁾ As of December 31, 2017.

⁽²⁾ Q4-17 Total Enterprise Value was calculated from September 30, 2017 balances adjusted to give effect to NSA's issuance of 6.9 million Series A Perpetual Shares on October 11, 2017 and NSA's issuance of 5.75 million common shares on December 11, 2017.

^{*} Q4-17 data based on disclosures in the NSA Prospectus Supplement filed with the Securities and Exchange Commission on December 8, 2017.

Senior Management Team Has Deep Industry Experience

- Widely respected industry owner / operators
- Average PRO has over 30 years of industry experience
- Proven track record of growth
- Strong network of industry relationships
- Significant insider ownership aligns interests with shareholders

NSA Executive Team



ARLEN NORDHAGEN Chairman & CEO



TAMARA FISCHER **CFO**



STEVEN TREADWELL SVP, Operations



PRO Executive Leadership



KEVIN HOWARD



DAVID CRAMER WARREN ALLAN





JOHN MINAR





TRACY TAYLOR BILL BOHANNAN STEVE WILSON





MARC SMITH







GUARDIAN STORAGE **CENTERS**











Structure Promotes Internal And External Growth

Sophisticated Platform Tools Drive Organic Growth

Operational "Best Practices"

Revenue Management / Analytics

Economies of Scale and Lower Cost of Capital

Internet Marketing

PROs Drive External Growth Opportunities

Acquisition of Captive Pipeline Properties

Relationship Driven Third Party Acquisitions

Recruitment of New PROs

Strategic Joint Ventures



NSA's Tools & Decentralized Structure Deliver Top Results

Since IPO NSA has Delivered Average Year-over-Year Same Store Total Revenue Growth of 7.0% and Same Store NOI Growth of 9.5%

NSA CORPORATE HEADQUARTERS PROVIDES PLATFORM TOOLS

EXECUTIVE LEADERSHIP

- Recruitment of PROs
- Acquisition review and approval

LEGAL & FINANCE SUPPORT

- Asset contributions and structuring
- Equity and debt capital markets

CORPORATE ACCOUNTING

- Internal controls, policies and procedures
- Budgeting and forecasting

CORPORATE MARKETING

- Revenue management infrastructure
- Internet platform
- Call center

TECHNOLOGY & INNOVATION

- Management information systems
- Business intelligence tools

REGIONAL & LOCAL OPERATIONS IMPLEMENT BEST PRACTICES

Acquisition Underwriting & Sourcing

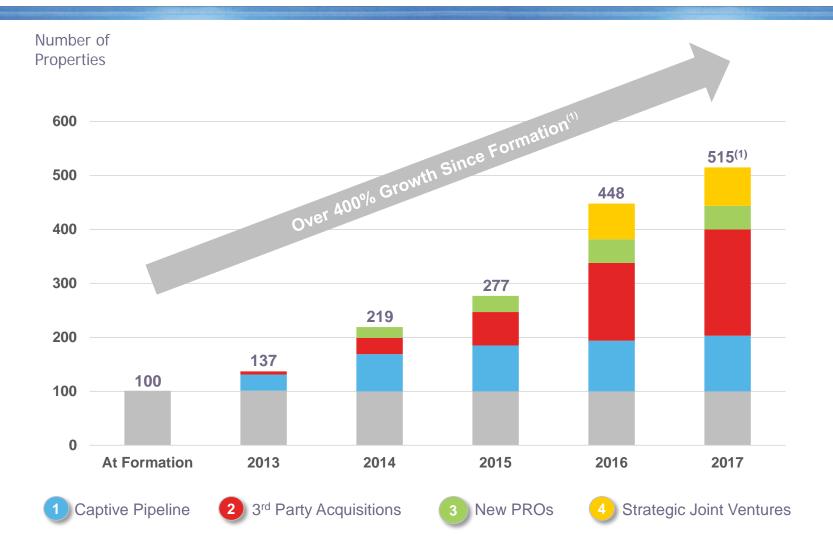
Property Management

Property Level Accounting

Local Branding & Marketing



NSA's Track Record of External Growth



⁽¹⁾ As of December 31, 2017, the portfolio consisted of 444 wholly-owned properties and 71 JV-owned properties.



Structure Attracts Disciplined, Growth-Oriented Operators

Successful regional operators join NSA as PROs rather than JV or sale options, giving NSA access to top properties not otherwise available

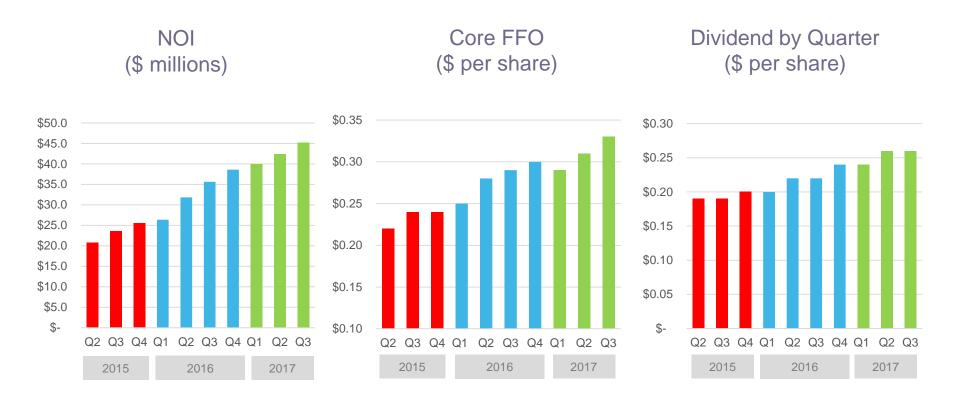
| Criteria | NSA | JV | Sale / Exit |
|--|----------|----|-------------|
| Liquidity / Monetization | ~ | • | • |
| Ability to Maintain Property Management | ~ | • | |
| Participate in Upside | ~ | • | |
| Enhance NOI Through Best Practices | ~ | | |
| Opportunity and Incentives to Grow Portfolio | ~ | | |



January 2018

Ten Quarters of Financial Performance⁽¹⁾

Strong Operational Growth Continues



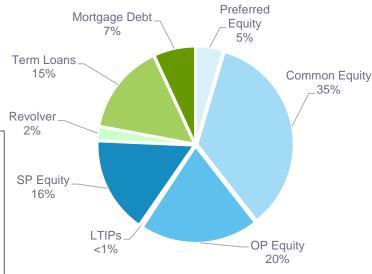


Pro Forma⁽¹⁾ Capital Structure – December 31, 2017

- Total Principal Debt \$955MM
- Weighted Average Maturity⁽³⁾: 5.2 Years
- Effective Interest Rate⁽⁴⁾: 3.4%
- Net Debt to Adjusted EBITDA⁽⁵⁾: 5.3X
- 24% Debt to Total Enterprise Value



Total Enterprise Value \$3.9 Billion⁽²⁾



- 72% of Debt is Unsecured
- 91% of Debt is Fixed

(1)Pro forma capitalization includes balances as of September 30, 2017 after giving effect to the issuance of 6.9 million Series A Perpetual Preferred shares as of October 11, 2017, and 5.75 million common shares as of December 11, 2017, and OP and SP Units issued in connection with acquisitions completed between October 1, 2017 to December 31·2017. The net proceeds of the preferred issuance (\$166.6 million) and the net proceeds of the common share issuance (\$140.3 million) were used to pay down the revolving line of credit. The revolving line of credit was subsequently partially redrawn in conjunction with the completion of acquisitions closed during the fourth quarter 2017. (2)Total Enterprise Value is defined as the sum of the Company's debt principal plus the perpetual preferred and common equity valued at \$26.04 and \$27.26 per share, respectively, as of December 29, 2017. SP equity is assumed converted using the hypothetical conversion ratio of 1.45x as of September 30, 2017. (3)Weighted average maturity calculated based on pro forma Q4-2017 maturities.

(4) Weighted average effective interest rate on debt instruments incorporates the stated rate plus the impact of interest rate cash flow hedges and discount and premium amortization, if applicable, with pro forma debt balances as of December 31, 2017. For the revolving line of credit, the effective interest rate excludes non-use fees which range from 0.15% to 0.25%.

(5)Net debt calculated as outstanding pro forma principal debt of \$955 million plus \$3.2 million in net unamortized debt issuance costs and debt premiums less cash and cash equivalents of \$13.7 million as of September 30, 2017. Adjusted EBITDA is based on annualized third quarter 2017, with pro forma adjustments for acquisitions completed in Q4-2017.

January 2018

Peer Comparison Data: Eight Quarters of Performance - through September 30, 2017



Source: 2015, 2016 and 2017 public reporting and SNL Financial.



^{*} Quarterly averages are computed using a simple average of year-over-year quarterly growth rates from fourth quarter 2015 through third quarter 2017.

Investment Highlights: "NYSE:NSA"

NSA's Institutional Quality Portfolio is Geographically Diversified NSA's Differentiated Structure Provides Local Market Expertise and Strong Internal and External Growth Incentives with Downside Protection 3 NSA's Senior Management Team has Deep Industry Experience NSA has Consistently Outperformed its REIT Peers on Various Metrics since its IPO 5 NSA's Flexible Capital Structure Supports Strong Future Growth



Contact Us

■ Investor Relations

Marti Dowling
Director - Investor Relations
720-630-2624
mdowling@nsareit.net

■ Corporate Headquarters

National Storage Affiliates Trust 5200 DTC Parkway Suite 200 Greenwood Village, CO 80111

Website

www.nationalstorageaffiliates.com



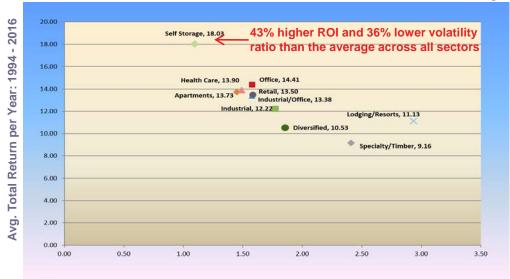


Appendix

Self Storage Has Consistently Outperformed

Self Storage Has Outperformed over Last 23 Years on Total Return with Less Volatility

- Since 1994, total returns for self storage have outperformed all other equity REIT sectors while experiencing the least volatility
 - The industry is expected to continue to generate substantial NOI growth
 - Savings expected through improved scale, new technology and centralized infrastructure



Standard Deviation Divided by Avg. Return: 1994 - 2016

Five Forces Driving Self Storage

Impact

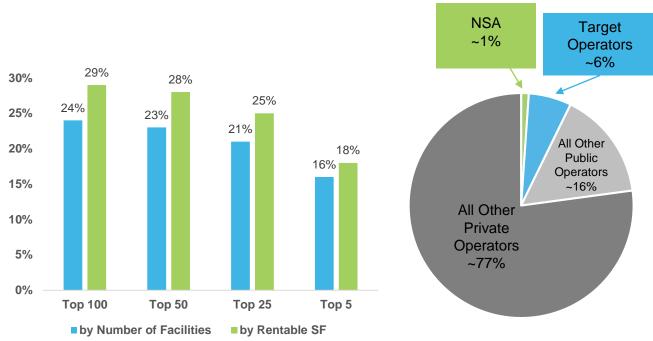
| Competitive Rivalry | Low – geographically limited | |
|-------------------------------|-------------------------------------|--|
| Customer Bargaining Power | Limited – not price driven | |
| Threat of Substitute Products | Very few cost effective options | |
| Supplier Bargaining Power | Limited - but increasing | |
| Threat of New Entrants | Limited – increasing entry barriers | |

Note: Data sourced from NAREIT 2016 published data. Volatility ratio defined as the standard deviation of return divided by return.



Meaningful Opportunity To Consolidate

- Highly fragmented sector
 - ~42,000⁽¹⁾ self-storage properties with over 30,000 operators
 - ~\$30 billion in annual revenue with over \$250 billion in private market value
- NSA primarily targets top private operators with 20 or more institutional quality properties in the top 100 MSAs
 - Target operators own and/or manage over 2,500 self-storage properties⁽²⁾



Source: 2017 Self-Storage Almanac and Self-Storage Association 2017.

Note: Rankings are based on net rentable square footage under management.

- (1) 2017 Self-Storage Almanac survey excludes small, rural facilities included in previous year's Almanacs.
- (2) Represents the number of facilities owned and/or managed by top operators, excluding NSA and other publicly traded entities.
- (3) Includes facilities owned internationally.
- (4) New NSA PRO, effective February 2017.

Top 40 Operators

- 1 Public Storage⁽³⁾
- 2 Extra Space Storage
- 3 CubeSmart
- 4 U-Haul International
- 5 Life Storage, Inc. (formerly Sovran/Uncle Bob's)
- 6 National Storage Affiliates Trust
- 7 StorageMart**
- 8W. P. Carey, Inc.
- 9 Metro Storage, LLC
- 10 The William Warren Group dba StorQuest Self Storage
- 11 Westport Properties, Inc.
- 12 Devon Self Storage Holdings, (US) LLC
- 13 World Class Capital Group, LC
- 14 Absolute Storage Management, Inc.
- 15 All Storage
- 16 TnT Self Storage Management
- 17 Compass Self Storage
- 18 Morningstar Properties
- 19 Brundage Management Co., Inc.
- 20 Safeguard Self Storage
- 21 The Jenkins Organization, Inc.
- 22 Storage Asset Management
- 23 Platinum Storage Group
- 24 A-1 Self Storage
- 25 Universal Storage Group
- 26 Argus Professional Storage Management
- 27 Security Public Storage
- 27 Metro Mini Storage
- 28 Strat Property Management, Inc.
- 29 StoragePRO Management Co.
- 30 Brookwood Properties, LLC
- 31 SHS Development/Lock Up Self Storage
- 32 West Coast Self-Storage
- 33 RHW Capital Management Group, LLC
- 34 Pogoda Companies
- 35 Dahn Corporation
- 36 Rosewood Property Company
- 37 Self-Storage Consulting Group
- 38 Shader Brothers Corp dba Personal Mini Storage (4)
- 39 Elite Stor Capital Partners
- 40 Sentry Self Storage

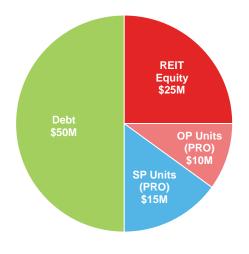
January 2018

Structure Incentivizes Pros To Perform

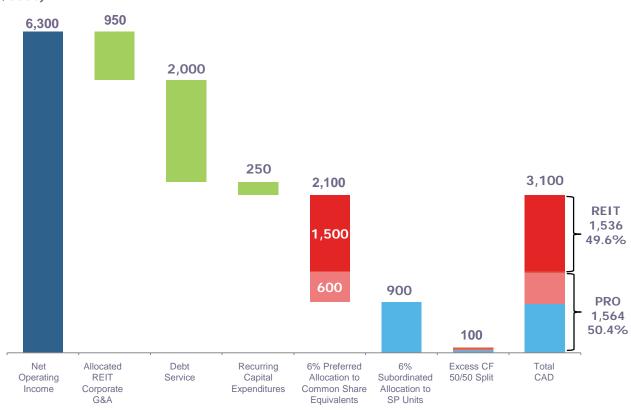
KEY ASSUMPTIONS

- \$100MM Purchase Price
- 6.3% Cap Rate
- 50% Funded with Debt
- 50% of Equity from PRO

Illustrative Capitalization



Illustrative Operating Cash Flow Allocation for Single Acquisition (\$000s)



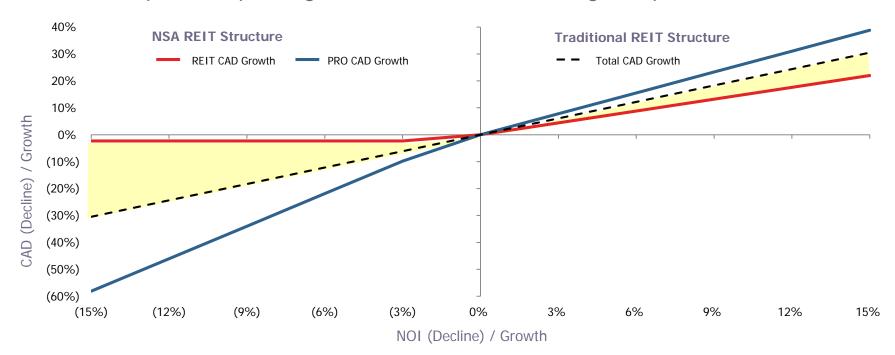
Note: Proportion of SP units and OP units in each acquisition will vary. In general, the number of OP units issued will be capped at a level intended to provide a minimal level of operating cash flow ("CF") allocation on unreturned capital attributable to the OP units. Debt Service is reflective of interest expense and scheduled principal amortization. Post-contribution capital structure is reflective of cost and does not reflect market value. This hypothetical capital structure and cash flow allocation is for illustrative purposes only and reflects the terms of the partnership agreement: SP unit holders receive a 6% allocation of operating CF on their unreturned capital contributions after a 6% allocation on unreturned capital attributable to OP unit holders, and then share in the allocation of any excess cash flow 50/50 with OP unit holders. The REIT is allocated \$36K of the operating CF allocated to OP units related to the 50/50 split of excess operating CF. The allocation of operating CF between the SP units and OP units is for purposes of determining distributions on SP units and does not represent the operating CF that will be distributed on OP units (or paid as dividends on NSA's common shares). Any distribution of operating CF allocated to OP units will be made at the discretion of NSA (and paid as dividends on our common shares at the discretion of our board of trustees).

January 2018

Structure Offers Cash Flow Stability And Downside Protection

Shareholders benefit from less volatile cash flow and downside protection

Illustrative Impact on Operating Cash Flow Allocation for Single Acquisition⁽¹⁾



Note: PRO CAD Growth is comprised of cash available to PROs through their ownership interests in both OP and SP units. REIT CAD Growth is comprised of cash available to all other equity stakeholders.

⁽¹⁾ This illustrative sensitivity graph reflects the capital structure of a single acquisition and operating CF allocation assumptions reflected on page 21. This hypothetical capital structure and cash flow allocation is for illustrative purposes only and reflects the terms of the partnership agreement: SP unit holders receive a 6% allocation of operating CF on their unreturned capital contributions after a 6% allocation on unreturned capital attributable to OP unit holders, and then share in the allocation of any excess cash flow 50/50 with OP unit holders. This allocation of operating CF between the SP units and OP units is for purposes of determining distributions on SP units and does not represent the operating CF that will be distributed on OP units (or paid as dividends on NSA's common shares at the discretion of our board of trustees).



NYSE: NSA