

Part III: Manner of Operations

Item 7: Order Types and Attributes

- a. Identify and explain each order type offered by the NMS Stock ATS. In your explanation, include the following:
 - i. priority, including the order type's priority upon order entry and any subsequent change to priority (if applicable); whether and when the order type can receive a new time stamp; the order type's priority vis-à-vis other orders on the book due to changes in the NBBO or other reference price; and any instance in which the order type could lose execution priority to a later arriving order at the same price;
 - ii. conditions, including any price conditions (e.g., how price conditions affect the rank and price at which it can be executed; conditions on the display or non-display of an order; or conditions on executability and routability);
 - iii. order types designed not to remove liquidity (e.g., post-only orders), including what occurs when such order is marketable against trading interest on the NMS Stock ATS when received;
 - iv. order types that adjust their price as changes to the order book occur (e.g., price sliding orders or pegged orders) or have a discretionary range, including an order's rank and price upon order entry and whether such prices or rank may change based on the NBBO or other market conditions when using such order type; when the order type is executable and at what price the execution would occur; whether the price at which the order type can be executed ever changes; and if the order type can operate in different ways, the default operation of the order type;
 - v. whether an order type is eligible for routing to other Trading Centers;
 - vi. the time-in-force instructions that can be used or not used with each order type;
 - vii. the circumstances under which order types may be combined with another order type, modified, replaced, canceled, rejected, or removed from the NMS Stock ATS; and
 - viii. the availability of order types across all forms of connectivity to the NMS Stock ATS and differences, if any, in the availability of an order type across those forms of connectivity.

PURE ATS is a ~~volume-based trajectory crossing venue. However, unlike existing time-based trajectory crossing venues that execute~~ matches compatible Subscriber orders and generates fills for those matches based on the aggregated prices of printed trades over time (e.g., a volume weighted average price). PURE ATS uses a trajectory matching protocol that executes orders by referencing publicly available market data, including the volume, and associated price, of each SIP-reported trade printed to the SIP as they occur (see, the Official Closing Price ("OCP"), and the NBBO. The venue's matching, reference, and crossing logic is primarily governed by the use of PURE ATS order types ("Order Types"). Each Order Type seeks fills referencing a defined set of market data. PURE ATS offers Subscribers the following order types: Streaming Block orders; Liquidity Seeking orders; and Reference-on-Close orders (each, an "Order Type"). PURE ATS Order Types are described in detail in this Item under "Order Types."

PURE ATS "matches" are bilateral pairings of compatible orders. Compatible orders are matched in accordance with the logic described in the "Inter-Order Type Compatibility Ranking" and "Matching" sections below (in this Item and in Part III, Item 23, Market Data, for the precise parameters of the SIP-reported trades¹¹, Trading Services, Facilities and Rules). PURE ATS generates two types of matches:

- (i) A "single point match," which results in a single point-in-time fill attributed to each order in the match, i.e., one single point match will result in one fill. Or,
- (ii) A "streaming match," which results in a series of "child fills" (a "stream") attributed to each order in the match, i.e., one streaming match will result in multiple fills. On the

PURE ATS, “child fill” means a trade executed by the ATS for a streaming match and is meant to indicate that one streaming match will potentially be associated with multiple fills.

A streaming match will continue uninterrupted so long as both orders in the match have quantity and remain “marketable” (as such term is defined below in this Item).

The type of match is determined by the Order Types that are matched, as described in this Item and in Part III, Item 11. ATS rules may apply differently to single point matches and streaming matches; where applicable, such distinctions are noted in this Form ATS-N.

Upon matching, the ATS executes fills for each matched order. The terms of all fills (both single point-in-time fills and streaming child fills), are governed by the Order Types, and execution logic described in this Item and in Part III, Item 11.

The remainder of this section provides additional detail on the (i) Order Types accepted on the ATS; (ii) how orders are prioritized; (iii) marketability (bid/offer) requirements; (iv) how Order Types can interact on the ATS; (v) ATS matching rules; (vi) minimum stream quantity, allocation and price discovery (execution logic); (vii) order modification and cancellation; and (viii) Time-in-Force (TIF)/order instructions. It also sets forth numerous examples meant to illustrate these principles.

Order Types

~~the ATS references).~~ Each firm and conditional order sent to the ATS will include a symbol, size, price, market side, a liquidity transfer rate (“LTR”)(explained below), and a Time-in-Force, among other terms.

(1) Compatible Streaming Block

Streaming Block orders are exclusively seeking a streaming match that references SIP-reported trades using a matched in accordance with liquidity transfer rate (“LTR”). PURE ATS has four Streaming Block orders that Subscribers can use. Each Streaming Block has an associated minimum LTR and a maximum LTR that indicates the logic described in LTR range that the Subscriber will accept. A streaming match will have a matched LTR that satisfies both matched orders (see Matching section below (in this item) Item and in Part III, Item 11, Trading Services, Facilities and Rules). Upon matching,). The matched LTR is a rate percentage that PURE ATS uses to determine the ATS executes fills (referred to herein as “size of child fills”) for each matched order. Similar to orders placed in a percentage of volume execution algorithm, the PURE ATS will produce a series of child fills. This series of child fills is called a “stream.” A stream will continue uninterrupted between two matched orders so long as both orders have quantity and remain “marketable” (as such term is defined and discussed in detail below in this item).

~~On the PURE ATS, “child fill” means a trade executed by the ATS for a streaming match. Given the PURE ATS execution logic, PURE ATS often executes trades at quantities less than the total size of the relevant matched orders. “Child fill” is meant to indicate that one streaming match will potentially be associated with multiple fills. Conversely, matches resulting in block trades (discussed below in this item) have in a single fill per streaming match.~~

~~The~~ More specifically, the size of the child fills in the streaming match is based on each match's ~~the~~ matched LTR percentage applied to ~~multiplied~~ against the quantity of each SIP-reported trade (SIP-reported trades are referred to as reference trades throughout this Form ATS-N) subject to the ATS's minimum stream quantity conditions ("MSQ") in accordance with the execution logic described in this item under "Order Types" and "Minimum Stream Quantity, Allocation, and Price Discovery" (see the MSQ example below in this item). The price of each child fill is the weighted average price of the reference trades that contribute to achieving the MSQ (see the MSQ example below in this item). Additional description of the PURE ATS compatibility, matching, and execution logic is described below in this Item under "Inter-Order Type Compatibility Ranking," "Matching" and "Minimum Stream Quantity, Allocation, and Price Discovery".

The remainder of this section provides additional detail on the (i) order types accepted on the ATS; (ii) how orders are prioritized; (iii) marketability (bid/offer) requirements; (iv) the ATS matching rules; (v) minimum stream quantity, allocation and price discovery; (vi) order modification and cancellation; and (vii) Time in Force (TIF)/order instructions. ~~It also sets forth numerous examples meant to illustrate these principles.~~

Order Types

To effect the matching protocol described above, PURE uses percentage (%) rate-based order types ("Order Types"). The % rate associated with each of the five Order Types listed below is called the LTR (referenced above). LTRs are used to determine the size of child fills in a stream by multiplying the applicable percentage against the quantity of each SIP-reported trade referenced in each respective child fill. Each Order Type has a minimum LTR and a maximum LTR, except the LS Order Type has an unlimited maximum LTR. The LTR is applied to SIP-reported trade quantities to determine the size of child fills (subject to the MSQ; see the MSQ example below in this item). Upon a child fill being effected (i.e., a trade being effected), the quantity of the child fill is then decremented against the total quantity of the matched order (decrementing is further explained and illustrated in "Inter-Order Type Compatibility and Matching" found below in this item~~Item~~). The child fill will be at the exact price of the relevant SIP-reported trade to which the LTR was applied (or, in the event a child fill is derived from multiple SIP-reported trades, the volume-weighted average of the reference trade prices; see the MSQ example below in this item). This matched LTR can then be continuously applied to each successive SIP-reported trade to create a series of child fills in a stream. The stream can continue over time, without any time limitations (during the course of an entire trading day with any remaining quantities cancelled at the end of a trading day).

~~PURE ATS has five Order Types. These five Order Types are:~~

- ~~1. Liquidity Seeking ("LS" or "Infinite%")~~
Streaming Block orders can be firm or conditional.

The Streaming Block orders are:

~~This Order Type is seeking a child fill quantity up to the full quantity of its entire order regardless of the size of the SIP-reported trade. Subscribers can set a minimum LTR for LS orders; otherwise, the default minimum LTR for an LS order is .1%.~~

2.1. 10-200% ("200%")

This ~~Order-Type~~Streaming Block is seeking a child fill quantity of 200% of the quantity of each contemporaneous SIP-reported trade but will accept at least 10%. This means that for a SIP-reported trade of 100 shares, the 200% ~~Order-Type~~Streaming Block will accept 200 shares to 10 shares for that child fill at the price of the SIP-reported trade.

~~3.2.~~ 5-30% ("30%")

This ~~Order-Type~~Streaming Block is seeking a child fill quantity of 30% of the quantity of each contemporaneous SIP-reported trade but will accept at least 5%. This means that for a SIP-reported trade of 100 shares, the 30% ~~Order-Type~~Streaming Block is seeking 30 shares to 5 shares for that child fill at the price of the SIP-reported trade.

~~4.3.~~ 5-15% ("15%")

This ~~Order-Type~~Streaming Block is seeking a child fill quantity of 15% of the quantity of each contemporaneous SIP-reported trade but will accept at least 5%. This means that for a SIP-reported trade of 100 shares, the 15% ~~Order-Type~~Streaming Block is seeking 15 shares to 5 shares for that child fill at the price of the SIP-reported trade.

~~5.4.~~ Custom LTR Range ("Custom")

This ~~Order-Type~~Streaming Block is seeking a child fill quantity based on the Custom parameters entered. Custom orders require both a minimum and maximum LTR, and must be within the range of 1-500%; the minimum and maximum LTR of a Custom order may be equal. For example, a Custom order with a 2% minimum and a 4% maximum, will accept 2 shares to 4 shares in a child fill referencing a SIP-reported trade of 100 shares, at the price of the SIP-reported trade.

Note that the examples above are illustrative. For the avoidance of doubt, PURE ATS will only generate child fills in accordance with the MSQ conditions described below.

(2) Liquidity Seeking ("LS")

This Order Type is seeking a single point match that references the NBBO. If such match is not available, LS orders will also accept a single point match referencing the OCP (upon dissemination) up to the full quantity of its entire order or a streaming match at the highest available LTR, in that order (compatibility, matching, and execution logic is described below in this Item under "Inter-Order Type Compatibility Ranking," "Matching" and "Minimum Stream Quantity, Allocation, and Price Discovery"). LS orders have an unlimited maximum LTR. Subscribers can set a minimum LTR for LS orders; otherwise, the default minimum LTR for an LS order is .1%. These orders can be firm or conditional.

(3) Reference-on-close ("ROC")

This Order Type is seeking only a single point match that references the OCP for up to its full quantity (compatibility and matching and execution logic is described below in this Item under "Inter-Order Type Compatibility Ranking," "Matching" and "Minimum Stream Quantity, Allocation, and Price Discovery"). This Order Type will not match prior to the OCP being disseminated, will not trade using any reference other than the closing price, and will not enter a streaming match. ROC orders do not have an LTR range but rather have an unlimited LTR. The unlimited LTR for ROC orders cannot be changed. ROC orders must be firm orders.

Intra-Order Type Prioritization

PURE ATS uses intra-order prioritization logic to rank orders within the same Order Type (note that for these purposes, Streaming Block is considered one Order Type). This section should be read in conjunction with the Inter-Order Type Compatibility Ranking section below in this Item, and in Part III, Item 11, for purposes of ranking for matches.

Within each Order Type, firm and conditional orders are prioritized based on (i) ~~Order Type~~LTR, (ii) size of the order, (iii) marketability (as defined below), and (iv) time the order was received, in that sequence. The ATS processes (i.e., assesses for matching compatibility, as described below) firm orders prior to conditional orders regardless of the order terms of the conditional orders.

The first term considered in intra-Order Type prioritization ranking is the ~~Order Type~~LTR. Orders are prioritized in the following order: (1) LS, (2) 200%, (3) 30%, (4) 15%, and (5) Custom. Custom orders will always be ranked behind the standardized ~~Order Types~~. This is true even if a Subscriber enters a Custom order with a higher maximum % LTR than a non-Custom order. Additionally, when multiple Custom orders are resting on the ATS order book, such Custom orders will be prioritized first by the highest maximum LTR, followed by size, marketability,. (The LS Order Type and ROC Order Type always have an unlimited maximum LTR and arrival time. therefore when prioritizing such orders among like Order Types, PURE ATS will always need to look at least to the size of the relevant orders).

The following example demonstrates the intra-Order Type prioritization if the ATS received the three orders chronologically:

Buy Order 1: 15% Streaming Block
Buy Order 2: ~~30%~~200% Streaming Block
Buy Order 3: ~~200%~~25% (Custom) Streaming Block

Regardless of any other terms of the orders (e.g., size, marketability, or time), the intra-Order Type prioritization would be based on ~~Order Type~~maximum LTR, as follows:

Buy Order 2 (Highest maximum LTR)
Buy Order 3 (Highest priority Order Type)
~~Buy Order 2 (2nd Highest priority Order Type)~~highest maximum LTR)
Buy Order 1 (3rd Highest priority Order Type)highest maximum LTR)

For two orders ~~in with~~ the same ~~Order Type~~LTR, the second term considered in intra-Order Type prioritization ranking is the size of the order quantity. The larger the order, the higher the standing. For example, if the ATS received the following three orders chronologically:

Buy Order 1: 15%,% Streaming Block, for 25,000 shares
Buy Order 2: 15%,% Streaming Block, for 5,000 shares
Buy Order 3: 15%,% Streaming Block, for 50,000 shares

The ~~inter-Order Type~~ prioritization would be:
Buy Order 3 (50,000 shares)
Buy Order 1 (25,000 shares)
Buy Order 2 (5,000 shares)

The third term considered in intra-Order Type prioritization ranking (i.e., for orders that are the same Order TypeLTR and of equal size) is the marketability of the order. The marketability standard depends on

~~For all Order Types,~~ the (i) relevant match type and (ii) reference point.

The marketability of the order for a potential streamstreaming match is the difference between the order's limit price and the contra-side NBBO. For instance, if the NBBO is \$10.01 x \$10.02 and the limit of a buy order is \$10.05, the marketability of an order is .03. The greater the marketability, the higher the standing in terms of priority.

To illustrate prioritization for a potential stream match, if the ATS received the following three orders chronologically:

Buy Order 1: 15%, % Streaming Block, for 25,000 shares, marketable by 4 cents
Buy Order 2: 15%, % Streaming Block, for 25,000 shares, marketable by 10 cents
Buy Order 3: 15%, % Streaming Block, for 25,000 shares, marketable by 6 cents

~~The inter-Order Type~~ prioritization would be:

Buy Order 2 (10 cents marketable)
Buy Order 3 (6 cents marketable)
Buy Order 1 (4 cents marketable)

~~In addition to streaming matches, LS Orders are also eligible to enter into block trades. Block trades are~~ An order is marketable for a single trades that occur only when two point match referencing the NBBO (this applies to LS orders match. These are described below in the Allocation and Price Discovery section and Example 6 of this response. LS orders have marketability for block trades (i.e., not a stream match), only if the order's limit price at least satisfies its peg instruction (peg instructions are described in Item 11c). The more aggressive the limit price, the higher the standing in terms of priority. Single point-in-time trades are described below in the "Minimum Stream Quantity, Allocation, and Price Discovery" section and Examples 9 and 10 of this response.

An order is marketable for a single point match referencing the OCP (this applies to LS and ROC orders) if the order's limit price is at least through the OCP. The more aggressive the limit price, the higher the standing in terms of priority.

The final term considered in intra-Order Type prioritization ranking (i.e., for orders that are the same Order TypeLTR, equal size, and have equal marketability) is the time the order arrived, with priority being assigned chronologically. Given the aforementioned prioritization logic, it is by system design that orders arriving later could feasibly be given higher priority than earlier arriving orders.

Minimum Marketability Threshold

For an order to be eligible for a streamstreaming match, it must be marketable by a minimum threshold (the "minimum marketability threshold") (minimum marketability thresholds are not applied to block trades;single point matches). The minimum marketability thresholds are set on a stock-by-stock basis and are neither publicly available nor made available to Subscribers and can be set at any integer, including zero. PURE ATS can modify the minimum marketability

threshold for particular stocks to account for volatility, including in the event of anomalous volatility of the overall market, relevant sector, or a specific stock. To monitor for circumstances that may warrant modifying the minimum marketability threshold, PURE considers various volatility proxies such as the VIX, Implied Volatilities, and Realized Volatilities of single stocks, sector indices, and/or market-wide indices. The minimum marketability thresholds are manually updated by PURE Market Operations and are reviewed biannually.

For example, for a stock with a minimum marketability threshold of 2 cents that is experiencing significantly higher price volatility, the minimum marketability threshold could be increased to 4 cents. This would require a buy order to have a limit of 4 cents higher than the current national best offer, and a sell order to have a limit of 4 cents below the current national best bid to be eligible for a streaming match.

PURE believes that modifications to the minimum marketability threshold in these circumstances promotes matches that yield more efficient streams between Subscribers.

Note that minimum marketability thresholds are only relevant to the creation of a streaming match (i.e., to be eligible for a match, an order must meet the minimum marketability threshold). Once an order is in a streaming match, so long as the order remains marketable (i.e., the order's limit price is priced at or through its respective NBBO farside), the order will remain in the match. If a matched order ceases to be marketable, the streaming match will end.

For example, if the NBBO is \$10.01 x \$10.02, for a stock with a minimum marketability threshold of 4 cents, a sell order would need to be priced at \$9.97 to be eligible for a streaming match. Once matched, the order would only need to remain marketable to remain in the streaming match. If the order became unmarketable, i.e., the NBBO moved to \$9.96 X \$9.97, the streaming match would end. To become eligible for a streaming match again (with the previous matched order or any other order), the sell order would again need to meet minimum marketability thresholds at the then-prevailing NBBO.

Inter-Order Type Compatibility Ranking

PURE ATS will Matching

~~Matches are bilateral (i.e., between only two orders). For a match to occur, two orders must be of~~
Order Types that are compatible.

- (1) Streaming Block Orders: Streaming Block orders are compatible to match with LS and Streaming Block orders, prioritized by Order Type in that order.
- (2) LS Orders: The LS Order Type is compatible to match with the LS, ROC (if the LS order is firm, and upon the dissemination of the Official Closing Print), and Streaming Block orders, prioritized by Order Type in that order. For the avoidance of doubt, ROC orders are ignored by the ATS for compatibility purposes until the dissemination of the OCP, and therefore until that time the ATS matcher will seek to match LS orders only with LS orders or Streaming Block orders (i.e., the presence of ROC orders on the ATS order book prior to the dissemination of the OCP does not inhibit matches of LS and Streaming Block orders).
- (3) ROC Orders: The ROC Order Type is not compatible with any Order Type until the Official Closing Print has been disseminated. Until that point, ROC orders are not eligible for any match and will remain resting on the ATS order book. Upon the dissemination of the Official Closing

Print, the ROC Order Type is compatible to match with ROC and firm LS orders, prioritized by Order Type in that order.

Matching

Matches are bilateral (i.e., between only two orders). For a match to occur, two orders must be compatible.

Compatibility means that among compatible Order Types (described above) there is (i) a buy and sell order in the same security, (ii) both meeting the minimum marketability threshold (not applicable to ~~block trades~~), single point matches), (iii) with overlapping LTRs (i.e., the LTR minimum to maximum range of one order overlaps with the LTR minimum to maximum range of another order), and (iv) that any additional order handling instructions sent with the orders (as described below in Part III, Item 11, Additional Order Parameters) are satisfied. ~~If there are overlapping LTRs, the orders will be matched at the highest LTR within the acceptable range for each order. If an order has residual LTR after being matched, the order's decremented LTR will be available for other matches, meaning the order can be in multiple matches concurrently. Note that for prioritization purposes, a decremented order maintains its original priority standing on the order book (e.g., an order using the 200% Order Type with a residual 170% LTR following a match, is still treated as a 200% Order Type for purposes of prioritization).~~

In searching for a match for an order, the ATS first considers inter-Order compatibility ranking. If there are multiple compatible contra-side orders with equal inter-Order compatibility ranking, the ATS will look to the intra-Order Type prioritization ranking of the relevant orders.

The following examples illustrate the application of the PURE ATS inter-Order Type compatibility logic (example assumes orders are compatible on all terms not reflected):

Example 1 —Compatible LTRs:- Incoming LS Order (prior to the Official Closing Print)

Orders 1-3 are resting on the ATS (all orders are firm).

Order 1 is a buy order for 5,000 shares in the ~~15%~~LS Order Type.

Order 2 is a buy order for 5,000 shares in the 15% Streaming Block (min. of 5%, max. of 15%).

Order 23 is a buy order for 5,000 shares in the ROC Order Type.

Order 4 arrives in the PURE ATS and is a sell order for 5,000 shares in the LS Order Type.

The compatible orders for Order 4 would be prioritized as:

Order 1

Order 2

Order 3 would not be ranked because the Official Closing Print was not yet disseminated.

Example 2 - Resting ROC orders

Orders 1-4 are resting on the ATS when the Official Closing Print is disseminated (all orders are firm).

Order 1 is a buy order for 5,000 shares in the LS Order Type.

Order 2 is a buy order for 5,000 shares in the 15% Streaming Block Order Type (min. of 5%, max. of 15%).

Order 3 is a buy order for 5,000 shares in the ROC Order Type.

Order 4 is a sell order for 5,000 shares in the ROC Order Type.

The compatible orders for Order 4 would be prioritized as:

Order 3

Order 1

Order 2 would not be ranked because Streaming Block orders are not compatible with ROC orders.

Example 3 - Incoming Streaming Block order

Orders 1 and 2 are resting on the ATS (all orders are firm).

Order 1 is a buy order for 5,000 shares in the LS Order Type.

Order 2 is a buy order for 5,000 shares in the 15% Streaming Block (min. of 5%, max. of 15%).

Order 3 arrives in the PURE ATS and is a sell order for 5,000 shares in the 200% Streaming Block.

The compatible orders for Order 3 would be prioritized as:

Order 1

Order 2

Matches will result in the following: (i) streaming matches are created at the highest possible LTR satisfying both matched orders (the highest LTR within the acceptable range for each matched order); and (ii) single point matches are created at the highest possible quantity that satisfies both matched orders.

If an order has residual quantity or LTR after being matched, the order's decremented quantity or LTR will be available for other matches, meaning the order can be in multiple matches concurrently. Note that for prioritization purposes, a decremented order maintains its original priority standing on the order book (e.g., an order using the 200% Order Type with a residual 170% LTR following a match, is still treated as a 200% Order Type for purposes of prioritization).

The following examples illustrate the interaction of Streaming Block orders with different LTRs:

Example 4 - Compatible LTRs:

Order 1 is a buy order for 5,000 shares in the 15% Streaming Block Order Type (min. of 5%, max. of 15%).

Order 2 is a sell order for 5,000 shares in the 15% Streaming Block Order Type (min. of 5%, max. of 15%).

These orders have overlapping LTRs because the LTR ranges of the orders overlap. Thus, the orders are eligible to be matched. The orders will be matched at 15%, which is the highest common LTR between the two orders (in this example, this also happens to be the maximum LTR for each order).

Example ~~2~~—5 - Incompatible LTRs:

Order 1 is a buy order for 5,000 shares in the 15% Streaming Block Order Type (min. of 5%, max. of 15%).

Order 2 is a sell order for 5,000 shares in the Custom Streaming Block Order Type, with a 1% minimum and a 4% maximum LTR.

These orders do not have overlapping LTRs because Order 2's LTR range (1% to 4%) does not overlap with Order 1's LTR range (5% to 15%). Thus, these orders are not eligible to be matched.

Example 3—6 - Compatible But Different LTRs:

Order 1 is a buy order for 5,000 shares in the 30% Streaming Block Order Type (min. of 5%, max. of 30%).

Order 2 is a sell order for 5,000 shares in the 15% Streaming Block Order Type (min. of 5%, max. of 15%).

These orders have overlapping LTRs because the LTR ranges of the orders overlap. Thus, the orders are eligible to be matched. The orders will be matched at 15%, which is the highest common LTR between the two orders. Order 1 will also have a residual LTR of 15%, which will rest in the ATS order book awaiting other potential matches.

Example 4—7 - Compatible LTRs and Concurrent Matching:

Order 1 is a buy order for 10,000 shares in the 15% Streaming Block Order Type (min. of 5%, max. of 15%).

Order 2 is a buy order for 10,000 shares in the 15% Streaming Block Order Type (min. of 5%, max. of 15%).

Order 3 is a sell order for 20,000 shares in the 30% Streaming Block Order Type (min. of 5%, max. of 30%).

Here, Order 3 has overlapping LTRs with both Order 1 and Order 2, and has sufficient LTR to match with both contra-side orders. Therefore, Order 3 will enter two concurrent matches, one with Order 1 and a second with Order 2. In this way, Order 1 and Order 2 will satisfy their maximum LTR of 15%, and Order 3 will achieve its maximum LTR of 30% (two matches each at 15% LTR).

Example 5—8 - Compatible LTRs and Sequential Matching:

Order 1 is a buy order for 10,000 shares in the 30% Streaming Block Order Type (min. of 5%, max. of 30%).

Order 2 is a buy order for 10,000 shares in the 30% Streaming Block Order Type (min. of 5%, max. of 30%).

Order 3 is a sell order for 20,000 shares in the 30% Streaming Block Order Type (min. of 5%, max. of 30%).

Here, Order 3 has overlapping LTRs with both Order 1 and Order 2, but only has LTR to match with one of the orders since the orders will be matched at the highest common LTR— -- here 30%. Since Order 1 is prioritized over Order 2, Order 3 and Order 1 form a match at a 30% LTR. Order 2 will remain resting on the ATS order book. However, because Order 3 is larger in size than Order 1, Order 3 will have a residual 10,000 shares to sell once Order 1's buy order is completed. Therefore, once Order 1's quantity is fully exhausted, Order 3 will form a match with Order 2, which will continue as a stream until both Order 3 and Order 2 are fully exhausted (since Order 3's residual 10,000 shares to sell is equal to Order 2's 10,000 shares to buy).

Minimum Stream Quantity, Allocation, and Price Discovery

Single point-in-time trade execution logic:

When two orders eligible for a single point match are matched (e.g., LS-LS, firm LS-ROC, ROC-ROC), they will execute a single point-in-time trade for the largest quantity possible (i.e., the smaller quantity of the two orders matched). Note that given the minimum order size requirements for orders on PURE ATS, minimum stream quantity is not applicable to single point-in-time trades.

The price of the single point-in-time trade will be set in accordance with the referenced market data as dictated by the matched Order Types (e.g., the OCP or NBBO), the limit price, and peg instructions, if applicable, for the two relevant orders (executions will not violate an order's limit price). Peg instructions (see Part III, Item 11c under "Peg Order Instructions for LS Orders") are applicable only to LS orders and are used (with limit prices) to determine compatibility for an LS-LS match and the price of any resulting single point-in-time trade.

Example 9 - LS / Compatible LS:

Order 1 is a buy order for 40,000 shares in the LS Order Type.

Order 2 is a sell order for 50,000 shares in the LS Order Type.

Orders 1 and 2 will be matched and execute a single point-in-time trade at the then-current NBBO midpoint (for illustrative purposes, the examples assume that the two LS orders are compatible at the midpoint of the prevailing NBBO).

Order 2 will have a residual 10,000 shares return to resting on the ATS order book.

Example 10 - LS / Compatible ROC:

Order 1 is a buy order for 40,000 shares in the LS Order Type.

Order 2 is a sell order for 50,000 shares in the ROC Order Type.

Order 1 and 2 are resting on the ATS order book when the OCP is disseminated.

Orders 1 and 2 will be matched and execute a single point-in-time trade at the OCP.

Order 2 will have a residual 10,000 shares canceled back to the Subscriber (since the ATS cancels all unexecuted orders at the end of the trading day and the ATS's last trade references the OCP).

Streaming match execution logic:

Once a streaming match has occurred, the ATS will use each observed SIP-reported trade in the relevant security as reference trades to execute "child fills" in accordance with PURE ATS execution (see under "Order Types") and Minimum Stream Quantity ("MSQ") logic.

The MSQ is a PURE-set threshold that represents the smallest quantity trade (i.e., a child fill) that the ATS will effect in a particular symbol (e.g., 10 shares, 50 shares, 100 shares). For example, if the MSQ for a symbol is 20 shares, the ATS will only execute trades that yield 20 or more shares to each matched order. PURE ATS will not execute a child fill that is less than the relevant MSQ.

The MSQ for each symbol is as follows:

- 1: Symbols with a 5-day rolling median daily volume ("MDV") equal to or greater than 20 million shares are assigned an MSQ of 50.
- 2: Symbols with a 5-day rolling MDV equal to or greater than 10 million shares and less than 20 million shares are assigned an MSQ of 20.
- 3: Symbols with a 5-day rolling MDV equal to or greater than 3 million shares and less than 10 million shares are assigned an MSQ of 20.
- 4: Symbols with a rolling 5-day MDV less than 3 million shares are assigned an MSQ of 1.

Each stock's 5-day rolling MDV is calculated daily. If the stock's 5-day rolling MDV changes such that the stock falls into a different MDV range, the stock's MSQ will be updated accordingly (MSQ updates occur daily, i.e., not intraday).

For example, if a stock had the following MDV by day:

- Trade Date 1: 9 million shares;
- Trade Date 2: 8 million shares;
- Trade Date 3: 12 million shares;
- Trade Date 4: 12 million shares;
- Trade Date 5: 9 million shares;
- Trade Date 6: 11 million shares.

Following Trade Date 5, the stock's 5-day rolling MDV is 9 million shares and the MSQ for trading the stock on Trade Date 6 would be 1. Following trading on Trade Date 6, the stock's 5-day rolling MDV is 11 million shares and the MSQ for trading on Trade Date 7 is 20 shares.

MDV for each stock is publicly available and therefore available to be calculated by all Subscribers and potential market participants.

In the ordinary course, PURE ATS will evaluate the appropriateness of the MDV ranges and applicable MSQs described above on a quarterly basis. PURE will notify Subscribers prior to modifying said ranges and MSQs.

~~For The MSQ is set by PURE at 20 shares for all symbols.—~~

In the event that there is a system or configuration issue involving the MSQ that is adversely impacting PURE ATS or PURE ATS Subscribers, PURE may (i) suspend the application of the MSQ (in which case the ATS would revert to generating fills for streaming matches by referencing each SIP-reported trade for each respective streaming match) or (ii) modify the MDV ranges and/or applicable MSQs outside of the quarterly schedule. In any event, Subscribers will be notified before any such action is taken. PURE will review the MSQ settings periodically, but not less than every 6 months.

The MSQ is applied as follows:

1. When the LTR of a match multiplied against the quantity of a single reference trade meets or exceeds the relevant MSQ, PURE ATS executes a child fill at the printed price of the reference trade. For example: (i) a 600-share reference trade; (ii) for a 10% LTR match; (iii) in a symbol with MSQ=50; (iv) results in PURE ATS executing a 60-share ($600s \cdot .10$) child fill for the match ($60 > \text{the } 50 \text{ MSQ}$) at the printed price.
2. When the LTR of a match multiplied against the quantity of a single reference trade does not meet or exceed the relevant MSQ, no child fill is executed. PURE ATS tracks the shares derived from multiplying the LTR against the quantity of the reference trade ("Derived Shares") and consecutive subsequent trades. When the running sum of Derived Shares is equal to or greater than the relevant MSQ, PURE ATS executes a single child fill. The price of the child fill is the volume weighted average price of the underlying reference trades.

For example: (i) a 600-share reference trade; (ii) for a 5% LTR match; (iii) in a symbol with MSQ=50; (iv) results in PURE ATS tracking 30 Derived Shares ($600s \cdot .05$), but no child fill. If the next relevant SIP-reported trade is 1,000 shares, PURE ATS would execute a child fill of 80 shares ($30 \text{ Derived Shares} + (1,000s \cdot .05)$). The price would be the volume weighted average price of the two reference trades.

Derived Shares are an internal concept used by the ATS for tracking purposes only, akin to a trajectory marketplace tracking reference trades that contribute to an average price. Prior to

an executed child fill, Derived Shares are not decremented against any order, and do not result in trade booking or reporting.

3. If a match is terminated, no further child fills are generated. Matches are terminated when matched orders become incompatible (e.g., when one or both orders become unmarketable, exhaust all quantity, or are cancelled). Any Derived Shares being tracked at the time of termination are ignored for all purposes.

A series of reference trades can create a series or “stream” of “child fills.” Note that each SIP-reported trade is only referenced once in each stream (and all concurrent streams in the ATS reference each SIP-reported trade once). The ATS references SIP-reported trades in real-time as they are reported in succession (subject to the filtering logic described in Part III, Item 23, below). (To the extent that there are malfunctions or other issues with the SIP that result in time gaps, the procedures set forth in Part III, Item 20, below will be applied). In the event that there is no SIP-reported trade after the match is formed, the orders will remain matched but there will be no child fills, and therefore no stream (i.e., a match can exist without a stream).

A stream will continue uninterrupted providing "child fills" as long as both orders remain marketable (i.e., the orders' limit prices are priced at or through the contra-side NBBO), have quantity remaining, and have not been cancelled.

The following example illustrates the application of the MSQ:

MSQ for the relevant symbol is 100 shares.

PURE ATS observes the following SIP-reported trades:

Reference Trade 1: 750 shares @ \$36

Reference Trade 2: 1000 shares @ \$35.90

PURE ATS generates fills for the following matches as follows (matches are bilateral and each order in the match receives a fill):

(1) Match 1 (30% LTR):

- a. Following Reference Trade 1: Child Fill 1 of 225 shares @ \$36 reported to FINRA Trade Reporting Facility (“TRF”)
- b. Following Reference Trade 2: Child Fill 2 of 300 shares @ \$35.90 reported to TRF

(2) Match 2 (10% LTR):

- a. Following Reference Trade 1: No child fill (75 Derived Shares; no decrementing or TRF reports)
- b. Following Reference Trade 2: Child Fill 1 of 175 shares @ \$35.94 reported to TRF

(3) Match 3 (10% LTR):

- a. Following Reference Trade 1: No child fill (75 Derived Shares; no decrementing or TRF reports)
- b. Match terminated prior to Reference Trade 2: No child fills and match is ended (75 Derived Shares ignored; no decrementing or TRF reports)

(4) Match 4 (any LTR):

- a. Match terminated prior to Reference Trade 1: No child fills and match is ended (no Derived Shares, decrementing, or TRF reports)

~~The only exception to an LTR governing fills is when two LS orders match. When two LS orders match, they will execute a block trade for the largest quantity possible (i.e., the smaller quantity of the two orders matched). Note that given the minimum order size requirements for orders on PURE ATS, MSQ is not applicable to LS-LS block trades. The price of the block trade will be set in accordance with the limit price and peg instructions for the two relevant LS orders (but in no event will fall outside of the NBBO or violate either order's limit price). Peg instructions (see Part III, Item 11c under "Peg Order Instructions for LS Orders") are applicable only to LS orders and are used (with limit prices) to determine compatibility for an LS-LS match and the price of any resulting block trade.~~

~~The two examples below show the impact on a pre-existing stream~~Streaming matches involving one LS order ~~and a non-LS order may also be impacted~~ when a second LS order on the contra-side of the first LS order enters the ATS. The two examples below show the impact. For illustrative purposes, the examples assume that the two LS orders are compatible at the midpoint of the prevailing NBBO.

In the first scenario (Example ~~6~~11), a stream involving an LS order and a ~~non-LS~~Streaming Block order is broken by an incoming contra-side LS order with a size greater than or equal to the remaining quantity of the first LS order. In no other circumstances would a stream be broken by an incoming order. In the second scenario (Example ~~7~~12), the stream involving the LS order and ~~non-LS~~Streaming Block order continues even after the second LS order matches and executes a ~~block~~single point-in-time trade against the first LS order, because the first LS order has residual quantity after the ~~block~~single point-in-time trade.

Example ~~6—11~~ - LS / Compatible LTR / LS Contra completes the LS:

~~Order 1 is a buy order for 40,000 shares in the LS Order Type.~~

~~Order 2 is a sell order for 50,000 shares in the~~Order 1 is a buy order for 40,000 shares in the LS Order Type.

Order 2 is a sell order for 50,000 shares in the 15% Streaming Block Order Type.

Orders 1 and 2 will be matched at 15% to participate in Stream 1, and Order 1 will have a residual LTR of Infinite% in the order book resting simultaneously.

Order 3 is an incoming sell order for 50,000 shares in the LS Order Type.

Order 1 and Order 3 will be matched to participate in Stream 2. Stream 2 will be comprised of a single ~~block~~point-in-time trade for the residual of Order 1's size at the then-current NBBO midpoint.

Stream 1 (Order 1 & Order 2) will end (because Order 1 is completed by Order 3) and Order 3's and Order 2's residual quantities will return to the ATS order book.

Example ~~7—12~~ - LS / Compatible LTR / LS Contra does not complete the LS:

Order 1 is a buy order for 100,000 shares in the LS Order Type.

Order 2 is a sell order for 50,000 shares in the 15% Streaming Block Order Type.

Orders 1 and 2 will be matched at 15% to participate in Stream 1, and Order 1 will have a residual LTR of Infinite% in the order book resting simultaneously.

Order 3 is a sell order for 50,000 shares in the LS Order Type.

Order 1 and Order 3 will execute a single point-in-time trade ~~a block~~ for Order 3's size of 50,000 shares at the then-current midpoint NBBO.

Stream 1 (Order 1 & Order 2) will continue referencing SIP-reported trades.

Order Modifications and Cancellations

All firm and conditional orders can be modified or canceled at any time.

For a firm or conditional order resting on the ATS order book, modifications to the Order Type, size, or limit price (which impacts marketability) will not result in a new timestamp for prioritization purposes, but may impact the order's priority status based on the modified parameters (in accord with the logic set forth in the Prioritization section).

For an order in a match, modifications will not impact the match or stream unless: (i) the limit price is changed and renders the order unmarketable (i.e., the order is no longer priced to at least the contra-side NBBO); or (ii) the LTR is changed (i.e., Order Type changes or changes to the LTR rate for Custom orders) such that the new LTR range does not overlap with the contra-side order's LTR range.

In the event of a PURE ATS or market-triggered trading stoppage, all orders will be cancelled back to Subscribers.

TIF/Order Instructions

The ATS does not support post-only orders or route to other trade centers.

Day, Immediate or Cancel (IOC), and the ATS's streaming analog Stream or Kill (SOK) are the only TIF order instructions supported by the ATS.

The IOC TIF can only be applied to the LS Order Type, and any other Order Type using the IOC TIF is rejected. The Day TIF may be applied to any Order Type.

SOK represents a specific PURE ATS TIF order instruction for Streaming Block Order Types where a Stream or Kill (“SOK”) order is accepted if a contra-side order is resting on the order book and is compatible with the SOK order. If the contra order to the SOK order is not resting on the ATS order book, the SOK order will be cancelled immediately. If accepted, the SOK order is immediately matched with its compatible contra-side order. If the order is not completed for any reason, it will be cancelled back to the Subscriber rather than rest in the order book.

Example ~~8~~—13 - SOK / Contra is resting and meets the LTR:

Order 1 is a resting sell order in the 15% Streaming Block Order Type (min. of 5%, max. of 15%) for 10,000 shares.

Order 2 is a SOK buy order in the 15% Streaming Block Order Type (min. of 5%, max. of 15%) for 10,000 shares.

Because Order 1 and Order 2 have overlapping LTR ranges, Order 2 will be matched with Order 1.

Example ~~9~~—14 - SOK / Contra is resting and does not meet the LTR:

Order 1 is a resting sell order in the Custom Streaming Block Order Type, 1-4% LTR for 10,000 shares.

Order 2 is a SOK buy order in the 15% Streaming Block Order Type (min. of 5%, max. of 15%) for 10,000 shares.

Because Order 1 and Order 2 do not have overlapping LTR ranges, Order 2 will be cancelled back and Order 1 will continue to rest.

Example ~~10~~—15 - SOK / Contra is resting and meets the LTR, but Quantity cannot complete:

Order 1 is a resting sell order in the 15% Streaming Block Order Type (min. of 5%, max. of 15%) for 10,000 shares.

Order 2 is a SOK buy order in the 15% Streaming Block Order Type (min. of 5%, max. of 15%) for 50,000 shares.

Because Order 1 and Order 2 have overlapping LTR ranges, Order 2 will be matched with Order 1.

After Order 1 is completed, if there is a contra-side order on the ATS order book that is compatible with Order 2, the two orders will be matched. If there is no compatible contra-side order resting on the ATS order book, the remaining 40,000 shares of Order 2 will be cancelled back to the Subscriber.

- b. Are the terms and conditions for each order type and attribute the same for all Subscribers and the Broker-Dealer Operator?

Yes

If no, identify and explain any differences.

Part III: Manner of Operations

Item 10: Opening and Reopening

- a. Explain how the NMS Stock ATS opens or re-opens for trading, including when and how orders and trading interest are priced, prioritized, matched, and executed, and identify any order types allowed prior to the start of regular trading hours or following a stoppage of trading in a security during regular trading hours.

PURE ATS accepts firm and conditional orders beginning at 8:00am ET and matching in the order book for firm and conditional orders only occurs during normal market hours (9:30am to 4:00pm ET). The firm and conditional orders will remain in an accepted state and no executions will occur until the matching engine detects the following execution triggers: (i) the first trade from the primary listing exchange for the relevant symbol, (ii) an NBBO, and (iii) the opening time. Note that the first trade from the primary listing exchange may be the opening auction trade or a trade that occurs before the opening auction (given each exchange's opening processes). The matching engine will reference either of these types of trades, so long as the other two execution triggers are detected. Once the matching engine begins trading, the standard priority logic and matching logic will be applied respectively to any open firm or conditional orders.

Following a stoppage of trading in a security during regular trading hours, PURE ATS will not execute transactions until the matching engine detects the first trade from the primary listing exchange for the relevant symbol, an NBBO, and the re-opening time (for an exchange-initiated stoppage) or pricing information (for a PURE ATS-initiated stoppage). In addition to the aforementioned criteria, a LULD band from the primary exchange is required for a ~~block~~single point-in-time trade between two LS contra orders (firm or conditional) to occur for both the start of trading or re-opening of trading. If the primary listing exchange does not reopen (or pricing information is unavailable) after a stoppage the PURE ATS will not match firm or conditional orders in the security.

- b. Are the processes and procedures governing opening and re-opening the same for all Subscribers and the Broker-Dealer Operator?
Yes
If no, identify and explain any differences.
- c. Explain how unexecuted orders and trading interest are handled at the time the NMS Stock ATS begins regular trading at the start of regular trading hours or following a stoppage of trading in a security during regular trading hours.

When the ATS begins matching orders, any resting firm or conditional orders will be subject to the prioritization and marketability rules described in Part III, Item 7.

In the event of a PURE or market-initiated stoppage, all firm and conditional orders in the ATS are cancelled back to Subscribers.

- d. Are the processes or procedures governing unexecuted orders and trading at the time the NMS Stock ATS begins regular trading at the start of regular trading hours, or following a stoppage of trading in a security during regular trading hours, the same for all Subscribers and the Broker-Dealer Operator?
Yes
If no, identify and explain any differences.

PureStream, LLC—Form ATS-N/UA (2022.10.28)

Exhibit 3

- e. Are there any differences between pre-opening executions, executions following a stoppage of trading in a security during regular trading hours, and/or executions during regular trading hours?

No

If yes, identify and explain the differences.

Part III: Manner of Operations

Item 11: Trading Services, Facilities and Rules

- a. Provide a summary of the structure of the NMS Stock ATS marketplace (e.g., crossing system, auction market, limit order matching book) and explain the means and facilities for bringing together the orders of multiple buyers and sellers on the NMS Stock ATS.

~~PURE ATS is a volume-based trajectory-crossing venue. However, unlike existing time-based trajectory-crossing venues that execute matches compatible Subscriber orders and generates fills for those matches based on the aggregated prices of printed trades over time (e.g., a volume weighted average price), PURE ATS uses a trajectory matching protocol that executes orders by referencing publicly available market data, including the volume, and associated price, of each SIP-reported trade printed to the SIP as they occur (see Part III, Item 23, Market Data, for the precise parameters of the SIP-reported trades that the ATS references). Each firm and conditional order sent to the ATS will include a symbol, size, price, market side, an LTR, the OCP, and a Time-in-Force, among other terms the NBBO. The venue's matching, reference, and crossing logic is primarily governed by the use of PURE ATS Order Types.~~

~~PURE ATS "matches" are bilateral pairings of compatible orders. Compatible orders are matched in accordance with the logic described in the "Inter-Order Type Compatibility Ranking" and "Matching-section (" sections below (in this itemItem and in Part III, Item 7a).-7).~~

~~Upon matching, the ATS executes fills (referred to herein as "child fills") for each matched order. The price and size terms of the childall fills is in accordance with matching (both single point-in-time fills and streaming child fills), are governed by the Order Types, and execution logic described in this item and Part III, Item 7a under "Order Types" and "Minimum Stream Quantity, Allocation, and Price Discovery". Similar to orders placed in a percentage of volume execution algorithm, the PURE ATS will produce a series of child fills. This series of child fills is called a "stream." A stream will continue uninterrupted between two matched orders so long as both orders have quantity and remain "marketable" (as such term is defined and discussed in detail in Part III, Item 7).and in Part III, Item 7.~~

~~The ATS is available for trading in NMS stocks only.~~

- b. Are the means and facilities required to be identified in Item 11(a) the same for all Subscribers and the Broker-Dealer Operator?
Yes
If no, identify and explain any differences.
- c. Explain the established, non-discretionary rules and procedures of the NMS Stock ATS, including order interaction rules for the priority, pricing methodologies, allocation, matching, and execution of orders and trading interest, and other procedures governing trading, such as price improvement functionality, price protection mechanisms, short sales, locked-crossed markets, the handling of execution errors, and the time-stamping of orders and executions.

~~The ATS order book matches compatible firm or conditional orders with marketable price limits at the highest compatible quantity or LTR and provide. Upon matching, the ATS executes fills as a function of the LTR and for each matched order using the contemporaneous SIP-reported trades based on relevant market data reference point(s) in accordance with the following logic (described in detail with examples this Item and in Part III, Item 7).~~

~~Intra-Order Type Prioritization~~

~~Firm~~PURE ATS uses intra-order prioritization logic to rank orders within the same Order Type (note that for these purposes, Streaming Block is considered one Order Type). This section should be read in conjunction with the Inter-Order Type Compatibility Ranking section below in this Item, and in Part III, Item 7, for purposes of ranking for matches.

Within each Order Type, firm and conditional orders are prioritized based on (i) ~~Order Type~~LTR, (ii) size of the order, (iii) marketability, ~~(as defined below)~~, and (iv) time the order was received, in that sequence. The ATS processes (i.e., assesses for matching compatibility, as described ~~above in Part III, Item 7 and below~~) firm orders prior to conditional orders regardless of the order terms of the conditional orders.

The first term considered in ~~intra-Order Type~~ prioritization ranking is the ~~Order Type~~LTR. Orders are prioritized in the following order: (1) LS, (2) 200%, (3) 30%, (4) 15%, and (5) Custom. Custom orders will always be ranked behind the standardized Order Types. This is true even if a Subscriber enters a Custom order with a higher maximum % LTR than a non-Custom order. Additionally, when multiple Custom orders are resting on the ATS order book, such Custom orders will be prioritized first by the highest maximum ~~maximum~~ LTR, followed by size, marketability, and arrival time. (The LS Order Type and ROC Order Type always have an unlimited maximum LTR and therefore when prioritizing such orders among like Order Types, PURE ATS will always need to look at least to the size of the relevant orders).

For two orders ~~in with~~ the same ~~Order Type~~LTR, the second term considered in ~~intra-Order Type~~ prioritization ranking is the size of the order quantity. The larger the order, the higher the standing.

The third term considered in ~~intra-Order Type~~ prioritization ranking (i.e., for orders that are the same Order Type and of equal size) is the marketability of the order.

For all Order Types, ~~the~~ marketability ~~of standard depends on the order for a potential stream~~(i) ~~relevant match~~ is the difference between the order's limit price ~~type~~ and the contra-side NBBO. The greater the marketability, the higher the standing in terms of priority. (ii) ~~reference point (see Part III,~~

~~In addition to streaming matches, LS Orders are also eligible to enter into block trades. Block trades are single trades that occur only when two LS orders match. These are described in Item 7a. LS orders have marketability for block trades (i.e., not a stream match), if the order's limit price at least satisfies its peg instruction (peg instructions are described in Item 11e). The more aggressive the limit price, the higher the standing in terms of priority.~~7).

The final term considered in ~~intra-Order Type~~ prioritization ranking (i.e., for orders that are the same ~~Order Type~~LTR, equal size, and have equal marketability) is the time the order arrived, with priority being assigned chronologically. Given the aforementioned prioritization logic, it is by system design that orders arriving later could feasibly be given higher priority than earlier arriving orders.

Matching

~~Matches are bilateral (i.e., between only two orders). For a match to occur, two orders must be compatible.~~

Inter-Order Type Compatibility Ranking

PURE ATS will only match orders of Order Types that are compatible. See Part III, Item 7 "Inter-Order Type Compatibility Ranking" section for complete list of Order Type compatibility rankings.

Matching

Matches are bilateral (i.e., between only two orders). For a match to occur, two orders must be compatible.

Compatibility means that among compatible Order Types (described above) there is (i) a buy and sell order in the same security, (ii) both meeting the minimum marketability threshold (not applicable to ~~block trades~~), single point matches), (iii) with overlapping LTRs (i.e., the LTR minimum to maximum range of one order overlaps with the LTR minimum to maximum range of another order), and (iv) that any additional order handling instructions sent with the orders (as described below in this Item 11, Additional Order Parameters) are satisfied.

In searching for a match for an order, the ATS first considers inter-Order compatibility ranking. If there are ~~overlapping LTRs, then~~ multiple compatible contra-side orders with equal inter-Order compatibility ranking, the ATS will look to the intra-Order Type prioritization ranking of the relevant ~~orders will be matched.~~

Matches will result in the following: (i) streaming matches are created at the highest possible LTR satisfying both matched orders (the highest LTR within the acceptable range for each matched order—); and (ii) single point matches are created at the highest possible quantity that satisfies both matched orders.

If an order has residual quantity or LTR after being matched, the order's decremented quantity or LTR will be available for other matches, meaning the order can be in multiple matches concurrently. Note that for prioritization purposes, a decremented order maintains its original priority standing on the order book (e.g., an order using the 200% Order Type with a residual 170% LTR following a match, is still treated as a 200% Order Type for purposes of prioritization).

Minimum Stream Quantity, Allocation, and Price Discovery

Single point-in-time trade execution logic:

When two orders eligible for a single point match are matched (e.g., LS-LS, firm LS-ROC, ROC-ROC), they will execute a single point-in-time trade for the largest quantity possible (i.e., the smaller quantity of the two orders matched). Note that given the minimum order size requirements for orders on PURE ATS, minimum stream quantity is not applicable to single point-in-time trades.

The price of the single point-in-time trade will be set in accordance with the referenced market data as dictated by the matched Order Types (e.g., the OCP or NBBO), the limit price, and peg instructions, if applicable, for the two relevant orders (executions will not violate an order's limit price). Peg instructions (see Part III, Item 11c under "Peg Order Instructions for LS Orders") are applicable only to LS orders and are used (with limit prices) to determine compatibility for an LS-LS match and the price of any resulting single point-in-time trade.

Streaming matches:

Once a streaming match has occurred, the ATS will use each observed SIP-reported trade in the relevant security as reference trades to execute “child fills” in accordance with PURE ATS execution (see under "Order Types") and MSQ logic.

Note that each SIP-reported trade is only referenced once in each stream (and all concurrent streams in the ATS reference each SIP-reported trade once). The ATS references SIP-reported trades in real-time as they are reported in succession (subject to the filtering logic described in Part III, Item 23, below). (To the extent that there are malfunctions or other issues with the SIP that result in time gaps, the procedures set forth in Part III, Item 20, below will be applied). In the event that there is no SIP-reported trade after the match is formed, the orders will remain matched but there will be no child fills, and therefore no stream (i.e., a match can exist without a stream).

All streaming child fills are governed by the MSQ logic (for in detailed description of MSQ logic see Part III, Item 7a, “Minimum Stream Quantity, Allocation, and Price Discovery”).

A stream will continue uninterrupted providing "child fills" as long as both orders remain marketable (i.e., the orders' limit prices are priced at or through the contra-side NBBO), have quantity remaining, and have not been cancelled.

Below is an example applying the ATS’s streaming matching logic to a series of orders:

The ATS receives three Buy orders in the following chronology:

Buy Order 1: 15%

Buy Order 2: 30%

Buy Order 3: 200%

The prioritization of the orders will be:

Buy Order 3 (Highest ~~priority-Order Type~~maximum LTR)

Buy Order 2 (2nd ~~priority-Order Type~~highest maximum LTR)

Buy Order 1 (3rd ~~priority-Order Type~~highest maximum LTR)

For a marketable incoming sell order (Sell Order 4), using the 200% Streaming Block Order Type: Stream 1 would be created at an LTR of 200% between Buy Order 3 and Sell Order 4.

Buy Order 2 and Buy Order 1 would continue to rest because Sell Order 4's 200% rate was completed.

For a marketable incoming sell order (Sell Order 5), also using the 200% Streaming Block Order Type:

Stream 2 would be created at an LTR of 30% between Buy Order 2 and Sell Order 5.

Sell Order 5’s available LTR is decremented to 170%.

And

Stream 3 would be created at an LTR of 15% between Buy Order 1 and Sell Order 5.

Sell Order 5’s available LTR is decremented to 155%.

After the creation of Stream 2 & 3, only Sell Order 5 will be resting in the order book with a remaining LTR of 155%. Sell Order 5 is participating in two streams, Stream 2 & Stream 3.

The LTR of each stream:

Stream 1 (Order 3&4) LTR: 200%

PureStream, LLC—Form ATS-N/UA (2022.10.28)
Exhibit 3

Stream 2 (Order 2&5) LTR: 30%
Stream 3 (Order 1&5) LTR: 15%

Given the following three contemporaneously processed trade reports from the consolidated tape:
SIP-reported Trade 1: 1,000 @ \$36.99
SIP-reported Trade 2: 50 @ \$36.9925
SIP-reported Trade 3: 200 @ \$37

And given an MSQ for the relevant symbol is set at 5 shares:

The orders in Stream 1 (comprised of Order 3 and Order 4) will receive the following child fills:
Stream 1 Child Fill 1: 2,000 @ 36.99
Stream 1 Child Fill 2: 100 @ 36.9925
Stream 1 Child Fill 3: 400 @ 37

The orders in Stream 2 (comprised of Order 2 and Order 5) will receive the following child fills:
Stream 2 Child Fill 1: 300 @ 36.99
Stream 2 Child Fill 2: 15 @ 36.9925
Stream 2 Child Fill 3: 60 @ 37

The orders in Stream 3 (comprised of Order 1 and Order 5) will receive the following child fills:
Stream 3 Child Fill 1: 150 @ 36.99
Stream 3 Child Fill 2: 8 @ 36.9925
Stream 3 Child Fill 3: 30 @ 37

The aggregated traded volumes in this example are as follows:
SIP Volume: 1,250 shares
PURE ATS Volume: 3,063

- Stream 1: 2,500 shares
 - Order 3: 2,500 shares
 - Order 4: 2,500 shares
- Stream 2: 375 shares
 - Order 2: 375 shares
 - Order 5: 375 shares
- Stream 3: 188 shares
 - Order 1: 188 shares
 - Order 5: 188 shares

Please note that Order 5 participated in two streams, and in aggregate sold 563 shares (375 shares in Stream 2 and 188 shares in Stream 3).

Additional Order Parameters

In the order book, the standard prioritization logic will be impacted when a Subscriber utilizes a HMMP (Human Matched Machine Processed) or PRO (Pre-Routing Optimizer) order instruction or imposes a self-match prevention constraint or conditional order restriction (implemented via a FIX message from the Subscriber; these order instructions are explained in Part III, Item 14.a). These parameters each limit potential counter-parties or contra-side orders for a respective order; otherwise, the standard prioritization logic applies to the impacted orders.

Further, Subscribers can route orders (via FIX) with minimum execution quantities (“MEQ”) for (i) ROC orders and (ii) for LS orders where the Subscriber sets the minimum LTR to be greater than the highest available LTR for all other available Order Types on the ATS. The effect of setting the minimum LTR at this level is to limit potential compatible contra-side orders to only LS orders. Where a Subscriber sets an MEQ for an order, the order will only be matched in the ATS to a contra-side order that can satisfy the MEQ (and is otherwise compatible with the order).

PURE ATS does not support post-only or counter-party segmentation or classification.

Peg Order Instructions for LS Orders:

PURE ATS requires peg instructions for all LS orders. PURE ATS recognizes three peg instructions: (i) Peg Far; (ii) Peg Mid; and (iii) Peg Near (defined below). PURE ATS will assign a Peg Mid instruction to (i) any LS order routed to the ATS without a designated Peg instruction; and (ii) any LS order with a minimum LTR less than or equal to 500%.

Peg instructions are effected only in the case of two LS orders (i.e., a Peg instruction will not be considered for stream matches or for LS-ROC matches referencing the OCP). PURE ATS uses the LS order’s peg instruction and its limit price to determine the order’s compatibility and the price for a potential blocksingle point-in-time trade. The peg order instruction defines where an order is executable in relation to the then-prevailing NBBO; the limit price defines where an order is executable with respect to a set price point. PURE ATS will not execute a blocksingle point-in-time trade at a price that violates an order’s peg instruction, and will never execute a trade that violates an order’s limit price.

For clarity, for LS orders:

- Peg Far means that an order will be executed to (and including) the then-prevailing contra-side NBBO (but not in violation of the order’s limit price).
- Peg Mid means that an order will be executed to (and including) the then-prevailing NBBO midpoint (but not in violation of the order’s limit price).
- Peg Near means that an order will be executed to (and including) the then-prevailing near-side NBBO (but not in violation of the order’s limit price).

Note that as a result of this logic, an order with a marketable limit price and priority but the most restrictive peg instruction (e.g., Peg Near) will not be eligible for a match where the only contra-side interest has a Peg Mid or Peg Near instruction.

For illustrative purposes:

In a stock with an NBBO of \$10.00-\$10.10, a Buy LS order with a \$10.20 limit price and:

- Peg Far instruction is eligible for a blocksingle point-in-time trade up to \$10.10;
- Peg Mid instruction is eligible for a blocksingle point-in-time trade up to \$10.05;
- Peg Near instruction is eligible for a blocksingle point-in-time trade up to \$10.00.

In a stock with an NBBO of \$10.00-\$10.10, a Buy LS order with a \$10.07 limit price and:

- Peg Far instruction is eligible for a ~~block~~single point-in-time trade up to \$10.07;
- Peg Mid instruction is eligible for a ~~block~~single point-in-time trade up to \$10.05;
- Per Near instruction is eligible for a ~~block~~single point-in-time trade up to \$10.00.

In a stock with an NBBO of \$10.00-\$10.10, a Buy LS order with a \$9.99 limit price and any Peg Instruction is not eligible for any trade because it is not marketable (the limit price is below the near-side NBBO).

Price Limits, Marketability, Protection, and Improvement:

No orders will receive an execution that would violate the order's limit price. In order to optimize the creation of streams, the order book uses minimum marketability thresholds required prior to an order being eligible to match (as described in Part III, Item 7).

There is no price improvement from, nor will the price vary from the price of the trades referenced by the ATS.

Short Sales and Regulation SHO:

The ATS's Subscribers are limited to U.S. registered broker-dealers that are obligated to comply with Regulation SHO Rule 203(b)(1). ~~The ATS will cancel and reject firm and conditional orders subject to Regulation SHO Rule 201. If short sale orders (firm or conditional) have been accepted prior to Rule 201 being triggered, the ATS will cancel the short sale orders back.~~

When Regulation SHO Rule 201 short sale restrictions are in effect for a particular NMS stock, PURE will cancel (previously accepted) and reject (incoming) firm and conditional short sale orders in the relevant stock, except for short sale LS orders with a minimum LTR greater than or equal to 501% ("Constrained LS Orders") that are permissibly priced for execution. The ATS will continue to execute such Constrained LS Orders pursuant to the policies and procedures adopted pursuant to Rule 201(b) of Regulation SHO.

Locked and Crossed Markets:

PURE ATS will not execute ~~block~~single point-in-time trades ~~(LS to LS)~~ when the market is crossed. PURE ATS will only execute ~~block~~single point-in-time trades ~~(LS to LS)~~ when the market is locked if both the buyer and seller specify on the order that they are willing to execute during a locked market. During a (i) locked market or (ii) crossed market lasting less than 1 second, the PURE ATS will reference all SIP-reported trades. During a crossed market lasting longer than 1 second, the PURE ATS will reference SIP-reported trades originating on an exchange but will not reference SIP-reported trades originating on a Trade Reporting Facility ("TRF").

Time Stamping of Orders and Executions:

Firm and conditional orders are timestamped at the time they are accepted by the system in microseconds. The formation of a stream and each trade fill is also timestamped in microseconds. The ATS will timestamp Subscriber firm and conditional orders in compliance with FINRA time stamp and clock synchronization rules and guidance.

Errors:

PURE has Written Supervisory Procedures regarding errors, and errors will be handled consistent with the firm's error policies. For ATS (not Subscriber) errors, PURE maintains an error account at its Clearing Broker (BAML) to book bona fide errors, and to trade out of them. Key elements of the ATS error policy include the following:

Exhibit 3

- 1) Errors must be escalated to the CCO immediately;
 - 2) Errors must be corrected and documented as soon as practicable;
 - 3) The ATS cannot be used to liquidate an error; and
 - 4) PURE will not cover losses for Subscribers by treating transactions as errors when they are not.
- d. Are the established, non-discretionary rules and procedures required to be identified in Item 11(c) the same for all Subscribers and the Broker-Dealer Operator?
- Yes
- If no, identify and explain any differences.

Part III: Manner of Operations

Item 18: Trading Outside of Regular Trading Hours

- a. Does the NMS Stock ATS conduct trading outside of its regular trading hours?
No~~Yes~~.
- b. If yes to Item 18(a), are there any differences between trading outside of regular trading hours and trading during regular trading hours in the NMS Stock ATS?
If yes, identify and explain the differences.

As described in Part III, Items 7 and 11, PURE executes point-in-time trades referencing the Official Closing. The prioritization, matching, and execution logic for these point-in-time trades is the same as described in Part III, Items 7 and 11, except that the ATS forms the relevant matches after the ATS receives the OCP.

As described herein, PURE ATS accepts all order types until the close of regular trading hours. Additionally, all order types can be cancelled or modified until the close of regular trading hours. Prior to the close of regular trading hours, the ATS matcher functions as described in Part III, Items 7 and 11. This behavior includes that the ATS matcher will ignore ROC orders prior to the dissemination of the OCP, as that order type is not eligible for a match prior to the ATS receiving the OCP. Open ROC orders will remain resting on the ATS order book until that time (subject to cancellation by Subscribers).

At the end of regular trading hours, the ATS will no longer accept new orders of any type, and Subscribers cannot modify or cancel resting orders.

Upon receiving the OCP via the SIP (see Part III, Item 23), the ATS matcher seeks to match resting ROC order types with a compatible contra-side ROC or LS order (compatibility and matching logic is described in Part III, Items 7 and 11). If the ATS identifies a compatible match, the match will be formed and the ATS will generate a fill at the highest compatible quantity between the two matched orders at the OCP.

After the ATS runs the matching protocol upon receipt of the OCP, all orders (of all order types), will be cancelled back to Subscribers, including any ROC orders with residual quantity (e.g., after being matched for a trade referencing the OCP).

- c. If yes to Item 18(a), is the treatment of orders and trading interest outside of regular trading hours the same for all Subscribers and the Broker-Dealer Operator?
e. Yes for all Subscribers. The Broker-Dealer Operator does not operate on the ATS.
If no, identify and explain any differences.

Part III: Manner of Operations

Item 19: Fees

- a. Identify and describe any fees or charges for use of the NMS Stock ATS services, including the type of fees (e.g., subscription, connectivity), the structure of the fees (e.g., fixed, volume-based, transaction-based), variables that impact the fees (e.g., types of securities traded, block orders, form of connectivity to the ATS), differentiation among types of Subscribers (e.g., broker-dealers, institutional investors, retail) and range of fees (e.g., high and low).

The PURE ATS uses two fee structures: a per share model and a subscription model.

~~Under the per-share model, fees are charged on a per share basis. The per share fee depends on how orders arrive at the ATS, as delineated below, and can range from \$0.0005 to \$0.0025. The per-share fee structures are separately negotiated with each individual Subscriber and all terms may vary. In negotiating fee structures, PURE primarily considers a combination of: (i) historical trading volume and patterns; (ii) anticipated trading volume and patterns; (iii) competitive considerations (e.g., venue-wide subscriber, market participation, market access, and product terms); and (iv) the method(s) by which orders arrive on the ATS, including whether the order access method is systematic (e.g., access methods (i)(a) and (ii), below) or manually directed (e.g., access method (i)(b) below) (lower fees are generally considered for systematic order flow, though that may vary by Subscriber and specific order flow). Orders may arrive on the ATS:~~

- (i) Via a Subscriber's market access connections (described more fully in Part III, Item 5) comprised of:
 - a. Customer systematic (e.g., algorithmic) order flow; and
 - b. Customer manual (e.g., EMS) order flow;
- (ii) Via a Subscriber's algorithm (described more fully in Part III, Item 5);
- (iii) With the HMMP instruction (described more fully in Part III, Item 14); or
- (iv) With the PRO instruction (described more fully in Part III, Item 14).

~~The fee schedule for the per share program is the same for all Subscribers. The commissions are standardized per the above routes and the range of commissions is \$0.0005 to \$0.0025. All order flow from a Subscriber's algorithm is treated the same in terms of fees for the per share program. This includes firm and conditional orders, and order flow (firm or conditional) attributed to a Subscriber (i.e., a principal order) or a Subscriber's customer. Furthermore, systematic order flow (e.g., (i)(a) and (ii), above) is charged a lower commission than order flow manually directed to the ATS by a Subscriber's customer through the market access connection ((i)(b), above).~~

PURE ATS also offers agreements under a subscription model. The subscription model is available to all Subscribers that provide for systematic (i.e., algorithmic) directed customer order flow (meaning that the Subscriber's customer is instructing the Subscriber to send the relevant orders to PURE ATS through the Subscriber's market access connections ((i)(a) above); however, PureStream may limit the number of agreements available under the subscription model at a given time. Under the subscription model, Subscribers are charged a flat fee in connection with directed customer orders. The flat fee and relevant terms are negotiated with Subscribers on a case-by-case basis ~~primarily in consideration of variables including (i) historical trading volume and patterns; (ii) anticipated trading volume and patterns; and (iii) competitive considerations (e.g., venue-wide subscriber, market participation, market access, and product terms) expected trading volume and order types used by the customer.~~ The range of flat fees per share when applied to expected volume per each subscription agreement is \$0.0005 to \$0.0025.

These fee models are not mutually exclusive and a Subscriber may route orders to PURE ATS subject to both structures. The terms of each fee model and the applicability to a specific Subscriber's order flow will be set forth in each Subscriber's agreement with PureStream.

- b. Identify and describe any fees or charges for use of the NMS Stock ATS services that are bundled with the Subscriber's use of non-ATS services or products offered by the Broker-Dealer Operator or its Affiliates, including a summary of the bundled services and products, the structure of the fee, variables that impact the fee, differentiation among types of Subscribers, and range of fees.

PURE does not provide any non-ATS products or services.

- c. Identify and describe any rebate or discount of fees or charges required to be identified in Items 19(a) and 19(b), including the type of rebate or discount, structure of the rebate or discount, variables that impact the rebate or discount, differentiation among types of Subscribers, and range of rebate or discount.

There are no rebates or volume tier discounts available to Subscribers.

Part III: Manner of Operations

Item 20: Suspension of Trading

- a. Explain any procedures for suspending or stopping trading on the NMS Stock ATS, including the suspension of trading in individual NMS stocks.

PURE's Market Operations team will monitor the ATS's performance throughout each trading day to ensure that the system is functioning properly. Note that PURE also has a back-up (i.e., secondary) version of the PURE ATS matching system in the event that the primary system experiences a malfunction. The back-up version is located at the same physical address as that of the primary system.

The Market Operations team will also ensure that, in the event of a regulatory halt, Regulation SHO Rule 201 state, or situation regarding SIP market data inaccuracies, that the matching engine is suspended, and all firm and conditional orders are cancelled back in the relevant securities-, as applicable.

PURE can effect the stoppage of trading per symbol and/or Subscriber. In order to suspend all trading in the ATS, PURE must instruct Ocean and cannot effect the change itself.

Given the dependence on reference trades via the SIP, any disruptions to the SIP will lead to the suspension of trading on the ATS.

PURE and Ocean will also monitor for fair access thresholds on a symbol-level basis. There are three (3) different validations to measure the approach of any given symbol towards 5% of total market volume.

The first check is called "Early Validation". On the last three (3) days of the month, a query will be run to determine if a symbol has traded more than 4.5% of total market volume in three (3) of the prior five (5) months, including the current month. If so, the symbol is halted for trading on the platform for the remainder of the month.

The second check is called "3 out of 5". On the first day of the next month, a query will be run to determine if a symbol has traded more than 4.5% of total market volume in three (3) of the prior five (5) months, excluding the current month. If so, the symbol is halted for trading on the platform for the remainder of the month.

The third and final check is called "4 out of 6". On each day of every month, a query is run to determine if a symbol has traded more than 4.5% of total market volume in four (4) of the prior five (5) months, including the current month. If so, the symbol is halted for trading on the platform for the remainder of the month and PURE is alerted of the breach. This breach should never occur since the "3 out of 5" check will block a symbol from trading four (4) months at above 4.5% of total market volume.

- b. Are the procedures for suspending or stopping trading the same for all Subscribers and the Broker-Dealer Operator?
Yes
If no, identify and explain any differences.

Part III: Manner of Operations

Item 21: Trade Reporting

- a. Explain any procedures and material arrangements for reporting transactions on the NMS Stock ATS, including where an ATS reports transactions and under what circumstances. PURE uses the NASDAQ TRF as its primary trade reporting facilities. NASDAQ OCEAN initiates and manages the submission of reports, which PURE confirms. The NASDAQ TRF2 is the back-up trade reporting facility. If the primary TRF is not available, NASDAQ OCEAN will failover to the backup TRF on behalf of PURE where any unreported trades will be resubmitted.

PURE uses the NASDAQ TRF as its primary trade reporting facility. Ocean will initiate and manage the submission of reports, which PURE will confirm. The NASDAQ TRF2 is the back-up trade reporting facility for the ATS. If the primary TRF is not available, Ocean will failover to the back-up TRF on behalf of the PURE ATS where any unreported trades will be resubmitted.

All reportable transactions effected on PURE ATS are over-the-counter transactions that are trade-reportable pursuant to applicable trade reporting requirements. Reportable transactions on the PURE ATS include all child fills and ~~block~~ single point-in-time trades as those terms are used herein. For the avoidance of doubt, Derived Shares are used for internal counting (see Part III, Item 7a), and are not reportable transactions.

Are the procedures and material arrangements for reporting transactions on the NMS Stock ATS the same for all Subscribers and the Broker-Dealer Operator?

Yes

If no, identify and explain any differences.

Part III: Manner of Operations

Item 23: Market Data

- a. Identify the sources of market data used by the NMS Stock ATS (e.g., proprietary feed from a national securities exchange, feed from the securities information processor (“SIP”)), and how the ATS uses market data from these sources to provide the services that it offers, including how the ATS uses market data to determine the NBBO and protected quotes, and display, price, prioritize, execute, and remove orders and trading interest on the ATS.

PURE ATS consumes SIP market data via feed handler software from Ocean to determine the OCP, NBBO, and protected quotes, as well as to price, prioritize, execute, and remove firm and conditional orders and trading interest on the ATS. Trades on the SIPs are comprised of exchange-reported and TRF-reported trades. PURE ATS also uses the SIP data to provide support services to Subscribers.

For the PURE ATS, SIP-reported trades means (i) continuous market trades that update the last sale, and (ii) odd lots. PURE ATS will not consider other trades that do not update the last sale (e.g., sold sales and derivatively priced trades). SIP-reported trades originating on exchanges are referenced as-is. SIP-reported trades originating on the TRF are only referenced if they have not traded through the relevant NBBO range during the corresponding 1-second window. To ensure that the order did not trade through the relevant NBBO range, the ATS uses FINRA TRF Timestamp 1 (defined as the participant’s time stamp) and cross references the system’s corresponding NBBO window at the participant’s time stamp. PURE uses this approach because clock synchronization between the participant’s timestamp and the NBBO window at that timestamp is more accurate than comparing the SIP-reported trade timestamp to the NBBO window at the time of the SIP timestamp.

- b. Are the sources of market data and how the NMS Stock ATS uses market data for the services that it offers the same for all Subscribers and the Broker-Dealer Operator?
Yes
If no, identify and explain any differences.