



Metro

Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

26

**REVISED
EXECUTIVE MANAGEMENT COMMITTEE
SYSTEMS SAFETY AND OPERATIONS COMMITTEE
FEBRUARY 16, 2012**

SUBJECT: METRO RAIL FARE GATE DEMONSTRATION

**ACTION: RECEIVE AND FILE REPORT ON DEMONSTRATION RESULTS OF
FARE GATE LOCKING**

RECOMMENDATION

Receive and file report on demonstration results of fare gate locking at selected Metro Rail stations.

ISSUE

In October 2011, the Board directed staff to expand the Metro Rail fare gate locking demonstration to include at least six additional stations, including the 7th Street/Metro Center and North Hollywood stations. The motion (by Directors Yaroslavsky, O'Connor, DuBois and Villaraigosa) also directed staff to include peak-hour closures in addition to off-peak timeframes for the demonstration. Reported results include information on: the breakdown of fare media used (number of monthly, weekly and day passes; cash riders; transfers; Metrolink passes; etc.); a comparison of ticket vending machine activity while gates are locked and unlocked; and the number of citations issued. This report presents the results of the demonstration.

DISCUSSION

Demonstration Methodology

Over the course of five months, staff identified 10 stations and tested locked gates on several different dates, during a 3-hour or 5-hour afternoon period. The 5-hour demonstration period included the early evening rush-hour.

This effort was led by TAP Operation staff with major assistance from key personnel of the Los Angeles Sheriff's Department (LASD) Transit Bureau and Marketing Ambassadors from the Communications Department. The team was able to execute 100% fare checks on all entries during the period that the gates were locked. All pre-paid fare media were captured including: TAP 1-Day; 7-Day and 30-Day passes; K-12 student and college/vocational passes; I-TAP, A-TAP and B-TAP; paper tickets used by Metrolink transferees; and EZ Transit Pass. Additional cash riders purchasing one-way

tickets and paper Metro Rail Day passes were also counted in this test. The following table provides the complete demonstration schedule.

Gate Locking Schedule (2011-2012)											
	Sept 28	Oct 5	Oct 12	Oct 19	Oct 26	Nov 9	Nov 16	Nov 30	Dec 7	Dec 14	Jan 11
1 – 4 PM											
Wilshire/Normandie	X	X	X	X	X						
Vermont/Beverly		X	X	X	X						
Wilshire/Western			X	X	X						
Hollywood/Western				X	X						
Wilshire/Vermont						X					
7 th St/Metro Center											X
1 – 6 PM											
Universal							X				
North Hollywood								X			
Hollywood/Vine									X		
Civic Center										X	

Demonstration Goals

The goals of the demonstration were: to determine a detailed composition of rail patrons passing through gates; to observe the effect of locked gates; and to monitor changes in customer transactions with stations, gates and ticket vending machines (TVM). Appropriate comparison findings were determined by analyzing “locked-gate” data to “free-spinning” data at corresponding days of the week and times of day.

Entries

Twenty gate-locking exercises were conducted and 26,031 gate entries were recorded. This included all riders who passed through the fare gates at the designated test stations. All customers with active TAP cards were required to TAP through the gates and all other non-TAP fare media (including pre-paid passes, Metrolink fare media, EZ Transit Passes, and interagency transfers (IAT) plus all cash entries) were tapped through the gates and fare type registered. Attachment A presents data on fare type entries at each station in the demonstration.

Fare Media Totals

Of the 26,031 gate entries recorded:

	Entries
30-Day passes accounted for	27% (6,965)
One-ways accounted for	26% (6,891)
Day passes accounted for	14% (3,677)
7-Day passes accounted for	11% (2,926)
Metrolink accounted for	8% (2,041)
Misc Metro passes accounted for	7% (1,745)
EZ passes accounted for	4% (1,028)
Access	3% (741)
Muni IATs accounted for	0% (17)

Metrolink

With Metrolink making up a significant portion of subway gate entries at several stations, additional analysis was conducted on specific utilization of Metrolink fare media. Of the 1,174 Metrolink transactions at six stations, the fare media recorded broke down as follows:

	Entries
Monthly passes accounted for	75%
10-Trip and Weekly accounted for	14%
Round-trip accounted for	9%
One-way accounted for	2%

Staff continues to work with Metrolink to identify alternatives for TAP-enabled fare media solutions for Metrolink customers. Attachment A presents detailed information on Metrolink entries by station and fare type.

Customer Interaction

Locking gates resulted in significant shifts in customer behavior. The first observation is that the vast majority of patrons are not utilizing TAP to get through fare gates. 59-75% of patrons do not TAP absent gate locking. It is projected that approximately 60% of customers have TAP-enabled fare media; Non-Metro external fare media accounts for about 20% of entries; Paper fare media (from TVMs) accounts for about 20% of entries; and up to half of TAP pre-paid card holders do not "tap" if not "encouraged."

Other behavioral observations include a decline in station entries (upwards of 10% at some stations) when gates are locked; and (qualitatively) a general lack of knowledge by a significant amount of patrons on how to use TVMs.

Impacts at Largest Stations

The most entries during the testing of the fare gates were recorded at 7th Street/Metro Center station with over 1,000 entries during a three-hour period and at North Hollywood station at just under 1,000 entries during a five-hour period. While TVM transaction increased 68% overall during gate locking exercises, these two stations provide the greatest insight into what can be expected in a "locked" environment. At 7th Street/Metro Center and North Hollywood stations revenue increased 18-22%. Key in managing larger stations with rail-to-rail transfers will be the relocation of some of the TAP equipment to better facilitate transfers and appropriate fare payment.

Day Passes and Single Trips

Single Trip and Day Pass transaction made up 40% of total gate entries. These two fare categories are most critical in terms of generating new revenue in that, unlike prepaid passes, this revenue is most likely not captured prior to entering a rail station (similar to cash purchases). In an "unlocked" environment single trips and Day Passes typically accounted for approximately 4% of entries with one exception, North Hollywood, a transfer station to the Metro Orange Line, where unlocked Day Pass sales reached 7%



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of the total. These fare categories should have the greatest impact in terms of generating new fare revenue and improving cost recovery.

Pre-Paid Passes

Monthly, 7-Day and other pre-paid Metro passes account for 45% of total transactions. While revenues for these fare products are collected up front, it appears that fewer than half of the patrons are using the fare media appropriately (i.e. Tapping). This practice has become a bigger concern with the advent of rolling passes. Customers who use rail only may be able to extend the use of their pass by failing to TAP.

EZ Transit Passes

Regional EZ Transit Passes made up 4% of total entries. Staff has developed a dual TAP/Flash Pass to accommodate EZ Transit Pass customers. It will enable participants to either track boarding through TAP-enabled equipment or visual inspection. Staff will coordinate with program participants and the EZ Transit Pass Project Manager to implement the transition over the next few months.

Inter-Agency Transfers

Out of over 26,031 transactions, Inter-Agency Transfers accounted for 17 total or .07% of total transactions.

TVM and Revenue Impacts

There was an overall increase of 68% in the number of cash tickets purchased throughout the 10 stations tested. Cash ticket purchases include one-way and Metro Rail Day passes (non-TAP customers). The greatest increase in sales was 107% at the Hollywood/Western station. The largest stations, 7th Street/Metro Center and North Hollywood, recorded increases of 18-22%. Total revenue increases are projected to be in the 18-22% range in a locked environment.

Operating Implications

Initial testing of locking gates required an extensive use of human resources to record transactions, train patrons on use of fare gates and TVMs and provide crowd control and security. Operating gates in a locked environment would initially require additional staff to help customers acclimate to the new "locked" environment. Reallocating LASD resources would also be required. The transition into a locked environment would take place incrementally – one or two stations at a time. Staff would provide initial customer assistance at TVMs and gates (2-4 people per station). Resource requirements would decline over time. Camera monitors (which are ~~being~~ ~~not yet~~ installed) could also be used to mitigate ongoing operating costs. The schedule for camera installation at gated stations is August 2012 for the Red and Purple Lines, September 2012 for the Blue Line and December 2012 for the Green and Gold Lines.

NEXT STEPS

Staff will continue working with Metrolink and municipal partners on transfer and EZ Transit Pass solutions. In recent discussions with Metrolink staff, several paths have been identified. Similarly, staff will continue to work with Municipal Operators and EZ Transit Pass Project Manager in regards to EZ Transit Pass entries. Staff has already presented one possible solution to the Municipal Operator General Managers that would enable non-TAP agencies to visually inspect passes, while those with TAP equipment would be able to capture boardings automatically.

Staff is exploring a less costly validator as an alternative for local operators who wish to have the benefit of TAP without integration of their entire fare collection system. LADOT is proceeding with the installation of the Driver Control Unit and Light Validator as a "stand beside" to their existing fare boxes. LADOT facilities and vehicles are currently undergoing pre-installation planning and back office testing.

A general regional discussion on the technical, policy and operational aspects of regional transfers is needed. The City of Los Angeles hosted a regional seminar addressing these issues on January 31st. ~~The practice of adapting technology to fare policy is costly, cumbersome and confusing.~~ Staff is developing recommendations for new fare and transfer policies. One example is eliminating the selling of interagency transfer on the first boarding. TAP makes this practice obsolete. With TAP-enabled equipment, interagency transfers, EZ Transit Passes and deductions of stored value from TAP cards can seamlessly take place on board vehicles with greater equity and efficiency.

Staff will continue its conversion of TVMs to a TAP-only environment, completing the conversion of Day Passes and single ride tickets to TAP over the next few months. The end configuration will offer only paper IATs at TVMs.

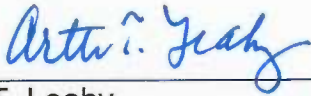
ATTACHMENT

A. Graphical Depiction of Fare Gate Locking Results

Prepared by: Matthew Raymond, Chief Communications Officer
Jane Matsumoto, Deputy Executive Officer, TAP Operation



Matthew Raymond
Chief Communications Officer



Arthur T. Leahy
Chief Executive Officer

ATTACHMENT A

Faregate Locking Pilot

Consolidated Test Results

September 2011 - January 2012



Metro

All Fare Media Entries by Fare Type

Metrics	28-Sep	5-Oct	12-Oct	19-Oct	9-Nov	16-Nov	30-Nov	7-Dec	14-Dec	11-Jan	Total Entries	
30 Day	25%	36%	28%	27%	28%	24%	26%	21%	31%	22%	6,965	27%
One Way	21%	25%	20%	35%	25%	28%	26%	36%	21%	32%	6,891	26%
Day Pass	18%	14%	15%	13%	14%	18%	18%	15%	8%	11%	3,677	14%
7 Day	6%	13%	9%	11%	11%	16%	17%	13%	8%	6%	2,926	11%
Metrolink	9%	2%	10%	1%	11%	3%	1%	3%	18%	13%	2,041	8%
Other (ITAP, A/BTAP, Student, Token, Senior)	13%	6%	7%	7%	5%	5%	5%	7%	6%	10%	1,745	7%
EZ	4%	2%	5%	2%	3%	4%	4%	3%	7%	4%	1,028	4%
Access	4%	2%	6%	4%	3%	2%	3%	2%	1%	2%	741	3%
IAT	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	17	0%
										Total	26,031	100%



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Metrolink Survey Counts

Station	Date	Time	Monthly	10 Trip	Weekly	Roundtrip	1 Way	Total
Wilshire Normandie	10/12/2011	1-4pm	38	7	0	6	1	52
Wilshire Normandie	10/19/2011	1-4pm	26	4	3	7	0	40
Wilshire Western	10/12/2011	1-4pm	68	6	2	10	4	90
Wilshire Western	10/19/2011	1-4pm	22	5	2	3	0	32
Wilshire Normandie	10/26/2011	3-6pm	149	15	8	15	4	191
Universal City	11/16/2011	1-6pm	37	4	0	6	0	47
Hollywood Vine	12/7/2011	1-6pm	27	2	1	3	1	34
Civic Center	12/14/2011	1-6pm	153	24	9	12	0	198
Wilshire Vermont	11/9/2011	1-6pm	140	30	5	14	0	189
7th/Metro	1/11/2012	1-4pm	226	28	6	24	17	301
Total			886	125	36	100	27	1174
			75%	11%	3%	9%	2%	100%

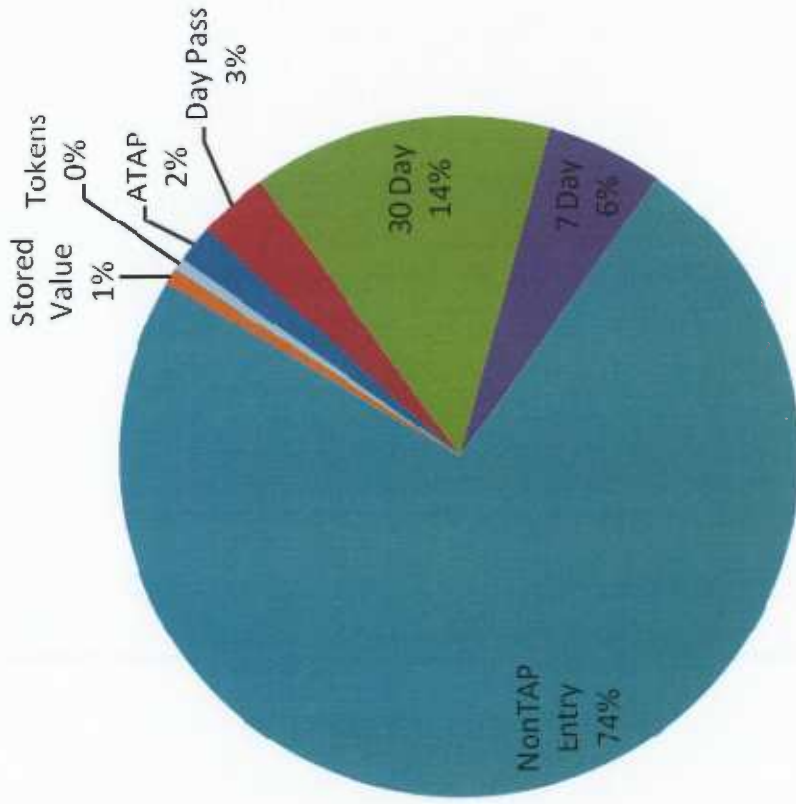


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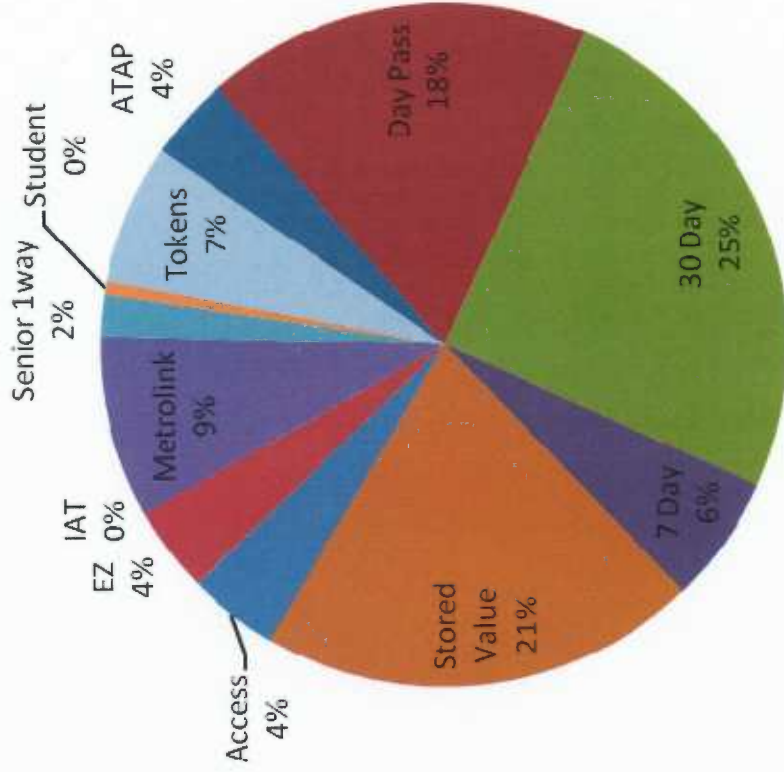
Wilshire/Normandie Gate Entry Data

1-4 pm

9/21, Unlocked



9/28, Locked

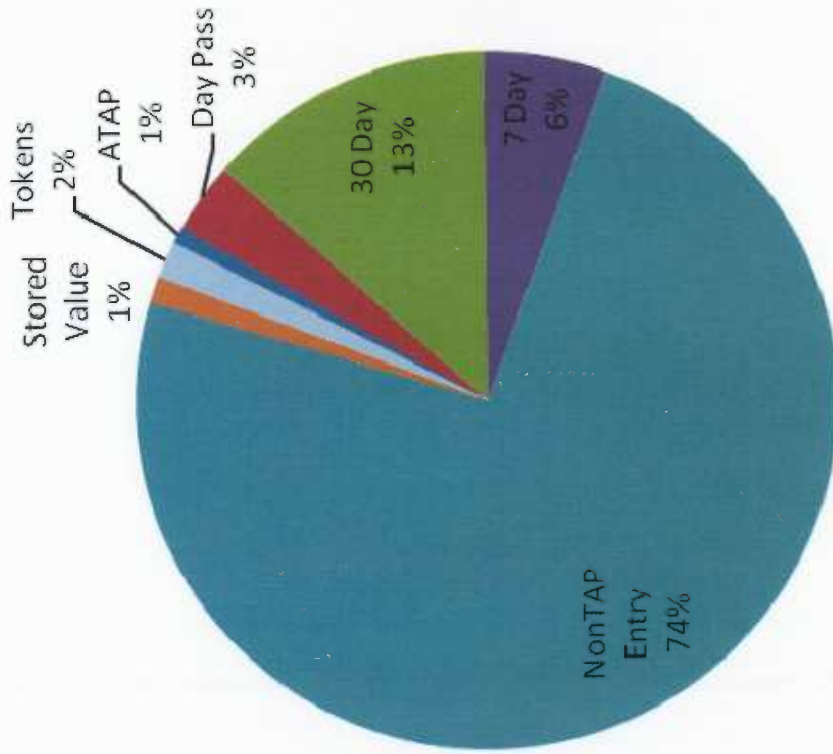


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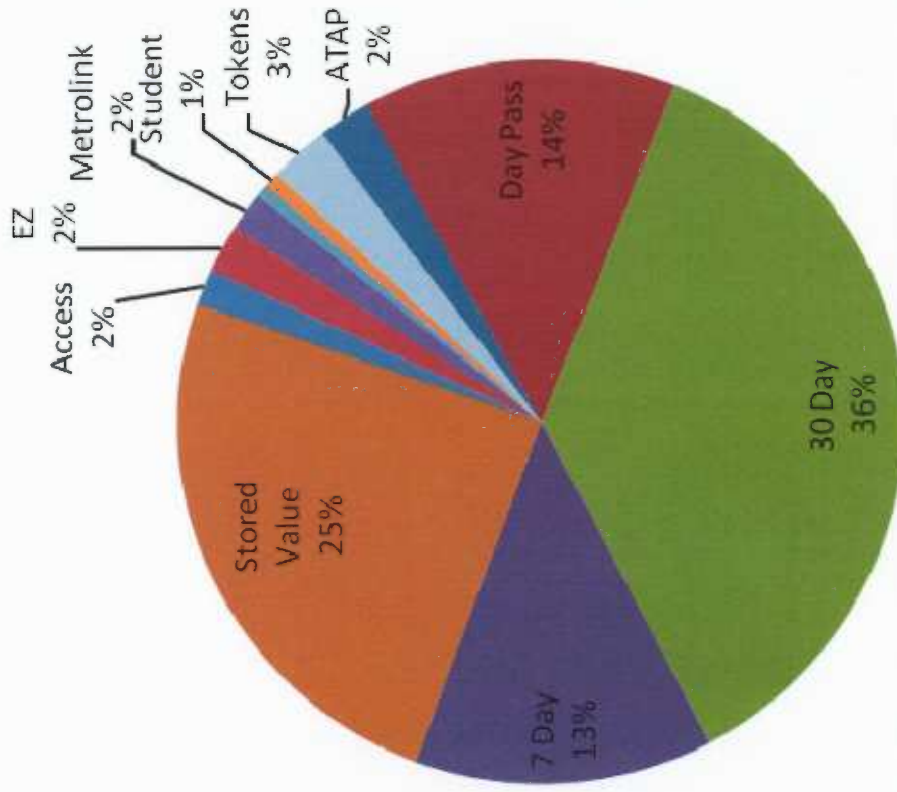
Vermont/Beverly Gate Entry Data

1-4 pm

9/28, Unlocked



10/5, Locked

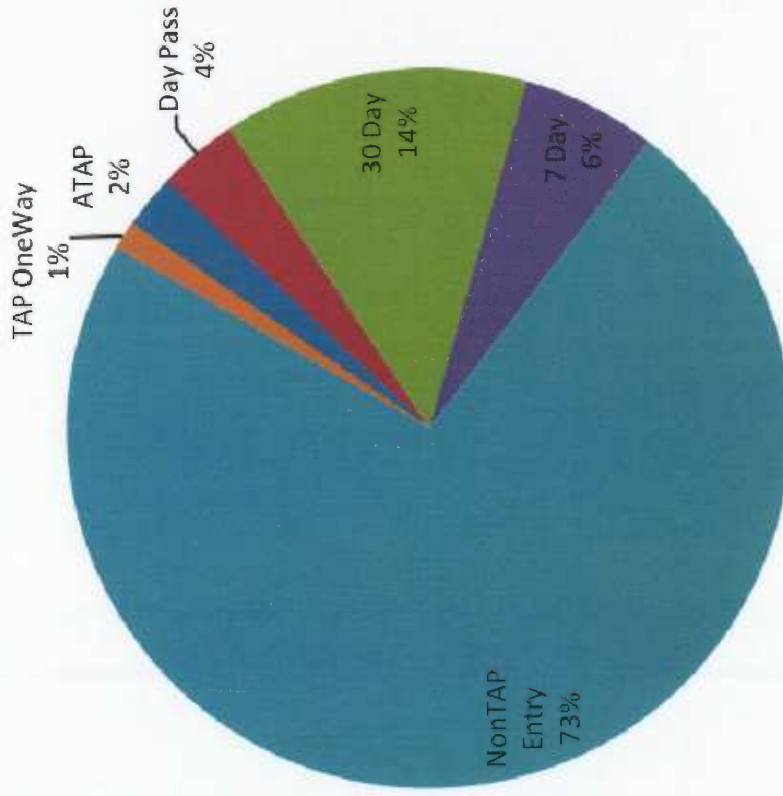


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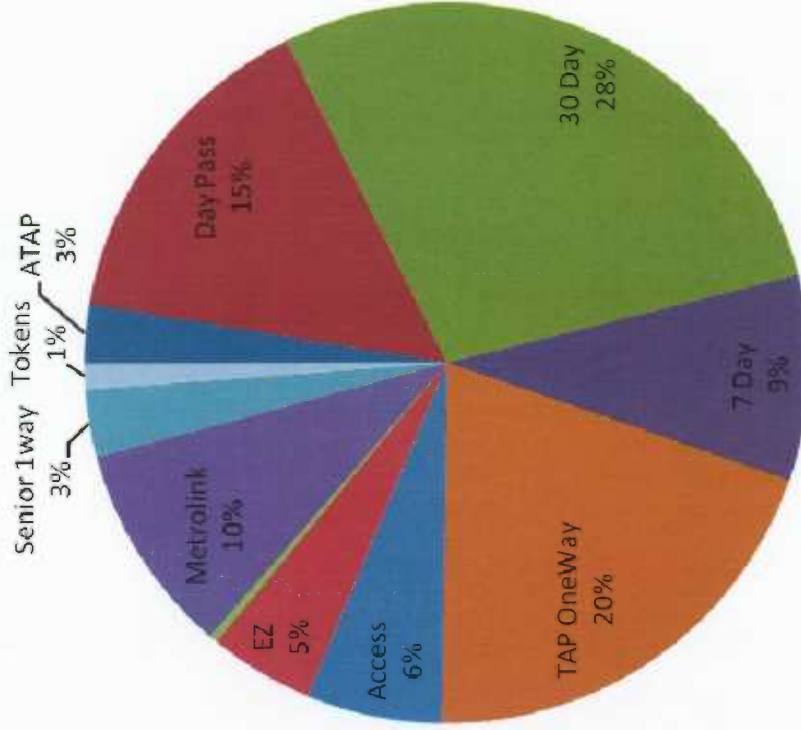
Wilshire/Western Gate Entry Data

1-4 pm

10/5, Unlocked



10/12, Locked

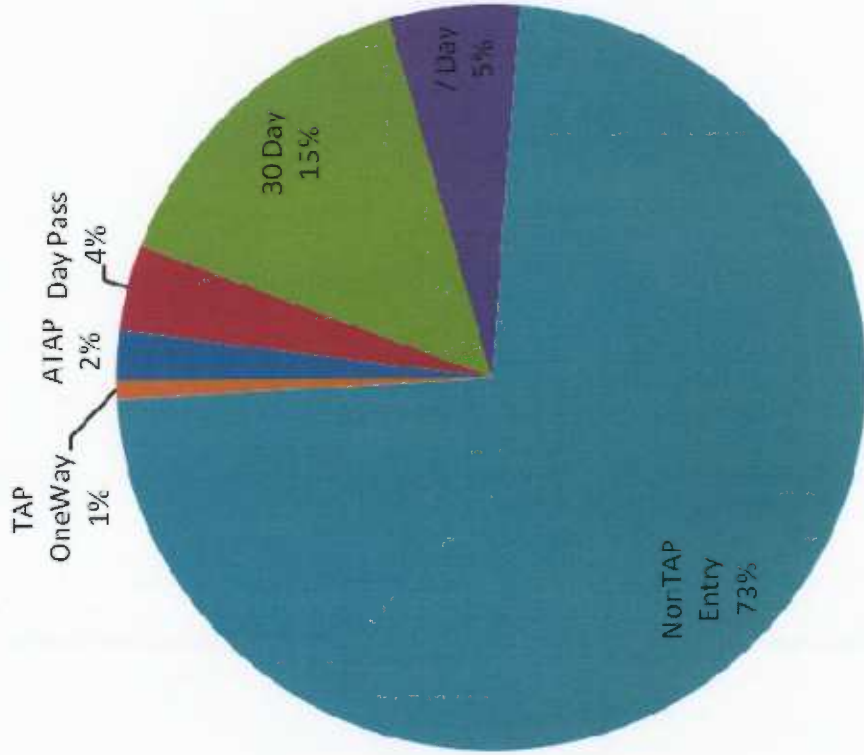


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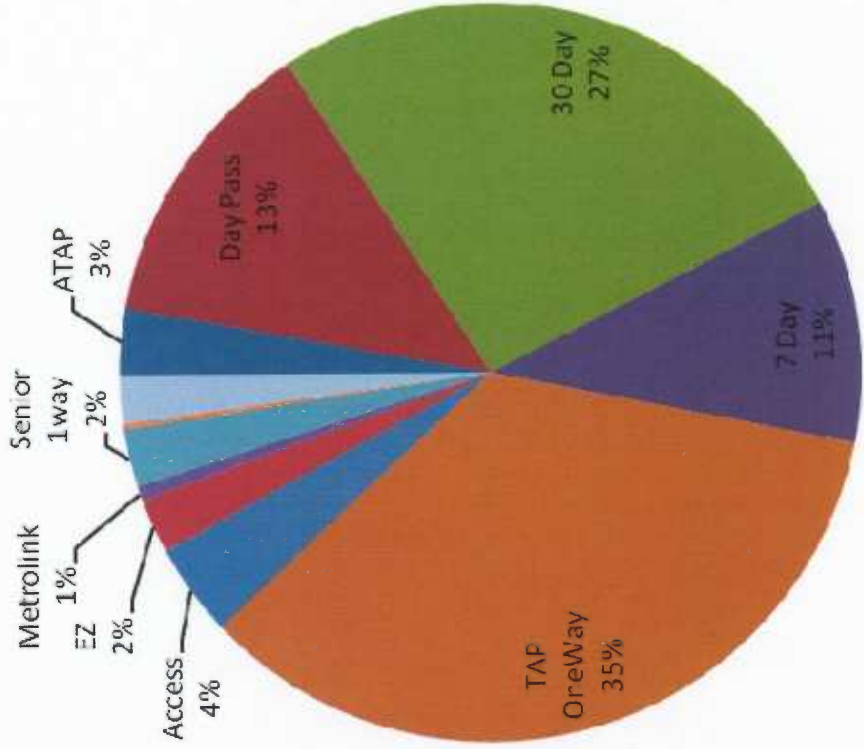
Hollywood/Western Gate Entry Data

1-4 pm

10/12, Unlocked



10/19, Locked

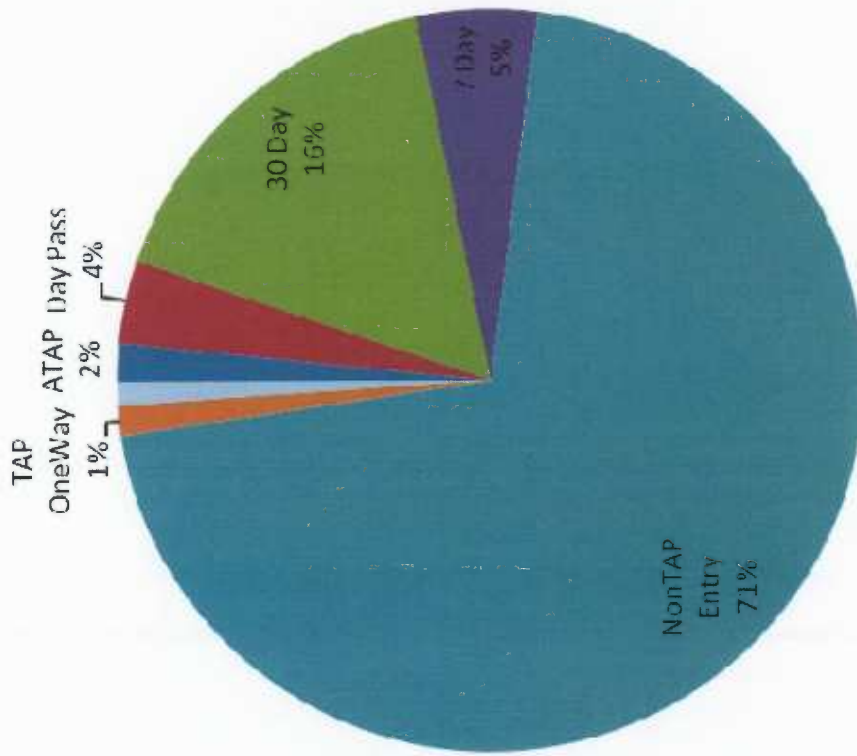


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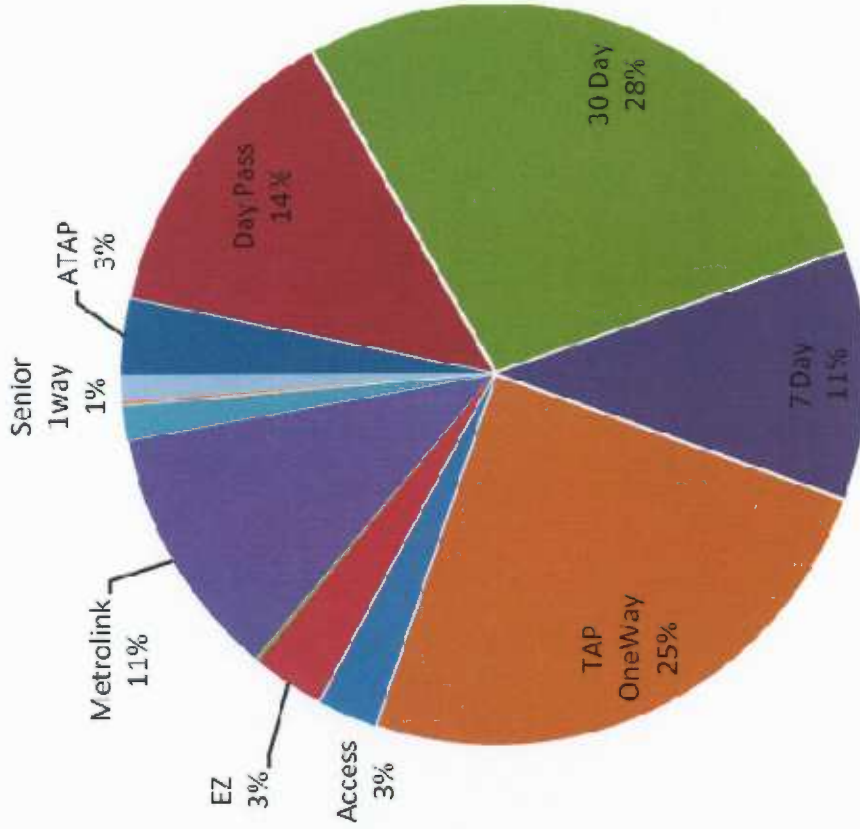
Wilshire/Vermont Gate Entry Data

1-4 pm

10/12, Unlocked



11/10, Locked

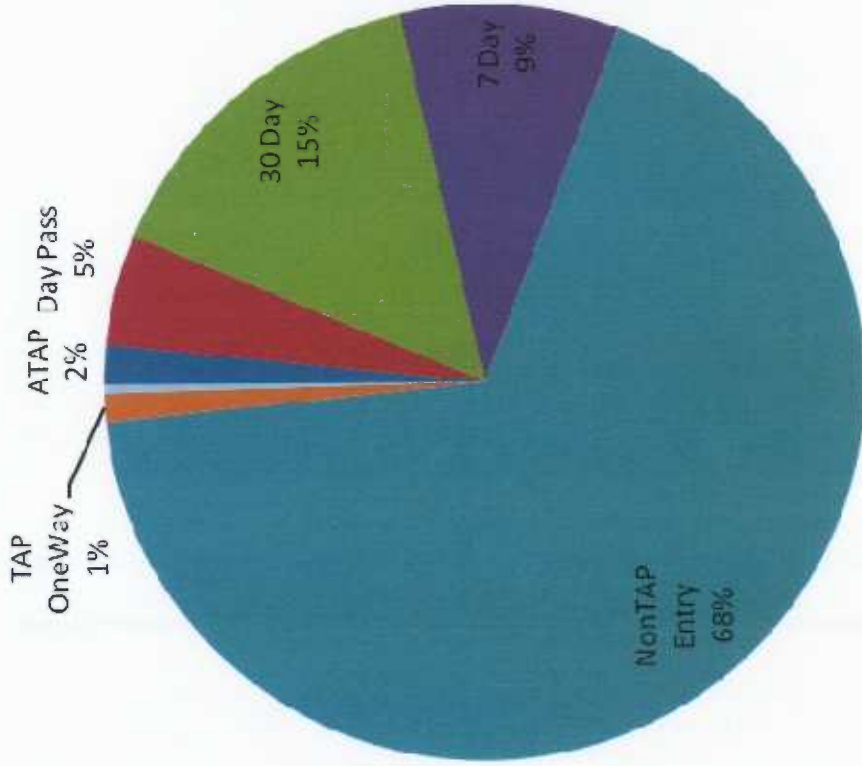


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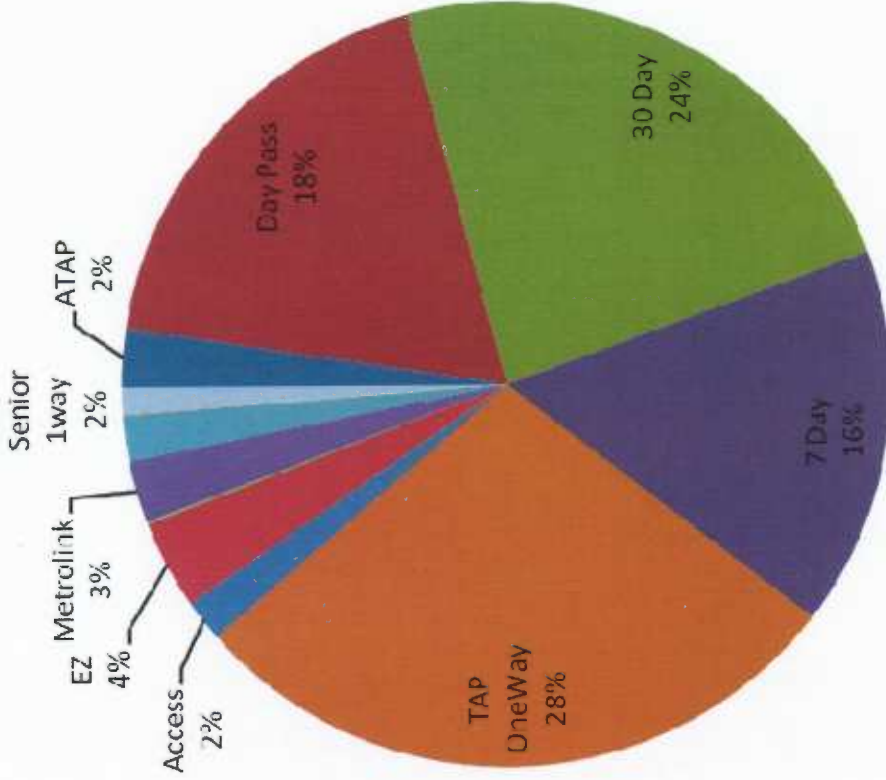
Universal City Gate Entry Data

1-6 pm

10/26, Unlocked



11/16, Locked

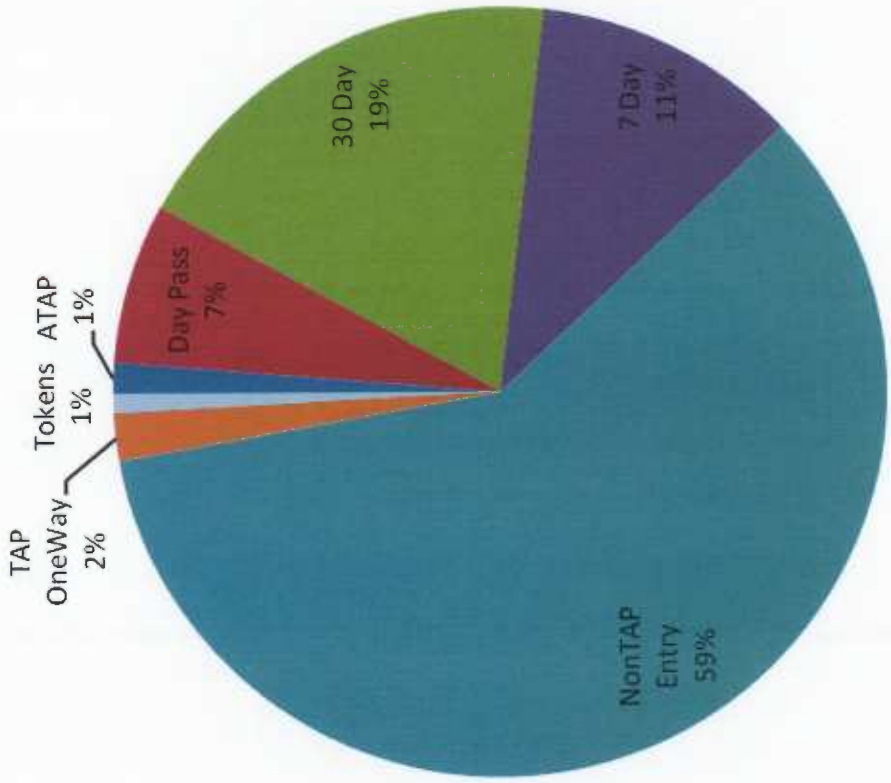


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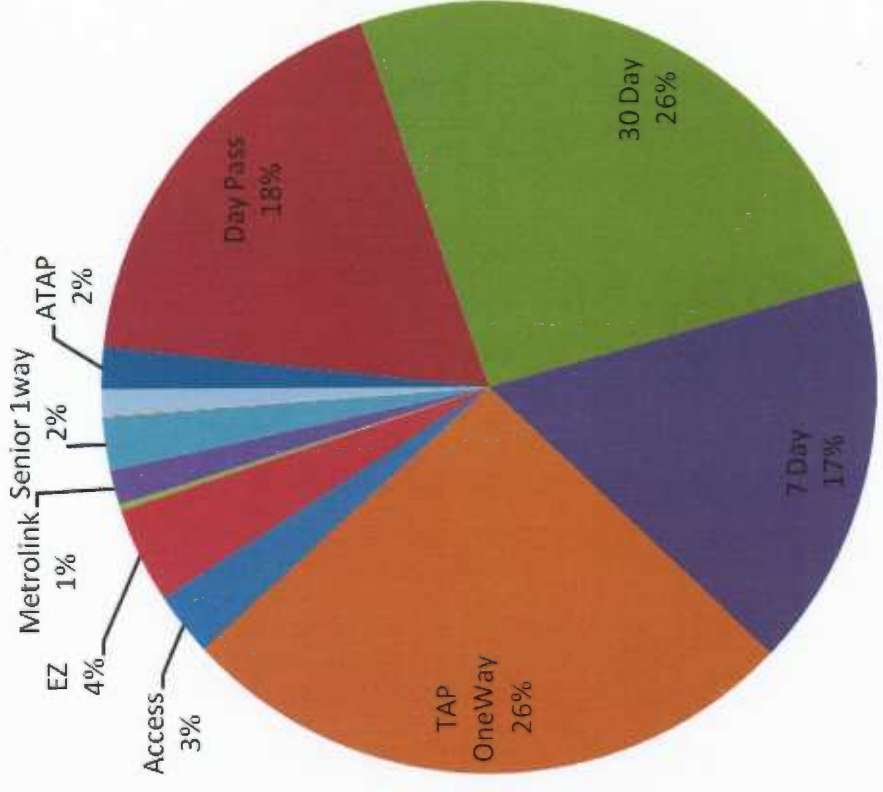
North Hollywood Gate Entry Data

1-6 pm

11/16, Unlocked



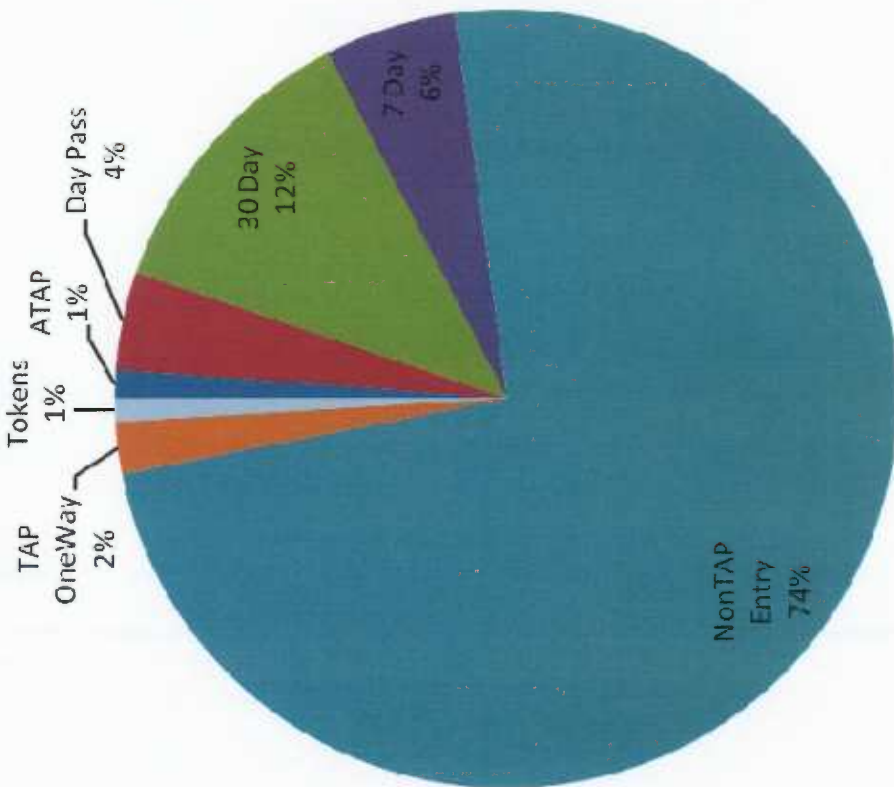
11/30, Locked



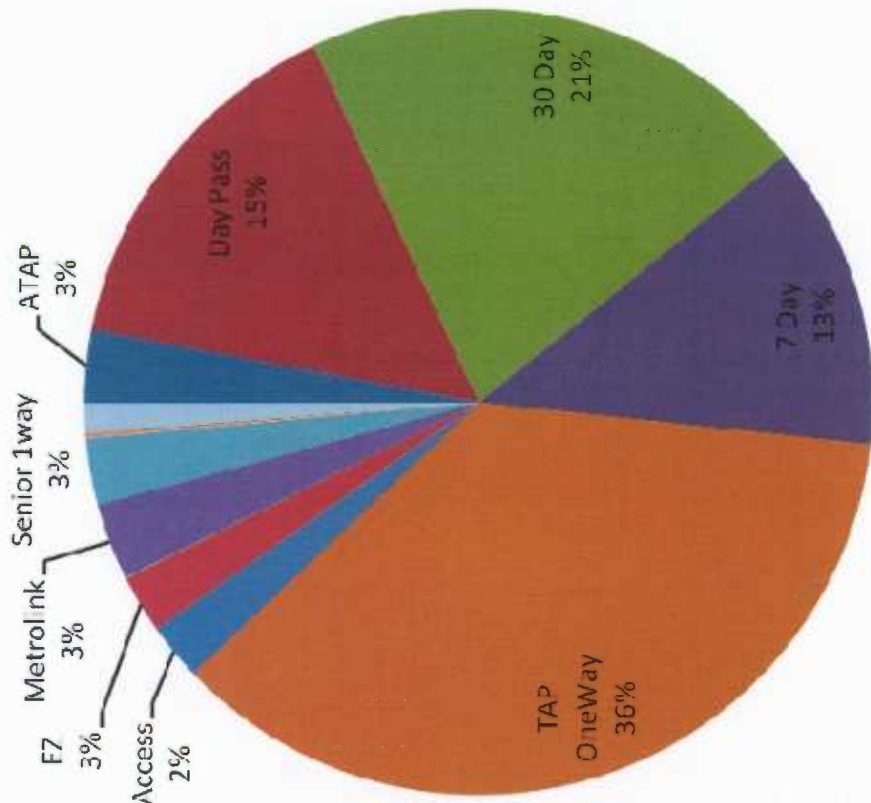
Hollywood/Vine Gate Entry Data

1-6 pm

11/30, Unlocked



12/7, Locked

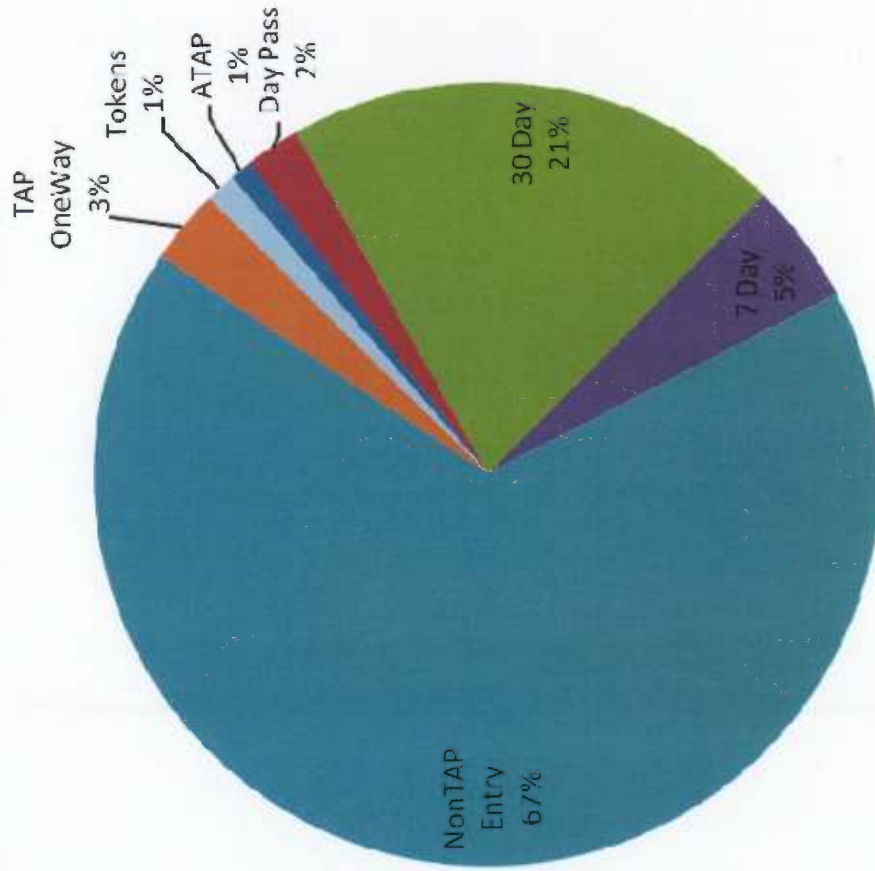


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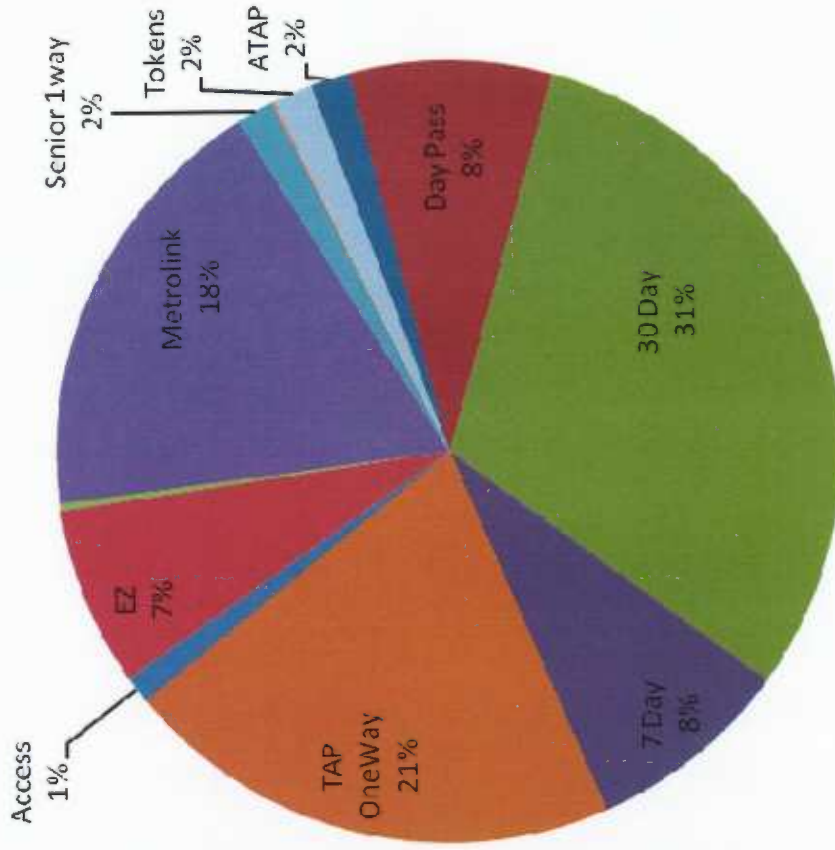
Civic Center Gate Entry Data

1-6 pm

12/07, Unlocked



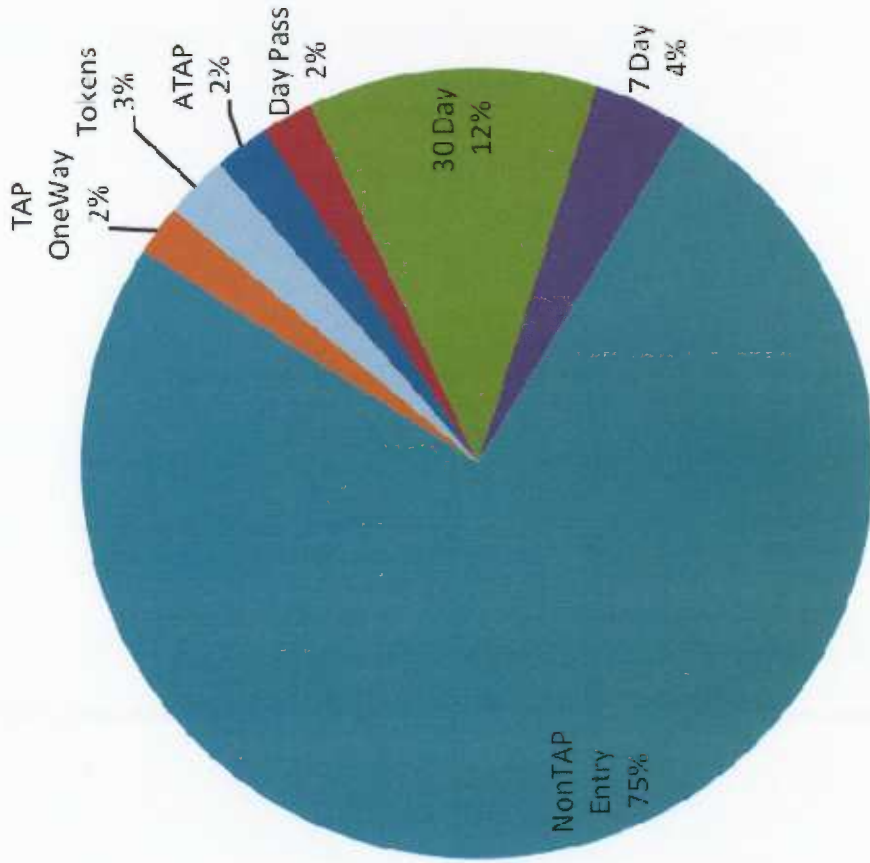
12/14, Locked



7th/Metro Gate Entry Data

1-4 pm

12/14, Unlocked



1/11, Locked

