

1970 Broadway, Suite 740 Oakland, CA 94612-2219 510.763.2061 www.dksassociates.com

### MEMORANDUM

DATE:

April 27, 2018

TO:

Heather Klein/City of Oakland

FROM:

Erin Vaca/DKS Associates

Jose Palma/DKS Associates

SUBJECT:

Head Royce School – Traffic Monitoring (Spring 2018)

### INTRODUCTION

Head Royce School has operated at its current site, located at 4315 Lincoln Avenue in Oakland, CA, since the mid-1960's. Per the requirements specified in the operable Conditions of Approval (Case File: REV 13-003), Head Royce School is required to provide an independent monitor whose responsibility is to conduct unscheduled campus visits to monitor school-related transportation activity during the morning drop-off, afternoon pick-up and one special event. There are to be at least four separate monitoring periods reported by a qualified traffic consultant: Summer Program 2017, Fall 2017, Spring 2018 and one special event.

DKS Associates was retained by Head Royce School as a qualified traffic consultant to provide traffic monitoring services by conducting campus visits and documenting observed conditions as they relate to the Conditions of Approval Document, dated June 7, 2016, item #23(g).

### MONITORING METHODOLOGY

DKS focused its campus visits to document vehicle queuing, observation of drop-off or pick-up behavior, deployment of traffic assistants and monitors, survey of occupancy of all Head Royce parking lots, monitoring of Whittle Avenue and Alida Street for school-related parking, review of the Head Royce Auto Trip Reduction Program and other potential safety issues.

DKS staff conducted the Spring 2018 semester observation on March 27 (morning) and March 29 (afternoon), 2018. These visits occurred during the morning drop-off operation from 7:55 to 8:30 AM and the afternoon pick-up operation from 3:15 to 3:45 PM.



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### MONITORING RESULTS

The following section describes the observations for each category listed.

### 1. Traffic Assistants and Monitors

At least six traffic monitors were present during the morning drop-off period and at least eight were present during the afternoon pick-up period.

### 2. Queue Line Flow Observations and Recommendations

Active traffic assistants managing vehicle-persons interactions combined with an effective education program were successful in maintaining orderly and safe operation of the queue line flow.

### 3. Queue Length and Extent

During both the morning and afternoon periods, the curb lane queue never extended beyond the upper driveway. For the afternoon period, school traffic assistants were active in guiding arriving autos into the auxiliary parking lot located at the western edge of the intersection at Lincoln Avenue and Monterey Boulevard as a temporary holding area. As the queue would shorten, the traffic assistants would then release cars from the parking lot one vehicle at a time to join the main queue on Lincoln Avenue. This management of the queue line was successful in that the queue never stretched beyond the upper driveway limits and never interrupted the traffic stream on Lincoln Avenue. A copy of the queue observation note sheet is provided in Appendix A.

### 4. Review of Violations Database and Recommendations

DKS has reviewed the vehicle infraction log for the period of December 30, 2017 to March 30, 2018. Head Royce traffic monitors recorded 21 user violations during the spring semester. The most common violation was a "U-turn on Lincoln Street," which occurred nine times. A copy of the violation log is provided in Appendix B. Note that when Head Royce School provided the violation log, the license plate numbers were also shown. However, to maintain a maximum level of privacy for the school families, the license plate numbers have been removed prior to inclusion with this report.

The school typically provides a traffic monitor near the intersection of Lincoln Avenue and Alida Street to discourage school vehicles from attempting U-turns. However, there was no traffic monitor present at this location in the afternoon at the time of the last observation. When U-turns do occur, the traffic monitor documents the occurrence and a violation notice is sent to the family of the registered student linked to the vehicle license plate.

DKS reviewed the vehicle license plates for each violation and it showed that there were no repeat violators (thus far) during the spring semester. This suggests that the education and accompanying violation program is effective in altering the behavior of the drivers at the school.



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The system currently deployed by the school is adequate and no further improvements are recommended at this time.

### 5. Parking Lot Occupancy

There are a total of 157 available parking spaces on-campus at Head Royce. Approximately 80 percent (or 126 spaces) of these parking spaces were occupied at the end of the morning monitoring observation.

### School Related Parking on Whittle Avenue and Alida Street

Both Whittle Avenue and Alida Street were monitored for school related activity. Student drop-offs or pick-ups were not observed along either street during the morning observation period. However, during the afternoon observation period towards 3:45 PM, one student pick-up was observed along Alida Street. During both observation periods, school staff were not observed to be parking along either street and no U-turns were observed along Alida Street.

### 7. Auto Trip Reduction Program

The current Transportation Demand Management (TDM) document was distributed to all school staff and families. Trip reduction programs and other transportation recommended practices are provided within the TDM document. DKS has reviewed this document and finds it to be satisfactory.

One program in place is the private school bus service. During each observation period, there were about five dedicated school buses dropping off and picking up students along Lincoln Avenue. Another program is AC Transit's three dedicated school routes. According to one traffic monitor, ridership has gone up by about 50 students since implementation of the TDM during the morning drop-off period.

### FINDINGS AND RECOMMENDATIONS

The current striping along Lincoln Avenue is worn and faded. Head Royce School staff has contacted the City of Oakland staff to refresh the pavement edge line striping. Refreshing the striping would enhance safety by reinforcing visual separation between cars in queue or parked along the curb and passing cars using Lincoln Avenue.

DKS recommends that the school continue implementation of the TDM plan, including recording of user violations and sending violation notices to families to ensure that violations are not repeated. No further recommendations are suggested.

P:\P\16\16128-001 Traffic Monitoring a Head Royce School\07 Deliverables\Spring 2018 Monitoring\HeadRoyceMonitoring Spring 2018 v2 CLEAN.docx

# Appendix A

**Queue Length Field Notes** 

# Head Royce School – Lincoln Avenue Curb Maximum Queue Record

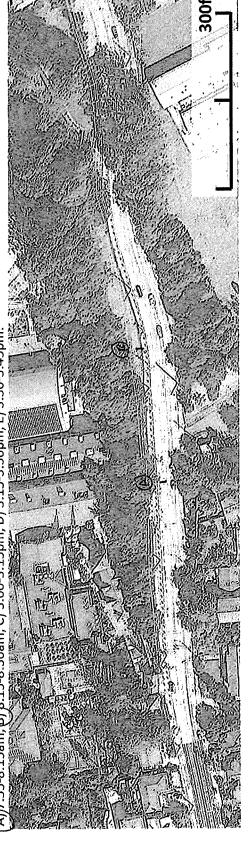
Date of Observation: 3/27/261% Time(s) of Observation: AM

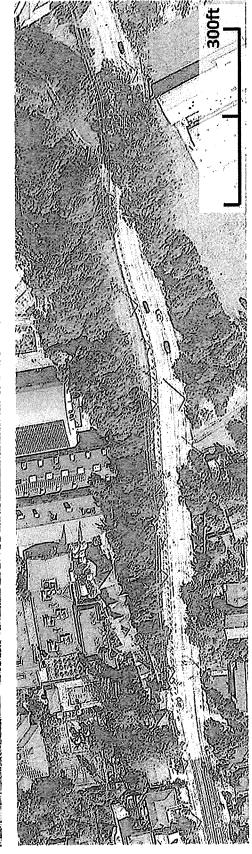
Observer Initials: 

→ □

Mark the *maximum* location of the "back-of-queue" position for:

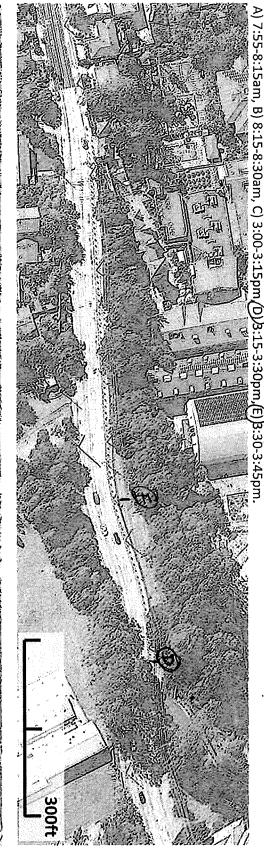
(A)7:55-8:15am, (B) 8:15-8:30am, C) 3:00-3:15pm, D) 3:15-3:30pm, E) 3:30-3:45pm.

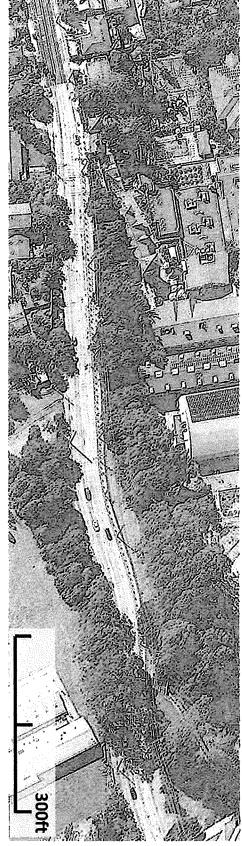




# Head Royce School – Lincoln Avenue Curb Maximum Queue Record

Date of Observation: Mark the maximum location of the "back-of-queue" position for: Time(s) of Observation:  $\nabla M$ Observer Initials: V





# Appendix B

**Violation Log** 

	Time	License Plate	Infraction
12/12/17	3:42 PM		u-turn on Lincoln Ave
1/17/18	3:25 PM		blocking driveway on Lincoln Ave
2/6/18	3:28 PM		u-turn on Lincoln Ave
2/7/18	3:20 PM		u-turn on Lincoln Ave
2/7/18	3:25 PM		u-turn on Lincoln Ave
2/7/18	3:35 PM		u-turn on Alida Ave
2/8/18	3:30 PM		blocking driveway on Lincoln Ave
2/8/18	3:25 PM		u-turn in driveway on Lincoln Ave
2/8/18	3:35 PM		student pick up below gatehouse
2/9/18	3:25 PM		u-turn on Lincoln Ave
2/13/18	3:20 PM		student pick up below gatehouse
2/28/18	8:09 AM		u-turn on Alida Ave
3/5/18	3:01 PM		parked in queue on Lincoln Ave
3/6/18	3:35 PM		u-turn on Alida Ave
3/9/18	8:10 AM		u-turn on Alida Ave
3/15/18	3:23 PM		jaywalk on Lincoln Ave
3/21/18	3:35 PM		u-turn on Lincoln Ave
3/21/18	8:14 AM		u-turn on Lincoln Ave
3/22/18	3:40 PM		u-turn on Alida Ave
3/30/18	3:30 PM		u-turn on Lincoln Ave
3/30/18	3:33 PM		u-turn on Lincoln Ave

Date



1970 Broadway, Suite 740 Oakland, CA 94612

www.dksassociates.com

DATE:

December 22, 2017

TO:

Heather Klein (City of Oakland)

FROM:

Erin Vaca, PE (DKS Associates)

José Palma, (DKS Associates)

SUBJECT:

Head Royce School - Traffic Monitoring (Special Event for 2017-18 School Year)

P# 16128-001

510.763.2061

### INTRODUCTION

Head Royce School has operated at its current site, located at 4315 Lincoln Avenue in Oakland, CA since the mid-1960s. Per the requirements specified in the operable Conditions of Approval (Case File: REV 13-003), Head Royce School is required to provide an independent monitor whose responsibility it is to conduct unscheduled campus visits to monitor school related transportation activity during the morning drop-off, afternoon pick-up and one special event. There will be at least four separate monitoring periods reported by a qualified traffic consultant: Summer Program 2017, Fall 2017, Spring 2018 and one special event.

DKS Associates was retained by Head Royce School as a qualified traffic consultant to provide traffic monitoring services by conducting campus visits and documenting observed conditions as they relate to the Conditions of Approval Document, dated June, 7, 2016, item #23(g). This report documents observations at a special event that took place on December 15, 2017.

### MONITORING METHODOLOGY

DKS focused its campus visits to document vehicle queuing, observation of drop-off or pick-up behavior, deployment of traffic assistants and monitors, survey of occupancy of all Head Royce parking lots, monitoring of Whittle Avenue and Alida Street for school related parking, review of the Head Royce Auto Trip Reduction Program and other potential safety issues.

DKS staff conducted the special event observation on December 15, 2017. This visit was concurrent with the Holiday Program lasting from approximately 10:00 AM to 1:00 PM.

### MONITORING RESULTS

The following section describes the observations for each category listed.

### 1. Number of traffic assistance and monitors present during drop-off and pick-up periods

At least seven (7) Traffic Monitors were present during the start of the event at 10:00 AM and again at the conclusion of the event at 1:00 PM. For this event, the school hired a professional valet service which shuttled vehicles between the front of the school on Lincoln Avenue and the off-site parking lot at the nearby Greek Orthodox Church. The valet service was staffed by approximately 10-15 drivers. Photos of signs used for the special event are attached as **Appendix A**.



### 2. Observing queue line flow and recommending measures to ensure smooth operations

Active traffic assistants and valet drivers managing vehicle-persons interactions combined with an effective education program were successful in maintaining orderly and safe operation of the queue line flow.

### 3. Reviewing the length of queue and check if queue extends above the upper driveway

During both the start of the program and end of the program periods, the curb lane queue never extended beyond the upper driveway. This management of the queue line was successful in that the queue never stretched beyond the driveway limits and never interrupted the traffic stream on Lincoln Avenue. A copy of the queue observation note sheet is provided in **Appendix B**.

### 4. Collecting the number of violations that have been reported from Head Royce's database and recommending measure to reduce violations

Because the auto circulation and parking for this special event was mostly handled by the professional valet service and their drivers, the school did not log any violations per their normal procedures. A summary of violations logged through early December was presented in the Fall monitoring report.

### 5. Recording parking occupancy in all Head Royce Parking lots

There are a total of 157 available parking spaces on-campus at Head Royce. Approximately 77% (or 1220 spaces) of all parking spaces were occupied at the beginning of the special event. Parking lots located on the south side of Lincoln Avenue were also observed to be at full or near full capacity. On-street parking on Lincoln Avenue directly adjacent to the school campus was also fully utilized. As parking lots continued to fill up, signs were placed to notify incoming parents and guest that parking lots were full. Parents and guest were then directed to use the valet service. Head Royce also dedicated a special drop-off and pick-up area for rideshare users (e.g. Uber & Lyft) with e-mail notifications and way finding across the street from main entrance. The e-mail notification included the address location point that can be used on rideshare app to leave parents and guest exactly across the main entrance photo of the rideshare sign is included in **Appendix A**.

### 6. Monitoring Whittle Avenue and Alida Street for School related parking

Both Whittle Avenue and Alida Street were patrolled to monitor for school-related activity. No student drop-offs or pick-ups were observed on either street during the observation periods. School staff or visitors were not observed parking along either street. During the observation period, no vehicles were observed performing Uturns at Alida Street.

### 7. Auto Trip Reduction Program and related documents

The current Travel Demand Management (TDM) document is distributed to all school staff and families. Trip reduction programs and other recommended transportation practices are provided within the TDM document. DKS has reviewed this document and finds it to be satisfactory.



### FINDINGS AND RECOMMENDATIONS

School should work with City of Oakland staff to refresh the pavement edge line striping along Lincoln Avenue. The current striping is worn and faded. Refreshing the striping would enhance safety by reinforcing visual separation between cars in queue or parked along the curb and passing cars using Lincoln Avenue.

The dedicated rideshare pick-up and drop-off area is a good addition to the special event parking plan, but should be observed by a nearby Traffic Monitor to ensure it is used properly. At times, parents would use this space to pick up children getting out of school (not related to the event) and waited long periods of time (5 mins or more) in the rideshare space. The Traffic Monitor responsible for the nearby crosswalk could periodically check during peak hours to ensure that drivers are not taking advantage of the rideshare pick-up and drop-off space.

DKS recommends that the school continue implementation of the TDM plan. No further recommendations are suggested.

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# Appendix A

**Photos** 

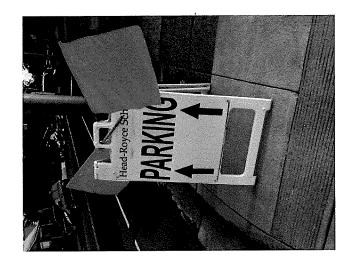
# Valet service during special event on December 15, 2017



# Rideshare Pick –Up and Drop-Off December 15, 2017



# Other Signage for Guest December 15, 2017





# Vehicles parked on dedicated space for rideshare on December 15, 2017



## **Appendix B**

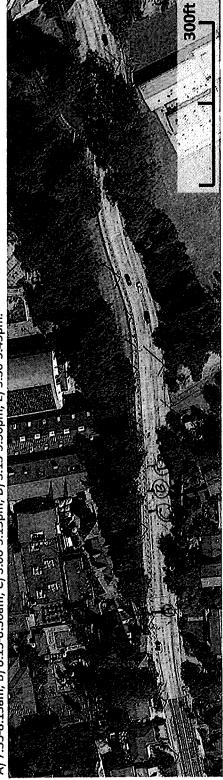
**Queue Length Observation Notes** 

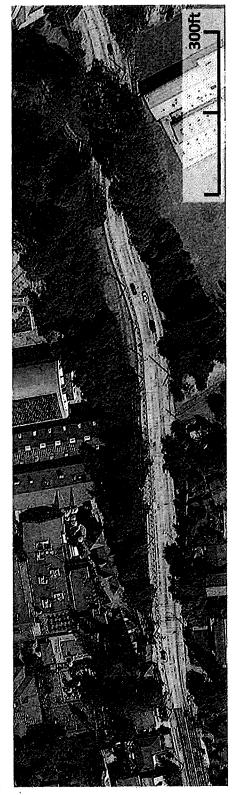
# Head Royce School - Lincoln Avenue Curb Maximum Queue Record

Time(s) of Observation: 4-00 am 11:00 am Date of Observation: 12/2017

Observer Initials:

Mark the *maximum* location of the "back-of-queue" position for: A) 7:55-8:15am, B) 8:15-8:30am, C) 3:00-3:15pm, D) 3:15-3:30pm, E) 3:30-3:45pm.







DATE:

December 5, 2017

TO:

Heather Klein (City of Oakland)

FROM:

Erin Vaca, PE (DKS Associates)

Jose Palma (DKS Associates)

SUBJECT:

Head Royce School - Traffic Monitoring (Fall 2017)

Oakland, CA 94612 510.763.2061 www.dksassociates.com

1970 Broadway, Suite 740

P# 16128-0001

### INTRODUCTION

Head Royce School has operated at its current site, located at 4315 Lincoln Avenue in Oakland, CA since the mid-1960s. Per the requirements specified in the operable Conditions of Approval (Case File: REV 13-003), Head Royce School is required to provide an independent monitor whose responsibility it is to conduct unscheduled campus visits to monitor school related transportation activity during the morning drop-off, afternoon pick-up and one special event. There are to be at least four separate monitoring periods reported on by a qualified traffic consultant: Summer Program 2017, Fall 2017, Spring 2018 and one special event.

DKS Associates was retained by Head Royce School as a qualified traffic consultant to provide traffic monitoring services by conducting campus visits and documenting observed conditions as they relate to the Conditions of Approval Document, dated June, 7, 2016, item #23(g).

### MONITORING METHODOLOGY

DKS focused its campus visits to document vehicle queuing, observation of drop-off or pick-up behavior, deployment of traffic assistants and monitors, survey of occupancy of all Head Royce parking lots, monitoring of Whittle Avenue and Alida Street for school related parking, review of the Head Royce Auto Trip Reduction Program and other potential safety issues.

DKS staff conducted the fall semester observation on October 5, 2017. This visit occurred during the peak drop-off operation times from 7:55 to 8:30 AM and again during the peak pick-up operation from 3:00 to 3:45 PM.

### MONITORING RESULTS

The following sections describe the observations for each category listed.

### 1. Number of Traffic Assistants and Monitors Present during Drop-off and Pick-up Periods

Six (6) traffic monitors or assistants were observed during the morning drop-off period and eight (8) were present during the afternoon pick-up period.

### 2. Observations on Queue Line Flow

Active traffic assistants managing vehicle-persons interactions combined with an effective education program were successful in maintaining orderly and safe operation of the queue line flow.



### 3. Queue Length

Over the afternoon periods, the curb lane queue never extended beyond the upper driveway for a significant length of time. During the morning period, the curb lane queue briefly extended past the upper driveway by one vehicle for about 25 seconds but school traffic assistants were able to guide arriving autos to continue forward to shorten the queue. For the afternoon period, school traffic assistants were active in guiding arriving autos into the on-campus parking lot (via the upper driveway) as a holding area. As the queue would shorten, the traffic assistants would then release cars from the parking lot one vehicle at a time to join the main queue on Lincoln Avenue. This management of the queue line was successful in that the queue never stretched beyond the driveway limits and never interrupted the traffic stream on Lincoln Avenue. A copy of the queue observation note sheet is provided in **Appendix A**.

### 4. Analysis of Violations Reported in Head Royce's Database and Recommended Measures to Reduce Violations

Head Royce traffic monitors recorded thirty-nine (39) user violations during the fall semester through December 5, 2017. The most commonly occuring violation was a "Driveway turn around on Lincoln Avenue", which occurred seventeen (17) times. The next most frequent infraction was a "Parked in red for pick up" which occurred nine (9) times. A copy of the violation log is provided in Appendix B. Note, when Head Royce School provided the violation log, the license plate numbers were also shown. However, to maintain the privacy of school families, the license plate numbers have been removed before inclusion with this report.

The school currently provides a traffic monitor near the intersection of Lincoln Avenue/Alida Street to discourage school vehicles from attempting U-turns. When U-turns do occur, the traffic monitor documents the occurance and a violation notice is sent to the family of the registered student linked to the vehicle license plate.

DKS reviewed the record of vehicle infractions and it showed that there were three repeat violator (two infractions each) during the fall semester to date. Two of the repeat license plates were cited for committing the same infraction twice. There were no third-time offenses, which require a meeting with the Head of School. While the education and accompanying violation program appears to be effective in altering the behavior of the drivers at the school, the school should continue to be vigilant in applying the program.

The system currently deployed by the school is adequate and no further improvements are recommended at this time.

### 5. Parking Occupancy in Head Royce Parking Lots

There are a total of 198 available parking spaces on-campus at Head Royce. Approximately 70% (or 138 spaces) of all parking spaces were occupied at the end of the morning monitoring observation.

### 6. Monitoring of Whittle Avenue and Alida Street for School Related Parking

Both Whittle Avenue and Alida Street were patrolled to monitor for school related activity. Student drop-offs or pick-ups were not observed to be occurring at either street during the observation periods. School staff was also not observed to be parking along either street. During the observation period, no vehicles were observed performing U-turns at Alida Street.



### 7. Auto Trip Reduction Program and Related Documents

DKS reviewed the current Transportation Policy Guide document that is distributed to all school staff and families as well as the Head Royce Transportation Demand Management (TDM) Plan. Trip reduction programs and other transportation recommended practices are provided within the TDM document. DKS finds these documents to be satisfactory.

### FINDINGS AND RECOMMENDATIONS

School should work with City of Oakland staff to refresh the pavement edge line striping along Lincoln Avenue. The current striping is worn and faded. Refreshing the striping would enhance safety by reinforcing visual separation between cars in queue or parked along the curb and passing cars using Lincoln Avenue.

DKS recommends that the school continue implementation of the TDM plan. No further recommendations are suggested.

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## Appendix A

**Queue Length Field Notes** 

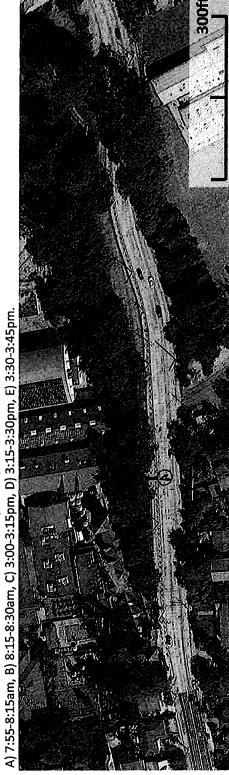
# Head Royce School – Lincoln Avenue Curb Maximum Queue Record

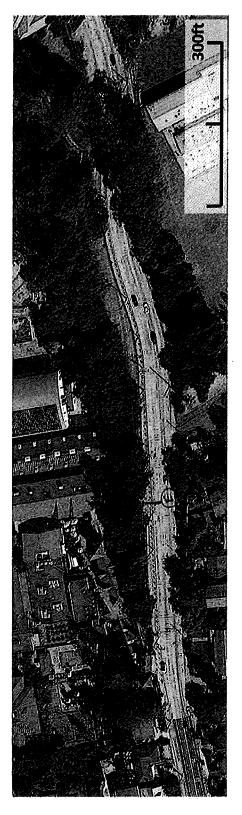
Date of Observation: 10/5/20 17

Time(s) of Observation:

Observer Initials: 5₽

Mark the maximum location of the "back-of-queue" position for:





## **Appendix B**

**Violation Log** 

Date	Time	License Plate	Infraction
	8/28/17	8:20 AM	Driveway turn around on Lincoln Ave
ŕ	9/13/17	5:45 PM	U-turn on Alida Ct
	9/15/17	3:35 PM	Driveway turn around on Lincoln Ave
	9/18/17	8:23 AM	Driveway turn around on Lincoln Ave
	9/19/17	6:20 PM	Parked onTiffin during evening school event
	9/19/17	7:10 PM	Parked on Lincoln during evening school event
	9/25/17	8:24 AM	Driveway turn around on Lincoln Ave
	9/25/17	8:25 AM	Driveway turn around on Lincoln Ave
	9/29/17	3:30 PM	Parked in red for pick up
	9/29/17	8:10 AM	Driveway turn around on Lincoln Ave
	10/2/17	3:33 PM	Parked in red for pick up
	10/2/17	3:36 PM	Driveway turn around on Lincoln Ave
	10/3/17	3:32 PM	Driveway turn around on Lincoln Ave
	10/3/17	3:31 PM	Parked in red for pick up
	10/4/17	3:36 PM	Parked in red for pick up
	10/4/17	3:37 PM	Driveway turn around on Lincoln Ave
	10/4/17	3:26 PM	Parked in red for pick up
	10/6/17	3:32 PM	Parked in red for pick up
	10/11/17	8:18 AM	U-turn on Lincoln Ave
	10/16/17	3:04 PM	Driveway turn around on Lincoln Ave
	10/17/17	3:40 PM	U-turn on Lincoln Ave
	10/18/17	3:45 PM	Driveway turn around on Lincoln Ave
	10/19/17	3:34 PM	Driveway turn around on Lincoln Ave
	10/19/17	8:12 AM	Driveway turn around on Lincoln Ave
	10/19/17	3:32 PM	Driveway turn around on Lincoln Ave
	10/19/17	8:20 AM	U-turn on Lincoln Ave
	10/20/17	8:15 AM	U-turn on Lincoln Ave
	11/1/17	3:35 PM	Parked in red for pick up
	11/1/17	8:07 AM	Blocking driveway on Lincoln Ave
	11/3/17	3:18 PM	Parked in red for pick up
	11/7/17	8:12 AM	U-turn on Lincoln Ave
	11/9/17	3:21 PM	Parked in red for pick up
	11/13/17	8:00 AM	U-turn on Lincoln Ave
	11/14/17	8:19 AM	Driveway turn around on Lincoln Ave
	11/26/17	8:26 AM	U-turn Alida Ct
	11/26/17	8:28 AM	Driveway turn around on Lincoln Ave
	12/4/17	8:06 AM	U-turn on Lincoln Ave
	12/5/17 12/5/17	8:24 AM 8:17 AM	Driveway turn around on Lincoln Ave U-turn on Lincoln Ave
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1970 Broadway, Suite 740 Oakland, CA 94612-2219 510.763.2061 www.dksassociates.com

### **MEMORANDUM**

DATE:

August 15, 2017

TO:

Heather Klein/City of Oakland

FROM:

Erin Vaca/DKS ASsociates

SUBJECT:

Head Royce School – Traffic Monitoring (Summer 2017)

### INTRODUCTION

Head Royce School has operated at its current site, located at 4315 Lincoln Avenue in Oakland, CA since the mid-1960s. Per the requirements specified in the operable Conditions of Approval (Case File: REV 13-003), Head Royce School is required to provide an independent monitor whose responsibility it is to conduct unscheduled campus visits to monitor school related transportation activity during the morning drop-off, afternoon pick-up and one special event. There are to be at least four separate monitoring periods reported on by a qualified traffic consultant: Summer Program 2017, Fall 2017, Spring 2018 and one special event.

DKS Associates was retained by Head Royce School as a qualified traffic consultant to provide traffic monitoring services by conducting campus visits and documenting observed conditions as they relate to the Conditions of Approval Document, dated June 7, 2016, item #23(g).

### MONITORING METHODOLOGY

DKS focused its campus visits to document vehicle queuing, observation of drop-off or pick-up behavior, deployment of traffic assistants and monitors, survey of occupancy of all Head Royce parking lots, monitoring of Whittle Avenue and Alida Street for school related parking, review of the Head Royce Auto Trip Reduction Program and other potential safety issues.

DKS staff conducted the summer program observation on July 20, 2017. This visit occurred during the peak drop-off operation times from 7:55 to 8:30 AM and again during the peak pick-up operation from 3:00 to 3:45 PM.

### MONITORING RESULTS

The following section describes the observations for each category listed.



Page 2

### Number of Traffic Assistants and Monitors Present During Drop-off and Pick-up Periods

Nine (9) Traffic Monitors were present during the morning drop-off period and eight (8) were present during the afternoon pick-up period.

### 2. Observing Queue Line Flow and Recommending Measures to Ensure Smooth Operations

Active traffic assistants managing vehicle-persons interactions combined with an effective education program were successful in maintaining orderly and safe operation of the queue line flow.

### 3. Reviewing the Length of Queue and Checking if Queue Extends Above the Upper Driveway

During both the morning and afternoon periods, the curb lane queue never extended beyond the upper driveway. For the afternoon period, school traffic assistants were active in guiding arriving autos into the on-campus parking lot (via the upper driveway) as a holding area. As the queue would shorten, the traffic assistants would then release cars from the parking lot one vehicle at a time to join the main queue on Lincoln Avenue. This management of the queue line was successful in that the queue never stretched beyond the driveway limits and never interrupted the traffic stream on Lincoln Avenue. A copy of the queue observation note sheet is provided in Appendix A.

### 4. Collecting the Number of Violations That Have Been Reported from Head Royce's Database and Recommending Measures to Reduce Violations

Head Royce traffic monitors recorded thirty (30) user violations during the summer program. The most commonly occurring violation was a "U-turn on Alida Street", which occurred seventeen (17) times. The next most frequent infraction was a "U-turn on Lincoln Avenue" which occurred eight (8) times. A copy of the violation log is provided in Appendix B. Note, when Head Royce School provided the violation log, the license plate numbers were also shown. However, to maintain a maximum level of privacy for the school families, the license plate numbers have been removed before inclusion with this report.

The school currently provides a traffic monitor near the intersection of Lincoln Avenue / Alida Street to discourage school vehicles from attempting U-turns. When U-turns do occur, the traffic monitor documents the occurrence and a violation notice is sent to the family of the registered student linked to the vehicle license plate.

DKS reviewed the vehicle license plates for each violation and there was only one repeat violator (two infractions) during the summer program. This suggests that the education and accompanying violation program is effective in altering the behavior of the drivers at the school.

The system currently deployed by the school is adequate and no further improvements are recommended at this time.



Page 3

### 5. Recording parking occupancy in all Head Royce Parking lots

There are a total of 198 available parking spaces on-campus at Head Royce (154 spaces in the main campus lots and 44 in Lots A-D). Approximately 58% (or 115 spaces) of all parking spaces were occupied at the end of the morning monitoring observation.

### 6. Monitoring Whittle Avenue and Alida Street for School related parking

Both Whittle Avenue and Alida Street were patrolled to monitor for school related activity. Student drop-offs or pick-ups were not observed to be occurring at either street during the observation periods. School staff was also not observed to be parking along either street. During the observation period, no vehicles were observed performing U-turns at Alida Street.

### 7. Auto Trip Reduction Program and related documents

DKS reviewed the current Transportation Policy Guide document that is distributed to all school staff and families as well as the Head Royce Transportation Demand Management (TDM) Plan. Trip reduction programs and other transportation recommended practices are provided within the TDM document. DKS finds these documents to be satisfactory.

### FINDINGS AND RECOMMENDATIONS

The School should work with City of Oakland staff to refresh the pavement edge line striping along Lincoln Avenue. The current striping is worn and faded. Refreshing the striping would enhance safety by reinforcing visual separation between cars in queue or parked along the curb and passing cars using Lincoln Avenue.

DKS recommends that the school continue implementation of the TDM plan. No further recommendations are suggested.

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## **Appendix A**

**Queue Length Field Notes** 

# Head Royce School – Lincoln Avenue Curb Maximum Queue Record

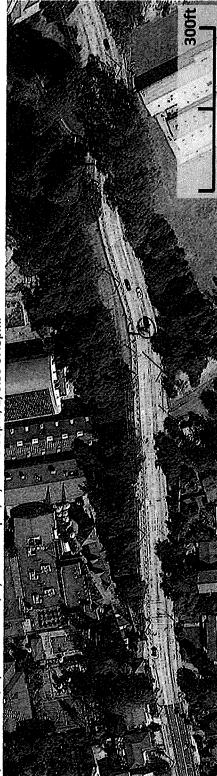
Date of Observation:  $7/2\delta/2017$ 

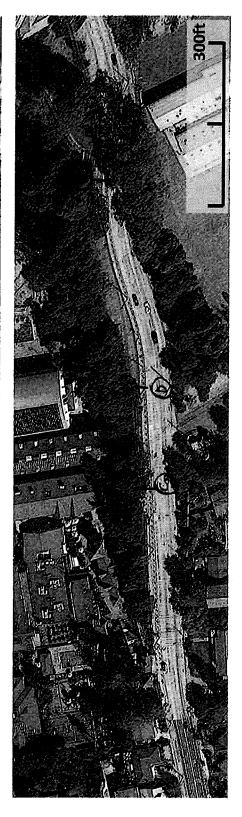
Mark the maximum location of the "back-of-queue" position for:

Time(s) of Observation:

Observer Initials:

\) 7:55-8:15am, B) 8:15-8:30am, C) 3:00-3:15pm, D) 3:15-3:30pm, E) 3:30-3:45pm.





## **Appendix B**

**Violation Log** 

Date	Time	License Plate	Infraction
6/19/17	8:00am		U-turn on Lincoln Ave
6/19/17	8:15am		U-turn on Lincoln Ave
6/19/17	8:15am		Blocked driveway
6/19/17	8:25am		. U-turn on Lincoln Ave
6/19/17	8:25am		Parked in bus zone
6/20/17	8:05am		U-turn on Alida Ct
6/20/17	4:06pm		U-turn on Alida Ct
6/20/17	4:19pm		U-turn on Alida Ct
6/21/17	8:05am		Parked illegally
6/21/17	8:16am		U-turn on Alida Ct
6/21/17	4:10pm		U-turn on Alida Ct
6/22/17	7:52am		U-turn on Lincoln Ave
6/22/17	8:10am		Parked in bus zone
6/22/17	3:48pm		U-turn on Alida Ct
6/22/17	3:55pm		U-turn on Lincoln Ave
6/22/17	4:00pm		U-turn on Alida Ct
6/26/17	8:20am		U-turn on Alida Ct
7/11/17	8:26am		U-turn in driveway
7/11/17	5:40pm		U-turn on Lincoln Ave
7/12/17	3:52pm		U-turn on Alida Ct

7/12/17	4:20pm	U-turn on Alida Ct
7/16/17	8:28am	U-turn on Alida Ct
7/17/17	4:08pm	U-turn on Lincoln Ave
7/19/17	7:57am	U-turn on Alida Ct
7/20/17	8:32am	U-turn on Lincoln Aye
7/21/17	8:24am	U-turn on Alida Ct
7/24/17	8:08am	U-turn on Alida Ct
7/24/17	8:25am	U-turn on Alida Ct
7/24/17	7:52am	U-turn on Alida Ct
7/25/17	8:21am	U-turn on Alida Ct

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