



Express Lanes

Draft Standard Operating Procedures and Supporting Documents

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4 TRO Daily Tasks and Procedures

This chapter provides list of tasks with step-by-step instructions of daily operations conducted by TRO staff. Event-based protocols and procedures will be covered in other Chapters of this document.

4.1 Shift Procedures

4.1.1 AM Opening Procedure

The AM Shift Opening is the first regular shift during the day. It typically begins several hours after the end of the previous regular shift and requires full startup of monitoring tools and applications. It also begins soon before the start of the typical rush hour. Therefore, operators must follow all of the basic shift opening activities completely and efficiently.

The operator shall perform the following activities by each tool as listed below. Use of these tools are described in Chapter 3, section 4.3 of this chapter and in the User Manuals. Although steps are listed for each set of tools independently, active monitoring typically encompasses activities that require use of multiple tools simultaneously. Examples are provided to each operator during on-site training.

If throughout this process issues are encountered, the operator shall follow the notification procedure that is discussed in Chapter 11.

4.1.1.1 General startup procedure

[Operations device hardware and software startup instructions. To be included closer to operations once information is available.]

4.1.1.2 TransSuite (RTM)

1. Open a separate Map view window for each corridor.
2. If a preset for the Corridor is provided, choose the appropriate preset. If not provided, Pan and zoom to each corridor.
3. Verify that FMS traffic layers are turned on.
4. Verify that TIS VTMS layers are turned on.
5. Verify that equipment status layers are turned on.
6. Look for any faulty equipment status alerts. If found, follow procedures described in Chapter 11. If not, maintain regular monitoring.
7. Verify that VTMSs are displaying appropriate messages and/or toll rates within expected values for this time of day, based on ranges provided by the Supervisor.
8. Look for any abnormal traffic patterns for this time of day by examining the color-coded traffic polylines. If found, investigate further and follow Chapter 5/Chapter 6 procedures as needed. If not, maintain regular monitoring.

9. If throughout this process a software issue is identified, follow procedures described in Chapter 11.

4.1.1.3 Cameleon (CCTV)

1. Select appropriate layout, presets and tours for the AM shift [more detailed info will be provided either in main SOP document or as an attachment to this chapter once this information is received.]
2. Project configured layout on the designated video wall screen(s).
3. Verify that VTMSs are displaying the messages indicated by TransSuite. If these coincide, maintain regular monitoring. If not, please follow Chapter 11 procedures.
4. If CCTV recordings have been performed overnight, review recordings to check for any abnormal messages and/or toll rates on VTMSs or any roadway issue (traffic incident, infrastructure). If issues with VTMS messages are observed, follow Chapter 9 procedures. Proceed to next step to confirm if roadway issues are still present.
5. Use tours and Pan-tilt-and-zoom cameras as needed to cover each Corridor and look for any abnormal conditions. If traffic incidents are detected, follow Chapter 6 procedures. If debris and/or infrastructure issues are detected, follow Chapter 9 procedures. For any incidents that were detected in recordings but are no longer present, refer to specific procedures in Chapter 6 for incidents undetected in real-time.
6. Return to original designated presets and maintain regular monitoring.

4.1.1.4 TCS Host Application

1. Run the Actual Fare Table Report for the period between the close of the previous regular shift and the start of the current shift and look for any abnormal values. If an issue is found, the corresponding system event procedure [more specific reference will be added as Chapter 11 is drafted]. Note: if unusual values are intentional due to overnight activities such as maintenance, operator would first confirm this before initiating a system event procedure described in Chapter 11 (see section 4.1.1.4).
2. Run the Traffic and Revenue Trends Daily Report for the previous day and look for any unusual values. If found, follow procedures described in Chapter 11.
3. Run the Skipped Read Point Report and look for any unusual values. If found, follow procedures described in Chapter 11.
4. Run the Trip Anomalies Report and look for any unusual values. If found, follow procedures described in Chapter 11.

4.1.1.5 Email/Voicemail/Other Communications

- Check email for any overnight updates inclusive of PM shift closure e-mails.
- End call forwarding of any phones and check for any messages left in the voicemail.
- Check for any handwritten notes left by the previous shift.
- Pull up job aids (binders, pen, notebook, etc).

- Print out a blank copy of the AM Shift Checklist [TBD if this is needed to be printed out, or filled out and/or signed electronically]. See section 4.2 for details.
- Print out any other items as indicated by Supervisor.
- After all the AM shift opening procedures steps specified above have been performed, fill out and e-mail the AM Shift Update Report (described in section 4.2.4) to “BAIFA TRO Shift Updates” within 1 hour of start of shift.

4.1.2 Regular Monitoring Guidelines

TRO Operators are expected to conduct regular monitoring of the roadway, the toll rates or messages, and the toll system at all times during regular shifts using the tools described in Chapter 3. The sections below describe these functions.

4.1.2.1 Roadway and Traffic Monitoring

These are guidelines for daily monitoring of the roadway. These focus on the observance of traffic conditions and of identification of traffic safety or performance impacting events such as traffic incidents or roadway maintenance. Traffic incident monitoring and resolution procedures are described in detail in Chapter 6 of this document. Roadway maintenance coordination procedures are described in detail in Chapter 9.

These guidelines are ordered by tools used to perform the various activities, but Operators are expected to use tools concurrently as possible.

CCTV Monitoring

Not all CCTV video feeds a corridor can be displayed simultaneously on a screen, so TRO Operators should prioritize which cameras are used and how to best use them in order to monitor the roadway in a timely and effective manner.

- At the JOC, CCTV video feeds should be shown on the video wall at all times.
- Using the Cameleon client, cycle through CCTV cameras along the using presets and tours. If tours are not configured or available, cycle manually based on guidance from the TRO Supervisor.
- Presets are helpful but BAIFA CCTVs can be PTZ'ed at will. TRO staff is encouraged to use PTZ actively in order to better observe roadway conditions.
 - Presets for some cameras are typically set so that key VTMS toll rates/messages are able to be observed during a particular time (see section 4.1.2.2), but there should also be presets that look at key parts of the roadway.
- TRO staff can also view the Caltrans CCTVs via Cameleon, which offer varying degrees of latency and quality. Control of these cameras is much more limited and should be reserved for incident/roadway event coordination.

- Based on experience, some traffic patterns and bottlenecks are identified (and evolve) over time. This knowledge, either transferred from other TRO staff at all levels or identified by operators in a particular shift, should be used as feedback to program tours or to manually choose which cameras should more frequently occupy the layout of the video wall and/or computer screen.
- When congestion, an incident and/or other roadway impacting event occurs, then this event should dictate the priority of CCTV use.
 - CCTV should be PTZ'ed to capture the traffic impacts in the EL and GP lanes. Governing laws and regulations regarding privacy shall be respected at all times.
 - As incidents or congestion bottlenecks generate traffic impacts that propagate over time, operators must be following this behavior and cycle through different cameras to anticipate impacts and react promptly.

Real-time Monitoring Dashboards (TransSuite)

The TransSuite dashboards are a key element to monitor traffic conditions. TRO staff should be actively monitoring the changes in traffic patterns, especially during peak period times, special events or incidents.

- At the JOC, one instance of TransSuite should be displayed on the video wall at all times.
- Using the TransSuite application, have the map view focused on one Corridor and the traffic TMS and polylines layers turned on.
- Every time that a change in polyline color is observed, hover over individual TMS stations affecting those polyline traffic segments to observe spot speeds, detection counts and other localized values for each lane.
- Open the FMS application to observe a graphical view of traffic for the desired location.
 - Observe both GP and EL behavior. Look at patterns between GP and EL traffic, which could be predictors of future EL traffic.
 - Look at current data but also at how it compares with data from previous days (note: on Monday AM shifts, operational peak hour from the previous AM shift will not be available).
- Verify that incident information reflects information entered on the TCS Host Application's incident logging screen. For incident related procedures, See Chapter 6.

4.1.2.2 Toll Rate and Messaging Monitoring

This section describes general guidelines for daily toll rate and messaging monitoring activities. TRO Operators should continuously monitor the toll rates and messages posted on the VTMS to ensure these are showing the intended information. Discrepancies should be detected as soon as

possible to limit the impacts on customers and BAIFA. These discrepancies occur due to user errors or system issues. Chapter 11 focuses on dealing with identified system issues, while this chapter describes proper steps to take using the right tools in order to detect these issues promptly. This chapter also describes steps and best practices to prevent and detect user errors when scheduling or manually posting toll rates and messages.

These guidelines are ordered by tools used to perform the various activities, but Operators are expected to use tools concurrently as possible.

CCTV Monitoring

Not all CCTV VTMS video feeds a corridor may be displayed simultaneously on a screen, so TRO Operators should prioritize which cameras are used and how to best use them in order to monitor the VTMS toll rates and messages effectively.

- At the JOC, CCTV video feeds should be shown on the video wall at all times. At the TIC, these would be displayed on one of the workstation monitor screens.
- At least one VTMS for each Zone in both Corridor-directions should be displayed at all times. If a certain Corridor has a predominant peak direction of travel, then additional screens can be dedicated to that direction of travel, without reducing the minimum number of screens associated to the off peak direction of travel.
- Every time there is a scheduled or manual toll rate or message change (e.g. variable pricing, every time active manual overrides are implemented), or every time a shift report is due, Operators should actively be looking at all representative VTMSs per Zone to confirm that the intended changes occurred. Also:
 - Even if toll rate of message information does not change with a VTMS update cycle, the LED typically flashes to refresh the content.
 - There could be a slight lag (few seconds) between the updating of the various VTMSs. This should not be a concern.
- During Dynamic Pricing, frequency of monitoring should be as close to the VTMS update frequency as possible. Operators should make the effort of tracking VTMS update cycles and perform at least one basic monitoring check (e.g. looking at all of the representative VTMSs per Zone - which should be already displayed on the screen at all times). There are times during the day when multiple priority activities and staffing constraints prevent the optimal VTMS monitoring frequency (e.g. every 5 minutes when running dynamic pricing). In those cases, frequency of both full and basic monitoring can be reduced as needed.
- Using the Cameleon client, cycle through CCTV cameras along the using the VTMS presets and tours. If tours are not configured or available, cycle manually based on guidance from the TRO Supervisor. Typically, the order begins with the first VTMS that motorists may encounter in the direction of travel and ends with the last. However, take

into account that since most BAIFA ELN corridors are open access in the majority of the facility, motorists can usually get in at most locations throughout it. Therefore, over time, the priority of sign order can evolve based on observed entrance patterns.

- Presets are key to monitoring VTMSs efficiently. TRO Operators should expect all CCTVs with a sight distance to a VTMS (as shown in Chapter 3) to have a VTMS preset. TRO staff is discouraged to use PTZ actively to monitor VTMS unless a VTMS preset for that camera is faulty or has not been set up.

Real-time Monitoring Dashboards (TransSuite)

The TransSuite dashboards are a key element to monitor VTMS toll rates and messages. TRO staff should be actively monitoring the changes in VTMS toll or messages, especially in the vicinity of VTMS update cycles.

- At the JOC, one instance of TransSuite should be displayed on the video wall at all times. At the TIC, this would be displayed on one of the workstation monitor screens.
- Using the TransSuite application, have the map view focused on one Corridor and the VTMS/TIS layers turned on.
- Verify that the VTMS icons are not displaying any status other than “Healthy.” If not, activate system issues procedures described in Chapter 11.
- Every time a scheduled or manually implemented toll rate or message or lane mode change is expected, or every time a shift report is due, hover over individual VTMS stations to observe the toll rates/messages and corresponding lane mode.
 - Once each VTMS in a particular Zone has been verified with the information in the TCS Host Application and other job aids, zoom further into each Zone until all of the VTMSs for that Zone appear.
 - Compare with CCTV feeds. Toll rates and/or messages in all LED bricks should coincide for all VTMSs. Notice that there might be some lag between what is shown on the dashboard and a real-time feed. Wait until the Dashboard refreshes before verifying again.
 - Verify that the displayed lane mode coincides with the intended lane mode in the TCS Host Application.
- During Dynamic Pricing, frequency of monitoring should be as close to the VTMS update frequency as possible. Operators should make the effort of tracking VTMS update cycles and perform at least one basic monitoring check (e.g. looking at all of the representative VTMSs per Zone – which should already be easily accessible on a zoomed out screen via a tooltip). There are times during the day when multiple priority activities and staffing constraints prevent the optimal VTMS monitoring frequency (e.g. every 5 minutes when running dynamic pricing). In those cases, frequency of both full and basic monitoring can be reduced as needed.

TCS Host Application

The TCS Host Application should be used for toll rate and message monitoring only when implementing manual overrides.

- In both JOC and TIC locations, one window of the TCS Host Application Lane Mode Override or VTMS Override screens should be active when performing overrides.
- After activating a Lane Mode Override or implementing a VTMS or Message Override, pull up the Lane Operation Mode Filter page.
 - Wait until the next DPP publishing cycle.
 - Verify that messages and lane mode on the VTMSs in this page coincide with those shown on TransSuite. After one TransSuite Dashboard refresh cycle, verify again.
- Next, open the Search Toll Rates Page.
 - In Start Time, type in the current date and time.
 - Leave the End Time blank.
 - Select the Corridor, Segment and Zone to review.
 - Click on Search.
 - Verify that toll rates for the appropriate times match.

4.1.2.2.1 Discrepancies

There are several types of VTMS message discrepancies between the different tools that could either be a cause of major or minor concern and can have different degrees of priority response. While specific procedures for system monitoring and issue resolution are detailed in Chapter 11, this section talks about basic checks Operators should be aware of during regular monitoring in order to verify, research and preliminary assess discrepancies that may require different response mechanisms.

- If at any time any discrepancies are confirmed between the CCTV feeds and the TransSuite Map:
 - Check if the VTMS status on the map is displaying “Healthy.” If not, follow the system failure procedures detailed in Chapter 11.
 - Check with the TIS module interface. If status is not “Healthy,” initiate system failure procedures. If “Healthy,” if messages match the ones on the CCTV, then make note of the TransSuite issue and notify the TRO Supervisor. If messages do not match either, then initiate system failure procedures.
- If manual overrides were implemented, if any discrepancies are confirmed between the CCTV feeds and what was intended to be posted:

- If TransSuite (Map/TIS) is showing the same as the CCTV feeds, check the TCS Host Application (Search Toll Rates) and confirm if the discrepancy is consistent. If it is not, then it is likely a user error and the override should be repeated. If it is, then initiate system failure procedures.
- If any discrepancies are observed with Map/Dashboard checks.
 - Open the TransSuite TIS module.

4.1.2.2 Preventing and mitigating user errors

Sometimes toll rates or messages posted on the VTMSs do not accurately reflect what was intended to be scheduled or overridden due to mistakes made by TRO staff. It is important to avoid these mistakes as much as possible, and if made, to identify them as quickly as possible and to correct them.

Below are some guidelines for proper use of the tools to ensure minimal errors when manipulating pricing and to quickly identify and correct these errors during regular monitoring activities. Step by step details of how to use these tools for pricing and messaging are in the User Manuals and in Chapters 5 and 6 of this document.

Toll Scheduling

- Before attempting to make any configuration changes, fill out a configuration change form to be approved by the TRO Supervisor or designee.
- When uploading configuration spreadsheets:
 - QA/QC each spreadsheet before uploading it. Do not rely only on system validation checks.
 - Make sure that a spreadsheet is updated for every configuration page even when values do not plan change. In cases when only minor changes are made and due to time constraints and experience it is not considered efficient to do so, then keep track of each uploaded sheet using job aids to make sure that it matches what was intended to change.
 - Once the spreadsheet(s) have been uploaded and validated, name the schedule based on a systematic way (identified in the form).
- When updating values manually, export the results to a spreadsheet and make sure to save it in the right format so that it is also importable.
- File and name all of the spreadsheets in a systematic way. [filing and naming conventions to be developed closer to operations].
- When possible, always have somebody check your work before approving in the system.
- When configuration lane modes, name message sets in a systematic manner. Save these configurations manually to a reference spreadsheet to verify what each name represents before applying a message set.
- Take screen captures of the completed main lane mode definition page(s) and the mode filter page(s) and save them in a systematic manner.
- Have visible (print out if needed) a calendar view of the scheduled lane modes.

Manual Overrides

- For pricing purposes, make sure all read points within a Zone are selected.
- Make sure the memo accurately reflects the reason of the override.
- When completing each process (including resetting the lane mode or VTMS override), take a screen capture of the mode filter page and save it in a systematic way.
- For lane mode overrides:
 - Make a manual note of the deactivation date and time.
 - Take a screen capture of the completed override lane mode screen and file in a systematic way.
 - Regularly compare the deactivation time with the next lane mode change time.
- For VTMS overrides:
 - Make a manual note of the override time.
 - Unless indicated by the TRO Supervisor, separate active and retro-active overrides to avoid confusion.
 - Maintain a ‘cheat sheet’ of replacement variables. Make sure the Zone and Segment Toll amounts are not left blank, unless purposely so. Typically, both Zone and Segment Toll amounts should be overridden simultaneously.
 - Take a screen capture of the completed VTMS override screen and file in a systematic way.

Mitigating error impacts

- When a discrepancy is identified during monitoring, open the files with records of the changes that should have led to the expected toll rate values/ranges or messages.
- Once a user error is identified or inferred, proceed to correct before doing further research on a specific cause for the discrepancy.
- Make note of the error to include in an error log to be shared with the TRO Supervisor.

4.1.2.3 Toll System Monitoring Procedure:

These are general guidelines for daily toll system monitoring activities to be conducted by TRO staff. System events resolution procedures are described in detail in Chapter 11 of this document.

Regular system monitoring activities are grouped by tool.

Real-time Monitoring Dashboards (TransSuite)

- Make sure that all of the device layers are turned on.
- Regularly observe the Map dashboard and look out for any devices that show a degraded or failed status.
 - If device is a VTMS, open the TIS

- If device is a TMS, open the FMS module
- If device is part of a Read Point, double click on it to open the health status window
- If device is a CCTV, check the feed in Cameleon.
- If there are no detected issues, open the Work Orders window every scheduled system check (i.e., when shift reports are being generated, or as scheduled by TRO Supervisor).
- If there are detected issues, have the MOMS Work Orders window open until issue is resolved.

TCS Host Application

- If there are no detected issues, open the Search Alarms window every scheduled system check (i.e., when shift reports are being generated, or as scheduled by TRO Supervisor).
- If there are detected issues, open the Search Alarms page and refresh its output every 15 minutes until issue is resolved or when a change in status is reported.

4.1.3 Shift Change Procedure

The Shift Change procedure typically describes procedures to be conducted during the transition between the AM shift and the PM shift. While most of the tools have already been started up, the incoming staff of the PM must verify appropriate handoff from the AM shift staff.

The following are activities that shall be performed by incoming staff and outgoing staff:

Note: this staffing transition is based on a model of two shifts per day described in Chapter 2. Actual shifts may vary depending on staffing solutions.

1. AM and PM staff meet and discuss:
 - Open traffic incidents
 - Open system issues, or planned outages/system maintenance activities
 - Any pending tasks to be performed by next shift (e.g., retro-active manual overrides).
 - Any other incomplete tasks that transfer onto the next shift.
2. AM staff performs one last cycle of roadway and system checks in the presence of PM staff and fills out the AM shift Update Report one last time.
3. AM staff fills out Shift Change Report and both AM staff and PM staff sign it.
4. AM staff signs off of applications and PM staff signs in using Single Sign-on. [details to be worked out on how users sign on or off but applications/setting/presets do not need to be restarted.]
5. PM staff formally takes over shift and AM staff leaves.

4.1.4 PM Closing Procedure

The PM Closing procedure describes procedures to be conducted during the period just prior to ending the PM shift. These activities are meant to ensure that all activities initiated during the day (inclusive of the AM shift's) are completed. Also, to inform overnight on-call support and the next day's AM shift of any past, planned or foreseeable activities or issues that may affect operations on the next day.

The following are activities that shall be performed by outgoing staff:

1. PM staff performs one last cycle of roadway and system checks, fills out the PM shift Update Report one last time and sends out the update to the "BAIFA TRO Shift Updates" e-mail group within 15 minutes of the planned ending of the shift.
2. If any unforeseen occurrence is noted after sending the last shift update report:
 - Staff informs the appropriate parties per the procedures described in this SOP document. If by e-mail, subject should specify "POST SHIFT UPDATE – Topic"
 - If the situation demands constant monitoring (e.g. major incident or system event), the staff must inform about the need to extend the shift to the TRO Supervisor (or designee) or follow the chain of command until a response is given. If on-site presence is required, staff will remain on-site until the situation is resolved and confirmed with the Supervisor. If not, operations can be conducted remotely by designated staff (see section 4.1.4). Refer to Chapter 2 for details about TRO staffing.
3. Once, shift has ended PM staff signs off of applications and initiates equipment shutdown procedure (see 4.1.3.1).
4. PM staff leaves any physical notes to the next day's incoming AM staff.
5. PM staff checks the PM Shift Checklist one last time and signs it.
6. PM staff gathers all physical tools and job aids and places them in the designated area
7. PM staff formally ends shift and leaves.

4.1.4.1 General shutdown procedure

[Operations device hardware and software shutdown instructions. To be included closer to operations once information is available.]

4.1.5 Remote Support Shift Procedure

This procedure applies primarily to on-call operations or to scheduled remote operations outside regular shift hours. Although the BAIFA ELN corridors currently do not operate outside regular shift hours, this procedure can be used for extension of operational hours. In operations failover situations (e.g., failure/absence of both primary and secondary TROC locations), remote support is also required but regular shift protocols and procedures take precedence.

4.1.5.1 Preparation

- TRO mobile phone charged, turned on, and with volume set at high.
- Computer plugged into outlet, on standby, internet active, applications ready (E-mail client, Internet browser).
- The following on hand: Notepad and pen, TRO staffing schedule, TRO contact list and distribution lists/e-mail groups.
- If remote support is required as part of an operations failover situation, then active monitoring is required at all times.

4.1.5.2 Event Startup Checklist:

- If event is planned (e.g., roadway maintenance, system upgrade), the TRO Supervisor or designee will ask you to monitor actively.
- Connect securely to TransCore network. Sign in to TransCore applications and open Cameleon,
- If event is an incident, receive notification (e.g., from Caltrans TMC, BAIFA TRO outgoing staff) or happen to notice it by other means (e.g. Cameleon).
- Assess the situation and follow the system event, maintenance or traffic incident general monitoring guidelines in this chapter of the SOP document and others where more specific procedures are detailed. In some cases these event types may overlap, so best judgement should be used on what impacts and forthcoming actions take priority.

4.1.5.3 Remote System Event Monitoring Procedure:

System events monitoring and resolution procedures are described in detail in Chapter 11 of this document. Below are general guidelines on special considerations to have in mind for these events when operating in a remote facility.

- If the event is planned, the TRO Supervisor or designee will ask you to monitor until it is finished or until a specific time.

4.1.5.4 Remote Roadway Maintenance Event Monitoring Procedure:

Roadway Maintenance events monitoring and resolution procedures are described in detail in Chapter 9 of this document. Below are general guidelines on special considerations to have in mind for these events when operating in a remote facility.

- If the event is planned, the TRO Supervisor or designee will ask you to monitor until it is finished or until a specific time.
 - If the event is not expected to affect road traffic, no further monitoring is required.
 - If the event is expected or is seen to affect road traffic, keep monitoring and evaluate its impact on the roadway. Follow roadway maintenance evaluation steps and determine if a retro-active toll/message override is required (see Chapter 9 for

- details). If an override is required, contact TRO supervisor/designee for approval. Send an e-mail to “BAIFA ELN Roadway Events.”
- Send an e-mail to the “BAIFA ELN Roadway Maintenance Event” group with event details.
 - If the event is planned but BAIFA TRO does not have previous knowledge of it, or if it is the result of equipment emergency maintenance (e.g. faulty equipment/comms in median):
 - TRO staff should be notified about it, or happen to find it during regular monitoring.
 - Ask questions from external (e.g.,TMC) staff if information is insufficient or unclear (Caltrans Cameleon, camera ID if provided, lanes blocked, start time, expected duration, etc.). Pull of Caltrans LCS information if available. Verify information with CCTVs.
 - If the event is not expected to affect road traffic, no further monitoring is required.
 - If the event is expected or is seen to affect road traffic, keep monitoring and evaluate its impact on the roadway. Follow roadway maintenance evaluation steps and determine if a retro-active toll/message override is required (see Chapter 9 for details). If an override is required, contact TRO supervisor/designee for approval. Send an e-mail to “BAIFA ELN Roadway Events.”
 - Send an e-mail to the “BAIFA ELN Roadway Maintenance Event” group with event details.
 - If the event is not planned and requires emergency maintenance due to potential hazardous conditions to drivers (e.g., damaged sign, gantry structure, massive debris on road) and is found to affect road traffic, follow the Remote Incident Monitoring Procedure.
 - Fill in the “Remote Shift Update Report” to report event. Since this may be the last event of the shift, send shift update to the “BAIFA TRO Shift Update” e-mail group. If this is not the first event, just reply to the previous e-mail with the update and send the appended report.

4.1.5.5 Remote Incident Monitoring Procedure:

Traffic incident monitoring and resolution procedures are described in detail in Chapter 5 of this document. Below are general guidelines on special considerations to have in mind for these incidents when operating in a remote facility.

- If conducting remote operations during regular shift hours, follow regular monitoring procedures in this Chapter as well as the incident-specific monitoring procedures in Chapter 5.

- If incident is notified, take note of the incident. Ask questions from external (e.g., TMC) staff if information is insufficient or unclear (Caltrans Cameleon, camera ID if provided, lanes blocked, start time, severity, etc.). Verify information with CCTVs.
- If you verify that it does not affect corridor traffic and will not do in the future, no further monitoring action is required. Fill in the “Remote Shift Update Report” to report event. Since this may be the last event of the shift, send shift update to the “BAIFA TRO Shift Update” e-mail group. If this is not the first event, just reply to the previous e-mail with the update and send the appended report.
- If incident did affect the corridor at some point but is not a concern at the present, follow incident evaluation steps and determine if a retro-active toll/message override is required (see Chapter 5 for details). If required, contact TRO supervisor/designee for approval.
 - If no answer is received in the next 15 minutes, then end shift until next notification. Write an e-mail to the TRO Operators e-mail account and copy the “BAIFA ELN Incidents” e-mail group with detailed information about the incident and recommended retro-active override actions.
- If incident does affect traffic or has the possibility of affecting traffic in the BAIFA ELN Corridor, follow incident evaluation steps and determine if a VTMS toll/message override is required (see Chapter 5 for details). Then contact TRO Supervisor/designee for approval or escalate following the chain of command until a decision is made.

4.1.5.6 Remote shift closure checklist

The following checklist should be followed by TRO staff operating from a remote facility.

1. Make sure all unplanned events or incidents are closed before ending the monitoring.
2. Make sure all notifications (e.g. e-mail) have been made.
3. Make sure report(s) update(s) are sent.
4. Sign off of applications but leave computer and mobile phone on.

4.2 Documentation Reporting

4.2.1 Job Aids and Binders

There are many useful aids and binders that help assist the TOC Operators with their day-to-day activities within the TOC. The following is a list of aids with information on their purpose and use.

Workstation Binder

- Reserved for BAIFA ELN TRO Standard Operations Procedures and Guidelines with reference documentation (e.g. user manuals, templates, other).

BAIFA ELN Incident Log Binder (TBD if all filing is electronic)

- TRO Operators are to print and file Express Lane incident Log into this binder for only incidents needing an action.

Toll Rate and Manual Override Binder

TOC operators can reference the contents of this binder to find information on scheduled rate plans. Some of the content in this binder may include:

- Configuration change management reports
- Calendar view print outs of scheduled lane modes
- Manual override ‘cheat sheets.’

Straight Line Diagram

This diagram is used as an aide to TRO Operators to quickly reference the following:

- Toll Zones and Segments
- Toll Read Point Locations
- VTMS Locations
- Express Lane Ingress and Egress zones.
- Cross Roads and Exit Numbers
- Mile Markers
- CCTV Camera locations

4.2.2 Checklists

There are multiple checklists that TRO Operators are to use to documenting that particular jobs have been completed on time. The following list includes planned checklists based on current staffing assumptions. Samples will be provided as attachments to this document.

- AM Shift Startup Checklist
- Mid-day Shift checklist (TBD)
- PM Shift Period End Checklist
- Remote support Checklist
- Incident Checklists
- Toll equipment /Network issues checklist
- Overnight Checklist

4.2.3 Daily Reports

These reports are submitted on a daily basis by TRO Operators. Below is a list of these reports with a brief description. Reports templates to be submitted as an attachment (initial template to be developed prior to operations).

AM startup report

This report is meant to capture roadway, pricing and system checks as well as any important overnight event information.

AM to Mid-day shift report

This report is meant to capture roadway, pricing and system checks as well as any important communications between outgoing and incoming shifts.

Mid-day to PM shift report

This report is meant to capture roadway, pricing and system checks as well as any important communications between outgoing and incoming shifts.

PM closeout report

This report is meant to capture roadway, pricing and system checks as well as any important information that may pertain a remote support/overnight on-call shift.

Remote support/overnight on-call report (optional)

This report is meant to capture any activities performed by this shift as well as any important information that may pertain the incoming AM Shift.

4.2.4 Event-based Reports and Logs

These reports are submitted based on occurrences during operations, so they are only modified or submitted in response to events or configuration changes.

Incident Response Report

This report is meant to describe the steps taken in incidents which required a response from BAIFA. These can be kept electronically.

Operations Errors Report

This report keeps track of any errors performed by Operators and any actions taken.

System configuration management report

This report summarizes any changes to configurable parameters performed by TRO staff. For official records, it should be printed out and signed by responsible parties.

System configuration logs

This report is meant to keep track of all instances of configurable parameter changes performed by TRO Staff. To be kept electronically.

4.3 Data Analysis Duties and Assignments (section under development and does not include monitoring of Key Performance Indicators)

4.3.1 Overview and objectives

- High level description of data analysis from the TRO perspective
- List of main objectives to accomplish
- Table summarizing tasks

4.3.2 Analysis Process and QA/QC

- Overview of the data analysis process. Bulleted lists and diagram.
- Best practices and quality control specific to data analysis duties

4.3.3 TMS data

- Description of the data to analyze and its sources.
- Listing of reports to run/dashboards to monitor with sample figures.
- Examples of data integrity issues with step by step list of identification, notification, resolution.

4.3.4 Transaction and trip data

- Description of the data to analyze and its sources.
- Listing of reports to run/dashboards to monitor with sample figures.
- Examples of data integrity issues with step by step list of identification, notification, resolution.

4.3.5 Toll data

- Description of the data to analyze and its sources.
- Listing of reports to run/dashboards to monitor with sample figures.
- Examples of data integrity issues with step by step list of identification, notification, resolution.

4.3.6 Incident data

- Description of the data to analyze and its sources.
- Listing of reports to run/dashboards to monitor with sample figures.

4.3.7 Other data

- Description of the data to analyze and its sources.
- Listing of reports to run/dashboards to monitor with sample figures.
- Examples of data integrity issues with step by step list of identification, notification, resolution.

4.3.8 TCS standard reports

- List and basic description of standard reports. Text. References to appendix.

4.3.9 TCS adhoc reports

- Description of ad-hoc reporting interface and features.
- Examples of possible adhoc reports (TBD).

4.3.10 Adhoc research

- Overview of adhoc research procedure

4.4 Coordination with other BAIFA or external units

4.4.1 Finance [section to be completed at a later time]

- Based on the responsibilities described in Ch 1, list specific coordination areas and basic TRO duties.
- Reference to Ch 7 where this is described in more detail.

4.4.2 Toll System Operations [section to be completed at a later time]

- Based on the responsibilities described in Ch 1, list specific coordination areas and basic TRO duties.
- Reference to Ch 9,11,12 where this is described in more detail.

4.4.3 BATA/MTC IT [section to be completed at a later time]

- Based on the responsibilities described in Ch 1, list specific coordination areas and basic TRO duties.
- Reference to Ch 10,11 where this is described in more detail.

4.4.4 RCSC [section to be completed at a later time]

- Based on the responsibilities described in Ch 1, list specific coordination areas and basic TRO duties.
- Reference to Ch 8 where this is described in more detail.

4.4.5 California Highway Patrol Enforcement Support

Authorized California Highway Patrol (CHP) users will be able to query certain toll system information in order to support the issuance of HOV Citations to vehicles traveling in the express lanes with HOV-declared FasTrak Flex transponders, but without the required occupancy in the vehicle. CHP users log into a Web Portal interface from laptop-equipped patrol vehicles, smart phones, or desktop computers (in the case of Dispatch users), and search for recent toll activity and transponder switch setting (occupancy declaration) data by entering either the driver's transponder ID or the vehicle's license plate number. The lane transaction details provided allow the officer to determine whether a non-HOV patron was self-declared as HOV and hence eligible for an HOV Citation.

The Web Portal also allows CHP users to associate a Citation Number to a particular results set, if that enforcement effort resulted in an HOV Citation. It also allows users to search for past enforcement activity by Citation Number, so that the officer can retrieve the results for use in court when needed. The intention is to provide the CHP with self-service access to this data and minimize the need for data support from BAIFA staff. However, there are circumstances under which BAIFA support may be required.

4.4.5.1 TRO Access to CHP Web Portal

4.4.5.2 Toll System Data Requests

TRO Staff may infrequently receive CHP requests for toll system data related to a particular HOV Citation. If the officer did not enter the Citation Number at the time of the Web Portal lookup query, the record is not accessible to CHP users.

If CHP provides a court order for release of evidence related to the case and sufficient vehicle and Citation information (e.g., license plate number, transponder ID, issuance date/time, location), TRO Staff should use the Transaction Research function within the Host to provide the data below for up to **X** lane transactions prior to the Citation issuance time.

- Lane Transaction Date / Time
- Transponder ID
- License Plate Number
- Transponder Switch Setting
- Lane Mode
- Corridor
- Zone
- Read Point ID

Under no circumstances should TRO Staff provide lane transaction data (for the vehicle or the transponder) that occurred on a different Corridor than the indicated location or on a different date than the Citation issuance date.

Without a court order, TRO Staff may not provide any toll system data and should inform the requestor of this policy. If a CHP requestor is insistent and cannot provide documentation from a court, TRO Staff should escalate the request to a TRO Supervisor for assessment.

4.4.5.3 Query Retrieval Assistance (Design in development)

Because CHP users can only access past query results by entering a Citation Number at the time of the enforcement lookup and using that Citation Number to retrieve the data, the CHP will require assistance from TRO Staff to obtain past results that were not originally associated with the correct Citation Number. This may occur if the officer entered no Citation Number at the time of issuance, or if the officer entered an incorrect Citation Number (e.g., entering the number incorrectly on a smart phone or other device).

TRO Staff must obtain the username or badge ID of the officer that originally performed the lookup; the license plate number or transponder ID searched on; and the Citation Number, issuance date/time, and Corridor/location.

For the Citation issuance date/time, run the CHP User Analysis Report and locate the correct user. (Note that this will be the user that was logged in to perform the initial enforcement lookup. If the initial query was performed by Dispatch, for example, the query will be associated with that user and not the officer that issued the Citation.) All lookup queries performed using the Web Portal for the date/time range selected will appear on this report. If there is no data for the user provided, confirm the issuance date and user information with the requestor. If the record still cannot be located, escalate the request to the TRO Supervisor for assessment.

Run Date: 06/24/2015 12:16:33		CHP User Analysis Report				Page 1 of 1		
Date: 05/17/2015 00:00:00 - 05/21/2015 00:00:00								
Session Id	Session Start Date/Time	Session End Date/Time	Session Duration	Badge User Name Number	Tag Number Search Queries	LP Number Search Queries	Total Number of Queries	
1	05/19/2015 14:51:38	05/19/2015 15:51:50	00:43:12	1001 John Smith	1	3	4	
2	05/19/2015 15:51:38	05/19/2015 16:51:50	00:43:12	1001 John Smith	2	1	3	
3	05/19/2015 15:51:14	05/19/2015 16:51:38	01:26:24	1002 Maya Brown	1	0	1	
4	05/19/2015 20:51:38	05/20/2015 00:51:38	03:36:00	1002 Maya Brown	0	2	2	
5	05/19/2015 21:51:38	05/20/2015 01:51:38	03:36:00	1001 John Smith	3	0	3	
Totals:				5	7	6	13	

Figure 4-1: CHP User Analysis Report

From the CHP User Analysis Report, locate the session that includes the Citation issuance date/time (issuance date/time between Session Start and Session End) and select that row to drill down into the CHP User Detail Report.

Run Date: 06/24/2015 12:38:00		CHP User Detail Report				Page 1 of 1
Session ID: 1		Date: 05/18/2015 00:00:00 - 05/21/2015 00:00:00				
Search Record ID	Query Date/Time	Badge Number	User Name	Tag Number	LP Number	Search Criteria Date/Time
1	05/08/2015 10:20:59	1001	John Smith	123456001		05/18/2015 14:28:38
2	05/08/2015 10:25:04	1001	John Smith		CA 123CAL08	05/18/2015 14:28:38
3	05/08/2015 10:30:56	1001	John Smith		CA 789MMM01	05/19/2015 07:16:38
4	05/08/2015 10:59:00	1001	John Smith		CA 601CCC33	05/19/2015 02:28:38

Figure 4-2: CHP User Detail Report

Locate the Tag Number or LP Number provided by the requestor to locate the query record associated with the HOV Citation. If a query matching the information provided cannot be located after confirming all inputs, the requestor must pursue a standard toll system data request and must provide documentation from a court that mandates the release of information (see section 4.5.1).

If the original lookup query is located on the CHP User Detail Report, check whether there is a Citation Number included with the query record. If so, provide this Citation Number to the requestor so he can retrieve the results using the Web Portal. If the Citation Number on the CHP User Detail Report matches the Citation Number the CHP requestor inquired about, confirm that the user attempted to retrieve the data using the Web Portal.

TRO Staff can login to the Web Portal interface, rather than using Host reports, to confirm the same data available to the User Reports is also accessible by Citation Number in the Web Portal (only for queries with associated Citation Numbers). See section 4.5.1.

If TRO Staff confirm with CHP that the Citation Number was entered incorrectly, submit a request to update the Citation Number in the database for future retrieval by CHP using the Web Portal (see section 4.5.4).

If there is no Citation Number for the query record, select the row to drill into the query results returned at the time of enforcement. Confirm the details presented on the CHP Query Detail Report match the information provided with the request.

Run Date: 06/24/2015 12:39:22		CHP Query Detail Report						Page 1 of 1	
Session ID: 1		Date: 05/18/2015 00:00:00 - 05/21/2015 00:00:00							
Search Record ID: 1									
Session Id	Search Record Id	Transaction Date/Time	Tag Number	LP Number	Switch	Lane Mode	Corridor	Zone	Read Point
1	1	05/06/2015 08:04:50	123456001	CA 777AAA77	SOV	Normal Toll	I-680 NB	3260 - Diablo	4260
	1	05/06/2015 15:10:10	123456001	CA 777AAA77	SOV	Normal Toll	I-680 NB	3260 - Diablo	4262
	1	05/07/2015 08:01:31	123456001	CA 777AAA77	SOV	Normal Toll	I-680 NB	3260 - Diablo	4260

Figure 4-3: CHP Query Detail Report

Export the query results associated with the request and matching the information provided (issuance date/time, location, initiating user, and Tag or LP Number). TRO Staff must follow

standard procedures for transmitting PII to external parties (e.g., secure email server, password-protected files, known recipients).

4.4.5.4 Adding and Modifying Citation Numbers

TRO Staff may be asked to locate query results for CHP in support of a Citation and resulting court appearance. CHP users are expected to enter the Citation Number in the Web Portal at the time of issuance, in order to associate it with the query results and make it retrievable by CHP directly. In the event an officer does not enter the Citation Number or enters it incorrectly, the record cannot be retrieved during a later session, and CHP may request assistance from TRO Staff (see section 4.5.3).

If TRO Staff determine, based on the information provided by the requestor, that the query was in fact performed but no Citation Number was entered, TRO Staff should submit a request the TransCore maintenance contact to add the Citation Number to the query record in the database for future retrieval by CHP using the Web Portal.

If TRO Staff determine, based on the information provided by the requestor, that the query was in fact performed and the Citation Number was entered incorrectly, TRO Staff should submit a request the TransCore maintenance contact to modify the Citation Number associated with the query record in the database for future retrieval by CHP using the Web Portal.

TRO Staff must log all requests for addition or modification of a Citation Number with TransCore maintenance staff.

4.4.5.5 Web Portal Activity Monitoring

TRO Staff can use express lanes operations reports to monitor CHP Web Portal and Citation issuance activity. On at least a monthly basis, TRO Staff should run trend analysis on CHP Web Portal access and Citation issuance (based on Citation Numbers entered into the Web Portal). Any significant increase or decrease in activity should be evaluated for possible follow-up or corrective action. For example, if CHP user logins decline substantially, a TRO Supervisor may contact CHP to determine whether users are encountering technical issues, or whether there have been staffing changes with CHP that impact express lanes enforcement.

Any requests for activity and/or Citation issuance reporting that are received from CHP must be approved by a TRO Supervisor before any reports or data are delivered to CHP.

4.4.5.6 Web Portal Technical Support

TRO Staff may receive inquiries from CHP users regarding technical or access issues with the Web Portal. TRO Staff should contact TransCore maintenance staff for resolution and may need to coordinate with CHP technical staff.

If CHP requests the addition, removal, or modification of users in the database, TRO Staff should submit the request to TransCore maintenance staff.

4.4.5.7 Roadway Incident Coordination

When TRO Staff receive notification from CHP of an incident on the roadway, TRO Staff should follow established communications protocol for notifying and updating internal and external parties and systems.

See Chapter 6 of these SOPs for detailed procedures regarding Incident Coordination and Response.

4.4.6 Caltrans

- Based on the responsibilities described in Ch 1, list specific coordination areas and basic TRO duties.
- Reference to Ch 6,9 where this is described in more detail.

AM Shift Startup Checklist: Operator _____

Activity	Check
Turn on all computers and monitors and cancel call forwarding on both phones	
Turn TV/radio to news station for traffic reports. (Upon end of news turn TV/radio off and replace window in video wall/screen with Cameleon video feeds and only go back to TV if an incident/special event warrants it.) *TransSuite Dashboard and CCTVs # (TBD) should always be on display.	
Log into TC Host Application, TransSuite and Cameleon. Open least one instance of the TransSuite Dashboard open, one instance of the TransSuite FMS Interface. Open 511/Quickmaps.	
Check the TS Dashboard for any current outages/alerts.	
Cameleon – check feeds using tours and presents to see if appropriate rates are being posted on VTMSs.	
511/Quickmaps – Traffic status, active incidents or planned events.	
Start TRO email in the General Services workstation and file e-mails as appropriate (MOMS, Host, NMS alerts, external communications, etc.).	
Check for any e-mails or messages from the previous day's TRO PM Shift or the On-call Remote Support shift from prior evening if activities need to be followed up on.	
Forward incoming e-mails as appropriate - cc "TRO" group (If not sure confirm with TRO Supervisor)	
Verify that any carryover retroactive overrides from the previous shift(s) have been performed.	
Fill out and send "AM Startup Report" e-mail to "BAIFA ELN TRO Shift Update" group. Notify TRO supervisor for any anomalies. Follow up with e-mails as necessary to the respective help desks (TransCore, 511 etc.)	
Create new folders for current day's log activities. Create a new word file for screen captures (related to incidents/traffic congestion).	
Verify the toll schedule for the AM Peak Period, including system configuration.	
After each manual override toll rate change (lane mode or VTMS override), check by running "Toll Rate Search Screen". After each cycle, verify with VTMSs using Cameleon. Whoever does the changes should sign off on this checklist.	
Reset manual overrides, if necessary (applicable if manual overrides are performed). Verify with fare schedules system to confirm what toll rates/schedules would be effective after expiration.	
Verify that incidents have been properly inputted in the TCS Host logging interface.	
Confirm that all pending logs have completely filled out and all files have been saved.	
Communicate with incoming staff regarding: Open incidents/events/overrides, equipments issues, incomplete reports/tasks, necessary overrides needed.	
Fill out and send "AM to Mid-day Shift Report" e-mail to "BAIFA ELN TRO Shift Update" group. Notify TRO supervisor for any anomalies. Follow up with e-mails as necessary to the respective help desks (TransCore, 511 etc.)	

BAIFA Express Lanes AM Reports

Operator Initials ----->	AM Start	AM Mid
Open "Daily Report" Template		
Shift information: Staff on duty & Supervisor.		
Weather & Traffic conditions		
Incident(s) information/action.		
Toll Rate Checks – TransSuite, Cameleon, and TCS Screens/Reports.		
Equipment Checks – TransSuite, Cameleon, MOMS, overall TCS performance.		
Send "Report" email that includes all info above "BAIFA ELN TRO Shift Update."		

Manual Overrides Performed By: _____

Manual Overrides Checked By: _____

PM Shift Checklist: Operator _____

Activity	Check
Turn TV/radio to news station for traffic reports. (Upon end of news turn TV/radio off and replace window in video wall/screen with Cameleon video feeds and only go back to TV if an incident/special event warrants it.) *TransSuite Dashboard and CCTVs # (TBD) should always be on display.	
Check TS Dashboard, Cameleon, 511/Quickmaps, for issues/incidents.	
Confirm previous shift's logs and reports are complete based on information exchange. If not, please complete.	
Forward incoming e-mails as appropriate - cc "TRO" group (If not sure confirm with TRO Supervisor)	
Verify the toll schedule for the PM Peak Period, including system configuration.	
Fill out and send "Mid-day to PM Report" e-mail to "BAIFA ELN TRO Shift Update" group prior to the start of the Peak Period. Notify TRO supervisor for any anomalies. Follow up with e-mails as necessary to the respective help desks (TransCore, 511 etc.)	
After each real-time manual override toll rate change (lane mode or VTMS override), check by running "Toll Rate Search Screen". After each VTMS posting cycle, verify with VTMSs using Cameleon. Whoever does the changes should sign off on this checklist.	
Reset manual overrides, if necessary (applicable if manual overrides are performed). Verify with fare schedules system to confirm what toll rates/schedules would be effective after expiration.	
Shortly after 7PM change to non-tolling, check with the toll rate search screens and appropriate reports that the lane mode changes and messages took place.	
Verify that any carryover retroactive overrides from this shift or the previous shift have been performed. Perform if not.	
Forward any incident report produced during the day to "BAIFA Finance" group and cc the "TRO" group.	
Verify that incidents have been properly inputted in the TCS Host logging interface.	
Confirm all logs and reports are completely filled out for the day.	
Run any TCS Host System reports as indicated by SOPs and/or Supervisor.	
Save any incident information for the day from external sources (e.g., Caltrans) into the daily folder.	
Archive e-mails in appropriate folders.	
Send a reminder e-mail to the TRO on-call staff if there are any effective lane closure requests or maintenance activities planned for the evening.	
Notes to next shift, if there are any outstanding items, or special instructions that should be passed on to the AM shift, leave a note on the TRO desk/send email/call.	
Fill out and send "PM Closeout Report" e-mail to "BAIFA ELN TRO Shift Update" group. Notify TRO supervisor for any anomalies. Follow up with e-mails as necessary to the respective help desks (TransCore, 511 etc.)	
Forward TROC phones to person on call for overnight shift.	
Log out of systems (external, Camelon, TCS Host, etc) and shut down all computers, TV, Radio, etc.	
Stick a post-it note onto one of the computer monitors or a TROC phone stating "TURN OFF Call forwarding" as a reminder to AM shift.	

BAIFA Express Lanes PM Reports

Operator Initials ----->	Mid/PM	PM close
Open "Daily Report" Template		
Shift information: Staff on duty & On-Call Manager.		
Weather & Traffic conditions		
Incident(s) information/action.		
Toll Rate Checks – TransSuite, Cameleon, and TCS Screens/Reports.		
Equipment Checks – TransSuite, Cameleon, MOMS, overall TCS performance.		
Run any reports as indicated by Supervisor and include key info in report (e.g. daily trip counts, revenue, etc.)		
Send "Report" email that includes all info above "BAIFA ELN TRO Shift Update."		

Manual Overrides Performed By: _____

Manual Overrides Checked By: _____

Subset of BAIFA ELN TRO Daily Operations Screens

1 TCS Host Application

These screens represent a subset of all screens and are all accessed via TransCore’s TCS Host Application interface.

1.1 Search Toll Rates

This screen is accessed either via the search menu or via hyperlinks from other screens. It shows the calculated and posted toll rates or messages at each location, including lane mode information.

The screenshot displays the 'Toll Rates Search Options' form and a table of results. The search criteria are: Start Date/Time: 07/15/2016 15:07:00, End Date/Time: (empty), Corridor: I-680 NB, Segment: All, Zone: NB Bollinger Canyon, Sort Type: By Read Point, Pricing Type: All, Lane Mode: All, From Read Point: NB Bollinger Canyon - 1, To Read Point: NB Bollinger Canyon - 2.

Location	Interval Date/Time	Default Lane Mode	Zone Message	Segment Message	Zone Amount	Segment Amount	Override Lane Mode	Override Zone	Override Segment	Pricing Type	Min/Max Applied
I-680 NB Bollinger Canyon - 1	07/15/2016 15:00:02 07/15/2016 15:03:05	Normal Peak 2016	\$2.50	\$5.00	\$2.50	\$5.00				Dynamic	
I-680 NB Bollinger Canyon - 1	07/15/2016 15:03:05 07/15/2016 15:06:06	Normal Peak 2016	\$3.50	\$6.00	\$3.50	\$6.00				Dynamic	
I-680 NB Bollinger Canyon - 1	07/15/2016 15:06:06 07/15/2016 15:09:05	Normal Peak 2016	HOV ONLY	HOV ONLY	\$8.00	\$11.00	HOV ONLY	\$15.00	\$15.00	Override Dynamic	Min Zone Min Segment
I-680 NB Bollinger Canyon - 1	07/15/2016 15:09:05 07/15/2016 15:12:07	Normal Peak 2016	HOV ONLY	HOV ONLY	\$12.00	\$16.00	HOV ONLY	\$15.00	\$15.00	Override Dynamic	Min Zone Max Segment
I-680 NB Bollinger Canyon - 2	07/15/2016 15:00:02 07/15/2016 15:03:05	Normal Peak 2016	\$2.50	\$5.00	\$2.50	\$5.00				Dynamic	
I-680 NB Bollinger Canyon - 2	07/15/2016 15:03:05 07/15/2016 15:06:06	Normal Peak 2016	\$3.50	\$6.00	\$3.50	\$6.00				Dynamic	
I-680 NB Bollinger Canyon - 2	07/15/2016 15:06:06 07/15/2016 15:09:05	Normal Peak 2016	HOV ONLY	HOV ONLY	\$8.00	\$11.00	HOV ONLY	\$15.00	\$15.00	Override Dynamic	Min Zone Min Segment
I-680 NB Bollinger Canyon - 2	07/15/2016 15:09:05 07/15/2016 15:12:07	Normal Peak 2016	HOV ONLY	HOV ONLY	\$12.00	\$16.00	HOV ONLY	\$15.00	\$15.00	Override Dynamic	Min Zone Max Segment

1.2 Fare Definition

The Fare definition screens are accessible via the Toll Operations -> Dynamic Pricing and Trip Building Management -> Fare Definitions menus. The example below shows the dynamic pricing maximum toll rate configurations for one zone. This process is repeated for all zones in a corridor.

While operators are not expected to use this daily, it should be of frequent use, especially during ramp up of operations.

CORRIDOR 1010
SEGMENT 3002
ZONE 4105
Fare Schedule Definition

Section Completed

Zone Name

Schedule Name

Upload Save Download

Last Updated: 01/16/2015 12:21:37

[Return to Fare Schedule List](#)

	From	To	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	00:00	00:29	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	00:30	00:59	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	01:00	01:29	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	01:30	01:59	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	02:00	02:29	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	02:30	02:59	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	03:00	03:29	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	03:30	03:59	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	04:00	04:29	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	04:30	04:59	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	05:00	05:29	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	05:30	05:59	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	06:00	06:29	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	06:30	06:59	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	07:00	07:29	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	07:30	07:59	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	08:00	08:29	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	08:30	08:59	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	09:00	09:29	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	09:30	09:59	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	10:00	10:29	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00
	10:30	10:59	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00	\$8.00

Previous
Next

1.3 VTMS or Toll Override

The Lane Mode configuration screens are accessed via the Toll Operations -> Lane Operation Mode Management -> VTMS or Toll Override menus. This is the screen used to perform manual VTMS overrides.

Override Lane Operation Mode

- * HOV Only
- * Corridor
- * Segment
- * Zone
- * From Read Point
- * To Read Point
- Deactivate Date/Time
- * Memo

Note: If no Deactivate Date/Time is specified, then the override automatically ends when the next scheduled default Lane Operation Mode begins

Save Cancel

1.4 Incident Logging

The Incident Logging screen can be accessed via the Search menu. It opens a summary view (image below) which can be expanded into a detailed view for each incident (image on next page).

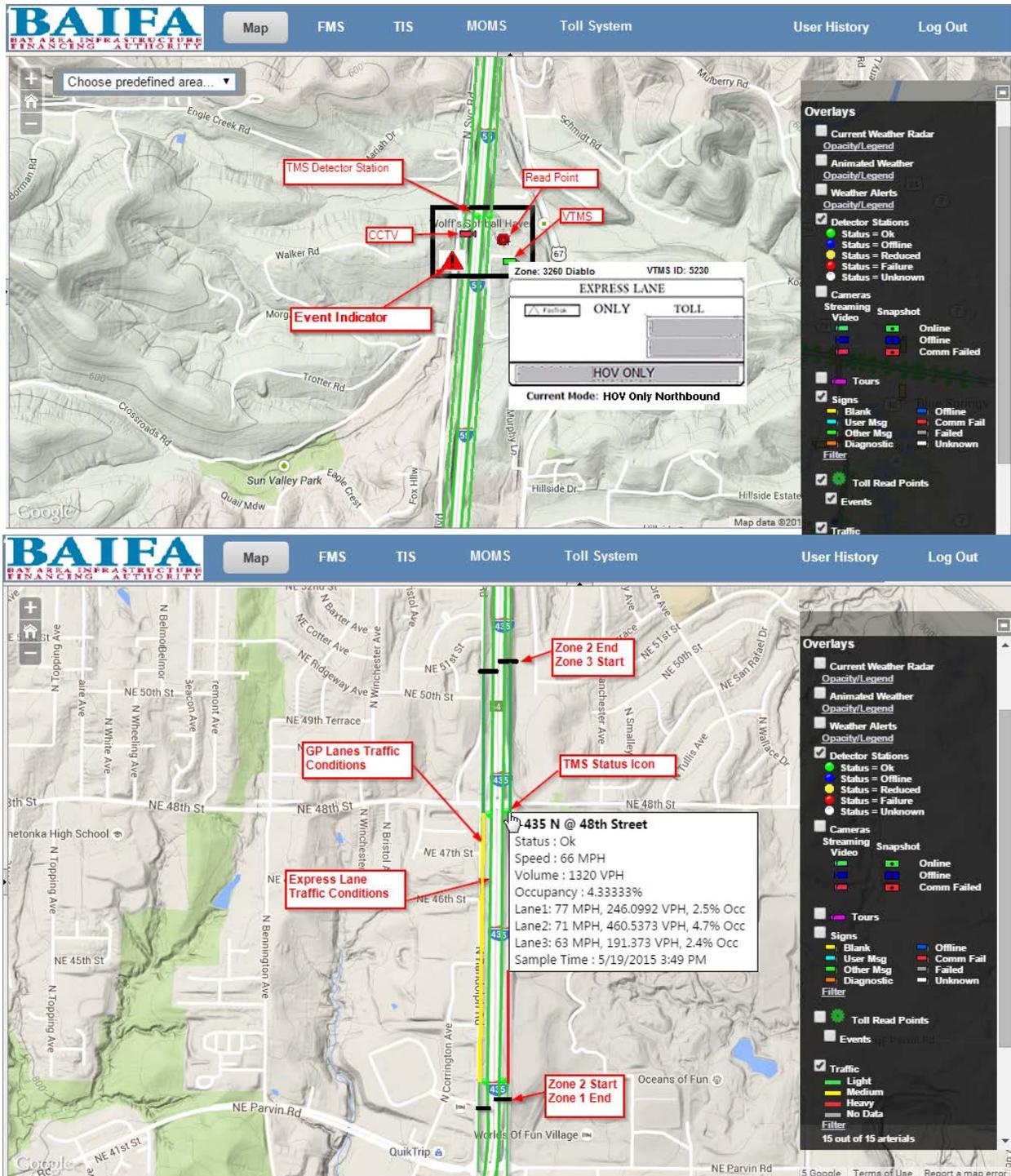
Incident #	Incident Type	Summary	Corridor	Segment/From RB	Incident Date/Time	Distribution Group	Status
97	Maintenance Activity	Upgrade software	I-680 NB	Tennyson-1	08/18/2011 23:59:59	Finance, Maintenance	🟢
98	Accident	Accident in the lane	I-680 NB	Tennyson-1	08/18/2011 10:40:00	Operations, Finance	🟡
99	Maintenance Activity	Traffic light replacement	I-680 NB	Tennyson-1	08/18/2011 13:30:00	Finance, Maintenance	🟡
100	Other	Test	I-680 NB	Tennyson-1	08/18/2011 13:03:00	Others	🔴

2 TransSuite (Real-Time Monitoring)

TransSuite is an add-on ATMS solution provided by TransCore which is linked to their TCS Host databases and application. It can be accessed from the TCS Host Main menu and shares a single sign-on (SSO) with it. The following screenshots are a subset of all the TransSuite screens.

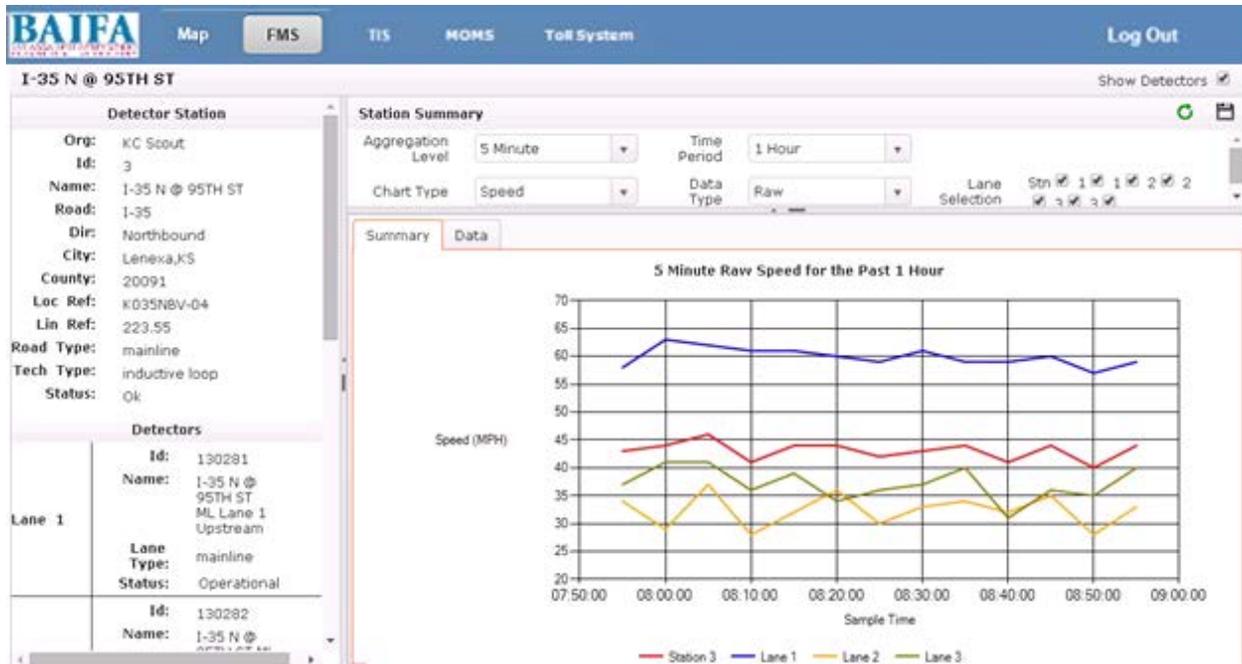
2.1 TransSuite Map (RTM Dashboard)

This is the main screen which operators should be displaying at all times. It overlays several layers of information including toll equipment status, traffic data, and VTMS information.



2.2 TransSuite FMS (Traffic)

This is TransSuite’s traffic data module which uses inputs from the Traffic Management System (TMS) microwave radar devices to display current and past data in an informative manner. This screen should also be shown at all times, especially during heavy traffic conditions.



2.3 TransSuite TIS (VTMS)

This is TransSuite’s Traveler Information System (TIS) module VTMS status screen, which displays toll rate messages, lane mode and VTMS status. Operator should be looking at this screen frequently and compare with what they observe via the CCTVs.

Corridor: I-680 Direction: NB VTMS Status

Zone: 3230 Bollinger Canyon VTMS ID: 5230 EXPRESS LANE <input type="checkbox"/> FasTrak ONLY TOLL HOV ONLY Current Mode: HOV Only Northbound	Zone: 3230 Bollinger Canyon VTMS ID: 5232 EXPRESS LANE <input type="checkbox"/> FasTrak ONLY TOLL HOV ONLY Current Mode: HOV Only Northbound	Zone: 3230 Bollinger Canyon VTMS ID: 5234 EXPRESS LANE <input type="checkbox"/> FasTrak ONLY TOLL HOV ONLY Current Mode: HOV Only Northbound
Zone: 3230 Bollinger Canyon VTMS ID: 5236 EXPRESS LANE <input type="checkbox"/> FasTrak ONLY TOLL HOV ONLY Current Mode: HOV Only Northbound	Zone: 3230 Bollinger Canyon VTMS ID: 5238 EXPRESS LANE <input type="checkbox"/> FasTrak ONLY TOLL HOV ONLY Current Mode: HOV Only Northbound	Zone: 3260 Diablo VTMS ID: 5260 EXPRESS LANE <input type="checkbox"/> FasTrak ONLY TOLL HOV ONLY Current Mode: HOV Only Northbound
Zone: 3260 Diablo VTMS ID: 5262 EXPRESS LANE <input type="checkbox"/> FasTrak ONLY TOLL HOV ONLY Current Mode: HOV Only Northbound	Zone: 3260 Diablo VTMS ID: 5264 EXPRESS LANE <input type="checkbox"/> FasTrak ONLY TOLL HOV ONLY Current Mode: HOV Only Northbound	Zone: 3260 Diablo VTMS ID: 5266 EXPRESS LANE <input type="checkbox"/> FasTrak ONLY TOLL HOV ONLY Current Mode: HOV Only Northbound