


Hazard Classification					System Safety Corrective Action Plan (CAP)		
Probability	Severity				SOURCE	Mode	Audit / Occurrence Date: K & J / System Safety's RWP Deep Dive July 2019. Location: RR & RT
	Catastrophic 1	Critical 2	Marginal 3	Negligible			
Frequent	A	1A	2A	3A	4A	<input type="checkbox"/> Accident/Incident <i>Specify:</i>	<input type="checkbox"/> Railroad
Probable	B	1B	2B	3B	4B	<input type="checkbox"/> Hazard <i>Specify:</i>	<input type="checkbox"/> Rail Transit
Occasional	C	1C	2C	3C	4C	<input type="checkbox"/> Internal Audit <i>Specify:</i>	<input type="checkbox"/> Bus
Remote	D	1D	2D	3D	4D	<input type="checkbox"/> AHJ / External <i>Specify:</i>	<input type="checkbox"/> CCT
Improbable	E	1E	2E	3E	4E	<input type="checkbox"/> Other <i>Specify:</i>	

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K & J Recommendations From their Presentation Close out Meeting & Written Report								
1	K & J / System Safety's RWP Deep Dive July 2019.		Immediately Mitigate Hazards Associated with the use of ITD. Based on the various work tasks performed by EM & C Groups, identify a list of tasks that are acceptable to be performed under ITD or TAW. All other work tasks will require a higher level of protection.	EM & C/Rules Committee			EM & C to identify the work tasks performed by each group (e.g. Power, C & S, B & B , Track) Then EM & C and the Rules committee and RWP Subcommittee will identify what level of protection is required for each task.	
2	K & J / System Safety's RWP Deep Dive July 2019.		<b>Enhance the Hot Spot List</b> <ul style="list-style-type: none"> <li>Create an interdisciplinary team-review &amp; Survey system hot-spot vs. Levels of protection and update the current list based on this review.</li> </ul>	EM & C/ Training/ System Safety	Sept 2019		EM & C has started to review and update their HOT SPOT list. Once list is updated it will be sent around for System Safety and Trainings review. The list will be clear on minimum levels of protection. After list is finalize it will be provided to all Roadway workers, A small pocket version will be	

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			<ul style="list-style-type: none"> <li>Enforce minimum levels of protection and remove QPE discretion to use lower forms of protection at Hot-Spots including interlockings.</li> <li>Incorporate Hot-Spots into RWP Training</li> <li>Incorporate Hot Spots into a controlled document such as On Track Safety Manual or similar.</li> </ul>				made available to the workers and Training will include HOT SPOTS into their training.	
3	K & J / System Safety's RWP Deep Dive July 2019.		Develop strategies to provide greater forewarning to Train Operators to alert them of employees on the Trackway. Also evaluate other means of warning operators.	Operations and ARC/RWP Subcommittee			See 4 below. Also Other means of warnings will be discussed by the ARC, Training, System Safety and Operations.	

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4	K & J / System Safety's RWP Deep Dive July 2019.		Invoke speed reductions when passing employees on trackway. This includes evaluating the mandatory implementation of the workers portable warning lamp and tie a speed restriction to it.	EM & C and ARC			The portable warning Lamp will be mandatory under ITD and TAW and will incorporate a speed restriction. A docket will be submitted to the ARC for Approval.	
5	K & J / System Safety's RWP Deep Dive July 2019.		Establish a rule or EM & C protocol to define what time of day non-emergency work is prohibited	EM & C	Sept 2019		EM & C is discussing the establishment of curfews for non-emergency work. Once defined it will be issued as a notice to all EM & C work groups and Operations.	
6	K & J / System Safety's RWP Deep Dive July 2019.		Evaluate implementing a rule to prevent two trains from simultaneously passing an employee clearing between tracks at high speed.	EM & C and ARC RWP Subcommittee	August 2019		By implementing the portable worker lantern and prescribing a speed to it. Trains passing simultaneous will be going at a slower speed. The ability to prevent or control two passing trains was evaluated and not feasible so the alternative was the warning lantern and speed restriction.	

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7	K & J / System Safety's RWP Deep Dive July 2019.		Provide Written Instructions on New Advance Watchman Process and Face-to-Face Instruction (Miranda Card) Include the script that AMW will use when informing a train about the upcoming work crew. Consider using portable Train stop as part of AMW procedures.	EM & C / Training/ System Safety	August 2019		A small working group will work to finalize the AMW procedures and then provide to the ARC for any rules adjustments. The Portable train stop will not be used as part of AMW under TAW. If that level of protection is needed to stop trains than a work zone should be established.	
8	K & J / System Safety's RWP Deep Dive July 2019.		Formalize a RWP Rules Compliance Audit/Education Program. This should include supervisor walk-a-longs with the work crews similar to what the Track Department is doing. Also limit disciplinary consequences tied to rules audits and even include union representation in the audits.	EM & C System Safety			EM & C will formalize a rules efficiency testing program for all their groups. The program should use the FRA program and QUARC program as models.  System Safety will combine the roadway worker audits being conducted by their two groups (Operational & Construction Safety). A new audit checklist will be developed and System Safety will provide one set of KPIs	

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							and Metrics for all of System Safety's RWP Rules audits.	
9	K & J / System Safety's RWP Deep Dive July 2019.		Evaluate Moving Inspection/Maintenance work to hours when train service is less intense and prioritize by most hazardous Hot-Spots	EM & C			EM & C is reviewing and will develop a protocol on when non-emergency work can be conducted.	
10	K & J / System Safety's RWP Deep Dive July 2019.		Create incentives to attract employees to be willing to work third shift.	EM & C			EM & C is evaluating.	
11	K & J / System Safety's RWP Deep Dive July 2019.		Establish a rule to create separation between the Watchperson and the work gang.	ARC/ ARC Subcommittee			The ARC will establish a rule to address this item.	
12	K & J / System Safety's RWP Deep Dive July 2019.		Evaluate Managements ability to Assign Personnel to off tours	EM & C			This is being evaluated in conjunction with item 9 & 10	
13	K & J / System Safety's RWP Deep Dive July 2019.		Evaluate Control Center Workload as part of Existing/Organizational Changes (RWP/Wrench Time)	Operations	September 2019		Operations is assessing the feasibility of this recommendation and will have findings available in September.	

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14	K & J / System Safety's RWP Deep Dive July 2019.		Evaluate Engineering Out Hazards such as Third Rail Aprons. Several third rail cover boards were identified as missing.	EM & C			EM & C is inspecting all 3 <sup>rd</sup> rail cover boards and will replace any missing cover boards.	
15	K & J / System Safety's RWP Deep Dive July 2019.		Promote Safety Hotline, e.g. RWP Training	System Safety	August 2019.	Sept 2019	System Safety has worked with Graphics to create new awareness posters to be posted at all locations. Posters are complete, System Safety representatives will have them installed at all reporting locations. Additionally, System Safety is working to make a sticker for each SEPTA vehicle to be added to the dashboard. Info is currently included in NEO class but will also work with Training to include a reference in annual recertification classes. This will also be a topic for discussion at our next internal Safety Day in the Fall.	

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16	K & J / System Safety's RWP Deep Dive July 2019.		Audit Train Operator Horn Practices	System Safety/Operations	September 2019/on-going		Rail Transit Operations will immediately add horn/whistle audits to its compliance testing activity on all rail modes. System Safety will also enhance the number of horn audits both independent and in concert with with Sub/El Operations .	
17	K & J / System Safety's RWP Deep Dive July 2019.		Proactively Verify Radio Functionality	Operations	August 2019		Control Center will develop a process to begin periodic verification of radio transmissions.	
18	K & J / System Safety's RWP Deep Dive July 2019.		"No Meetings Day" to increase Senior Leadership interaction with Field Personnel and Field Conditions	All	August 2019		EM & C and Operations is already looking to formally incorporate something in their division. Both Divisions will work together to try and choose the same day since it's likely that many of their meetings will be together and then we'll essentially have two "No Meetings Days". We just have to watch for days that have regular meetings like the JHSC and any regular GM meetings.	

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							System Safety is looking to formally incorporate something as well.	
19	K & J / System Safety's RWP Deep Dive July 2019.		Establish a Near Miss Criteria & Reporting Mechanism to be used by both Employees and Contractors.	System safety	November 2019		System Safety is currently having discussions with NASA about being able to contract with them to be the independent intake for a CCR program on the Non-Railroad territories. System Safety is also reviewing WMATA's program and will have discussion with the Transportation Bureau of Statistic to develop a similar program at SEPTA is the NASA option does not work.	
20	K & J / System Safety's RWP Deep Dive July 2019.		Evaluate Establishing a Minimum Period of Employment before Qualifying as a QPE	EM & C			EM & C is reviewing this item to establish a minimum period.	
21	K & J / System Safety's RWP Deep Dive July 2019.		Evaluate More Frequent Classroom RWP Training	EM & C Training			EM & C is reviewing the feasibility of using their technical training staff to supplement the Training Department's staff to enable them to hold more RWP training and during times more conducive to their work hours.	


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22	K & J / System Safety's RWP Deep Dive July 2019.		Procure Non-Conductive Work Zone Sign Covers to reduce shock hazard	EM & C System Safety	September 2019.		A hazard Assessment will be conducted to determine if covers are warranted. EM&C is in the process of finding vendors for non-conductive signs.	
23	K & J / System Safety's RWP Deep Dive July 2019.		SEPTA reevaluate clearing locations in current use and the four-foot requirement to determine the appropriate level of safety	ARC				
24	K & J / System Safety's RWP Deep Dive July 2019		SEPTA should harmonize the list of authorized methods of protection in the OTS training handout introduction with the list in OTS-	Training				

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			500 (e) to avoid any confusion. Both should list all 8 levels.					
25	K & J / System Safety's RWP Deep Dive July 2019		SEPTA establish procedures that when abnormal train movements occur, train operators are advised of any roadway workers on their route and roadway workers are advised of the train movements.	Operations			In addition to administrative processes, evaluate the possibility of having a AMDT like monitor in the cab so specific instructions or message to supplement the OIL and to report where track workers are.	
26	K & J / System Safety's RWP Deep Dive July 2019		Find a way, perhaps modifying the job briefing form or adapting the Regional Rail form, to capture the issues raised by all GFCs and keep a record and share among departments so that the information can be used during training, rules revisions, and other safety policy decision making.	Training EM & C				

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27	K & J / System Safety's RWP Deep Dive July 2019		Develop a process to capture all Good Faith Challenges and keep a record so they can be shared with various departments and can be used in training, rules revisions and policy decision making.	EM & C Training				
28	K & J / System Safety's RWP Deep Dive July 2019		The "W" sign near Melbourne on the MFL was removed due to resident noise complaints; however, no mitigation was put in place. We suggest that SEPTA consider a speed reduction or adding this location to the hotspot list.	ARC/ EM & C Operations			Before any alternative mitigation are implemented an assessment should be conducted to determine if there is even a hazard that warrants either a whistle or other type of warning due to this curve location. If the hazard is identified that a solution may be to include as a hot spot or speed reduction using portable warning lamp when workers are in the area.	

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29	K & J / System Safety's RWP Deep Dive July 2019		SEPTA evaluate checkerboarding (or otherwise marking) the entire distance of no clearance areas to improve employee awareness of the locations including at stations.	ARC/ EM & C Operations				
30	K & J / System Safety's RWP Deep Dive July 2019		Similar to the Authority wide Safety Culture Survey that was conducted in 2017, SEPTA should consider a Roadway Worker Protection Survey.	System Safety				
31	K & J / System Safety's RWP Deep Dive July 2019							
<b>Additional SEPTA Action Items</b>								
32	K & J / System Safety's RWP Deep Dive July 2019.		Look at the opportunity for Operations supervisors to attend RWP class rather than have it part	Operations Training				

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					Target	Actual		
			of their Operating rules recertification. Possibly look at having an all supervisor RWP class to include both operations and EM & C supervisors.					
33	K & J / System Safety's RWP Deep Dive July 2019.		Evaluate a brighter more distinct portable warning lantern.	System Safety EM&C				
34	K & J / System Safety's RWP Deep Dive July 2019.		Evaluate the possibility of having a AMDT like monitor in the cab so specific instructions or message to supplement the OIL and to report where track workers are.	EM & C VEM				
35	K & J / System Safety's RWP Deep Dive July 2019.		Evaluate the possibility of having the horns for the MFL and BSS car interface with the head lights so the headlights flash when the horn is sounded.	VEM			Vehicle Engineering is currently evaluating the capability of this for the MFL, BSS and NHSL fleet.	

Reporting Date: September 18 2019

Initiated By: Fox/Abel.