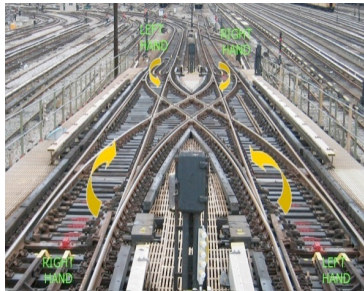


Rail Transit Safety

Quarterly Newsletter

Oversight of Rail Transit Agency Track Inspections

Rail transit agencies perform inspections of their track on a routine basis according to their own track standards. The main purpose of these inspections is to ensure that the track is



safe for the passage of trains, to determine if any aspects of the track and roadway do not meet the defined maintenance standards of the rail transit agency, and for maintenance planning purposes. 49 CFR Part 659.17 requires that the SSO Agency require the rail transit agencies under their jurisdiction to include in their System Safety Program Plans (SSPP) “a description of the process used for facilities and equipment safety inspections,” as well as “a description of the maintenance audits and inspections program.” These descriptions must:

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- Identify the affected facilities and equipment subject to regular safety-related inspection and testing,
- Identify the maintenance cycles and documentation required,
- Include the techniques used to conduct inspections and testing,
- Provide inspection schedules and procedures, and

- Describe how results are entered into the hazard management process.

SSO Agencies are also required by Part 659 to ensure the rail transit agencies under their jurisdiction perform track inspections according to the processes stated in their SSPPs and track standards. Many SSO Agencies however, lack the resources necessary to actually participate in track inspections, while others are unfamiliar with the track standards used by the rail transit agencies under their jurisdiction. As a result, these SSO Agencies must rely solely on the information gathered from the rail transit agencies they oversee to monitor inspection performance.

The following is intended to provide SSO Agencies with a clearer understanding of the rail transit industry's track inspection processes.

Track Inspection Standards

As track components age and degrade as a result of everyday use, exposure to the elements, or for other reasons, ride quality and system safety also degrade. The rail transit industry must therefore perform track inspections to identify and correct defects. While there is no specific regulatory requirement that mandates how rail transit agencies conduct track inspections, the following are the most frequently applied and generally accepted standards used by the industry.

- **49 CFR Part 213, Track Safety Standards** – Prescribe minimum safety requirements for railroad track that is part of the general railroad system of transportation. The requirements prescribed in this part apply to specific track conditions existing in isolation. Therefore, a combination of track conditions, none of which individually amounts to a deviation from the requirements in this part, may require remedial action to provide for safe operations over that

track. This part does not restrict a railroad from adopting and enforcing additional or more stringent requirements.

- **The American Public Transportation Association (APTA) Standard for Rail Transit Track Inspection** – Created for rail transit systems (operating agencies), original equipment manufacturers (OEMs), consultants, engineers, and general interest groups, this standard provides procedures and minimum requirements for inspecting and maintaining rail transit system tracks. It represents an industry consensus of safety practices for rail transit systems directed towards achieving a high level of safety for passengers, employees, and the general public.
- **The American Railway Engineering and Maintenance-of-way Association (AREMA) Track Work Manual, Section 2.2, Track Inspection and Maintenance** – Provides a guide for track inspectors pertaining to the types of defects to look for while performing track inspections, the observations that may indicate a potential or actual problem, and the important measurements to check. This manual also provides useful checklists and recommendations for obtaining thorough and accurate inspection records.

Each of the above provides detailed requirements for performing track inspections. They define acceptable tolerance limits for track components, and detail how to best document inspection results. Because of their proven effectiveness, they often serve as the basis upon which rail transit agencies have developed their own track inspection standards. At a minimum, the rail transit agency's track inspection standards should define:

- Track Inspector Qualifications.
- Track Worker Protection Rules and related

safety procedures.

- The frequency at which track inspections are performed (for both walking inspections and vehicle borne inspections).
- How inspections are to be performed (for both walking inspections and vehicle borne inspections).
- Track component tolerance limits.
- How results of track inspections are to be documented.
- How remedial action plans are to be developed and implemented.

To better understand and oversee the track inspection process it is incumbent upon the SSO Agency to become familiar with the track inspection standards used by the rail transit agencies under its jurisdiction and to determine if these standards meet the minimum requirements established by the

The FTA Recommended Practice for Rail Transit Track Inspection

In 2008, in response to an alarming industry trend of increased track work fatalities, FTA began development of its own recommended practices for rail transit track inspection. The purpose of this document is to ensure rail transit agencies can verify that tracks are operating safely and as designed through periodic inspection and maintenance, thereby increasing reliability and reducing risk of hazard and failures. Currently in draft form, FTA intends to issue these recommended practices as a pocket guide that can be easily carried and referred to by track inspectors during inspections. FTA anticipates publishing the pocket guides later this year.

above referenced standards and practices.

Track Inspector Qualifications

Maintaining system safety is the primary focus of all rail transit activities. It is therefore imperative that all track inspectors and maintenance staff be fully qualified to fulfill the responsibilities of their positions. Qualified track inspectors should have at least 2 years of satisfactory related experience inspecting, constructing or maintaining track and special work. They should possess a combination of experience in track maintenance and training received from a qualified course in track inspection or from a college-level education program related to track inspections, or they should have had progressive satisfactory supervisory experience on another transit or railroad system.

Refresher training and recertification programs must also be established on at least an annual or biannual basis to ensure track inspectors remain qualified. In addition, the rail transit agency must ensure that its track inspectors know and understand the requirements of the agency's track inspection standards and requirements, can detect deviations from these standards and requirements, and can prescribe appropriate remedial action to correct or safely compensate for those deviations.

SSO Agencies should periodically review the training and certification records of track inspection personnel to ensure they are up-to-date. This can be done as part of the SSO Agency's triennial review of the rail transit agency, or as part of the SSO Agency's ongoing oversight activities.

Track Inspection Basics

Track inspections are made either by foot or by riding over the track in a vehicle at a speed that allows the track inspector to visually inspect the track structure to determine if it is within the

limitations defined in the rail transit agency's track standards. If a vehicle is used, it should be prohibited from exceeding 5 miles per hour when passing over track crossings and turnouts; otherwise vehicle speeds are required to be maintained at the sole discretion of the track inspector based on track conditions and inspection requirements.

Before beginning an inspection, track inspectors should first obtain, review, and keep accessible for use during the inspection, the following items:

- *Operating rules and conditions*: Defines the track safety requirements that must be maintained during the inspection. As conditions change, so to must the safety precautions taken to maintain track and personnel safety.
- *Current timetables*: Defines the frequency at which trains will be operating. This enables track inspectors to be better prepared for oncoming train traffic so that they can take the necessary precautions to maintain system and personnel safety.
- *General instructions, bulletins or special orders that may be in effect during the inspection*: Defines any special operating conditions that may exist during the inspection that may affect how the track inspection is performed. Also assists track inspectors in determining the necessary precautions that must be taken to maintain system and personnel safety.
- *Track car rules*: Defines the operating rules that must be followed when using track cars to support track inspection efforts. This includes operating speed limits for different track types and locations, the number of personnel permitted aboard the track car, and how personnel must behave while onboard the track car.
- *First aid rules*: Defines who has received the necessary training and certification to administer first aid, where first aid equipment will be maintained during the track inspection, and when and how it should be used.
- *Maintenance-of-way rules*: Defines the on-track safety rules that must be followed by track inspectors to maintain system and personnel safety. This may include requirements for the use of watchmen/flagmen, derail devices or other systems and equipment during the track inspection.
- *Maintenance standards for all areas to be inspected*: Defines how each track component is to be inspected, original equipment manufacturer specifications and acceptable tolerance limits for track components, and how repairs are to be made.
- *Necessary equipment and measurement tools*: Defines the equipment and tools that must be used to conduct quality track inspections, including when, where, and how equipment and tools are to be used.
- *Authority to slow or stop traffic*: Provides track inspectors with the authority needed to maintain system and personnel safety while performing track inspections.
- *Watchmen/flagmen to support inspection activities*: Serve as "lookouts" for oncoming train traffic. Are used to warn track inspection crews of approaching trains and to warn train operators that track inspection crews are ahead.
- *Copies of the previous track inspection reports including the previous ultra-sonic test run results and track geometry car results*: Enables track inspectors to identify past and potential future defects so that track inspections can be targeted at high-risk areas. Enables track inspectors to

verify that past defects have been corrected.

- *Blank inspection forms:* Ensure that track inspectors will be able to properly document inspection findings. Completed forms also serve as a record of the track inspection and can be reviewed to identify the depth and quality of the inspection.

In addition to the above, job briefings should be held prior to the start of any on-track activity including track inspections. Job briefings are intended to discuss the sequence of the steps that will be taken to complete the track inspection including the responsibilities of each employee involved in the inspection (this includes who will be doing what, where it will be done, how it will be done, and when it will be done). All tools, inspection equipment and safety equipment must be checked prior to use, and any potential hazards that may be encountered during the inspection must be discussed. The track inspector must also ensure protective equipment is available and is being used properly. Finally, the track inspector must review any emergency procedures that may need to be taken during the inspection and confirm that every member of the work crew understands what has been discussed in the job briefing. Each of these items is essential to maintaining track safety and to performing a quality track inspection.

Once the job briefing has been completed, permission has been obtained from the control center to enter the track, and all necessary safety precautions have been taken, the track inspection can begin. Ideally track inspections should be performed at different times of day using different inspection methods. In general, track inspections are performed to identify:

- Rail defects such as broken rails, discolored running surface, worn or flat spots, cracks, or other damage,
- Rail fastener defects (i.e., tie plates, spikes, inserts, etc.) such as missing or broken bolts and washers, or loose or freely moving fasteners,
- Turnout and crossing defects,
- Roadway and general surface defects including line misalignments, uneven track, abnormal depressions, cracks or slides on embankments,
- Rail lubricator defects,
- Tie defects such as cracking, signs of rot or deterioration,
- Ballast defects including voids, holes, or depressions,
- Culvert defects including blockages,
- Ditch and drainage channel defects including blockages and high water,
- Grade crossing defects including damage gate arms, obstructed views and clearances, obstructed flange ways, or holes in the crossing surface,
- Track signal defects,
- Clearance defects such as obstructions closer than 6 feet from the gauge side of the rail,
- Vegetation defects (i.e., vegetation is encroaching into the right-of-way or is affecting the track structure),
- Weather or environmentally caused defects, and
- Miscellaneous other defects.

SSO Agencies should periodically review the rail transit agency's track inspection procedures, track standards, and track inspection records to verify that the rail transit agency is addressing, at a minimum, each of the above items during its inspection processes.

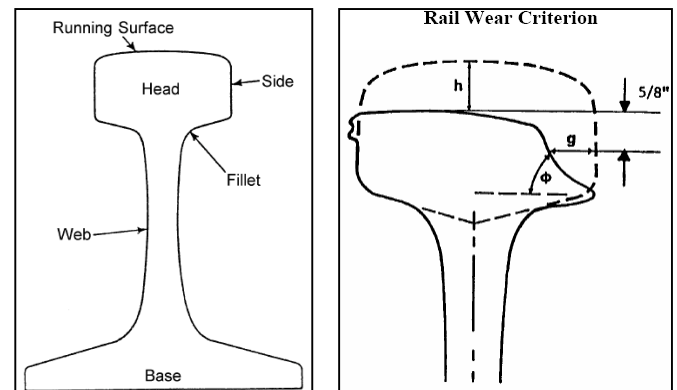
Track Inspection Equipment:

Although various inspection methods and equipment can be used depending on the type, nature and location of the inspection being performed, much of the track inspection can be performed visually. The condition of ballast, ties, drainage, culverts, and vegetation for example, can normally be determined by visual walking or riding inspections. For those track components that require more thorough examination, track inspection equipment is used. Types of track equipment used may include:

- **Rail wear gauges:** Used to measure rail wear, this gauge is designed to be carried by the track inspector and manually applied to the rail to measure the degree to which the rail head and side have been worn down. This enables the track inspector to verify if the rail is still within acceptable tolerance limits.
- **Straight edge and taper gauges, dial indicators and 36 inch straight edges, and dial indicators and parallel 36 inch straight edges:** Used to measure surface defects including corrugations, corrosion, engine burns, surface spalling, and other conditions or anomalies that directly affect the behavior of the dynamic wheel/rail interface. The taper gauge and straight edge can be used by the track inspector to determine batter and the surface conditions of rail ends, but are of little use in measuring engine burns and other similar flaws in the rail surface. A dial indicator has a higher degree of accuracy than a taper gage, and when used with a 36 inch straight edge, allows for the measurement of corrugating and engine burns. To measure defects that extend over 36 inches, two 36 inch straight edges are bolted together. The dial indicator can then be moved anywhere along the 72 inch length of the straight edges,

and can obtain continuous measurements along the length.

- **Goop Gauge:** Used to measure the degree to which lubricant has migrated from the flange area to the top of rail. Based on the measurements taken, the track inspector or maintenance crew can identify defects pertaining to the rail lubricator and can make adjustments as necessary.
- **Track Gauge:** Come in several different shapes and models, and are used to measure the distance between the rails of a track. Track gauge defects can be measured in various ways, including through the use of a standard track gauge, a combination gauge-level board (frequently used by track inspectors), a pocket rule or tape, or a special car equipped to measure track geometry. Unless a track geometry car is available, checking the entire railroad at regular intervals for possible gauge defects requires a great deal of labor.



All measurements gathered through the use of this equipment must be documented on the track inspection form. SSO Agencies should verify that the rail transit agencies under their jurisdiction not only have the equipment necessary to complete quality track inspections, but that they have also trained all necessary personnel in its correct use, calibration

and maintenance. SSO Agencies should also periodically inspect track inspection forms and reports to identify the types of equipment used during the inspections and to verify that measurements have been recorded appropriately. This again can be done as part of the SSO Agency's triennial review of the rail transit agency or as part of the SSO Agency's ongoing oversight activities.

The Track Inspection Form

As the track inspector completes his or her inspection of the track, he or she must record all identified defects on a track inspection form. Completed track inspection forms should be maintained by the rail transit agency for a minimum of two years after the inspection and for at least one year after remedial action is taken. At a minimum, the rail transit agency's track inspection forms should:

- Identify the track inspector's name, the date of the inspection, a supervisor's signature, and the work order number (if applicable).
- Identify the area inspected including the track number and the starting and ending locations of the inspection. The track inspector may vary an inspection from one track to the other as frequently as deemed necessary for efficiency but each stretch of track should be indicated by direction.
- Include a record of all findings and defects including the track number and actual location of where the defect was identified. (If exceptions relate to switches or turnouts the unique switch identification number should be entered with a description of the location.)
- Identify the repairs or other actions taken by the track inspector to address and correct the defect. In some instances, a "slow order" may be issued until actual repairs can be made. These instances

should also be documented on the inspection form.

- Acknowledgement that a Supervisor has reviewed and agrees with the track inspector's assessment of track conditions. This may be in the form of a signature or by the Supervisor initialing each entry on the inspection form.
- Additional sheets as required to fully document the inspection findings and actions taken. Additional sheets should be completed sequentially and numbered in the top right hand corner of the form. The total number of pages should also be recorded.

SSO Agencies should periodically review track inspection forms to verify that, at a minimum, the above information has been recorded on the forms. SSO Agencies should also verify that completed track inspection forms are being maintained by the rail transit agency for a minimum of two years after the inspection and for at least one year after remedial action is taken.

Remedial Action Plans

Based on the outcomes of the track inspection, the track inspector may take immediate action to correct identified deficiencies or may implement a remedial action plan if the defect is beyond the immediate capabilities of the track inspector and/or work crew. In both instances, the actions taken by the track inspector must be identified on the track inspection form. If the defect cannot be immediately corrected, it must be reported to the track maintenance department so that the required repairs can be scheduled and made. This will typically require that the rail transit agency issue a work order. The date of when the final repairs are made should be added to the track inspection form once completed.

SSO Agencies should periodically review track

inspection forms and work orders generated as a result of the track inspection process to verify that corrective actions are being taken by the rail transit agency to correct identified deficiencies in a timely manner. This again can be done as part of the SSO Agency's triennial review of the rail transit agency, or as part of its ongoing oversight activities.

10 Quick Questions SSO Agencies Can Ask to Evaluate RTA Track Inspection Processes

To gain an immediate sense of a rail transit agency's track inspection processes, SSO Agency can ask the following questions:

1. Are the rail transit agency's track standards based on 49 CFR Part 213, APTA, AREMA or other equivalent standards and practices?
2. What is the date of the rail transit agency's track inspection standards and when were they last reviewed and/or revised?
3. Do all necessary track maintenance personnel have ready access to the rail transit agency's track inspection standards?
4. How does the rail transit agency ensure the safety of maintenance personnel performing track inspections?
5. Do all track inspectors have up-to-date training and certifications?
6. Does the rail transit agency have the equipment necessary to perform quality track inspections?
7. Have all applicable personnel been received training on how to use, calibrate and maintain track inspection equipment?
8. Are track inspections well-documented using track inspection forms and are these forms reviewed and formally approved via

Supervisors?

9. Are completed track inspection forms maintained for a minimum of two years after the inspection and for at least one year after remedial action is taken?
10. How does the rail transit agency assure identified deficiencies are corrected in a timely manner?

Effective Oversight of RTA Track Inspection Processes – A Case Study of the Chicago Transit Authority

Special thanks given to Ms. Grace Gallucci, Mr. John Goodworth, Ms. Violet Gunka, and Ms. Amy Kovalan for their support and cooperation in developing this article.

On Tuesday, July 11, 2006 a northbound Chicago Transit Authority (CTA) Blue Line train derailed in the subway tunnel between the Clark/Lake and Grand stations. The derailment caused smoke in the subway and all eight cars of the train had to be evacuated. The National Transportation Safety Board (NTSB) investigation that followed specifically identified the CTA's "ineffective management and oversight of its track inspection and maintenance program" as a probable cause of the accident. The NTSB also identified the Regional Transportation Authority, acting as the SSO Agency for the state of Illinois, as failing "to require that action be taken by CTA to correct unsafe track conditions" as a contributing factor to the accident. Finally, NTSB noted that FTA's "ineffective oversight of the Regional Transportation Authority" had contributed to the accident. Now, nearly three years after the accident, both the CTA and the Regional Transportation Authority have come full circle to address the NTSB's recommendations and to

administer and oversee an effective track inspection and maintenance program.

Based on the results of both the CTA and NTSB investigations, the CTA developed an action plan focused on infrastructure renewal and investment, work structure and staffing, and technology changes to address deteriorating track conditions. Activities that the CTA has completed under this plan have included:

- Completing a detailed track inspection of the Blue Line subway and developing a schedule to replace corroded parts;
- Installing new track marker location, directional and emergency exit signs, evacuation maps, and telephone directories to reflect current conditions and to facilitate the identification of train locations and passenger evacuations from tunnels;
- Replacing all lighting in the Blue and Red lines, dramatically increasing visibility in the tunnels;
- Hiring a contractor to perform track strength measurements throughout the entire rail system (these tests are now conducted on an annual basis);
- Purchasing manual load testing equipment to enable track gauge measurement under 3,000 psi loads;
- Entering into on-going contracts for annual track vehicle geometry testing and ultrasonic testing;
- Using new track plates that electrically isolate the negative return in the running rails to prevent the corrosion of fasteners;
- Reorganizing its track engineering department to separate track inspectors from track maintainers and increasing the number of positions dedicated to track inspection and maintenance;

- Instituting management systems and quality control checks to ensure track inspections are more closely monitored;
- Providing all track inspectors with ongoing refresher training;
- Revising its track inspection and maintenance standards to meet, and in many cases exceed the American Public Transportation Association's (APTA) standards. The new standards now incorporate improved parts that reduce the likelihood of corrosion, and also require track inspections be conducted twice every seven days for track that is older than 10 years;
- Providing System Safety department staff with track safety, track inspection, and track standards training and they now audit the track inspection and maintenance functions;
- Using a new computerized database with handheld units for field employees that integrates the maintenance records and other information needed to effectively and economically monitor the condition and repair of all tracks; and
- Implementing a grouting program to address areas of water seepage in the subway.

The Regional Transportation Authority also took action to address the NTSB recommendations and to improve and strengthen its oversight program. This has included:

- Quadrupling its level of effort devoted to its SSO Program to provide increased oversight of CTA-related issues;
- Exploring legislative changes that would provide the RTA with additional enforcement authority regarding the CTA's implementation of Part 659 requirements;
- Receiving right-of-way safety training and

certifications so that RTA personnel are now fully authorized to enter the CTA right-of-way to observe track inspections and other activities;

- Receiving training from CTA operations pertaining to the Zeta Tech handheld units now used by CTA track inspectors to enter and monitor inspections; and
- Accompanying the CTA's System Safety department and track personnel during track inspections.

In addition to each of the above, the Regional Transportation Authority, as the designated State Oversight Agency, felt it could contribute more to safety by becoming both a partner and ally to the CTA in the mutual exploration of new safety technologies. A program called "Safety Discovery" was initiated to promote this partnership between agencies. As part of this program, each agency agrees to be on the lookout for safety issues or concerns and any ideas that might improve safety in the CTA system. Both agencies meet regularly to share and compare these ideas, using each other as a sounding board, teammate and "best friend" in the quest for enhanced safety.

In one example, John Goodworth, Division Manager Program Compliance for RTA's Research, Analysis and Policy Department, inspired by the FTA's Track Inspection Workshop and working with the CTA's System Safety department, created a prototype track inspection process to help CTA track inspectors more easily detect areas of the rail right-of-way that are out of alignment and need to be properly adjusted. The prototype device was presented to the CTA's System Safety department and Track Inspection department at the January 2009 Safety Discovery meeting and received very positive reviews from both the CTA and the Regional Transportation Authority's management. The prototype makes use of a new automatic "walk

behind" device used to measure track gauge and is designed for affordability and ease of use. The device can be quickly removed from the track and safely held upright if a train is approaching and measures track deviations as small as a quarter inch, using both audible and visual alarms to notify inspectors of any problem areas. Used in tandem with the CTA's handheld GPS devices, the CTA can now use the prototype to immediately identify the exact location of any misalignment issues within the system and determine to what extent it is out of tolerance.

The Regional Transportation Authority and the CTA continue to work together to explore other possible related inspection products and tools and are continuing to develop the prototype into a full production model that can be used by all CTA inspectors across the entire system. Both agencies believe this device can significantly improve the track inspection process, which can help to prevent future train derailments and ultimately help to save lives.

Indeed, significant accomplishments have been



made by both the CTA and the Regional Transportation Authority since the 2006 accident. To gain deeper insight into the issues and challenges

faced with implementing these vast changes and with developing an effective track inspection program, both from an SSO Agency and transit agency perspective, the FTA contacted Ms. Grace Gallucci, Deputy Executive Director, Research Analysis and Policy Development, Regional Transportation Authority, Mr. John Goodworth, Division Manager, Program Compliance, Regional Transportation Authority, Ms. Violet Gunka, Program Manager, Rail Safety Oversight, Regional Transportation Authority, and Ms. Amy Kovalan, Vice President of Safety, CTA. Outtakes from these conversations are provided below.

Regional Transportation Authority

How has the oversight agency's role changed since the 2006 derailment with regards to overseeing track inspection activities at CTA?

Grace Gallucci (GG): From an oversight perspective, we took the NTSB report very seriously and used it to address our entire oversight program, including how it was viewed internally and externally to CTA. We quadrupled our resources and changed our oversight approach from being a reactive audit function to a much

more proactive approach with CTA. Before we would audit CTA's track inspection function, make recommendations, and follow-up to see if corrective actions had been implemented. Now our staff are fully trained and certified to participate in CTA's track inspection activities.

John Goodworth (JG): We've formed a very strong partnership with CTA that is now used to identify and solve problems. Our goal is to be able to look ahead and to make system improvements before accidents can occur. We no longer focus all of our energy on simply identifying what is broken, but now try to determine why problems exist, what impact they have on other system components, how

they can be fixed, and what can be done to prevent them from occurring again. We now have regularly scheduled meetings with CTA focused solely on these issues and how we can work together to improve the system. Through this expanded role, we now hope to be much more than just an overseer of CTA's rail systems.

CTA's System Safety Department views the Regional Transportation Authority as a sympathetic collaborator, which has allowed us to work together as a team. We believe that because of this teamwork we've been able to realize exponential improvements to our safety programs. Two entities working together can accomplish much more than twice the amount of one. We now consider each other to be an extension of ourselves and our programs.

Violet Gunka (VG): What we've found as a result of our partnership with CTA and our increased onsite activities is that we're now able to hold an open dialogue about problems. As a result, we've been able to come up with truly positive approaches to improving the system. Our success with the track inspection program now has been extended to other areas such as the signaling system, which is currently undergoing a thorough review in much the same manner as the track inspection program.

What challenges did your agency face in making these changes and how did you overcome them?

GG: Our biggest challenge was to get CTA to view oversight in a different way. We needed to overcome issues of trust so that CTA personnel could be convinced that we were committed to helping them improve the system, and weren't just there to conduct repetitive audits that generated countless findings. This took time, but we overcame these issues by working and communicating with CTA on a regular basis. We began spending much more time on-site participating in training and actual field

work, and we began communicating with all levels of CTA. This enabled our oversight staff to form strong working relationships with CTA personnel that extended from the highest levels of the organization to the lowest. As a result, we're now able to gather information much more easily and our time and resources as a team with CTA can be leveraged much more effectively.

What do you feel is the most important role or responsibility of an SSO Agency in overseeing the track inspection processes of the rail transit agencies under its jurisdiction and how have you fulfilled these roles and responsibilities?

GG: Traditional auditing is still required; however, we now place greater emphasis on identifying and ensuring the correct processes are in place to achieve goals and to solve problems. We've done this through partnership with CTA, realizing that we all have unique levels of responsibilities that must be fulfilled to identify and mitigate risks and to administer the requirements of Part 659. Through this partnership, both agencies have been able to better align their responsibilities so that we can all be more effective.

What advice can you offer to other SSO Agency's with regards to overseeing rail transit agency track inspection processes?

GG: Above all else, SSO personnel need to get out in the field. This work can't be done from behind a desk. Partnering with CTA has proven incredibly important and effective. SSO Agency's need to look first at their process to identify management's role, safety's role, their resources, and how these resources can be leveraged across both the SSO Agency and the rail agency to have the greatest impact.

Chicago Transit Authority

It is clear that the CTA has made sweeping

changes to its track inspection processes over the past several years. How have these changes improved your department's oversight of the track inspection program?

Amy Kovalan (AK): From a CTA perspective, we've undergone a significant cultural change to improve the track inspection program. We conducted a full review of the program and realigned territories to make them more realistic; we underwent an extensive reorganization to separate track inspection and maintenance responsibilities and to improve accountability at all levels of the organization; and we began using more advanced tools such as hand-held technology with GPS and real-time data capabilities to improve the accuracy and oversight of inspections. The System Safety department became a separate, stand-alone department and the position of Vice President of Safety, reporting directly to the CTA's President, was created. This has helped to increase the visibility of safety and integrate the System Safety department's recommendations into the organization's broader restructuring of accountability through the use of a data-driven, performance management system.

The results of these changes have been very positive. Beginning in 2007, the System Safety department instituted monthly audits of the track inspection and maintenance functions. Because System Safety was able to verify over the course of 2007 and 2008 that the track department's improvements to the inspection and maintenance programs were working, System Safety, after discussion with our SSO team, decided to move to a quarterly audit of the track inspection and maintenance functions. This will free up our audit resources to focus on other areas such as signal maintenance, where CTA management is now applying some of the same principles and concepts that were used to improve the track inspection and

maintenance program.

What has been the greatest challenge in making these changes and how have you overcome them?

AK: Changing the culture was the most difficult because the previous track inspection program had been in place for so long. Employees had to be empowered to make changes and to report problems, knowing that management would respond promptly and appropriately. They also had to know that they would be held accountable for their individual actions. Management had to take an active role in the change management process including implementing the handheld technology and managing by the data. Management also put their full support behind the FTA's new Track Inspection and Maintenance workshop which was piloted at the CTA. The workshop provided the entire track department the opportunity to learn about new tools, alternative techniques and industry best practices.

We also began collecting, analyzing and managing far more data and made significant improvements to our recordkeeping processes. With better data we've been able to realign our resources to have the greatest benefits of the program. As a result, we have a high level of confidence in our inspection program and in what is being reported.

Have the improvements made to date had any unexpected affects on CTA's safety, operations, or maintenance programs (such as improvements in employee morale, fewer employee and customer complaints, better system performance, etc.)?

AK: Overall, there seems to be a higher level of employee job satisfaction because the inspection program and employee roles and responsibilities within it are now much more clear and enforceable. We believe that improvements can't be made unless we're capable of having an open dialogue about the problems. Employees are now empowered to report safety concerns and are rewarded for doing so.

Last year, your agency participated in the FTA's Track Inspection and Maintenance workshops. How did these workshops benefit your agency?

AK: The FTA's Track Inspection and Maintenance workshops added incredible value by reinforcing the improvements made to our track inspection and maintenance program. In addition to the excellent content of the training, the mix of people that participated in the training, which included representatives from the FTA, our State Safety Oversight team, and outside consultants, added credibility and gave CTA management the opportunity to acknowledge our front line employees for their contribution to our customers' safety.

Normally transit personnel think outsiders won't understand the issues they are facing because their systems are unique. However, the Track Inspection and Maintenance workshop demonstrated that while every system is unique, there are still a number of similarities and best practices that can be shared. The workshop helped to educate CTA personnel regarding these similarities and how we can work together to continuously improve our track inspection and maintenance program. The CTA would readily volunteer to pilot any other similar programs the FTA may be developing.

We Want Your Feedback

To provide feedback pertaining to this issue of the SSO Quarterly Newsletter; to obtain additional information pertaining to any of the topics discussed in this issue; or to request that a specific topic of interest to your organization be discussed in upcoming issues, please contact:

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About the Newsletter

The FTA Rail Transit Safety Newsletter is a technical assistance newsletter published quarterly by the Federal Transit Administration. This Newsletter is distributed free to members of the State Safety Oversight Community, including FTA regional offices, state safety oversight agencies, and rail transit agencies