

The slide features a green header with the CUTR logo on the left and the USF University of South Florida logo on the right. The main title is centered in a large, bold, green font. Below the title, the authors' names and affiliation are listed in a smaller black font, followed by the date. A green footer bar at the bottom contains the text 'CENTER FOR URBAN TRANSPORTATION RESEARCH'.

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# Bus Operator and Maintenance Training Key Pillars for Safety and Operations

Stephen Berry and Stephen Wachtler ,  
CUTR

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The slide has a green header with the CUTR logo on the left and the USF University of South Florida logo on the right. The title 'Where We Are' is in a bold green font. The main content is a list of statistics from an FTA report, presented in black text. A green footer bar at the bottom contains the CUTR and USF logos, with a small blue star icon on the right.

## Where We Are

According to FTA Report No. 0096, *Workforce Development Summit Proceedings*

- Transit workers > 55 years of age – 35%
  - US workers > 55 years of age – 22%
- Transit workers > 45 years of age – 63%
- 4.6 million new workers needed in the next 10 years
- Transit job opening 68% greater than the candidate pool

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## Transit Bus Operator/Technician Roles and Responsibilities

- What does it take to become a bus operator or technician in 2018?
- Typically an agency will need the following steps to locate, hire and graduate a new transit operators



## Transit Bus Operator/Technician Roles and Responsibilities (cont'd)

- New bus operator or technician recruit must pass:
  - Recruitment
  - Drug and alcohol testing
  - Vetting of applicants
  - Interviews
  - Pass background check
  - Experience in driving and/or mechanics
  - Positive reference checks
  - Physical
  - Currently have CDL or obtain



## Transit Bus Operator/Technician Roles and Responsibilities (cont'd)

- Pass up to **8** weeks of classroom and drivers training including quizzes and exams (possibly with the addition of obtaining CDL) which includes bus inspections, fuels, maneuvers, service stops, driving conditions, highway driving, defensive driving, security & safety elements, breakdowns, radio, fatigue, substance abuse, maintenance issues, assaults and about **100+** other topics
- Typical graduate cost: \$5,200



## Transit Bus Operator/Technician Roles and Responsibilities (cont'd)

- Pass up to **8** weeks of classroom and hands-on maintenance training including quizzes and exams (possibly with the addition of obtaining CDL) which includes: shop safety, PPE, HAZMAT, **bus inspections**, steering and suspension, air system and brakes, **lifts and ramps**, engine and transmission, electrical, alternative fuels, **articulated buses**, climate control, **work order management system**, road calls, **electronic systems**, along with defensive driving, security & safety elements, radio, fatigue, substance abuse, transit operations, and about **100+** other topics



## Transit Bus Operator/Technician Roles and Responsibilities (cont'd)

In addition, operators will:

- May experience the extraboard for a period of time
- Participate in system onboarding and acclimation which continues for several months for up to 1 year
- Learn agency system, bus troubleshooting, deal with difficult patrons, possible assaults, splits, accidents, biohazards, reports, ADA, and so forth



## Transit Bus Technician Roles and Responsibilities

- What does it take to hire and retain a bus technician in 2018?



## Roles and Responsibilities

- Agencies must do the following to hire a technician
  - Recruitment to find candidates
  - Vetting of applicants
  - Interview to select proper candidates
  - Pass background check for eligibility
  - Experience in vehicle maintenance (diesel preferred)
  - Positive references
  - Physical
  - CDL



## Where Do We Find Transit Technicians? ASE Certified Technicians

Automobile Technicians	197,440
Service Consultants	17,494
Maintenance/Light Repair Technicians	18,047
Advanced Engine Performance Specialists	34,598
Collision Repair/Refinish Technicians	16,124
Collision Damage Estimators	5,659
Medium/Heavy Truck Technicians	33,806
Truck Equipment Installation & Repair Technicians	2,509
Compressed Natural Gas Technicians	1,745
<b>Transit Bus Technicians</b>	<b>3,427</b>
School Bus Technicians	4,052
Parts Specialists	29,777



## Where Do We Find Transit Technicians? Master ASE Certified Technicians

Master Automobile Technicians	69,678
Master Collision Repair/Refinish Technicians	3,580
Master Medium/Heavy Truck Technicians	10,665
Master Medium/Heavy Vehicle Technicians	687
Master Truck Equipment Technicians	1,087
<b>Master Transit Bus Technicians</b>	<b>859</b>
Master School Bus Technicians	1,383



## Challenges to Hiring and Retaining Quality Bus Technicians

- Shortage of transit technicians
- Schedule
- Outdoors/Weather
- Dirty job
- Dangerous
- Pay
- Union



## What to Do?

- Review hiring guidelines
- Technician Orientation Program
- Apprentice programs
- Certified Technician Training Program



## Review Hiring Guidelines

- Is job description accurate and up-to-date?
- Experience required
- Education vs experience
- Special skills



## Standard Operating Procedures (SOP)

- Recruitment: wage and benefits
- Vetting of applicants: human resources, training and operations working together
- Interview process: solid questions with experienced panel
- Experience: **audience participation (prior bus operator)**
- Reference checks: at least 3
- Health and physical abilities: functional assessment
- CDL vs non-CDL: **audience participation**



## Certified Driver and Technician

- Is the state and national trend leaning towards diminishing operator and technician numbers?
- Specifically, is Florida experiencing a decline in applicants and retention of operators and technicians?
- If this continues, how will the typical agency contend with the increase in staffing costs associated with this operator and technician shortage?





## Certification Concept

- Large Metros and other traditional transit agencies absorb the costs, carry training staff, equipment, materials, and associated expenses
- Carries pros and cons
- **Pro:**
  - In-house environment, schedule pliability, considerable time with candidate, and agency focus



## Certification Concept (cont'd)

- **Cons:**
  - Considerable cost associated with staff, equipment, and resource requirements
  - Possible training and schedule creep
  - Possible too much focus on agency desires and not enough focus on holistic and thorough transit requirements and concepts
  - Curriculum can be lacking and dated
  - Burnout due to overtime, safety, risk, and claims



## Bus Operator Concept

- There has been interest in a transit operator technical training program that may provide some or all of the following concepts:
  - A partnership with the transit agencies on recruitment, vetting, interviewing, background checks and standardized initial training including CDL and non-CDL candidates
  - Regionalized efforts to produce applicant pools with pre-packaged (ready-to-go) transit operators.
  - This would allow for agency training or OJT to be reduced down to 1-2 weeks



## Bus Operator Concept (cont'd)

Driver certification concept considerations:

1. Assist agencies with scarce resources and realizing a mechanism to save on general budget expenditures
2. Allow agencies to focus more on important core functions and retention
3. Agencies can utilize operator candidate pools that are vetted and trained on the most up-to-date, standardized and emerging resources available



## Bus Operator Concept (cont'd)

### Possible Benefits:

- Power of partnership between multiple entities and sharing of resources
- Multiply the transit operator effort from local to statewide
- Realize a true safety benefit by way of a standardized curriculum and certification that is updated annually based off SMS principles, best operator training practices, FAC 14-90 and federal regulations



## Bus Operator Concept (cont'd)

- Recruitment partnerships
- Interview assistance
- Recognized and compliant training standards
- Cost and equipment sharing
- Regionalized efforts which collaborates amongst agencies
- Move towards standardized training, operator effectiveness, retention and safety



## Apprentice Program

- Hire from within
- Select from known good employees
- Build your own/no bad habits
- Succession planning



## Technician Orientation Concept

- Requires resources
- Cannot succeed without a program
- Document program and progress
- Mentorship
- Classroom and on-the-job training (OJT)



## Certified Technician Training Program

- Offered through CUTR, FDOT, and Hillsborough Community College
- FDOT covers cost
- Well rounded transit technician
- PSAV Certificate
- Credits towards Associate in Science (AS) Degree



## Operations and Maintenance Relationship

- Synergy is paramount
- Operations and maintenance support and need each other
- Provide 'core' transit functions
- Poor relationship could result in missing pull-out and effect vehicle reliability



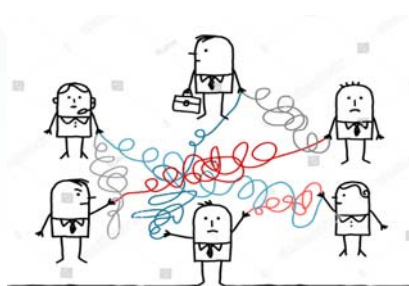
## Operations and Maintenance Relationship (cont'd)

Has many faces....

What we want

vs

What we get



## Operations and Maintenance Synergy

- A day in the life of a operations and maintenance supervisor
- Operations and maintenance issues included in both training programs

