



C I N C I N N A T I  
**STREETCAR**™

**MAJOR TRANSPORTATION & REGIONAL  
COOPERATION COMMITTEE**

October 13, 2015

# RECENT DEVELOPMENTS

- Major civil construction in final month
  - Final wire pulls along Walnut, Main completed
  - Main St. paving continued
  - Final trackwork at 2<sup>nd</sup> & Main underway
- Vehicle production continues at CAF Elmira, NY plant
  - Unit #1 - final mods, CAF inspections
  - Unit #2 - routine testing
  - Unit #3 - routine testing
  - Units #4, 5 - assembly underway
  - CAF projects first vehicle delivery to Cincinnati at end of Oct



# SCHEDULE STATUS

- MPD Construction Contract Milestone Dates:

Milestone	Original Contract Dates (Bid Docs)	Change Order #1	Change Order #5
OTR Loop & MOF Substantial Completion	June 15, 2014		
3000 ft. Test Track & MOF Substantial Completion	July 15, 2014	March 1, 2015	March 21, 2015
Substantial Completion of OTR Loop	March 1, 2015	June 29, 2015	July 19, 2015
Substantial Completion of All Work	October 1, 2015	March 15, 2016	April 4, 2016
Revenue Service	April 2, 2016	September 15, 2016	September 15, 2016

- CAF Contract Modification #2 (executed on August 1):

Milestone	Contractual Late Date
Contractual Delivery of 1st Car	September 17, 2015
Contractual Delivery of 2nd Car	October 17, 2015
Contractual Delivery of 3rd Car	November 17, 2015
Contractual Delivery of 4th Car	November 17, 2015
Contractual Delivery of 5th Car	December 17, 2015

# BUDGET VS. EXPENSES

Through 10/6/15 - DRAFT

BUDGET - June 2013		EXPENSES 10/6/2015		
Budget Category	Base + Allocated Contingency	Expended	Encumbered	Expend. + Encumb.
<b>Federal</b>				
Construction	\$ 52,511,908.33			
MOF	\$ 11,914,668.98			
Utilities (Project)	\$ 6,958,405.62	\$ 62,458,113.80	\$ 8,926,869.13	\$ 71,384,982.93
Utilities (3rd Party)	\$ 6,225,065.37	\$ 2,574,494.38	\$ 3,092,363.76	\$ 5,666,858.14
Fare Vending	\$ 550,000.00	\$ -		\$ -
City Project Administration	\$ 4,006,813.27	\$ 2,795,462.44	\$ 260.00	\$ 2,795,722.44
SORTA Project Administration	\$ 2,100,000.00	\$ 1,098,312.91	\$ 901,687.09	\$ 2,000,000.00
Real Estate	\$ 2,010,143.00	\$ 2,011,186.00	\$ -	\$ 2,011,186.00
Start-up (capital)	\$ 250,000.00	\$ -	\$ -	\$ -
Vehicles	\$ 25,213,095.40	\$ 8,937,859.92	\$ 15,014,060.59	\$ 23,951,920.50
Unallocated Contingency	\$ 4,991,010.00	\$ 3,159,953.88	\$ 1,359,247.75	\$ 4,519,201.63
<b>Subtotal</b>	<b>\$ 116,731,109.97</b>	<b>\$ 83,035,383.33</b>	<b>\$ 29,294,488.32</b>	<b>\$ 112,329,871.64</b>
Utilities (Duke Escrow)	\$ 15,000,000.00	\$ 15,000,000.00	\$ -	\$ 15,000,000.00
<b>Federal Total</b>	<b>\$ 131,731,109.97</b>	<b>\$ 98,035,383.33</b>	<b>\$ 29,294,488.32</b>	<b>\$ 127,329,871.64</b>
<b>Local</b>				
Design	\$ 14,598,719.00	\$ 14,313,044.86	\$ 19,571.85	\$ 14,332,616.71
Pre-Development	\$ 1,313,786.00	\$ 1,264,628.13	\$ 49,157.87	\$ 1,313,786.00
City Project Administration	\$ 434,663.00	\$ 384,900.38	\$ -	\$ 384,900.38
<b>Local Total</b>	<b>\$ 16,347,168.00</b>	<b>\$ 15,962,573.37</b>	<b>\$ 68,729.72</b>	<b>\$ 16,031,303.09</b>
<b>Grand Total</b>	<b>\$ 148,078,277.97</b>	<b>\$ 113,997,956.70</b>	<b>\$ 29,363,218.04</b>	<b>\$ 143,361,174.73</b>

\* Construction Expenditures include \$2.931 Million in unreleased retainage on MPD contract .  
 Vehicle Expenditures include \$346,228 in unreleased retainage on CAF contract

# RISK/CONTINGENCY ITEMS

- CONSTRUCTION
  - Unforeseen conditions/design issues
    - Underground and overhead utility and structures conflicts
- VEHICLES
  - Additional staff time, consultant time (LTK)
    - Vehicle delivery delay, acceleration of activities to recover schedule may require additional engineering/inspection support
  - Construction delay
    - If significant, vehicle delay could impact construction testing schedule to the point construction delays occur
- SAFETY & SECURITY CERTIFICATION/INTEGRATED TESTING
  - Issues identified during integrated testing and safety certification may require redesign or additional construction work



# CONTINGENCY USAGE

Through 10/8/15 - DRAFT

Through:	October 8, 2015				
Budget Category	Contingency Budget	Completed Contingency Uses	Pending Contingency Uses	Estimated Contingency Uses	Contingency Remaining
<b>ALLOCATED CONTINGENCY</b>					
Pre-Development	\$ -	\$ -			\$ -
Design	\$ 202,370.96	\$ -			\$ 202,370.96
Real Estate	\$ -	\$ -			\$ -
Construction					
MOF	\$ 2,000,000.00	\$ 1,359,248.32	\$ 174,700.00	\$ -	\$ 466,051.68
Utilities (Project)					
Utilities (3rd Party)	\$ 77,207.23	\$ -			\$ 77,207.23
Vehicles	\$ 2,101,722.40	\$ 977,100.75			\$ 1,124,621.65
Fare Vending	\$ 50,000.00	\$ -			\$ 50,000.00
City Project Administration	\$ 190,800.63	\$ -	\$ 190,800.63		\$ -
SORTA Project Administration	\$ 100,000.00	\$ -			\$ 100,000.00
Start-up	\$ -	\$ -			\$ -
<b>Subtotal</b>	<b>\$ 4,722,101.22</b>	<b>\$ 2,336,349.07</b>	<b>\$ 365,500.63</b>	<b>\$ -</b>	<b>\$ 2,020,251.52</b>
<b>UNALLOCATED CONTINGENCY</b>					
Unallocated Contingency		\$ 1,385,418.50		\$ 223,538.00	
Construction	\$ 4,991,010.00	\$ 2,049,340.11		\$ 881,347.00	\$ (1,089,450.64)
City Project Administration			\$ 931,868.72		
Design		\$ 608,948.31			
<b>Subtotal</b>	<b>\$ 4,991,010.00</b>	<b>\$ 4,043,706.92</b>	<b>\$ 931,868.72</b>	<b>\$ 1,104,885.00</b>	<b>\$ (1,089,450.64)</b>
Utilities (Duke Escrow)	\$ -				\$ -
<b>Grand Total</b>	<b>\$ 9,713,111.22</b>	<b>\$ 6,380,055.99</b>	<b>\$ 1,297,369.35</b>	<b>\$ 1,104,885.00</b>	<b>\$ 930,800.88</b>

# GRANT DRAWDOWN SUMMARY

Through 9/30/15

SOURCE	GRANT NUMBER	ALI CODE	Description	FEDERAL SHARE			
				Authorized	Drawn	Pending	Amount Remaining
Urban Circulator	OH-03-0303	12.79.00	City Project Admin.	\$ 1,453	\$ 1,453	\$ -	\$ -
		12.79.00	SORTA Project Admin.	\$ 1,388,545	\$ 844,226		\$ 544,319
		12.23.03	Construction	\$ 12,598,000	\$ 7,600,000	\$ 3,439,354	\$ 1,558,646
		12.13.20	Vehicles	\$ 11,002,000	\$ 6,667,079		\$ 4,334,921
<b>Subtotal</b>				<b>\$ 24,989,998</b>	<b>\$ 15,112,758</b>	<b>\$ 3,439,354</b>	<b>\$ 6,437,886</b>
CMAQ	OH 95-X054	12.23.03	Construction	\$ 4,000,000	\$ 4,000,000		\$ -
<b>Subtotal</b>				<b>\$ 4,000,000</b>	<b>\$ 4,000,000</b>	<b>\$ -</b>	<b>\$ -</b>
Rail ROW Grant	OH-90-X265	13.73.00	Contingency	\$ 268,278	\$ 268,278		
<b>Subtotal</b>				<b>\$ 268,278</b>	<b>\$ 268,278</b>	<b>\$ -</b>	<b>\$ -</b>
TIGER 3	OH 79-0002	12.79.00	City Project Admin.	\$ 154,545	\$ 154,545	\$ -	\$ (0)
		12.79.00	SORTA Project Admin	\$ 211,453	\$ 34,434		\$ 177,019
		12.23.03	Construction	\$ 15,554,000	\$ 15,554,000		\$ (0)
<b>Subtotal</b>				<b>\$ 15,919,998</b>	<b>\$ 15,742,980</b>	<b>\$ -</b>	<b>\$ 177,018</b>
<b>TOTAL</b>				<b>\$ 45,178,274</b>	<b>\$ 35,124,016</b>	<b>\$ 3,439,354</b>	<b>\$ 6,614,904</b>

\* Budget revision on 9/16/15 moved \$4.998 M from Urban Circulator ALI 12.13.20 to 12.23.03

\*\* Drawn + Pending = 85.4% of Federal grant funds



# CONSTRUCTION STATUS

through 8/31/15

- Revenue Track Complete 18,293 of 18,600 ft. (98%)
- OCS Pole Foundations (as of 10/7/15) 317 of 317 complete (100%)
- OCS Poles (as of 10/7/15) 328 of 328 complete (100%)
- Traffic Signal Foundations (as of 10/7/15) 96 of 96 complete (100%)
- Traffic Signal Poles 95 of 95 complete (100%)
- Lane Miles Paved Approx. 10.7 of 13.5 complete
- Station Stop platforms (as of 10/7/15) 18 of 18 complete
- Traction Power Substations 4 of 4 delivered
- Special Trackwork 12 of 12 switches installed



# CONSTRUCTION STATUS

## Track:

- Complete Through Sep 8
- Scheduled Aug-Sep 2015

## OCS:

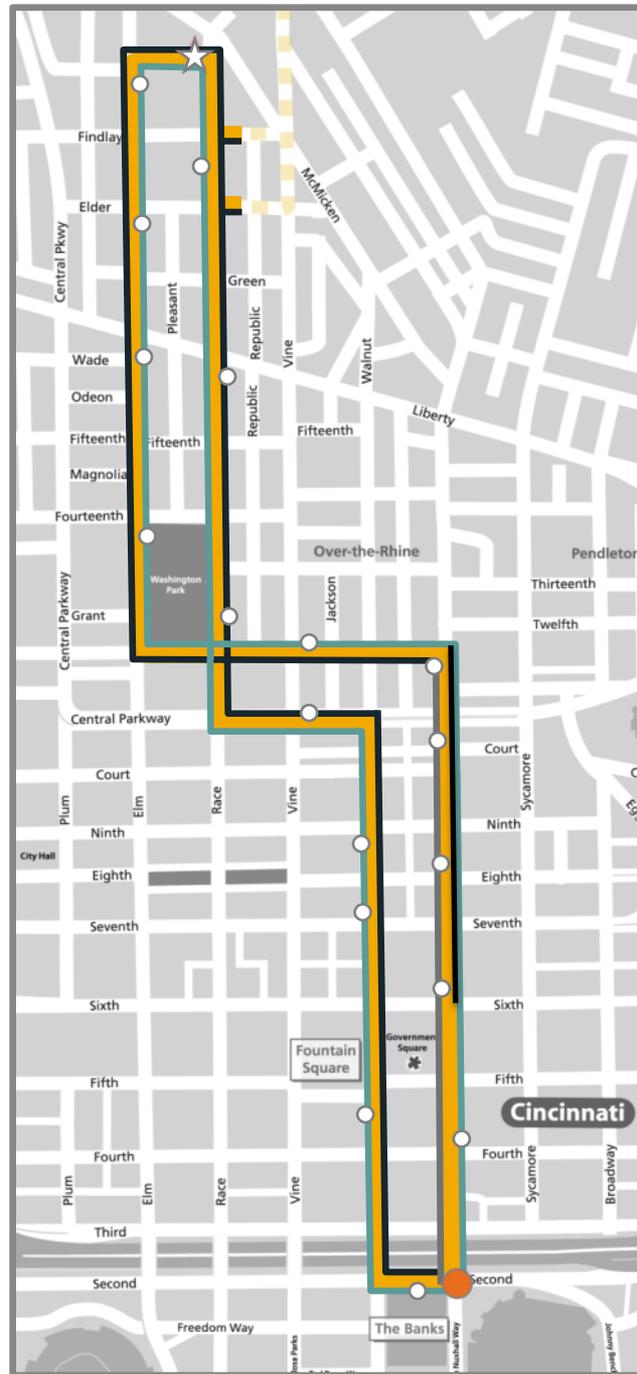
- Complete Through Sep 2015
- Scheduled Sep-Oct 2015

## Paving:

- Complete Oct 12, 2015
- Scheduled Sep-Oct 2015

## Stops:

- Complete

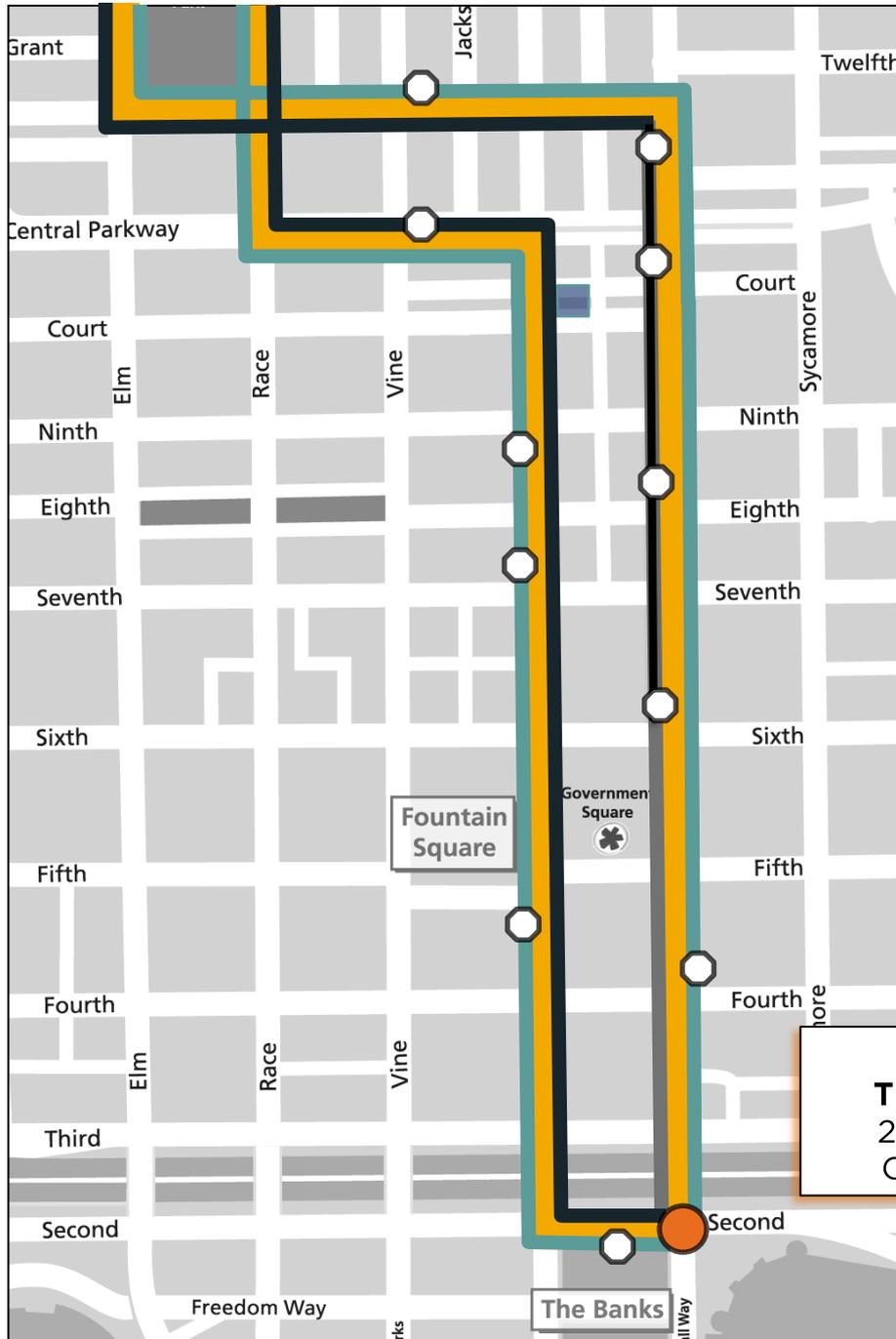


# CINCINNATI STREETCAR MAJOR CBD WORK

OCT 2015

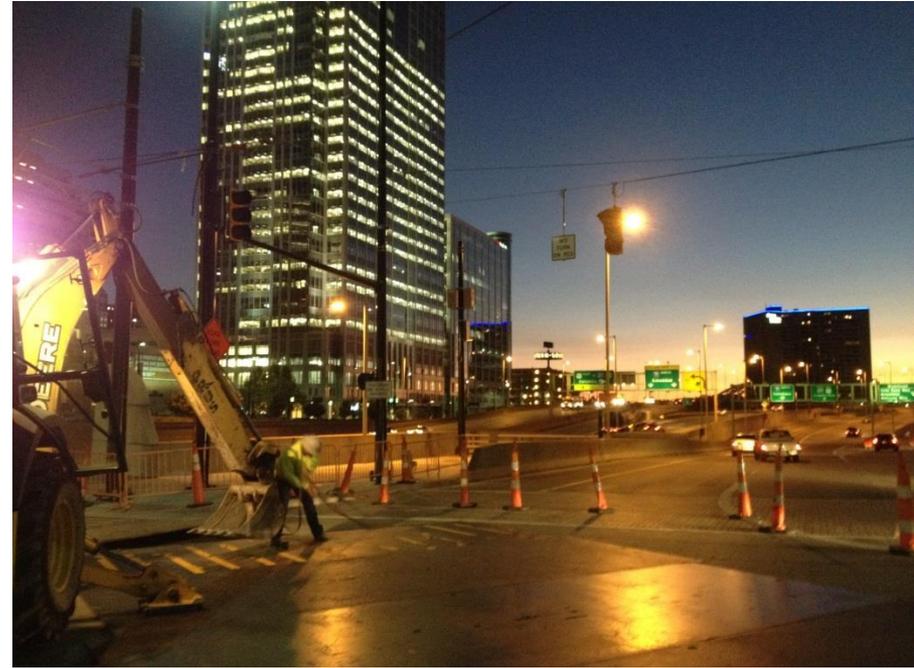
**Legend**

- Track Complete
- Track Scheduled
- OCS Complete
- OCS Scheduled
- Paving Complete
- Paving Scheduled
- Stops Complete



**Main St. Trackwork**  
2<sup>nd</sup> & Main  
Oct 12-30

# CONSTRUCTION STATUS



# CONSTRUCTION STATUS



# CONSTRUCTION STATUS



# UTILITIES

through 9/30/15

- Duke Electric 99% complete
- Duke Gas 99% complete
- Cincinnati Bell 99% complete
- Water 99% complete
- Level 3 100% complete
- Chilled Water 100% complete
- Time Warner Cable 99% complete
- MSD (Sewer) 95% complete



# UTILITIES



# VEHICLES

- **Vehicle production and testing continues in Elmira**
  - Unit #1 - dynamic testing completed, testing mods being implemented, CAF QA inspections
  - Unit #2 - climate room testing completed - one re-test Oct 13
  - Unit #3 - routine testing underway
  - Unit #4 - carshell assembly complete , installations in progress
  - Unit #5 - some carshell assembly complete, repair required for carshell damage
- FAI for first vehicle projected for Oct 13-15 in Elmira
- City is reviewing Open Items in concert with CAF schedule updates to determine authorization for CAF to ship vehicles.
- Warrantees do not start until after vehicle has been successfully tested in Cincinnati and vehicle accepted for revenue service (Conditional Acceptance)

# VEHICLES – SCHEDULE VS. OPEN ITEMS

**GOAL:** Balance and minimize risks to project cost and schedule slippage due to *delayed delivery* with risks associated with *closing vehicle open items after shipment*

- City is working with LTK to balance risks associated with closing open items in Cincinnati and risks to project cost and schedule caused by further delaying shipment.
  - Shipment with some minor Open Items is not uncommon and is acknowledged and allowed per contract
  - Testing activities in Cincinnati will likely identify additional open items to be addressed
  - All Open Items will be closed prior to Final Acceptance of vehicle. Final Acceptance requires 500 km of successful operation including 100 km without failure of equipment. If a failure occurs in the last 100 kilometers, the 100 kilometer test will be restarted after correction of the problem.

# CAF RECOVERY PLAN

- **Major potential risks:**

- 1) Additional production and testing shifts will put pressure on City's engineering and inspection resources (LTK)
  - Could require additional resources for LTK contract
- 2) Extended delivery could impact construction contractor's testing schedule
  - City is working to determine extent of this - could result in delay claim from MPD
- 3) Extended delivery dates could impact start up schedule for operator
  - No anticipated impact to operations activities for Transdev, based on current projected delivery dates - will monitor against further delays
- 4) Failures or issues identified in testing activities could produce further delay
  - Redesign or major retesting will require additional time
  - Nothing significant has resulted in testing to date, but there are open items

# CAF PROGRESS



**CoC Unit 1 prepped in Building 4B**



**Final Customer roof & under car ready**



**CoC Unit 2 in Building 4T**



**Testing continues on Unit 2**

# CAF PROGRESS



**CoC Unit 3 with Unit 2 in background**



**Technician reviewing Event Recorder**



**CoC Unit 4 C1 activity in building 4B**

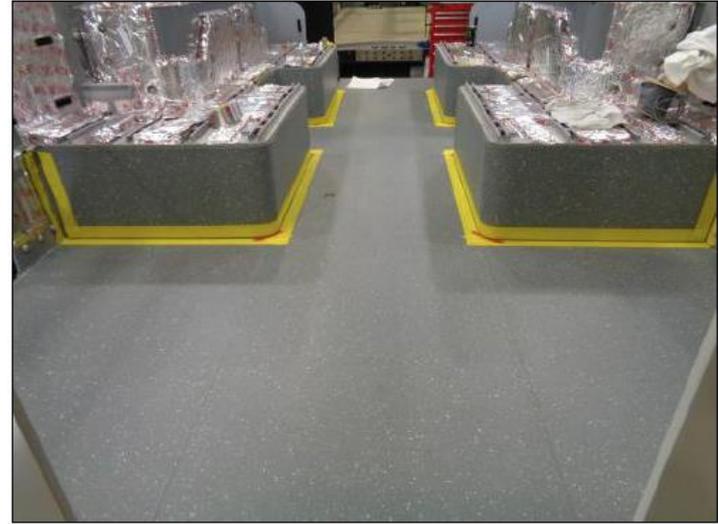


**Crane crew trucking C1 car**

# CAF PROGRESS



**Unit 5 (the final car) on stage 2 stands**



**Rubber flooring down in C1 car**



**S-car roof assembly in-process**



**C1 roof assembly in-process**

# COMMUNITY INVOLVEMENT



Major Transportation & Regional Cooperation  
Committee - October 13, 2015

# COMMUNITY INVOLVEMENT

- Communications effort has begun to shift to SORTA operations and streetcar safety
- Meeting with City departments and outside agencies and organizations to emphasize the general streetcar safety issue, the track access process, and any obligations that they may have under the OMIGA.
- Meetings with CPD, CFD, EOC, SORTA, and Cincinnati DOTE focusing primarily on emergency response, SOPS for working around the wire, and communication protocols.
- Press releases and media availability for intersection closure updates

# COMMUNITY INVOLVEMENT

- Continuing established involvement strategy:
  - Streetcar Hotline: (513) 352-3333
  - Monthly Construction Stakeholders Meeting
  - Email Weekly updates
  - Media alerts for all closures or other work disrupting pedestrian or vehicular traffic in coordination with RoadmapCincy
  - Personal visit by a member of the team to affected businesses and building management
  - Attendance at DCI/Police Sector Meetings

# COMMUNITY INVOLVEMENT

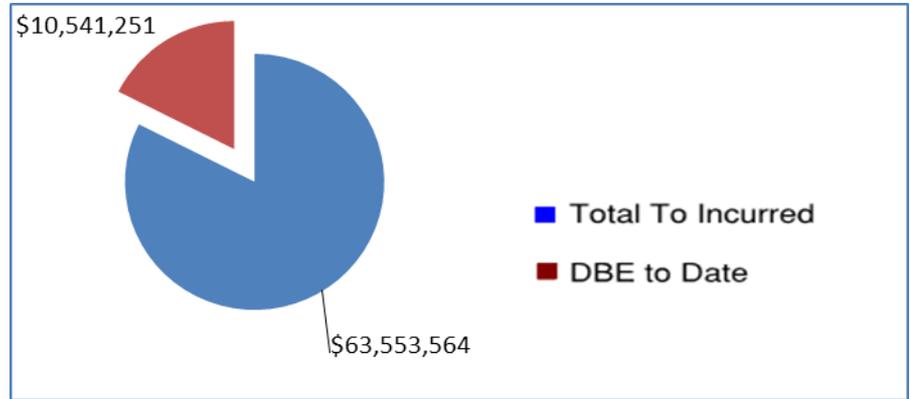
- Streetcar website: [www.cincinnati-streetcar.com](http://www.cincinnati-streetcar.com) (all media and press releases)
- Bi-weekly coordination meetings with police, City Manager and communication personnel
- Monthly Construction Stakeholders Meeting
- Monthly Riverfront Joint Operations Task Force
- Social media (twitter @Cincy\_Streetcar, City of Cincinnati Facebook page  
<https://www.facebook.com/CincinnatiStreetcarOFFICIAL> )

# JOB SITE SAFETY

- Safety Oriented-To date: 874
- Safety Oriented-August: 16
- Safety Orientations-August: 7
- Total man-hours worked to date: 262,361
- Total man-hours worked without a lost time accident: 161,062
- Lost Time Accidents-To date: 3
- Lost Time Accidents-August: 0

# DBE & INCLUSION

DBE Spend To Date:  
16.6%



MPD reports a DBE Spend at end of August: 16.6%, same as July and below the target of 18%.

The City will continue to monitor MPD's reporting and performance against the DBE goal and seek ways to maximize DBE spending and discuss during weekly construction progress meetings.

MPD reports that work could still on track to meet the DBE subcontracting goal of 18% at the time of final billing. but the tallying of final quantities may show them below their goal

# DBE & INCLUSION

## Workforce Inclusion Compliance

- City requirements under the contract establish workforce inclusion goals for MPD as well. The City requirements establish inclusion goals for the contractor's aggregate workforce in Hamilton County throughout the term of the contract. The chart below summarizes hours worked on the contract (Actual) as well as the countywide workforce inclusion goals:

Minority & Female Utilization		
	<u>Actual</u>	<u>Goal</u>
Minority Hours	18.8%	11.9%
Female Hours	3.9%	6.9%
Minority Female	68.2%	50.0%



C I N C I N N A T I  
**STREETCAR**™

## **PLANNING & OPERATIONS UPDATE**



# OPERATIONS & MAINTENANCE UPDATE

OCTOBER 2015



# KEY SCHEDULE MILESTONES

October 2015 -- Remainder MOF facility to SORTA



October 2015 -- Ticket vending machine delivery



October 2015 -- Wheel truing machine delivery



End of October -- First vehicle



November 2015 -- Integrated testing begins



Spring 2016 -- All system turnovers complete



April 2016 -- Completion of civil construction



May/June 2016 -- Transdev mobilization, phase 2



September 2016 -- Start of passenger service



# SAFETY

- **Construction verification**
  - New City Staff Liaison
  - Project Safety Officer Meeting
- **ODOT State Safety Oversight**
  - Review and comment on revised SSO Program standard
- **Vehicle design audit**
  - Greatly improved CAF documentation
  - Audit scheduled end of October 2015
- **Communication/outreach**
  - Project executive and SORTA continued activities, with emphasis on OCS safety and bike safety



# SAFETY COMMITTEES

## **Safety and Security Review Committee**

- FTA and ODOT participation -- September 11
- Track access issues
- Hazard log – remaining issues

## **Fire, Life, Safety, and Security Committee**

- First responder training
- MOF security assessment



# RAIL ACTIVATION

- **Maintenance & Operating Facility (MOF) turnover**
- **Streetcar rail activation plan**
  - Revision 2 distributed
  - Streetcar integrated test plan
    - MPD schedule
- **Transdev mobilization status**
  - SOPs
  - MOF training
  - Staff training in San Diego
  - New hires



# SYSTEM INTEGRATED TEST PLAN

Verification that all systems work together

Most tests require streetcar vehicle

Integration of:

- CAF Cincinnati type and routine test plans
- MPD civil test plan
- Other tests

Examples:

- Pull test
- Substation tests
- CAD/AVL tests



# WHAT WILL THE PUBLIC SEE?

**Dead pull test, done at night:**



# VEHICLE ADVERTISING/SPONSORSHIPS

- **OMIGA – SORTA’s primary responsibility**
  - SORTA’s Advertising Vehicles contract
- **Difference between sponsorships and advertising**
- **SORTA advertising SOP and policy**
  - No window coverage
  - No logo coverage



# VEHICLE ADVERTISING/SPONSORSHIPS

- Interior advertising:
  - Floor
  - Ceiling
  - Lateral traps (car cards)
- Revenues offset operating expenses



# AVAILABLE SPACE FOR PLACEMENTS



# “BE STREETCAR SAFE” CAMPAIGN

- Campaign kicks off when streetcars arrive (pre-testing)
- Initial push in OTR -- phase 2 for CBD and riverfront
- Safety messages for pedestrians, motorists, bikes, people with disabilities
- Includes media relations, e-blasts, web, brochures, video, presentations
- Also Spanish and accessible format

**BE**  
STREETCAR  
**SAFE**



# “BE STREETCAR SAFE” CAMPAIGN



**BE STREETCAR SAFE** Look up! Look out!

**CAUTION!**  
HIGH-VOLTAGE OVERHEAD WIRES  
ELECTROCUTION RISK

You must have appropriate permits from the City of Cincinnati to do work in the area near the streetcar route, contact:

**DOTS ROW Management Office**  
801 Plum St., Suite 425  
Cincinnati, OH 45202  
513-352-3463, Monday to Friday, 8 a.m. to 4 p.m.

Use extreme caution when doing any of the following along the streetcar route:

- Deliveries to upper floors of buildings - using lifts, jacks, other raised platform equipment
- Chutes or throwing debris out of windows - buildings or dumpster equipment
- Scaffolding, ladders, lifts, etc. - washing windows, painting, roofing, other maintenance work
- Wire equipment on upper floors - installing cable or satellite TV, telecommunications, alarm systems, etc.
- Front-end, etc. dumpsters
- Mast antennas - media trucks
- Emptying trash

For information about permits needed along the streetcar route, contact:

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www.cincinnati-streetcar.com  
www.cincinnati-streetcar.com  
Streetcar Construction Hotline  
513-352-3453

**BE STREETCAR SAFE**

**Manténgase seguro del tranvía!**

1. Vea y escuche... no cruce enfrente de un tranvía en movimiento
2. De él paso sobre las vías, camine con su bicicleta o cruce en ángulo recto.
3. No camine, corra ni juegue en las vías del tranvía
4. Manténganse lejos de las astas, cables eléctricos de alto voltaje aéreos y centrales eléctricas
5. Estaciones dentro de las líneas blancas pintadas a lo largo del área de las vías y mire antes de abrir la puerta

www.cincinnati-streetcar.com  
www.cincinnati-streetcar.com  
Streetcar Construction Hotline  
513-352-3453

**BE STREETCAR SAFE** PARKING SAFETY

**Friendly WARNING for parking violators**  
Streetcars will be tested over the next several months. Be safe - protect yourself and your vehicle!

**Don't park on streetcar tracks**

- Do not park on tracks or track area
- Park completely within the white line (including mirrors)
- Look before opening your door of your vehicle
- Never cross in front of a moving streetcar

**Keep it moving**  
Failure to park within the white lines or double-parking along the streetcar route can prevent streetcars from passing and cause the system to back up, so do your part to keep everyone moving.

www.facebook.com/CincinnatiStreetcar  
www.cincinnati-streetcar.com  
Streetcar Construction Hotline  
513-352-3453

**BE STREETCAR SAFE**

CINCINNATI STREETCAR

**Budweiser**  
DESIGNATE A DRIVER  
DON'T DRINK AND DRIVE

**BE STREETCAR SAFE**

SAFETY FOR PEOPLE WITH DISABILITIES



# KIDS: “BEE STREETCAR SAFE”

- Specifically targeted to kids – Safety Bee motif
- School outreach, presentations
- Kid-friendly materials, safety quiz
- Kids’ “touch the streetcar” event later this year



# KIDS: “BEE STREETCAR SAFE”

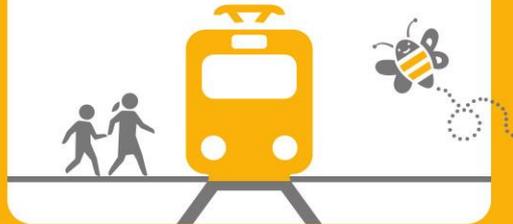
## STREETCAR WORD SEARCH

S R E G N E S S A P  
 T B C A R B A R N P  
 R H T H J L N E R T  
 E E R K Z Y T S I W  
 E L A O H  
 T M N O I  
 C E S L A  
 A T I R E  
 R M T H E  
 S U B S T  
 O Z G E C

STREETCARS | SUBSTATIONS  
 BE SAFE | LOOK | LISTEN |

## THE A, B, C & D's OF STREETCAR SAFETY

Be safe around the Cincinnati Streetcar.  
 Always look and listen and follow these important safety tips:



# WHEEL TRUING MACHINE

Maintains wheel profile for smooth operation; will be installed at MOF by end of year

- Modifications to MOF Complete
- Delivery and MOF installation October 12
- Testing and commissioning November



# WHEEL TRUING MACHINE



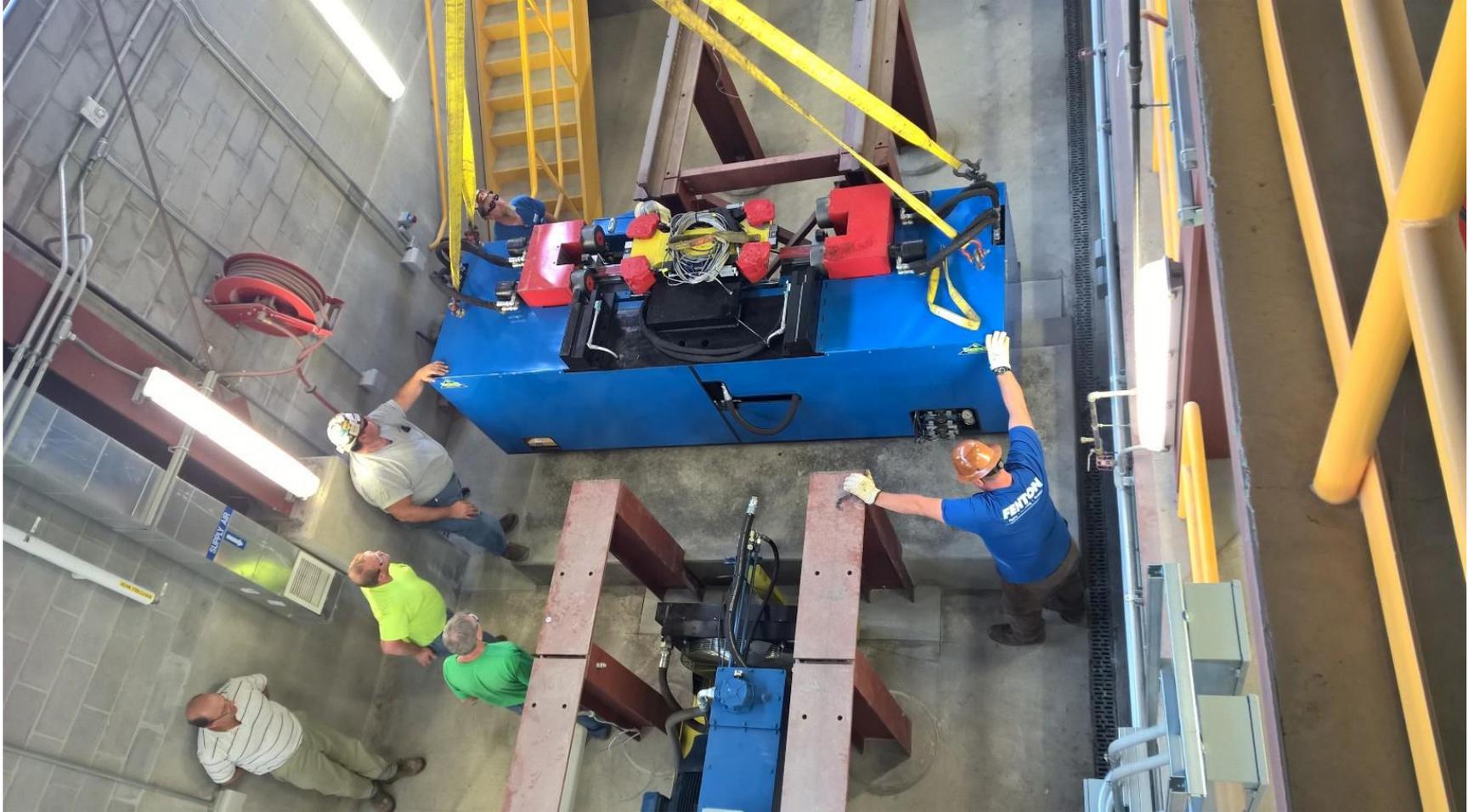
# WHEEL TRUING MACHINE



# WHEEL TRUING MACHINE



# WHEEL TRUING MACHINE



# WHEEL TRUING MACHINE



# WHEEL TRUING MACHINE



# CRITICAL ISSUES

- **SOP development:**
  - SORTA's SOPs complete
  - Transdev's SOPs underway
- **MOF office equipment** -- complete
- **TVM order in production** -- delivery October 2015
- **Trapeze CAD/AVL communications system:**
  - MOF equipment order



# QUESTIONS

