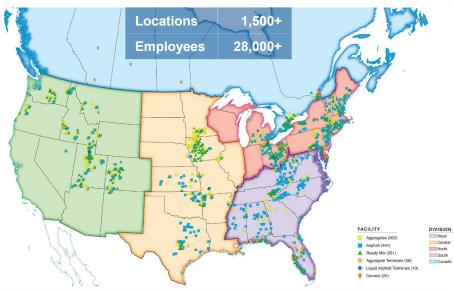


# I px !zpv!l opx !Vt 2 2





Product	Position
Asphalt	No. 1
RMC	No. 1
Aggregates	No.1





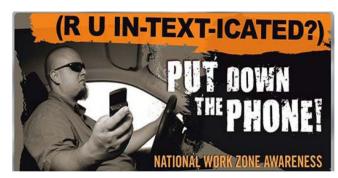
## N jyhbyoh!Sjt I t!



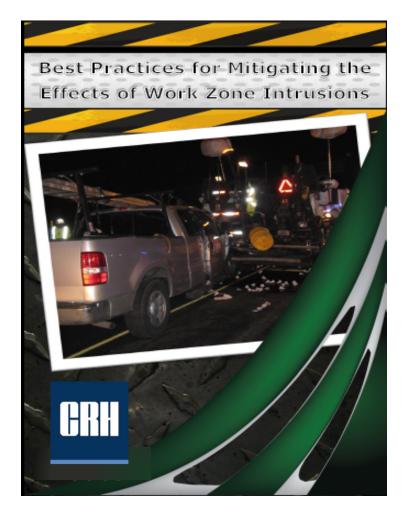




- National Efforts
  - Legislation
  - Public Education
  - Trade Associations
- Local Efforts
  - Compliance
  - Training
  - Innovation
  - State associations and DOT's
  - Best Practices







- Management Traffic Control Supervisors, Local Management Engagement, DOT Partnering
- Risk Assessment Job site/equipment evaluation, Preshift/Pre-task crew meetings
- Safe Work Practices –Personal positioning, equipment staging
- Personal Protective Equipment (PPE)- Hard hat, Highvis apparel, Illumination
- Equipment for Intrusion Prevention attenuators, work zone lighting
- Maintenance of Traffic -Manual on Uniform Temporary Traffic Control (MUTCD), Internal Traffic Control Plan
- Beyond Compliance temporary rumble strips, law enforcement, safety signage

http://www.workzonesafety.org/data-resources/wz-intrusion-prevention/

#### PvdX i z"

#### The **STATS**:

- According to the National Highway Traffic Safety Administration (NHTSA), 80% of accidents and 60% of highway deaths are the result of distracted drivers.
- Vehicle Intrusions are the leading cause of worker fatalities with the road construction industry. In 2013, there were 67,523 crashes in work zones. In 2014, there were 669 fatalities from crashes in work zones

Frank



Bubba



Marshall



Ronaldo



Chet



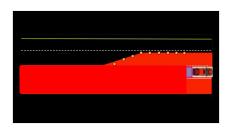




## 4!Cbt jd!Bqqrjdbujpot

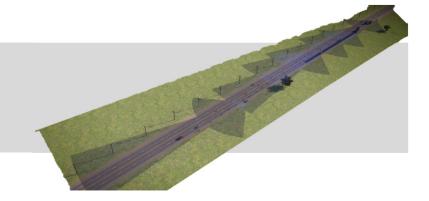
**Tubipobsz!Tjwbipo!** Flagging Station, Maintenance Crews, Lone Worker





Nf shf! – MOT (cone) Trucks, Striping Operations, Sweeping Operations, Road Rangers, School Buses

**Bduwf!X psl![ pof t!** Paving, Milling, or Construction Operations within (non-protected) lane closure



# BX BSF!Spbe!N bq

Concept

Possibility

**Usability** 

Production

**Marketability** 

May 2013
Project Begins

May - Dec 2015
Pilot
Alert TTI Testing

Sept 2015 CRH Board Demo May - Dec 2016

Large Pilot

Performance TTI Testing

June 2017 Sentry Deployment Dec 2017 Debug/Test 2018
System improvements
Manufacturing

2019 200 Unit Deployment

1st/2nd Generations

3<sup>rd</sup> Generation

4th Generation

#### Tested in 14 States / 40 Crews

- ≜ Lessons Learned
- ▲ Needs to be easy to use/install
- ▲ Needs to provide feedback



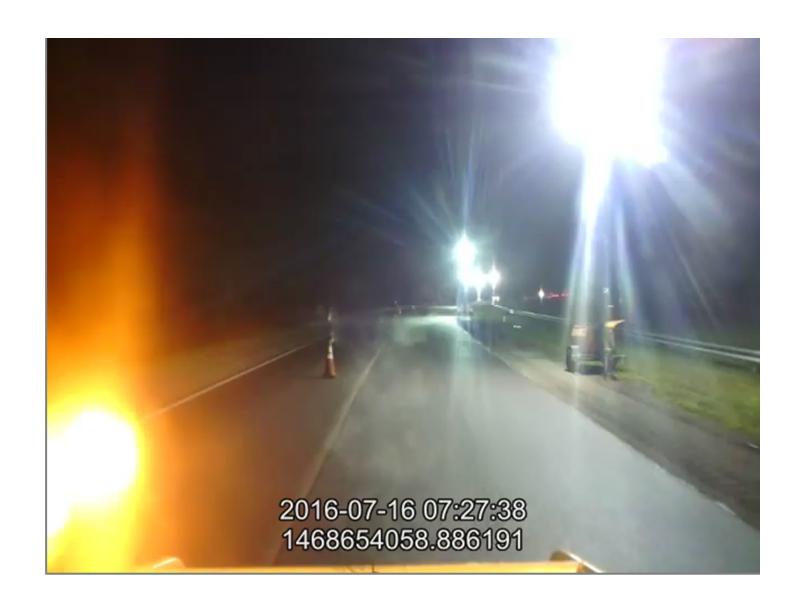






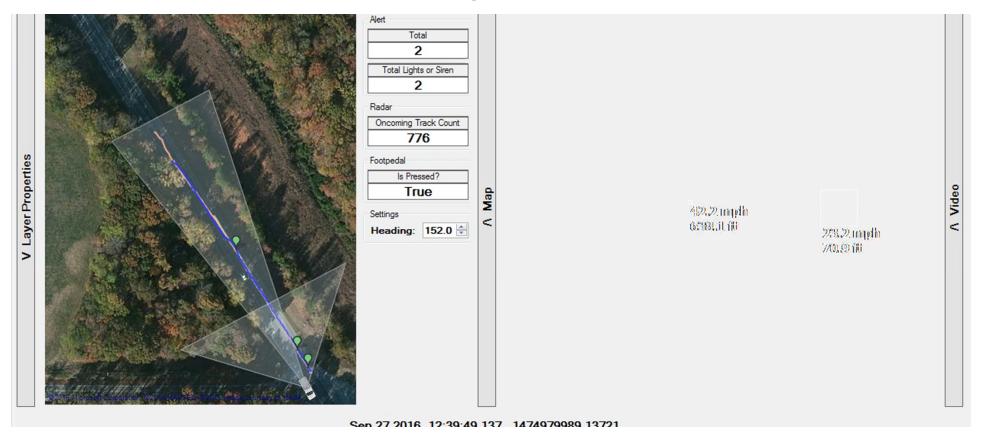
Mbof!
Journal
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OZ!Ui svx bz!!



## BX BSF!TFOUSZ!)Gbhhf &Dbxt\*

#### N vt drh!Ti pbrh-!Brbcbn b!



#### **BX BSF!TFOUSZ**

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- ▲ Tn bmsln psf!qpsubcrfi!dbt f
- ♣ Rvjdl !f bt z!Tf uVq
- ≜ 26!I pvst!Cbuf sz!Mgf



**Proof of Concept** 

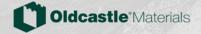


**Prototype** 



**New SENTRY** 



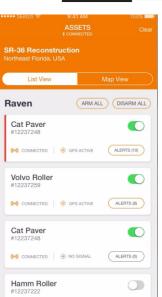


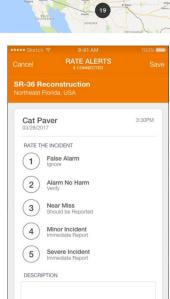
#### BX BSF!CBTF!TUBU\_PO N pcjrfi-!X f c!Bqq!' !Ebubcbt f

- ≜ Easy log in and UI on iOS or Android phone or tablet
- ♣ Real Time Event Data and Alerts
- **Easy** event rating
- Near time visualizations tools
- ♣ Performance Metrics and Protected Zone Overview
- ▲ Mapping with Status and location updates











AW <u>=</u> IR	■ Select Group ▼ Search Location or Project or Assets Q.	Hi, David Mathew ▼
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# Thank you!



