



## AD-here Blended Additive—Project Profile, Jacksonville, FL

### AD-here LOF 65-00<sup>®</sup> with CECABASE<sup>®</sup> RT 945

#### Project Information:

Agency: Florida Department of Transportation

Project Location: US-301 Nassau County, 20 miles NW of Jacksonville, FL

Date Placed: January 2013

As part of the FDOT approval process for warm mix additives, a field trial was recently conducted near Jacksonville Florida using AD-Here LOF 65-00 with CECABASE 945 RT additive. Road Science, Division of Arr Maz Products, partnering with Marathon Petroleum Asphalt Division, in conjunction with Anderson Columbia and the Florida DOT, participated in this field trial, paving a test section of Hwy US-301.

The additive was made available to Anderson Columbia by Marathon at their Jacksonville Asphalt Terminal truck rack. The additive was introduced into the truck at a rate of 0.5% by weight of virgin asphalt binder.

#### Plant Data:

- Anderson Columbia, Plant 7 located in Maxville, FL
- o Aztec Double Barrel 1987 with 1990 drum
  - o 250 tons per hour mix capacity with 205 tph for project
  - o Vertical binder storage tanks
  - o Mix temperature 280°F
  - o Bag house temperature
    - o Enter Avg - 245°F / Exit Avg - 217°F



#### Mix Design: SP-12.5

- o 30% RAP
- o 5.2% RA750 ~PG58-22
- o 0.4% ADhere blended with CECABASE 945RT

Weather: ~0.25" of rain the night prior to production. Temperatures ranged from low 80s to mid 60s. Skies were mixed ranging from clear to mostly cloudy. Surface temperatures ranged from 72°F to 94°F plus winds varied from warm, calm and light, to breezy and cool.



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### Field Data

Paver: Blaw-Knox / Ingersall-Rand PF3200

- o Screed vibratory wasn't used

Rollers: 3 – CAT CB 54 XW

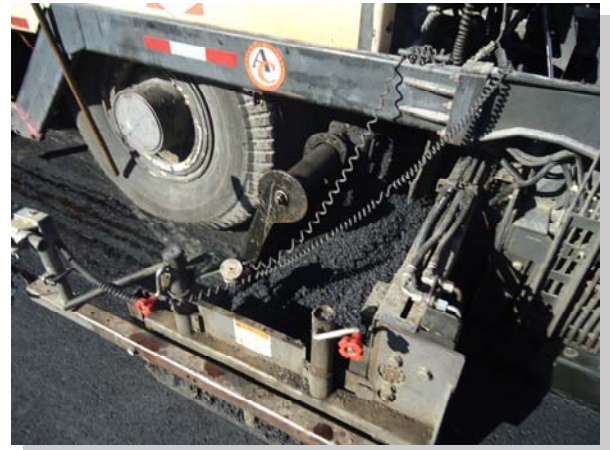
- o HMA compaction pattern: 5/2
- o WMA compaction pattern: 4/2

Average temperature of compaction: 251°F

Density: (by subplot average of five cores)

- o 92.8, 93.7, 92.8, 93.1 (93.1)

(Note: all compaction and lay down occurred without the use of vibratory effort due to the nature of the subgrade).



Results: Overall the trial was a huge success and accomplished its objectives for both the DOT and contractor.

- Mix stayed workable and compaction was achieved with mix temperatures measured on the mat behind the paver by a handheld infrared thermometer down to 190/220 degrees.
- Mix was workable in areas where hand work was needed. Paving crew comments where that the mix did not feel "heavy" as traditional hot mix usually becomes when hand work is required. Comments were made by the paving crew about less smoke and fumes as compared to traditional hot mix.
- Density was achieved using one less coverage in the rolling pattern as compared to the hot mix version of this design both for 1 1/2" and 3 1/2" placement. Static compaction was used.



- The mix was placed ~100°F lower than the standard mix with no reduction in density and Marathon was extremely happy.

### Conclusion:

The contractor achieved his required density which gained him the addition 5% pay bonus for that job, and the State Materials engineer commented in writing that the results were "incredible". The AD-here blend has been added to the FDOT Qualified products list for WMA as the Florida DOT was impressed and will look to utilize the AD-here blended product in other similar projects.