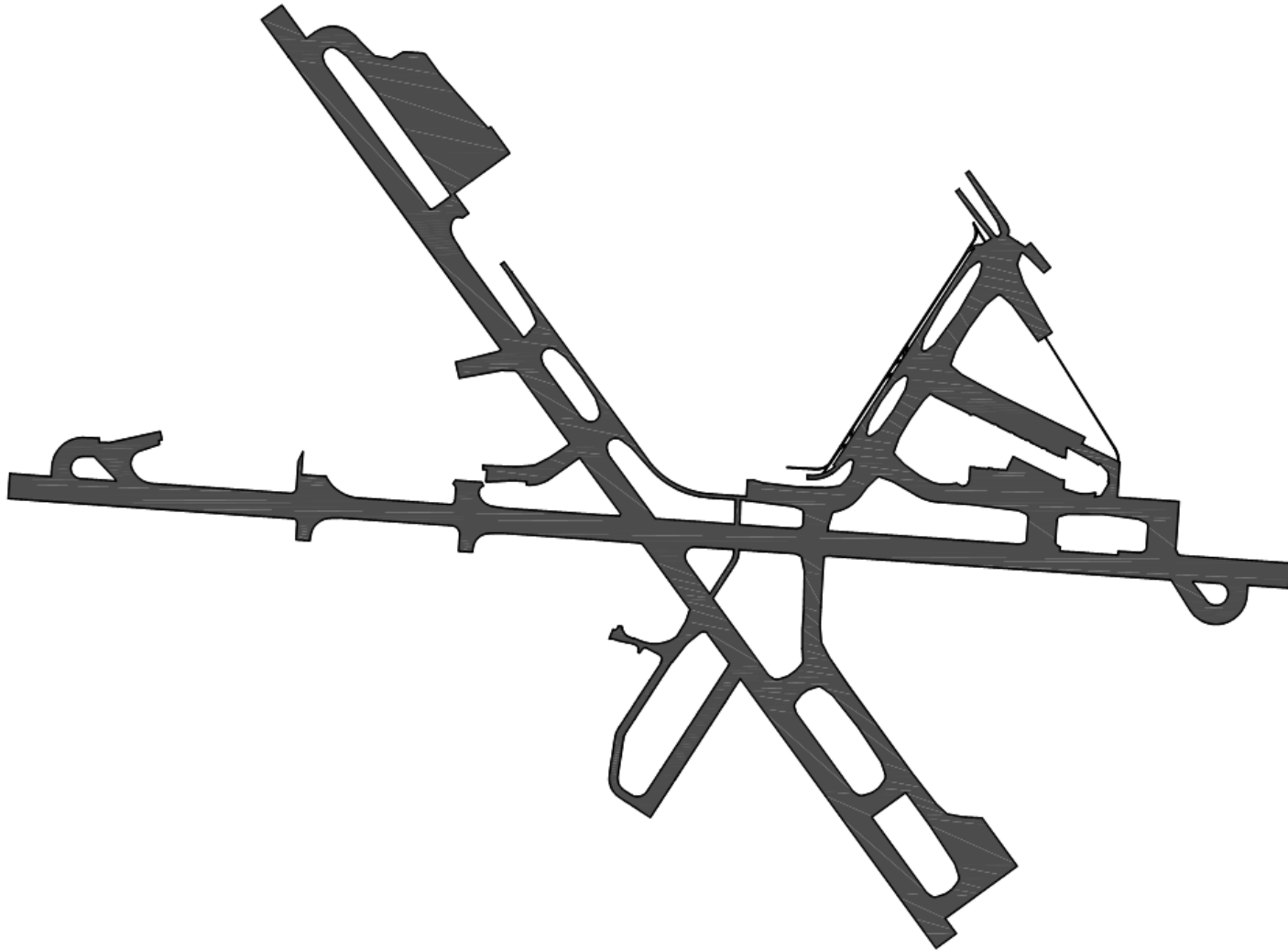




# REDEFINING BWI: AN AIRFIELD TRANSFORMATION

Chuck Dennie, PE

## ➤ BWI AIRFIELD 2017



# PRESENTATION AGENDA

- Program overview
- Management approach
- Program highlights
- Key design elements & innovations
- Challenges
- Takeaways

## PROGRAM OVERVIEW

- Program duration – 2009 to 2017
- Projects:
  - R/W 10-28 Repair
  - R/W 15L-33R Modification
  - R/W 15R-33L Repair
  - Airfield Standards and Pavement Repair Program
  - Miscellaneous T/W Repairs
- Program funding - \$350M

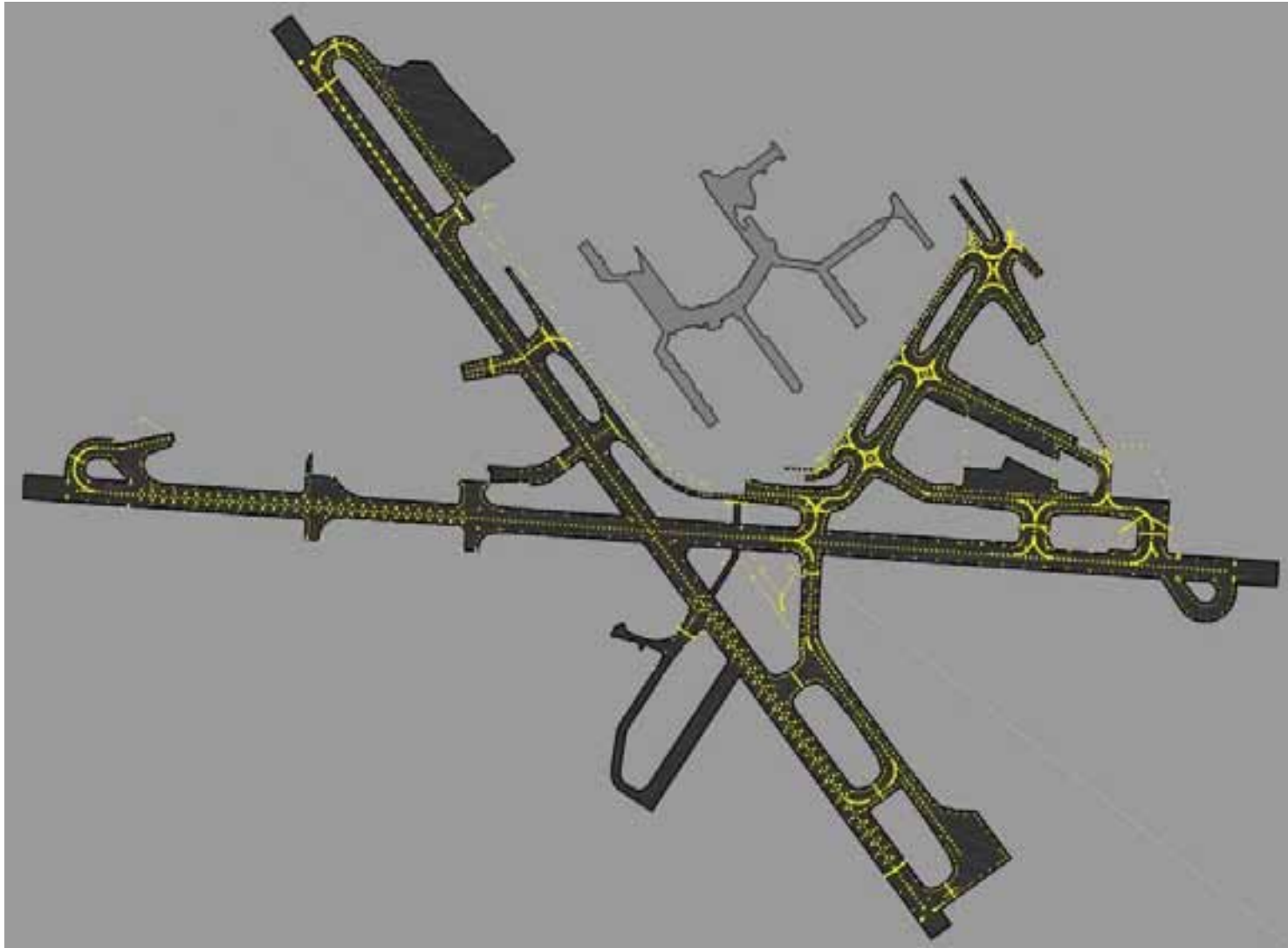


## ➤ PROGRAM OVERVIEW

- >4,000 new light fixtures
- >8 miles of ductbank
- >40 miles of 2" conduit
- >200 miles of #8 L824 cable
- >200 signs

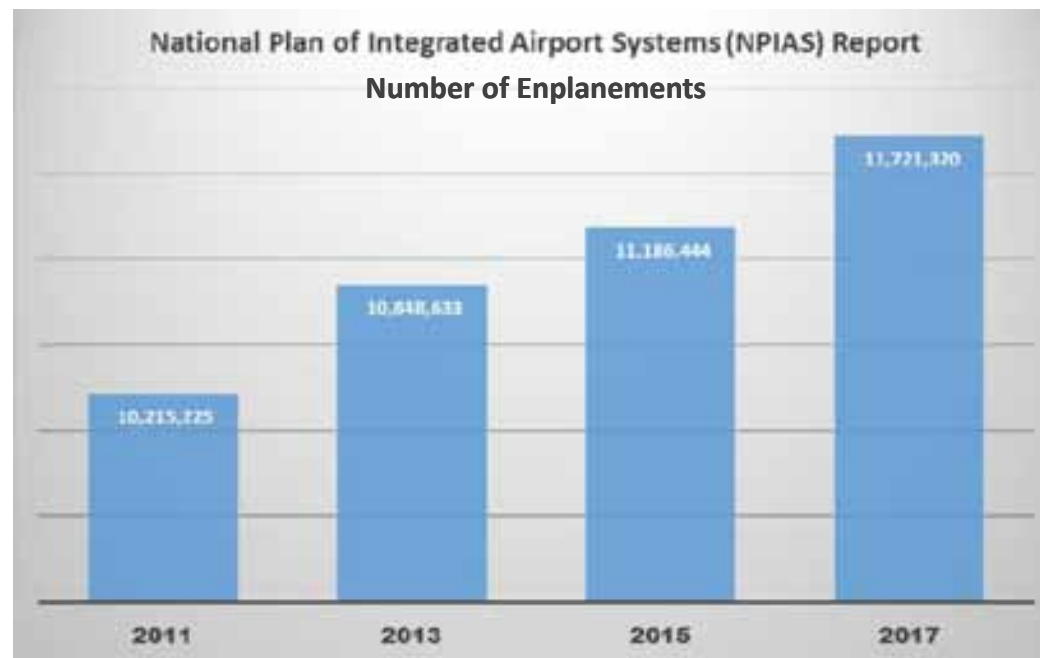


## ➤ PROGRAM OVERVIEW

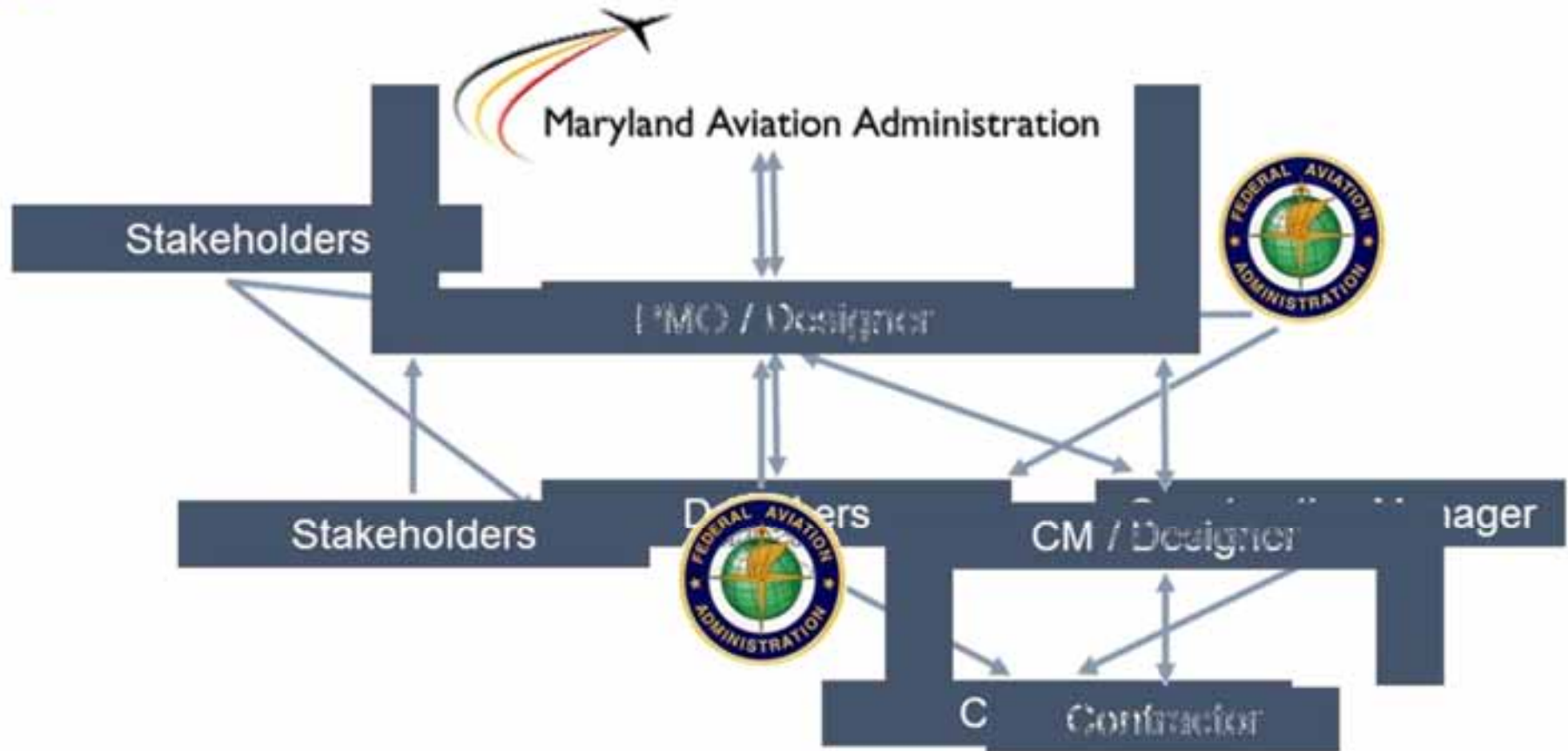


## ➤ PROGRAM OVERVIEW

- Increase in airfield safety (FAA RSA Compliance)
- Increase in operations
- Comply with FAA AC 150/5300-13A Change 1
- Shift to LED lighting and signage/switchgear CCR

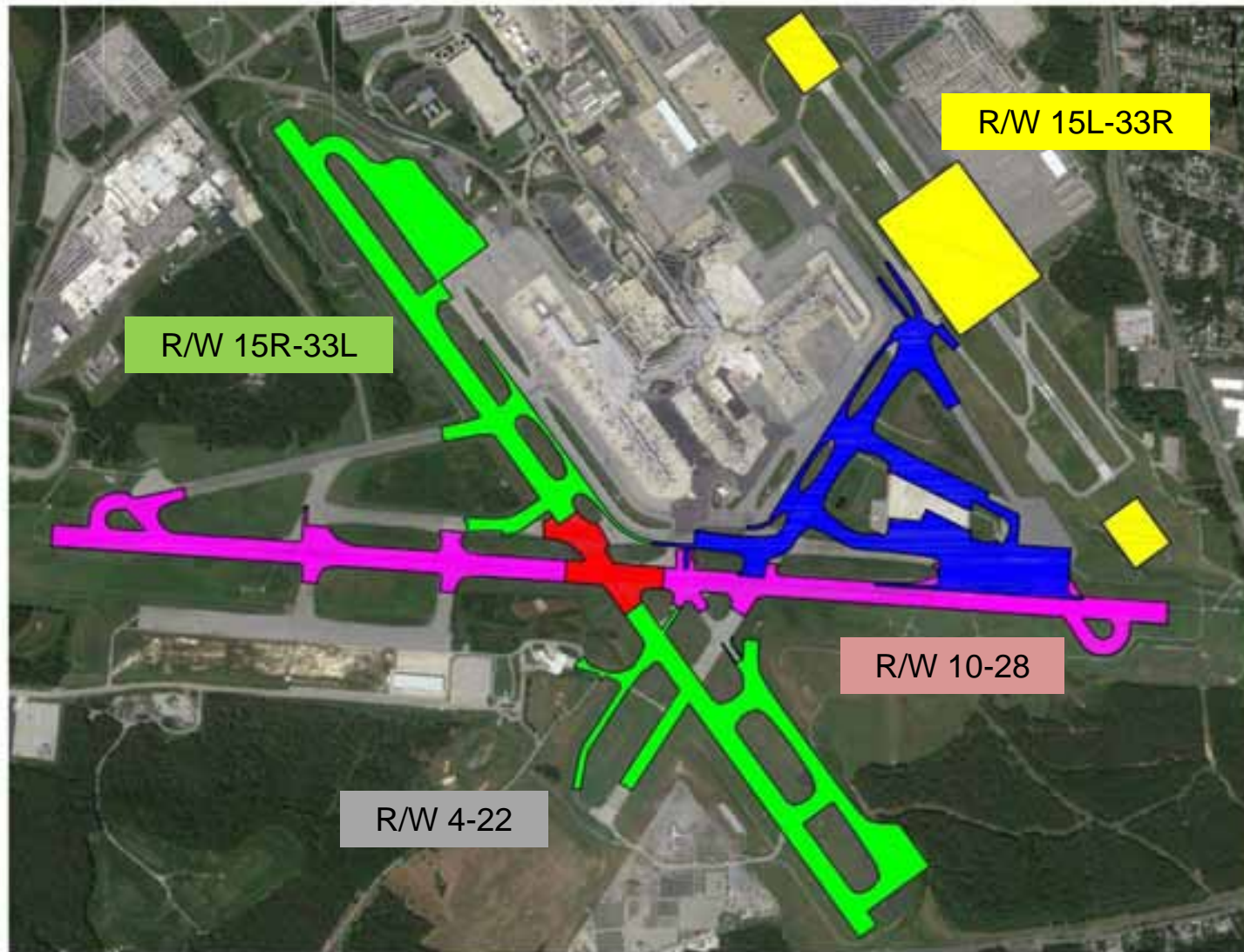


## ➤ MANAGEMENT APPROACH





## ➤ PROGRAM HIGHLIGHTS



## ➤ R/W 10-28 INTERSECTION

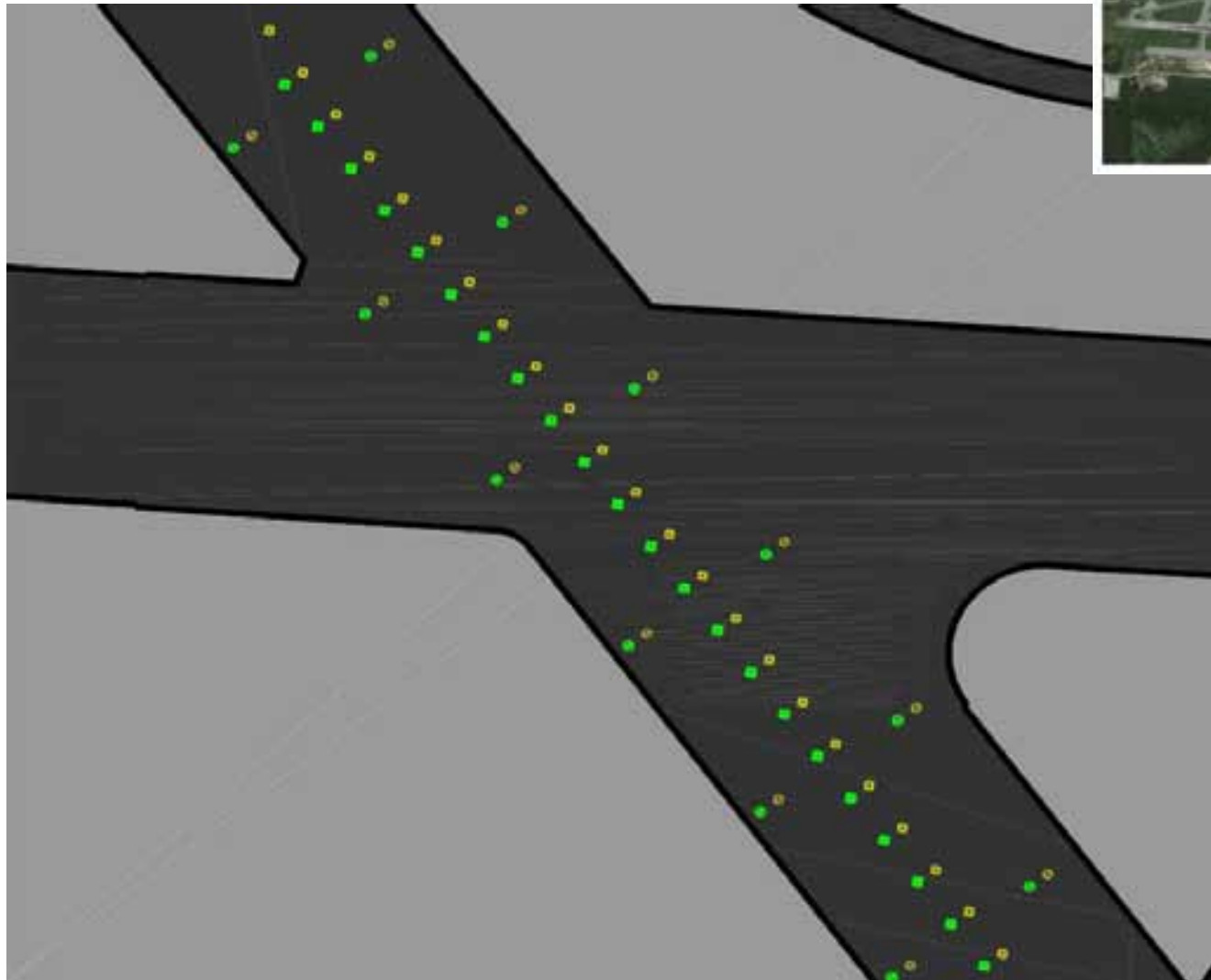




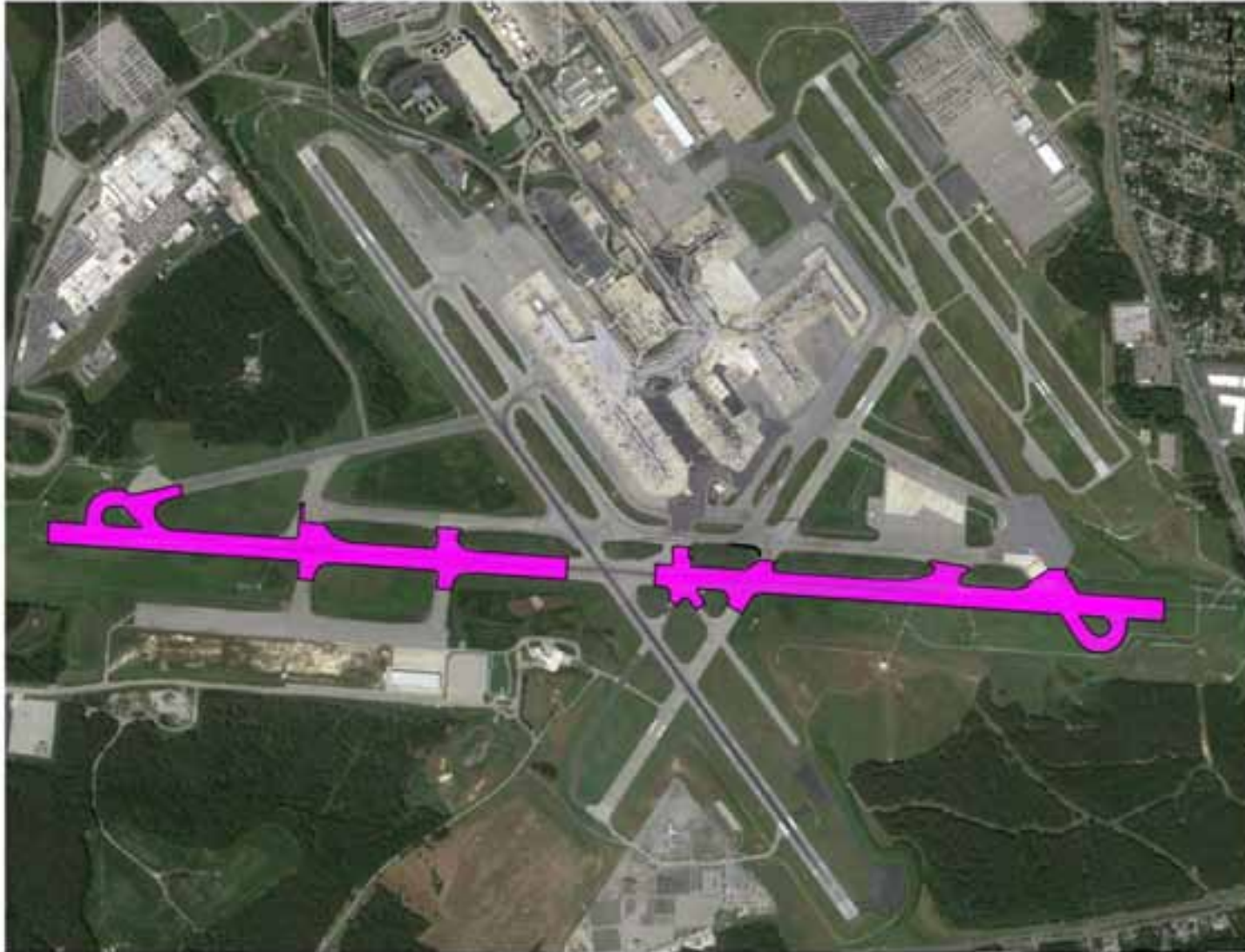
## ➤ R/W 10-28 INTERSECTION



## ➤ R/W 10-28 INTERSECTION



## ➤ R/W 10-28 REPAIR





## ➤ R/W 10-28 REPAIR



## ➤ R/W 10-28 REPAIR





## ➤ R/W 10-28 REPAIR





## ➤ R/W 15L-33R MODIFICATIONS



## ➤ R/W 15L-33R MODIFICATIONS





## ➤ R/W 15L-33R MODIFICATIONS



## ➤ R/W 15L-33R MODIFICATIONS

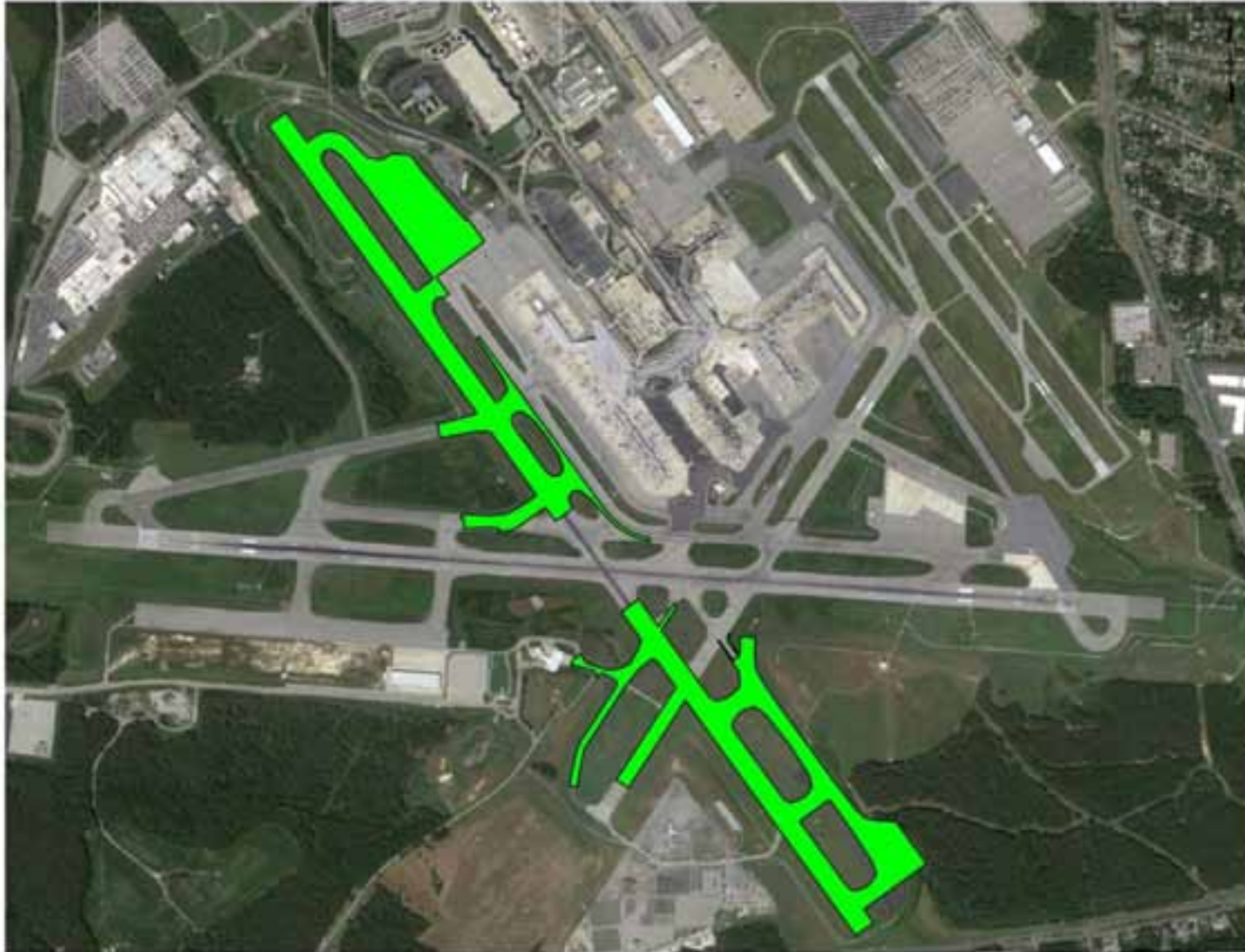




## ➤ R/W 15L-33R MODIFICATIONS



## ➤ RSA 15R-33L REPAIR





## ➤ RSA 15R-33L REPAIR



## ➤ RSA 15R-33L REPAIR





## ➤ RSA 15R-33L REPAIR



## ➤ RSA 15R-33L REPAIR



# ➤ RSA 15R-33L REPAIR

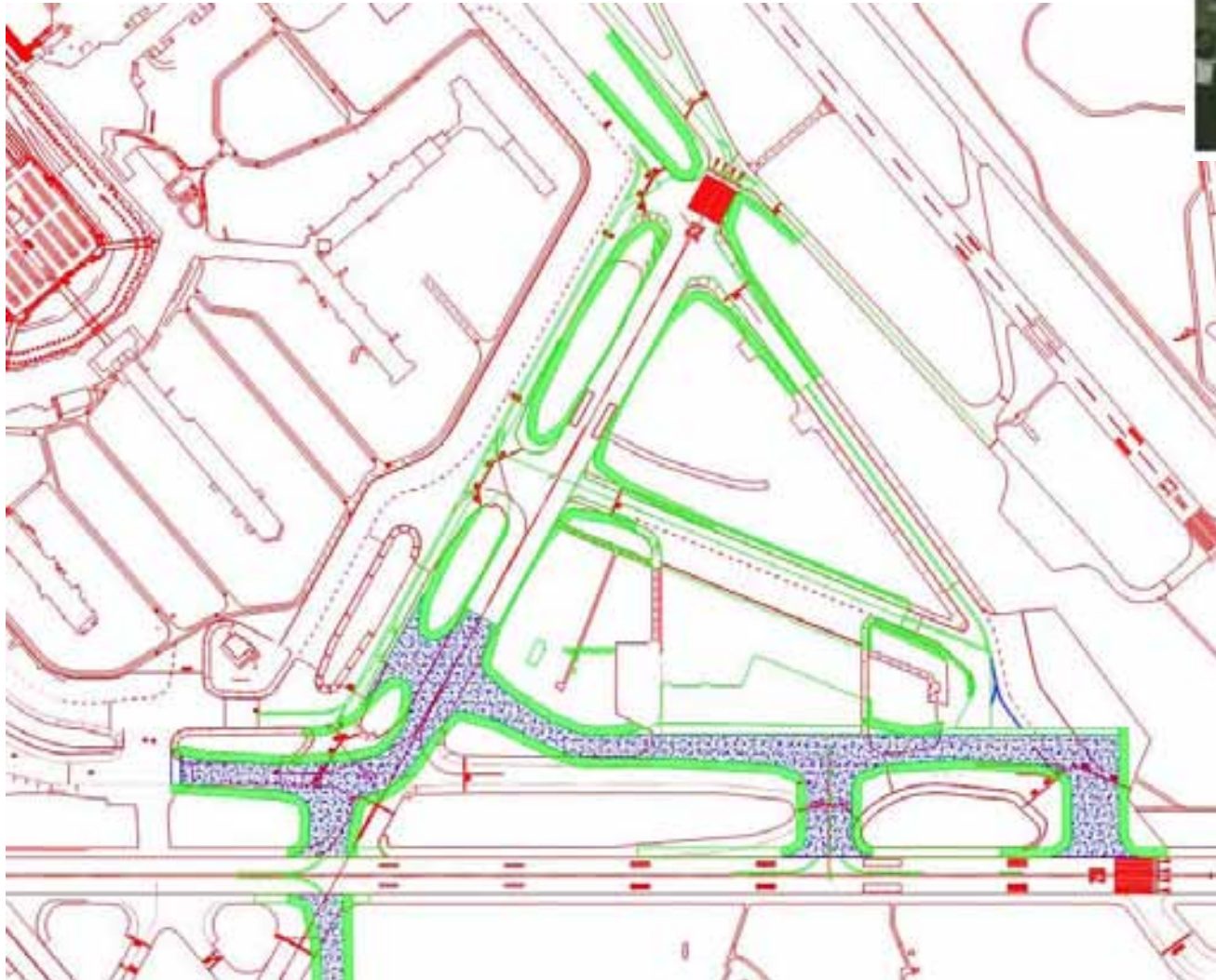




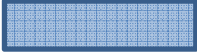


# ➤ AIRFIELD STANDARDS AND PAVEMENT REPAIR PROGRAM (ASAPRP)



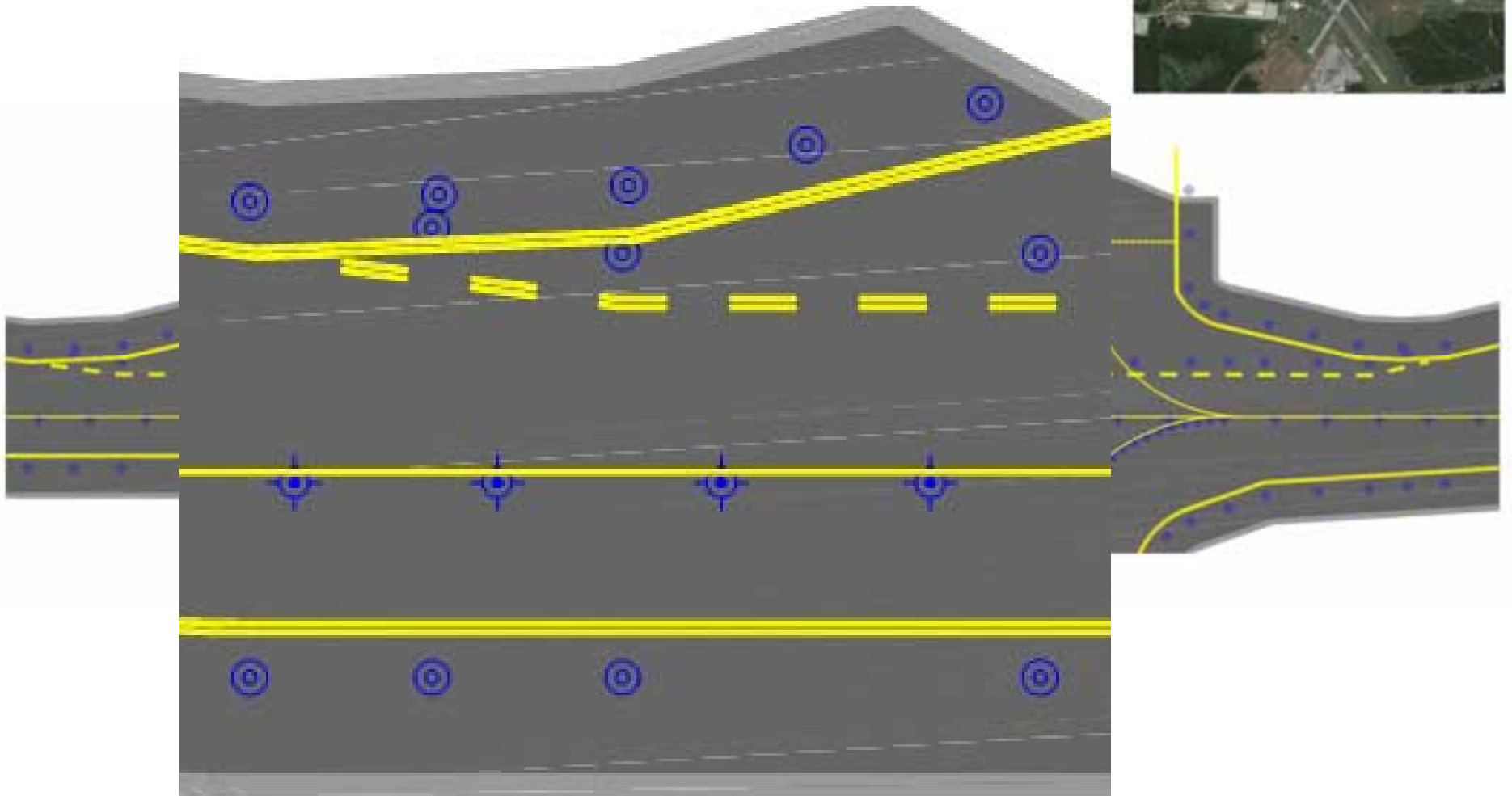
# ➤ ASAPRP



-  Existing Striping
-  Future Striping
-  PCC Areas

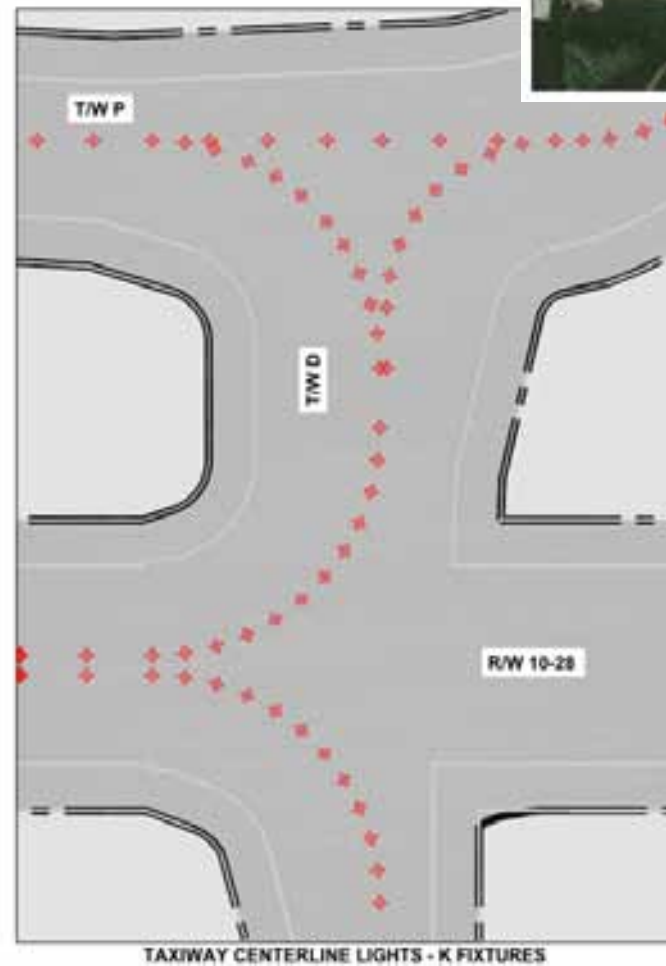


# ➤ ASAPRP





# ➤ ASAPRP



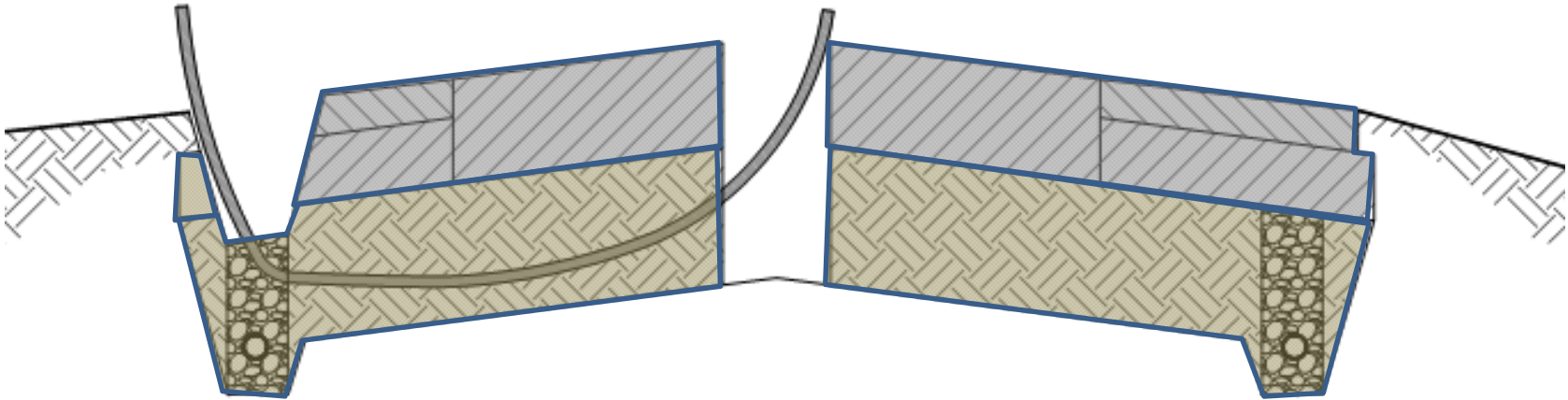
## INNOVATIONS

- Directional drilling drain lines
- Install intersection light bases in early scope
- Use of temporary pavement during phasing
- Runway status lights





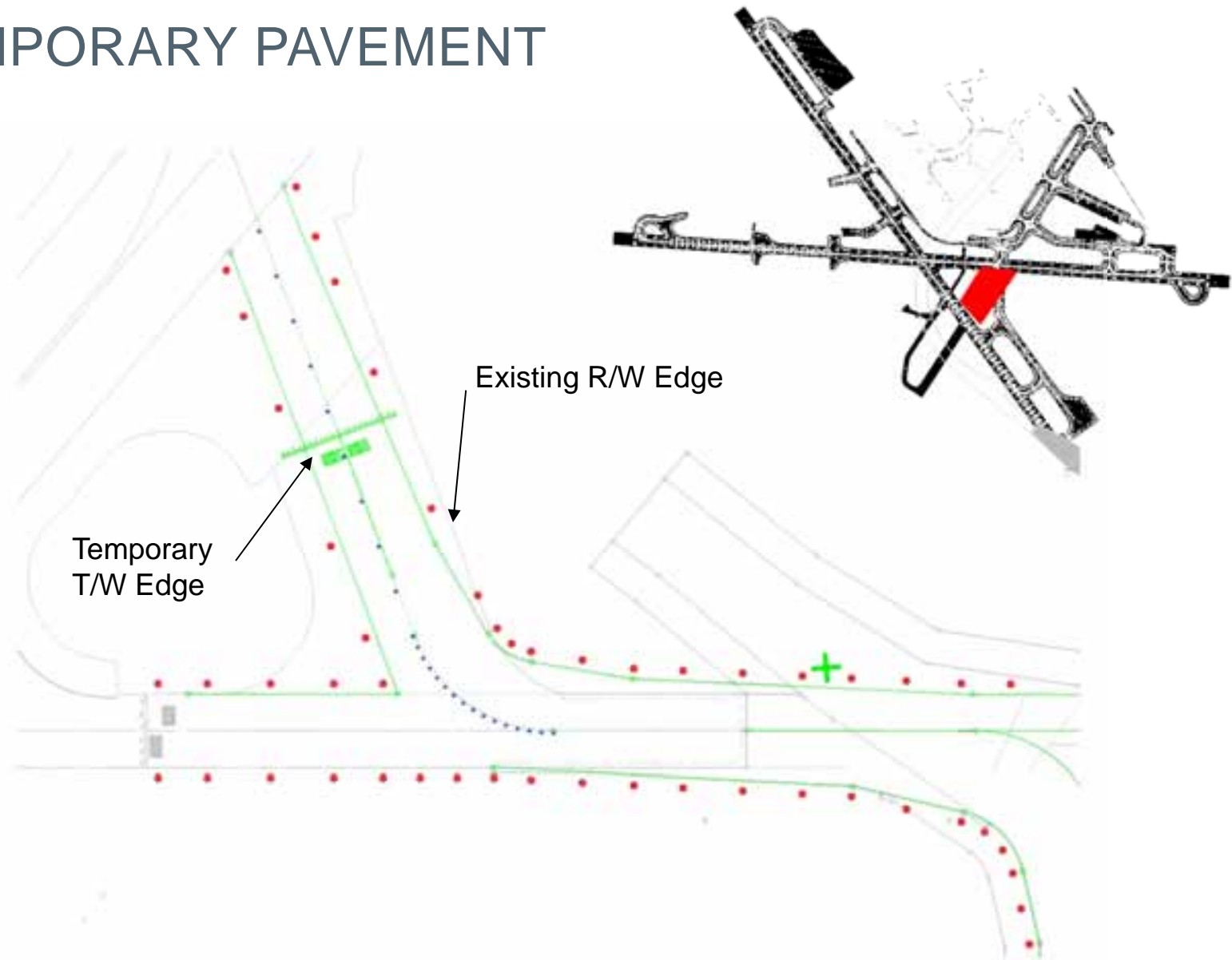
## ➤ DIRECTIONAL DRILLING DRAIN LINES



## ➤ INSTALL INTERSECTION LIGHT BASES EARLY



# ➤ TEMPORARY PAVEMENT



## ➤ RUNWAY STATUS LIGHTS



[http://www.faa.gov/air\\_traffic/technology/rwsl/media/BWI.pdf](http://www.faa.gov/air_traffic/technology/rwsl/media/BWI.pdf)

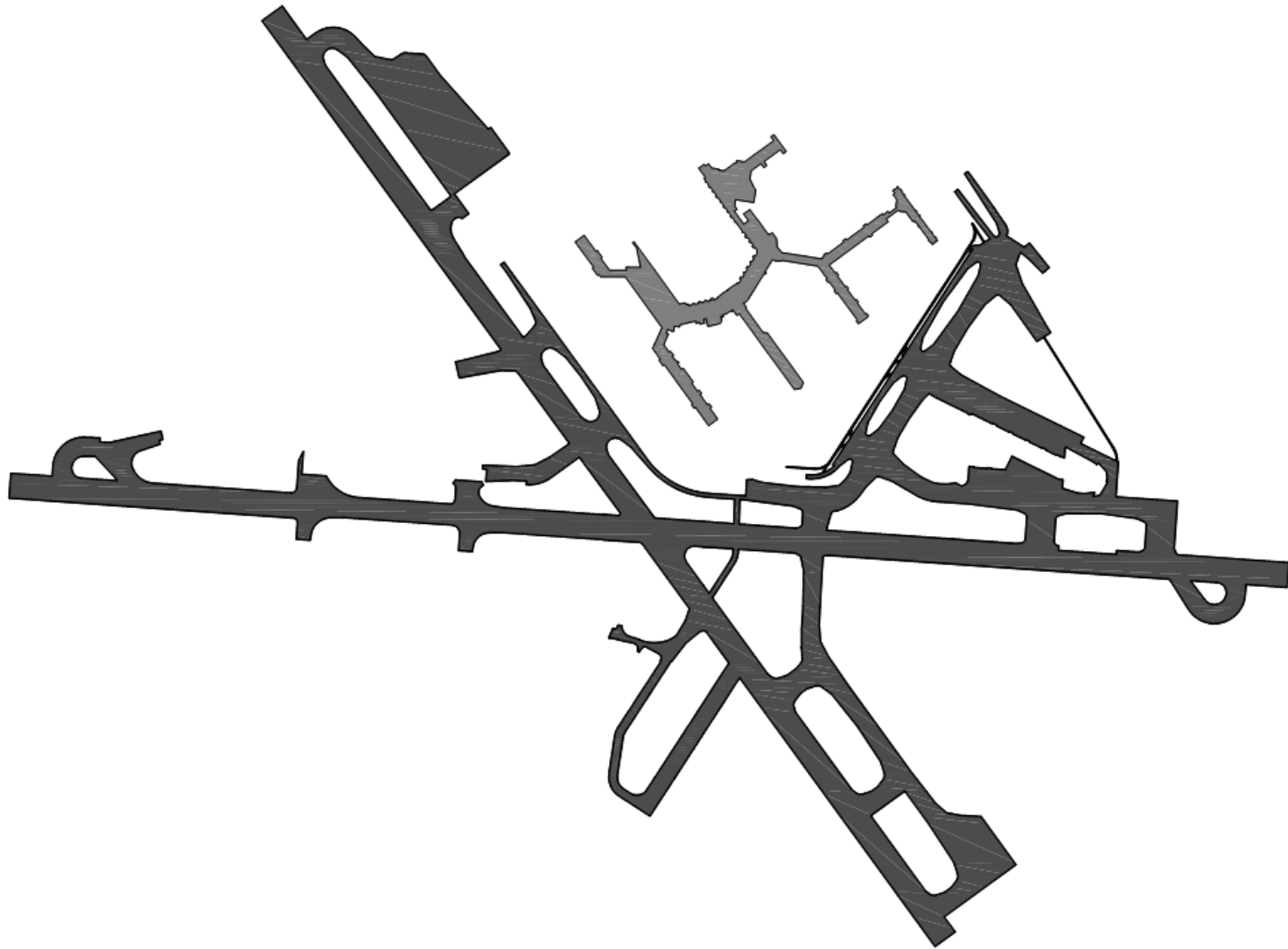


## KEY DESIGN ELEMENTS

- Extend LED lights and signs beyond civil scope
- Utilize LED lights where possible
- Install centerline lights in all new T/W pavement
- Utilize PCC pavement in aircraft staging areas



## ➤ KEY DESIGN ELEMENTS



## ➤ CHALLENGES

- Construction delays
- Passing acceptance testing
- Demarcation of project scope
- Crowded islands





## TAKEAWAYS

- Emphasis on Master Plan
- Emphasis on staging
- Big programs need big teams





## ➤ CREDITS

- Alan Peljovich, JMT
- Keith Fritz, ADCI
- Tracy Hollida, Michael Baker
- Jason Williams, AECOM
- Ken Lepera, URS
- Terry Seaworth, Parsons





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