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A CDI Company

# Lighting Systems in Caustic Environments

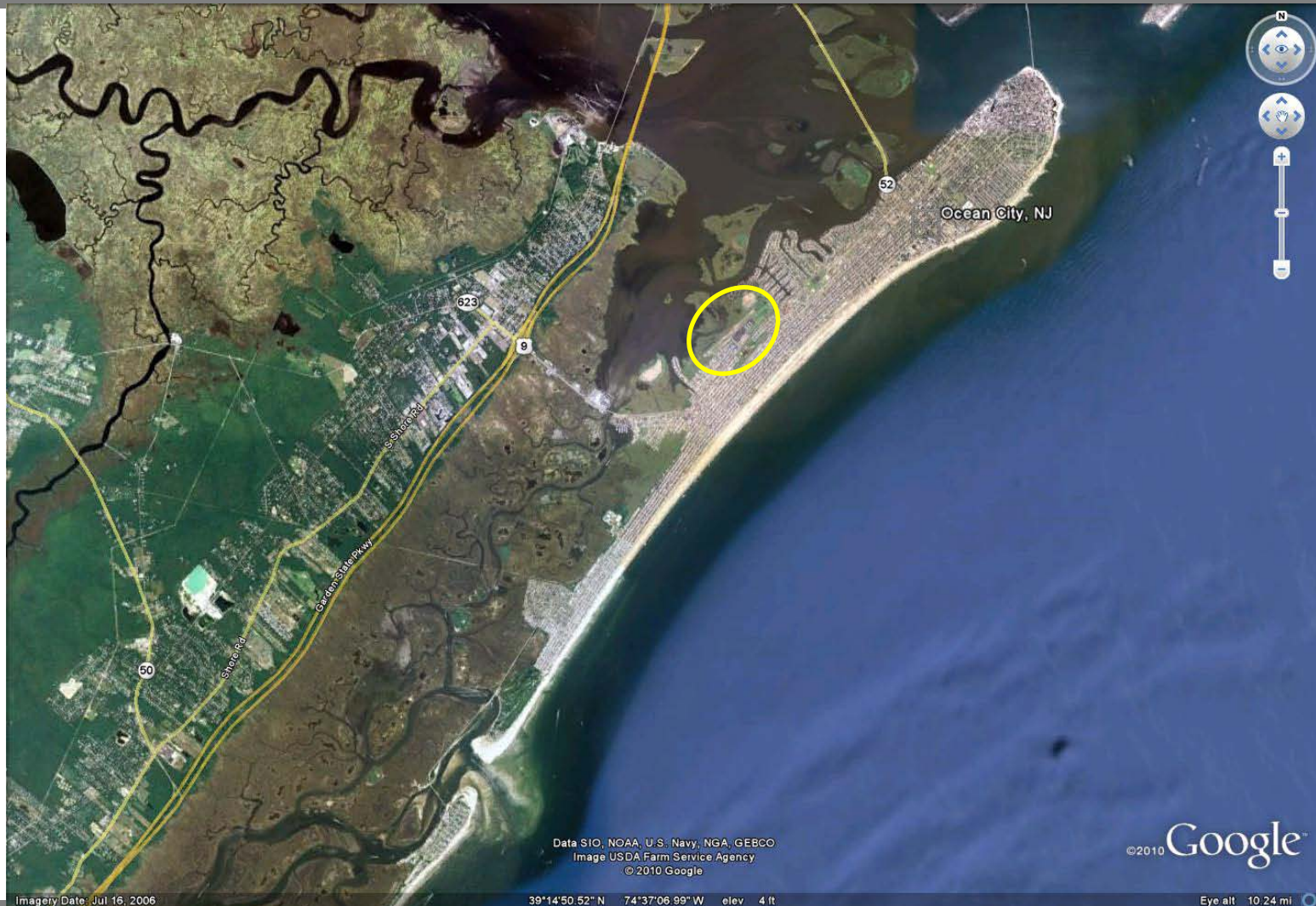
Rehabilitation of the Airfield Lighting & Electrical  
System at Ocean City (NJ) Municipal Airport (26N)

ARCHITECTURE • ENGINEERING • COMMUNICATIONS TECHNOLOGY

AVIATION | CIVIL | CONSTRUCTION SERVICES | DATA SYSTEMS | ENVIRONMENTAL  
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# Ocean City, NJ



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# Ocean City Municipal Airport



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# The Particulars

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- 3,000 x 60 ft runway and parallel taxiway
- Medium Intensity R/W Lighting
- Taxiway Lighting
- PAPI's both ends
- Signage (does not meet current standards)
- Elevation – 4.8 ft
- Lighting & Electrical System is only 12 years old



# The Real Problem?

- High Tide

and.....



# HIGHER Tide





# HIGHER Tide



# The Result?





# The Result?





# The Result?





# The Result?



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# The Result?



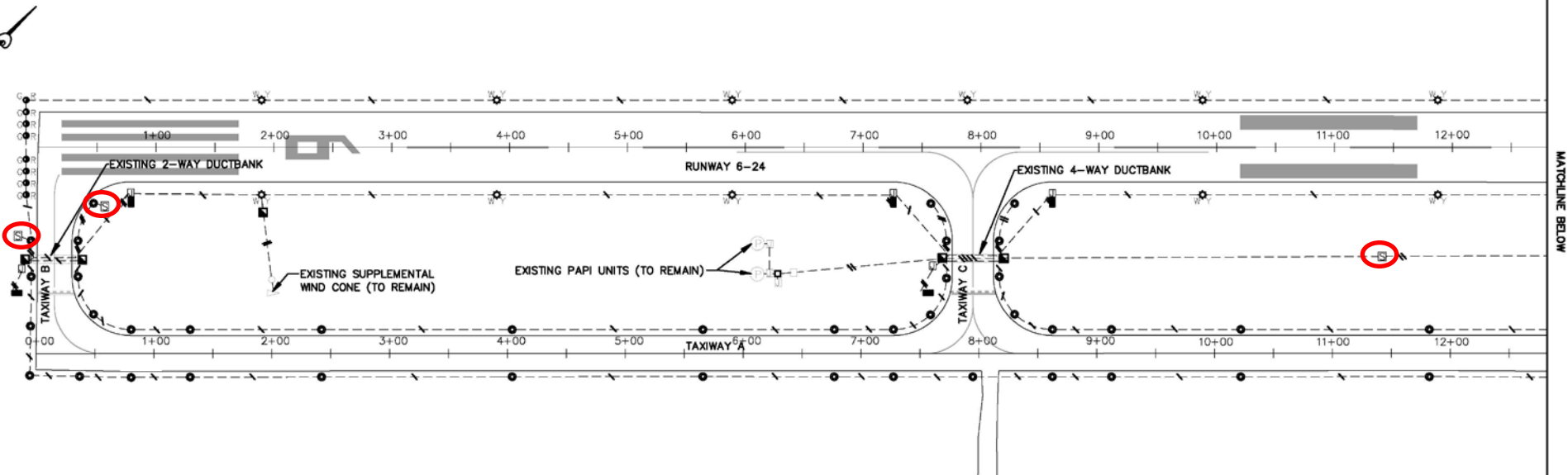


# The Result?



# The Plan

Stainless Steel Components  
Water tight conduit  
Special Sump Pits  
and.....



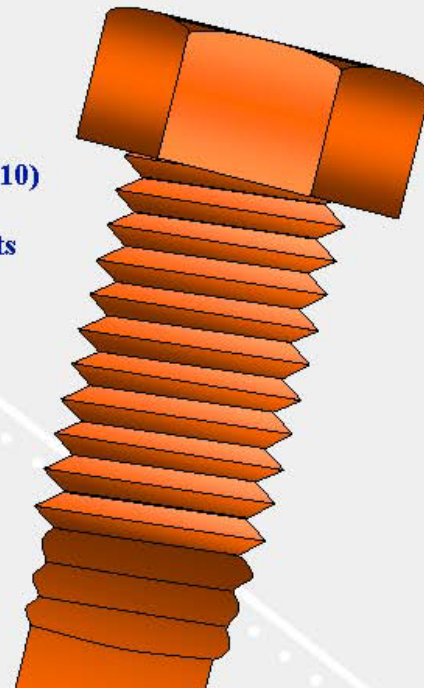


# The Plan

## LSO-1 Light Base Flange Bolts

### *Dual Coated Bolts —*

- Conforms to FAA Engineering Brief 83 (06/29/10)
- USA made – Meets Buy American requirements
- Top coat replaces messy anti-seize
- Base coat for better corrosion resistance
- SCS point – eliminates cross threading
- Bright **Orange** and carbon steel for better FOD detection
- NO galling with stainless steel light bases



# The Plan

## Coating Comparison After 720 Hours in ASTM B-117 Salt Fog Test

- Historical standard was galvanized, cadmium and zinc plating.
- These coatings could not stand up to certain corrosion environments / issues with make-up and break out
- These coatings tested under ASTM B117 showed severe corrosion and in some cases failure before 1000 hours
- By using a resin bonded fluoropolymer coating (PTFE topcoat) we get both lubricity and extended corrosion resistance.
- Extensive testing and field case studies have shown that a better coating system can be achieved with an improved base coat of ceramic/metallic.



Uncoated



Galvanized



Cadmium



Zinc



Fluoropolymer

53

# The Outcome

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