

10 January 2023

# Ascension Island Runway Replacement

Challenges of working  
in remote locations



Ascension Island?

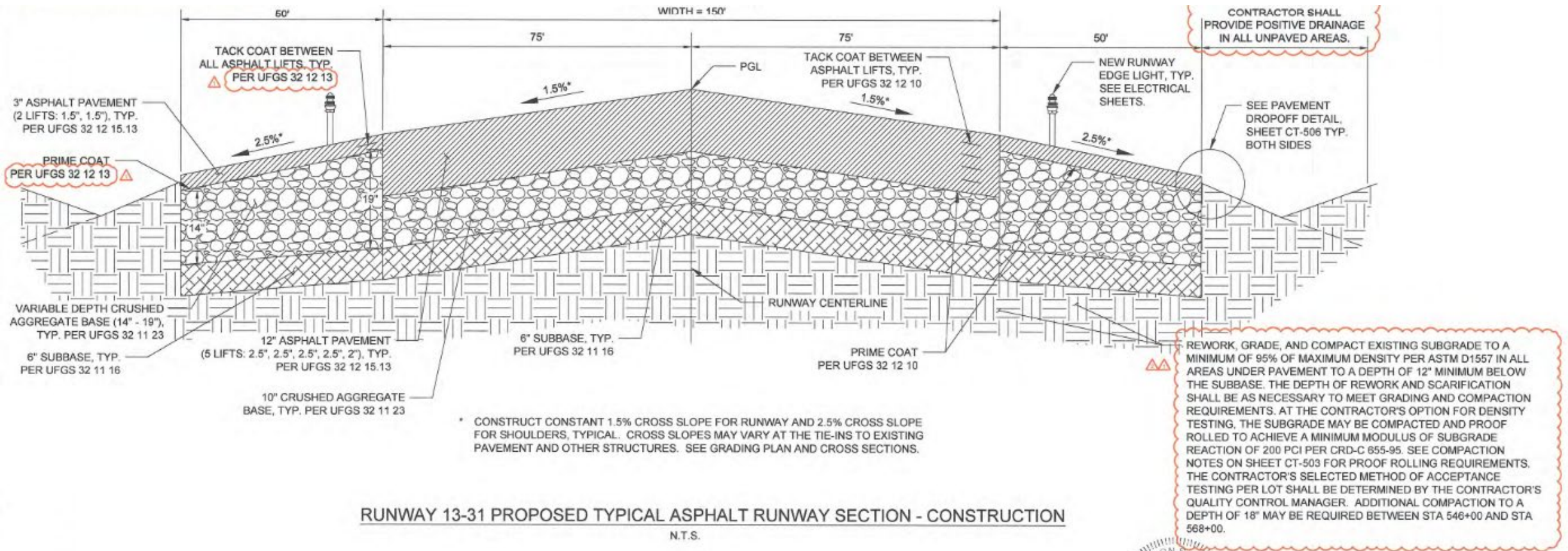


# Runway Scope

- Full depth replacement
- 10000 linear feet plus overruns
- Shoulder widening
- Must remain operational
- Two phases of approx. 5000 ft each with displaced threshold
- New runway lighting
- Partial PCC repairs on taxiways and apron



# Typical Paving Cross Section



# Current Players

- Designer of Record:
  - OTIE with DRMP with GP Strategies and AVCON.
  - Patrick Space Force Base Range Architect-Engineer Inspection Services Contract (2015-2018)
- Construction Contract:
  - Fluor-AMEC II JV (FAIL)
  - AFCAP IV Basic Contract (awarded 10 Jan 20)
- AFCAP: Construction contract PM, Construction contract Contracting Officer
- Title II (Construction Oversight and Inspection Services):
  - OTIE-RS&H JV
  - Air Force AE 13 DCS contract (awarded 6 May 20)
- AFCEC: Title II PM & COR; Construction Contract COR
- 772 ESS: Title II Contracting Officer
- US Government - US Air Force (AFCAP & AFCEC)
- UK Government – Royal Air Force (UK Stratcom)
- FAIL – Prime Contractor
- 77 Construction – primary subcontractor to FAIL for airfield construction
- Schuyler – primary subcontractor to FAIL for shipping
- Terracon – FAIL USACE validated materials testing lab on island
- OTIE-RS&H JV – Title II
- Universal Engineering Sciences – Title II USACE validated materials testing lab on island
- 45SLD/Det 2 & Wolf Creek Federal Services
- Ascension Island Government

# Topics for Discussion

Logistical challenges of remote work

Contracting considerations of remote work

Technical challenges specific to the project

# Logistics Challenge: Shipping









# Other Shipping and Logistics Challenges

- Bitutainers
  - Rental and availability of containers
  - Return shipping
- Materials and Shelf Life
  - Emulsions
  - Other Products
- Worldwide shortage of shipping containers
- Foreign flagged vessels
- Site storage availability
- Other environmental concerns (plants, crabs, hazmat containment and disposal, etc.)
- On-island lodging and food
  - Limit on number of workers
  - Turkish contractor lunches

# Other Shipping and Logistics Challenges

- On-island vehicle availability
- Fuel maintenance and fuel availability
- Pier conflicts
- COVID and quarantine issues
  - Barracks space and meals
  - Connectivity in quarantine
  - R&R and maintaining staffing
- Phone and Internet availability, quality
- Flight and mail frequency

## Contracting Considerations

### Design Contract

- Local through Base Ops Contract
- Designer access to typical design data
  - Island as-builts
  - Geotechnical Investigations
- Time between design and execution
  - Specification changes
  - Site condition changes
  - Environmental law changes
- Reconsideration of decisions during design
  - Aircraft arresting system
  - Horizontal and transverse waiver issues
  - Drainage structures
  - Interleaving of lights

## Contracting Considerations

### Construction Contract

- Contractor risk
  - More unknowns than knowns
- Employee incentives
- Market pricing and timing
- Acquisition Strategy
- Finalized as a cost reimbursable contract
  - Government accepts much more risk
  - No warranty – QA/QC significantly more important

## Contracting Considerations

### Title II Contract

- Timing w.r.t. Construction Contract Award
- USACE Validated Lab
  - CONUS Inspections
  - On-Island video
  - Calibration
- Employee morale maintenance
- Inclusion of DOR on Title II contract
- Fixed price oversight on a cost-plus construction contract
- Government funding pots
- Shared funding with UK (typical on all)

# Technical Challenge: Subgrade

- Volcanic Soils
- Debate on Applicability of Proctor Test
- Potentially Moisture Intensive and Soil Disturbing Operation
- Alternative Method was Successful and Less Impact on Schedule





# Technical Challenge: Aggregate

- On-Island crushing
- Aggregate testing – quarry vs. on island
- Stockpile maintenance
- Construction water availability



# Technical Challenge: JMF

- No Contractual AC Range Limit
- Aggregate Regrading Required
- Multiple Submissions and Revisions

# Technical Challenge: Proof Rolling

- Equipment availability that meets the specification requirement
- Manpower (inspector) and Schedule intensive activity
- Lots of questions as to “why” for subbase and base.



# Subbase and Base Course

- Materials pre-mixed and blended with water at a wet-mix plant
- Materials placed to thickness using asphalt paving machines
- Excellent results



# Conclusions and Specifications Considerations

Toto, I've a feeling we're not in Kansas anymore!!

- Acquisition planning of all phases simultaneously would be beneficial, perhaps to include an ECI type of arrangement
- Must consider logistics in any specification you write
- HMA specifications potential need for a required asphalt range
  - Consider a minimum value where appropriate
- Proof rolling – value added??? Consideration of FAA requirements for similar loading



# Questions