

Leading Challenging Projects at Airfields

RICK ZGOL – PAVESET AMERICA
MIKE ALTERGOTT – AGGREGATE INDUSTRIES

1

Centennial Airport

2016 AIRPORT IMPROVEMENTS
AIP NO. 3-08-0029-50
REHABILITATE RUNWAY 17L / 35R
OWNER: ARAPAHOE COUNTY PUBLIC AIRPORT AUTHORITY
ENGINEER: CH2M HILL
CONTRACTOR: AGGREGATE INDUSTRIES – W.C.R., INC.

2

Major Work Items

- 4" Asphalt Mill and Overlay of Runway 17L 35R – 2 miles long x 100' wide
- 2" Asphalt Mill and Overlay of Taxiways and Connectors
- Placement of millings, and sealcoating on haul roads and snow melt areas
- Substantial Airfield Electrical Modifications
- Saw-cut grooving
- Pavement markings – Temporary and final

3

Major Incidental Items

- Surveying and Grade Control
- Materials Testing of Asphalt, Concrete, and Soil
- Sawcut of cold joints and pavement edges on a daily basis
- Temporary Haul Roads – Installation, maintenance, and removal upon completion

4

Aerial View



5

Time of Completion and Liquidated Damages

- 5 calendar days to generate a passing test section
- 35 calendar days to complete all work associated with runway, except saw-cut grooving and final striping, \$10,000.00 per day liquidated damages
- Runway closure work phased to allow access of aircraft traffic to adjacent runway
- 30 calendar days for asphalt cure
- 15 consecutive night closures (7:00 P.M – 5:00 A.M.) for saw-cut grooving and final striping. \$2,500.00 per day LD's on calendar day violations, and \$1,000.00 per hour on night time closure violations.

6

Phasing

- Test Section required passing results prior to runway closure.
- 2 phases for construction to allow 24/7 access for aircraft to the touch and go runway.
- Phase 1 needed to be complete prior to starting Phase 2

7

Asphalt Pavement and Quantities

- P-401 (75)(PG 64-28) material with maximum 1/2" aggregate and no RAP. Modified the asphalt mixture to meet VMA specification.
- 31,000 tons of milling and overlay
- 2,350 tons of asphalt repairs

8

Asphalt Milling



9

Full Depth Repairs



10

Asphalt Overlay



11

Smoothness

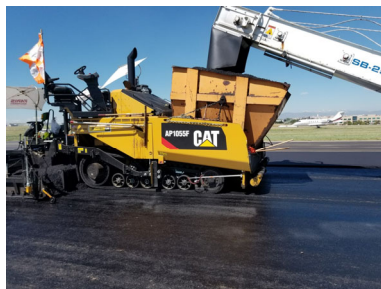
Less than 1/8" deviation per 16' straightedge

Pay point grid set at 17' x 50' grid for runway and 12' x 50' on connectors and taxiways. Variances within .04.

Each pay point surveyed 4 times on runway and 3 times on connectors and taxiways.

Data entered into grade control devices on milling machines and pavers.

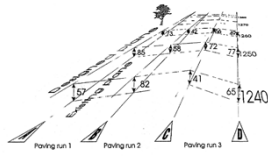
Rick Zgol – Paveset America LLC



12

Survey Grid and Pay Points

SURVEYORS GATHER THE EXISTING ELEVATIONS



SPREADSHEET WITH COMPACTED FILLS

Station	Offset	Offset	Offset	Existing offset	Offset	Offset
	-51	-34	17	8'43"	14	14
1150	17	15	13	16	16	17
1175	17	15	14	17	16	17
1200	17	17	12	18	15	17
1225	17	17	11	18	15	17
1250	17	14	12	15	16	17
1275	17	13	13	15	16	17
1300	17	16	15	17	17	17
1325	17	16	12	19	16	17
1350	17	13	16	18	16	17
1375	17	15	14	18	17	17
1400	17	15	14	18	16	17
1425	17	16	15	18	19	17
1450	17	16	14	17	17	17
1475	17	12	11	15	18	17
1500	17	12	14	14	17	17
1525	17	13	13	15	15	17
1550	17	13	11	13	14	17
1575	17	13	13	14	11	17
1600	17	11	11	16	16	17

13

Paveset Grade Control

Files – Runway and Taxiways
Station, Offset and Loose Fill Depths
Screedman- checks loose depths and station
Compaction % Loose depth to Compacted Depths



14


Planning and Paving

Have a plan B
Excellent Paving crew
Relationships with the Engineer and Surveyors



15

Airports
Test Strips
Cutting longitudinal joints
Elevations



16

Conclusion

- Project required working long hours and 7 days a week to complete on schedule.
- Needed a strong commitment from all of our workers in addition to the many subcontractors utilized on the project.
- “Best in Colorado” Quality Award in the Airport Category by the Colorado Asphalt Pavement Association (2017)

17

Questions?

18
