



COMMUNICATION WITH YOUR CLIENT IN THE WORLD OF AIRPORT ENGINEERING

Presented by: David Hartmann, PE



AERONAUTICS

PRESENTED BY



David Hartmann, PE
Chief Engineer | QA/QC
Grand Junction, CO

Armstrong Consultants, a Lochner Company | Airport Engineering, Planning, Construction Administration

- Armstrong | 2000–2022, Project Engineer, Project Manager, Vice President & Engineering Director
- Lochner | 2022– Present, Chief Engineer, QA/QC (old guy with the red pen)

Banner Associates, Municipal Design Consulting

- 1994–2000, Project Engineer, Project Surveyor for subdivisions, commercial projects, road and utility projects

Engineer Officer, U.S. Army and Army Reserve

- 1994–2006, Bridging, Construction, Civil Affairs, Combat Engineering, Six-State Regional Facility CIP Planning, Afghanistan

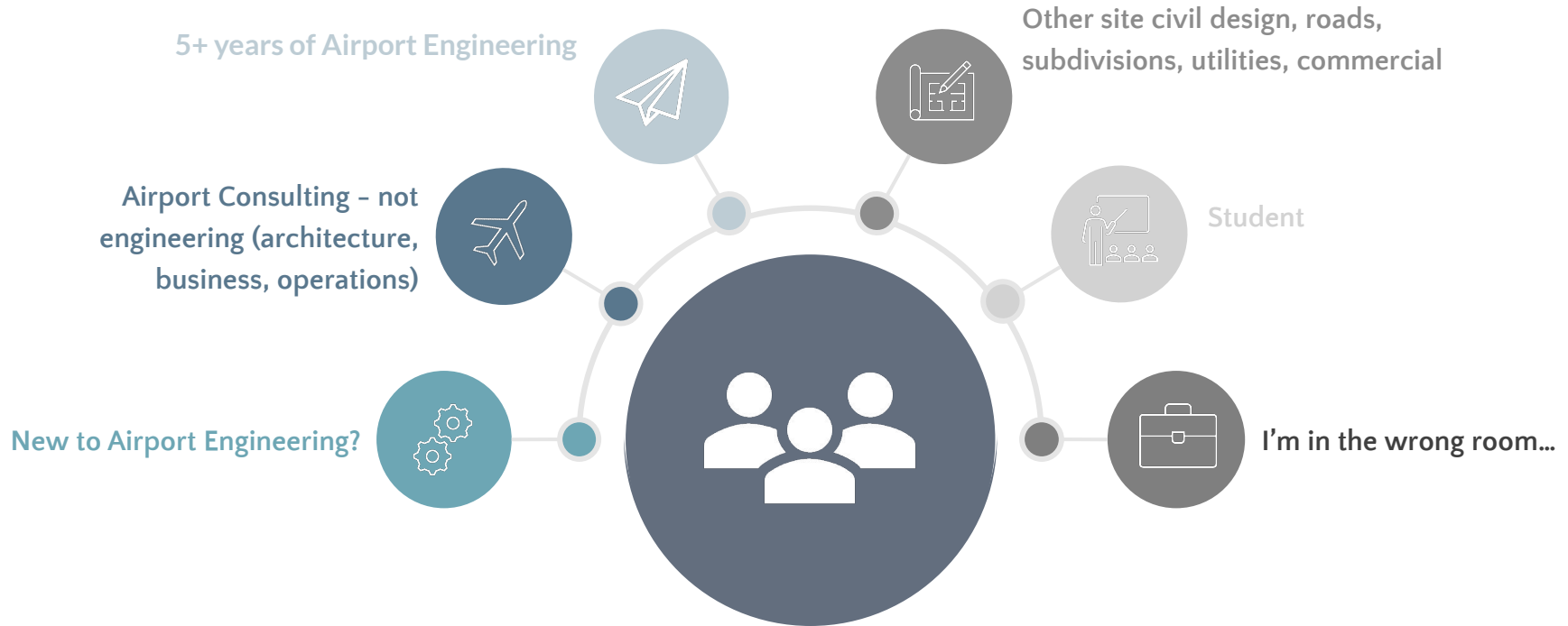
Mesa County, Colorado, Planning Commission 2013–2017

Colorado Mesa University Civil Engineering Program Adjunct Lecturer

Colorado Mesa University Engineers Without Borders Student Chapter Mentor

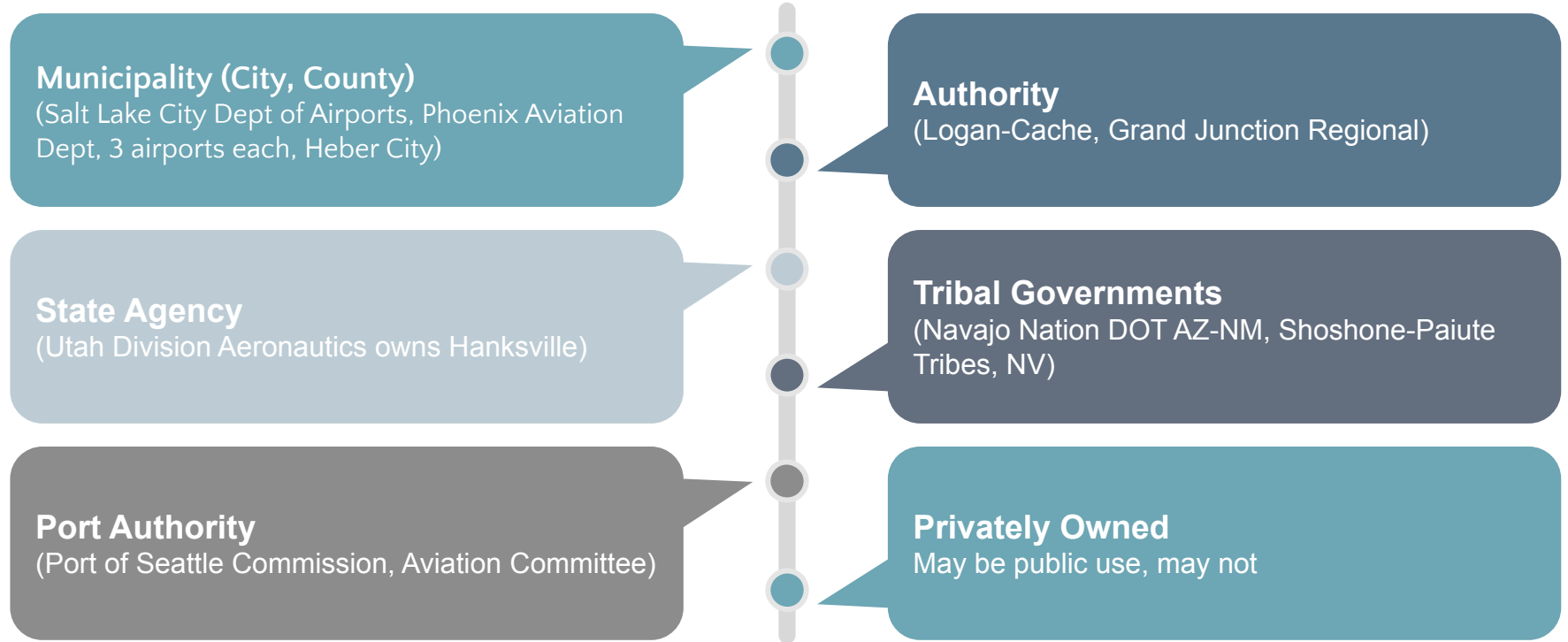
Mesa County Search and Rescue Volunteer

WHO ARE YOU?



AIRPORT OWNERSHIP ENTITY

Airport lingo and requirements are often updated

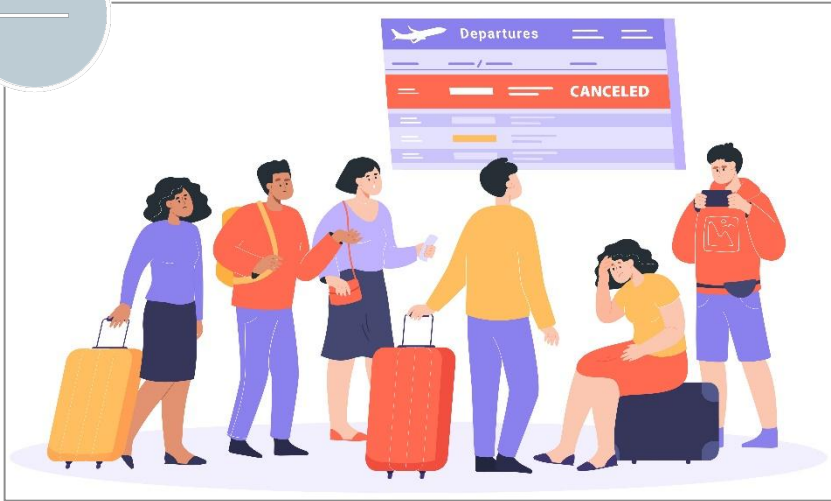
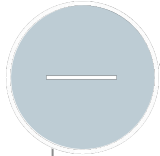




WHY DO WE CARE?

- The type of sponsor will impact how the airport is operated
- Who operates the airport is critical in knowing your audience
- Sponsorship type and structure impacts how we do business with the airport
 - Airport engineering and planning
 - Airport based businesses – FBO, flight school, A&P
 - Hangar and ground leases
 - Consultant selection

EMOTIONAL CONNECTION TO AIRPORTS



KEY DECISION MAKERS



Municipality

- **City, County, or Town Sponsors**
 - Municipalities can love or hate their airport
 - Council, Mayor, are voted in and out
 - Advisory board, with/without teeth
- **Municipality Sponsors**
 - Have other concerns – road and bridge, parks department, water treatment plants – The airport is only one division among many.
 - Airport funds come from the General fund and can be fickle
 - Some airports use an Enterprise Fund structure – Airport revenue is safe, but hard to get general funds



Authority

- Airport Authority created through local legislation
- Mill levy-funded
- The authority board is aviation focused and specialized and can better
- Elected or appointed members – Can act against the will of the Municipality



State Agency, Tribal Gov., Port Authority

- Nuance throughout so ID their priorities early and often
- May have a wholly separate internal DOT

CITY/COUNTY ENGINEERS WEAR MANY HATS

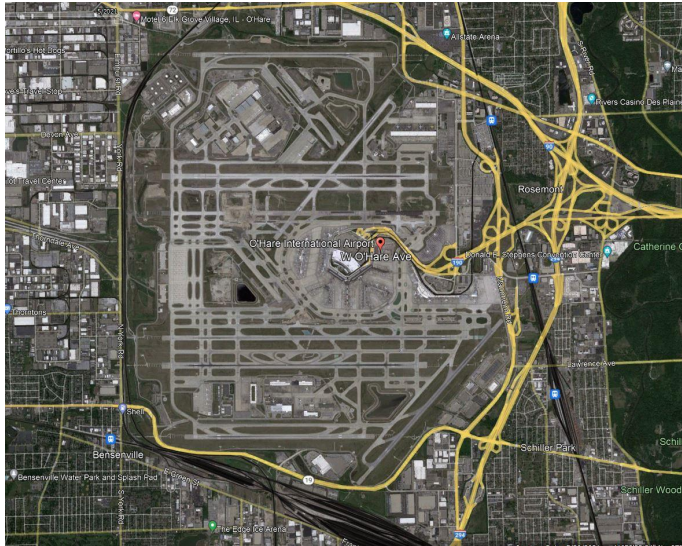


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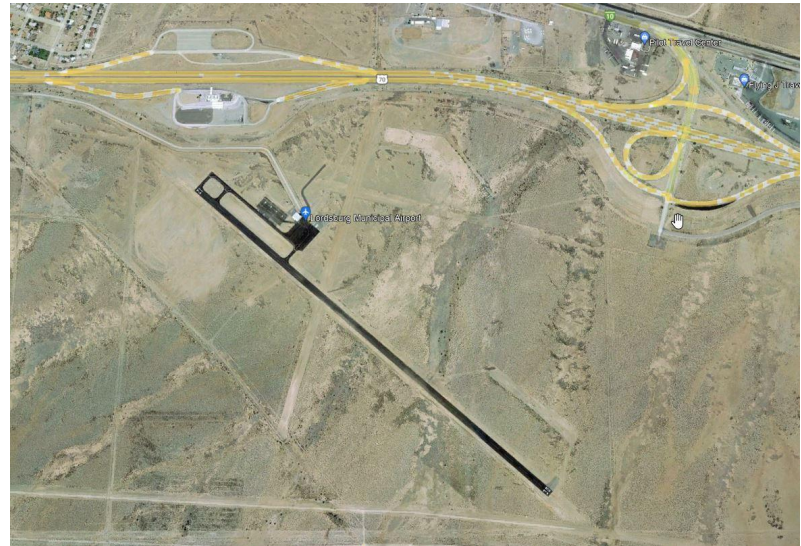


FAA RULES APPLY TO ALL AIRPORTS RECEIVING FAA FUNDING

From this...



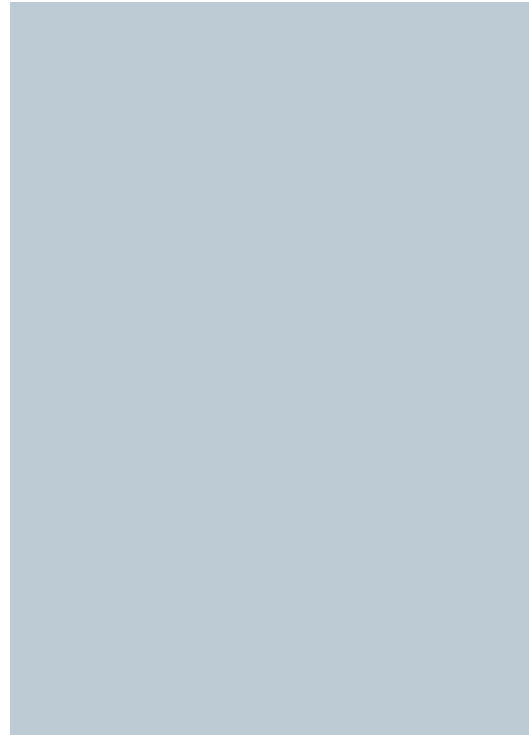
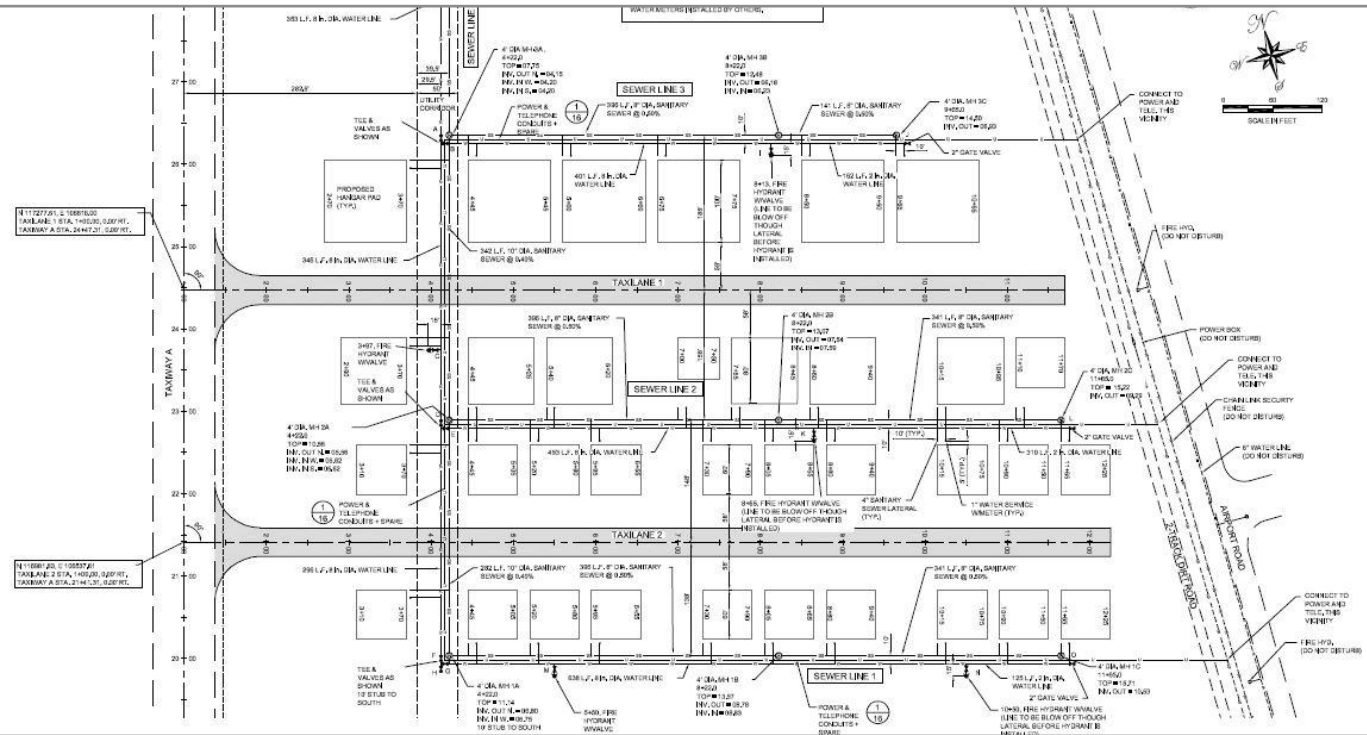
...to this!



LEARN TO SPEAK SUBDIVISION-ESE



HANGARS ARE LIKELY A FOREIGN LANGUAGE

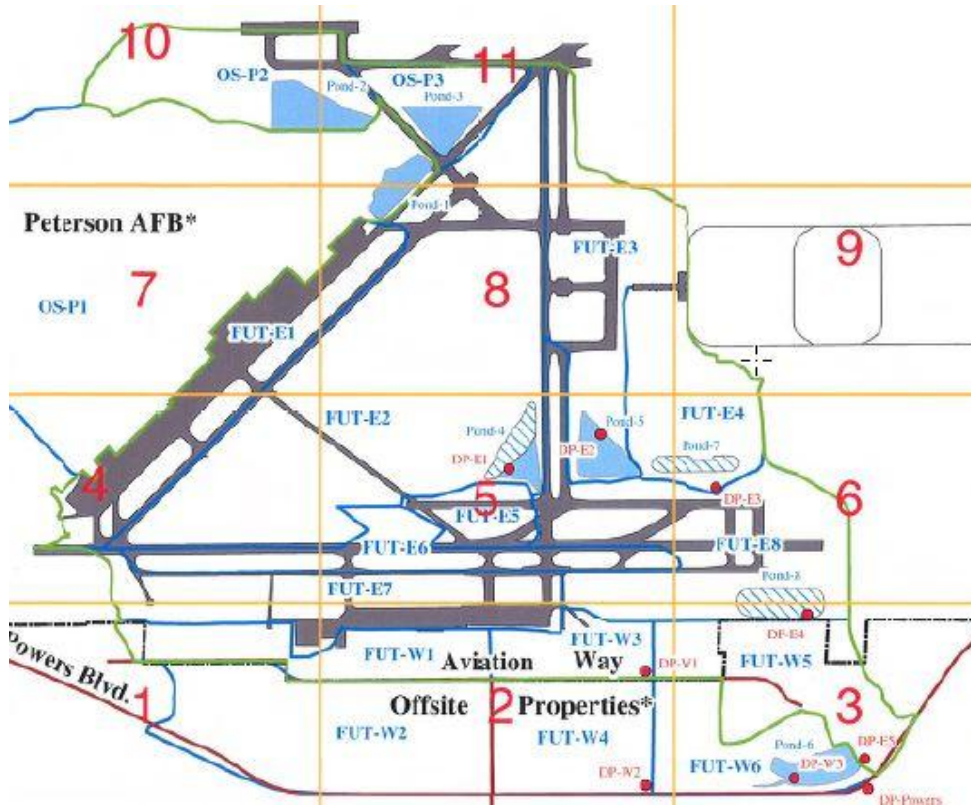




HANGAR AREAS:

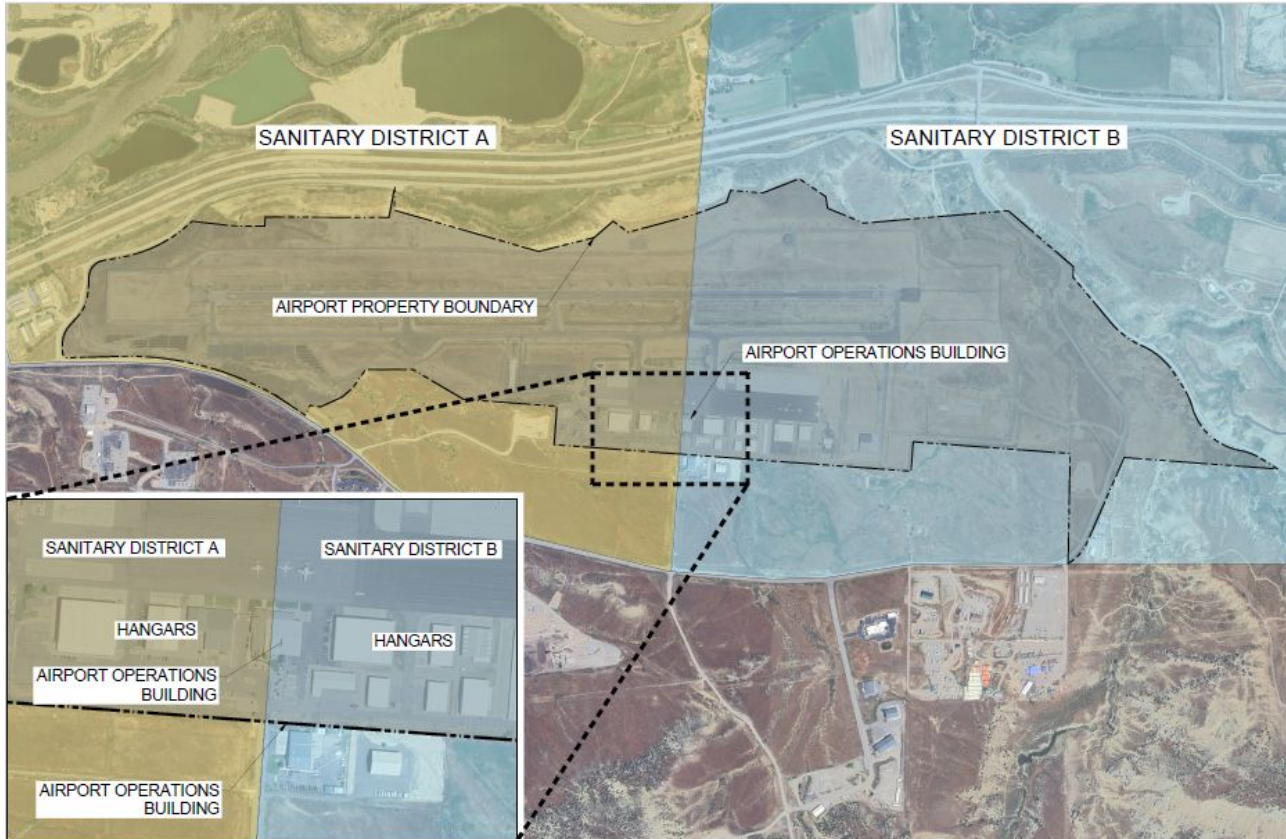
- Flightline access, straight lines and rows, get to the runway
- Sponsor owns the ground and ultimately the hangars too (reversion clause)
- Don't put utilities in the taxiways if possible!
- Run utilities down the backs, like alleys
- No detention ponds, birds love ponds, pilots hate birds
- Fire code, clustering

STORMWATER MANAGEMENT



- Most airports have (or need!) master drainage plan
- Shows & plans for buildout
- Accommodate detention, quality on master system basis
- Every lessee having their own plan is problematic
- Offsite drainage improvements extra problematic

UTILITY MANAGEMENT



- Know the providers
- Might be your sponsor (city, county, etc.)
- Might be separate entity (power co-op, water/sanitation, irrigation district)
- May have multiple providers on one airport!

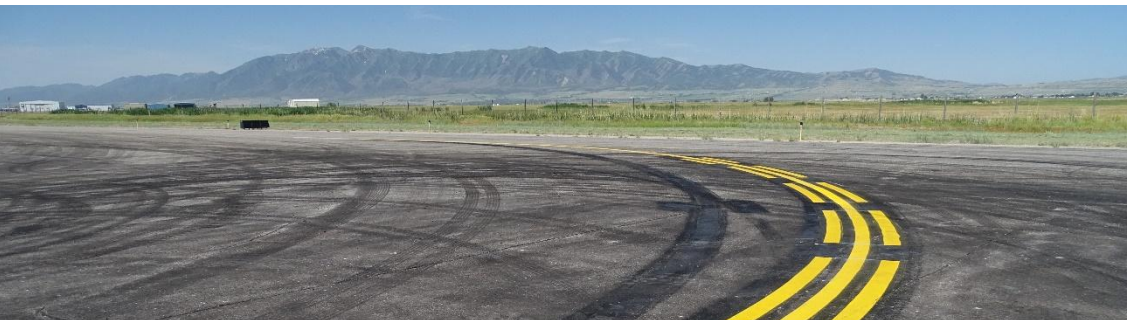
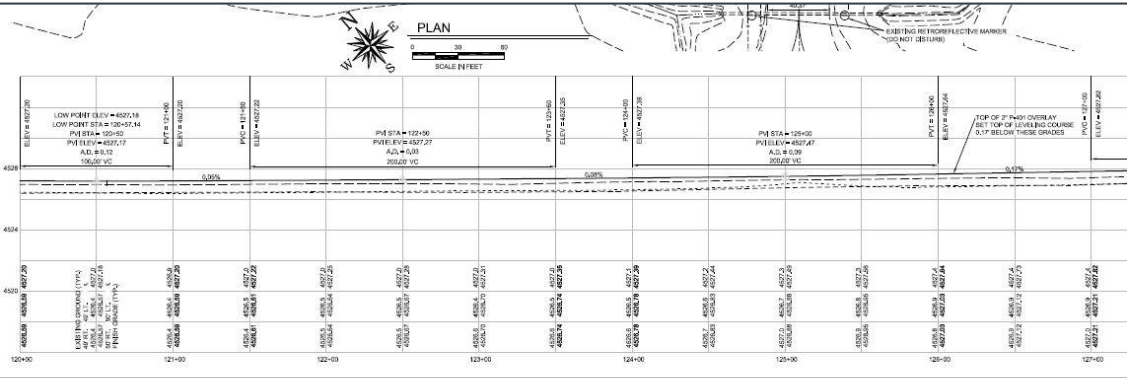


ROAD OVERLAYS

- Smoothness QA but usually not much grade QA
- Rough quantities, contingencies for tonnage overruns
- Variable mix designs
- Noncritical phasing, you can close one lane and keep paving, cheaper traffic control plans
- Cars can pull over or dodge a pothole. Planes, not so much

RUNWAY & TAXIWAY OVERLAYS

\$ “why so expensive?”



- ½” grade tolerance, ¼” smoothness tolerance
- Extensive lab QA
- P-501 concrete uses flexural test (what’s that?)
- Ultra precise finish grade setting, vertical curve requirements, quantity control
- Strict mix design criteria
- Built for “a metal tube filled with children and lawyers to come screaming out of the sky at 100 mph and land on, in the dark, in a storm, with mechanical problems”



01. KNOW YOUR AUDIENCE

02. TRANSLATE YOUR PROJECT

03. SAVE TIME



QUESTIONS?

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