# Airport Inspection

How Airport Sponsors and Inspectors Should Team Together for Project Success



# What is Airport Inspection?

 Airport Inspection involves keeping track of daily construction operations to assure that projects are being constructed in accordance with contract documents and construction plans (and more)...







# Why Provide Inspection?

- "The sponsor must provide and maintain competent technical supervision at the construction site throughout the project to ensure the work conforms to the plans, specifications, and schedules approved by the FAA for the project." – FAA AC 150/5370-12B
- To assist in identifying construction defects and deficiencies and potentially minimize the risk of these deficiencies by being proactive.
- Have an on-site liaison between the sponsor/engineer and contractor, serving as eyes and ears on a project.



# Inspection & Documentation

WHAT ROUTINE ACTIVITIES SHOULD YOUR INSPECTORS BE Doing?

# Project Startup

- Obtain and Review Project Plans and Specifications
- Attend Pre-Construction Conference
- General File and Office Setup
  - Erosion Control Plans and Forms
  - Diaries / Files / Quantities Sheets
  - Prepare On-site Plans and Exhibits
  - Identify Meeting Space
- Review Submittals
- Coordinate with Engineer for 7-day EC Inspection



# Daily Tasks

- On-site Observation for Conformity with Contract Documents
- Complete Daily Diary
- Daily Report
- Document Quantities
- Take Photos
- Collect Material Tickets / Shipping Invoices
- Compare Shop Drawings to Materials Coming On-Site
- Maintain Redline Drawings
- Monitor Safety



# Weekly Tasks

- FAA Reports
- Prepare Weekly Meeting Minutes
- Collect and Monitor Payrolls for Davis Bacon Act
- Review Quantities with Contractor
- Schedule Applicable Construction Materials Testing
  - Review and Maintain Records of QA/QC Reports
- Check-In on Inactive Areas of the Site



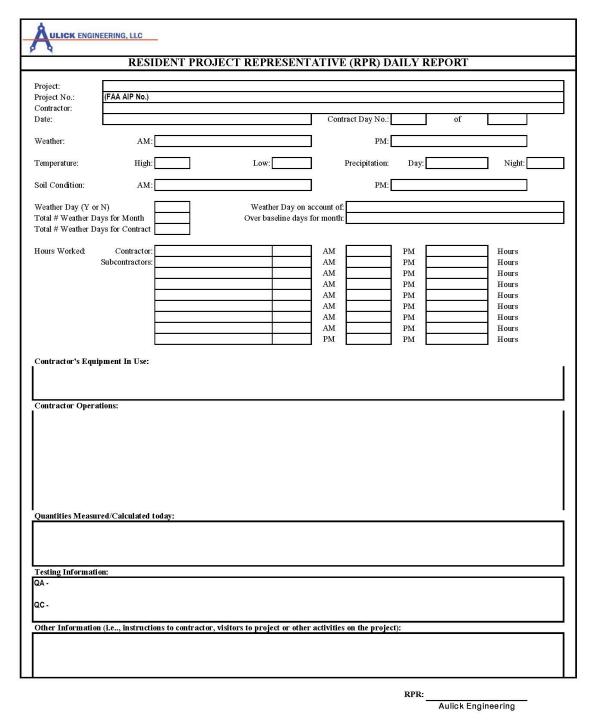
# Monthly Tasks

- Wage Rate Interviews
- Coordinate Pay Application / Approve Quantities





Daily Inspection Example





FAA Weekly Report

<u>Airports Forms | Federal</u> <u>Aviation Administration</u> (faa.gov)



OMB CONTROL NUMBER: 2120-0569
EXPIRATION DATE: 6/30/2023

				EXPIRATION DATE: 0/30/202		
0	Construction Progress and	Inspection F		Period Ending		
U.S. Departmen of Transportatio F <b>ederal Aviatio</b> Administration	n Airport Gran on	Airport Grant Program				
Airport Name						
Project Descript	tion		Contractor's Name			
1. Contract Tim	e No. Days Charged to Date	Last Workir	ı ıg Day Charged (Da	te)		
	er Summary this Period, including Approxima lobs, include soil conditions.)	ate Rainfall and I	Periods of Below Fro	ezing Temperature		
	nate of Percent Completion to Date of Constr surface, lighting, etc.)	ruction Phases (	Include items such a	as clearing, grading,		
4. Work Compl	eted or In Progress this Period					
ōa. Summary of	f Laboratory and Field Testing this Period (N	ote failing tests	and any retests. Sui	mmarize out-of-tolerance.)		
5b. Material <i>(Ide</i>	entify material subject to pay reduction.)					
6. Description o	of Anticipated Work by Contractor for Next Po	erio d				
7. Problem Are etc. and actions	as/Other Comments ( <i>Include revisions to pla</i> taken.)	ans and specific	ations approved or c	lenied, delays, difficu <b>t</b> ies,		
	SPONSOR'S INSPECTO	ND ND DEDDES	SENTATIVE			
Date	Typed or Printed Name and Title	Signatur				
	SOURCE .	655/6				

Wage Rate Interview

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<u>LaborInterviewForm.pdf</u> (ga.gov)





#### Division of Construction LABOR INTERVIEW FORM

Prime							
Contractor/Subco	ntractor:						
Contract ID:				County:			
Project Number:				Date of Interview:			
Employee Name:				Sex:		Race/Ethnic Origin:	
Employee's Title:				Hourly Wage Rate:			
Length of Time in Current Position :				Hire Date:			
1. Description of e	mployee's	work at tim	e of interview	/ (includ	le tools used 8	k equipment):	
2. Who is your company's EEO Officer?							
3. Do you have any valid complaints about wages received or hours worked? Yes No							
Verification of Complaint & documentation type:							
4. Are you a union member? Yes No If yes, what union do you belong to?							
5. If employee is a a. Have yo Classifical	ou ever bee		e questions be d as a journeyr		Yes No		
Classificat	1011:						
b. What phases of the Training Program have you had?							

Wage Rate Interview

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<u>LaborInterviewForm.pdf</u> (ga.gov)

c. Trainee's Address & Social Security Number:	
INTERVIEWER'S COMMENTS:	
Interviewer's Signature Title	Date
FOR USE OF PAYROLL CHECKER:	
Is the above information in agreement with payrol	I data and contract requirements? Yes No
If <u>NO</u> is checked please forward to Area Engineer aup is required.	and District EEO. Documentation and follow
Comments:	
Project Engineer	Date
Project Engineer	Date

I hereby attest this labor interview was performed in accordance with the current Construction Manual and provided for the subsequent Payroll Review.



### **Project Completion Tasks**

- Attend Pre-Final Inspection Walk Through
  - Follow up and ensure punch list items are completed
- Attend Final Inspection Conference
- Provide Final Redline Plans to Engineer
- Ensure All Paperwork is Scanned and Emailed



### Photos

- Photos Show Progress and Provide Documentation
- Photos Show Visual Evidence of Good/Bad
- Photos Help Document Existing Conditions
- Could You Need to See it Later? Take the Pic!
- Take Pictures Daily
  - Use separate folders for pictures that could be needed later.
- Pictures of No Progress are Important Too!



### Photos

- Types of Photos
  - Equipment On-site (and Idle) Update Throughout the Project
  - Daily Activities
  - Underground Features During and Completed
  - Pre-Activity Conditions
  - Off-Site Areas Pre-Project and During Construction
    - May be needed to get back to pre-project condition
  - Flooding Issues On-Site and Downstream
  - Potential Issues or Change Orders
  - Marketing Photos!
    - For Airport and Engineer Pictures Help Communicate Good Projects to Others



What's Going on Here? (If you said nothing...)







Document Before and After







Document Equipment – Active and Idle





#### **Equipment Type**

Case 460 Ride-On Trencher

Wacker RT C-35 Compactor

Wacker RT C-44 Compactor

Ingersoll Rand SD-45 Roller

John Deere 200C LC Hydraulic Excavator

Cat 242B Skid Steer Loader

Volvo EC 45 Pro

D12 Dozer 037P

Stith D41P D19

Cat 963B LGP TL-08

Model 3680 Grinder

John Deere 200C LC Hydraulic Excavator

Cat Challenger

John Deere 862B

Komatsu TH-4 Excavator

Ingersoll Rand C-26 Roller

Volvo EC 460B LC Excavator

Komatsu PC 300 LC Excavator

Cat 963C TL-4 Dozer

Komatsu D65E Dozer

Cat 815 C-7 Compactor

Volvo A40D Articulated Truck

Komatsu PC 200 LC Excavator

Comatsu FC 200 LC Excavato

Ford Water Truck

Cat 938G Loader

Komatsu D20 Dozer

Cat 5400E Truck

Cat 3400E Truc

Mack Truck



Document When Things Go Wrong





Document On-Going Activities





Document Finished Products







# Communication

What Type of Communication and Meeting Involvement Should You Expect?

### **General Coordination**

- Constant Communication with Contractor
  - Field and Office
- Coordination with the CMAT Moving Target!
- Regular Phone Communication with Engineer/Sponsor
  - Daily/Weekly depending on project size
- In-Person / Phone Calls / Emails with Contractor
- Field Check-Ins with Owner/Engineer a Few Times each Month



# Meetings

- Weekly Progress Meetings
  - Facilitate Meetings and Prepare Minutes
  - Schedule and Two-week Look Ahead
  - Address Any Issues or Potential Problems
  - Review Submittal Status
  - Discuss Quantities and Pay Applications
  - Review Airport Safety
  - QA/QC Coordination
  - Potential Change Orders
  - Review Project Day Count and Weather Delays if applicable
  - Coordinate NOTAMs / 7460s / Closures / Tenant Impacts



# Meetings

- Pre-Activity Meetings
  - Major Activities such as P-401/P-501
  - Review the specs for understanding
  - Clear direction for QC vs. QA
  - 1-2 weeks prior to work starting
  - Possibly 1-2 days before if night work or other closure related work needs to be reviewed before starting
- Include Inspectors in Related Meetings
  - Upcoming projects
  - Design reviews
  - Monthly airport meetings



# Identifying Issues

How Early Identification of Issues Can Help with Project Success

# Identifying Issues

- Early Constructability Plan Review is Important
  - Design Phase coordination (prior to bidding!)
  - Review plans on-site
  - Phasing and schedule are critical for construction review
  - Provides outside eyes with a different vantage point
  - Airport inspectors tend to think like owners / consider maintenance and long-term impacts
  - Also helps to prepare the inspector
- Good Communication Can Avoid Delays
  - Example if you anticipate unsuitable soils, start talking with QA/QC and Contractor about the plan rather than waiting to encounter them in the field and have delays.



# Identifying Issues

- Document Potential Issues
  - If you think something could become an issue, start documenting and tracking quantities separately.
  - Keep notes in diary and in meetings
  - Notify Owner/Engineer and ultimately GDOT/FAA if a potential change order could result
- Identifying Issues Early Could Save Money
  - If any issue is found early, there is more time to find a costeffective solution – if found later the options are more limited.
- Prior Experience at YOUR Airport Can Be Valuable
  - Inspectors see multiple projects and often know about poor soils/rocks/utilities that may not be in survey/geotech.



# Identifying Issues - Examples

- Determine how to measure rock or other critical quantities ahead of time.
- Inspector noticed grades on plans didn't match field conditions. Working with engineer they were able to field modify using basic assumptions to keep things moving and avoid costly rework.
- Inspector noticed forms for P-501 looked off. Had contractor check and a whole section was surveyed wrong. Avoided tearing out and replacing concrete.
- Inspector worked with CMAT to optimize soil cement content to save over \$200K.



# Identifying Issues - Example

Conduit Bored Through Existing Pipe

 Inspector found mud in downstream inlet – could have gone unnoticed until after Project and become a larger issue.

• Quick camera check and coordination with Engineer resulted in no

project delay.

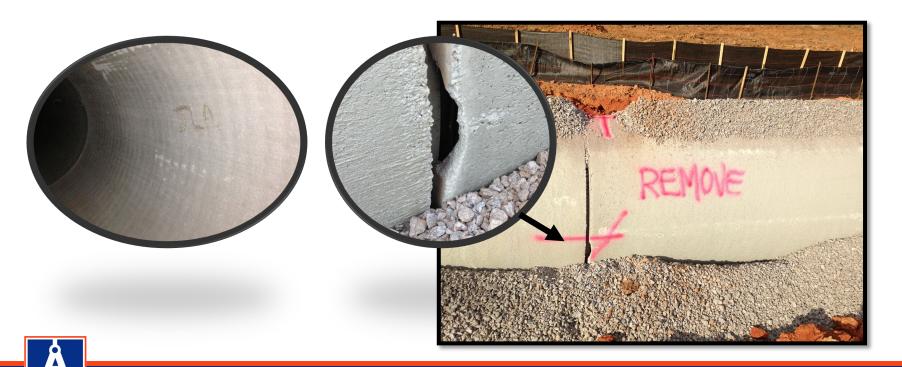






# Identifying Issues - Example

- Damaged Pipe
  - Inspector saw pipe on-site and said it couldn't be used next day it was in the ground – then had to be ripped out.



# Airport Inspectors are Specialized

WHAT MAKES A GOOD INSPECTOR AND HOW DO YOU FIND THE RIGHT INSPECTOR FOR YOUR PROJECT?

### Airport Inspectors

- Provide Full-Service Inspection
  - Taking tickets, monitoring construction, running meetings, making field decisions, coordinating field issues, etc.
- Have to Become Experts in Multiple Disciplines
  - Clearing, EC, Grading, Drainage, Paving, Lighting, Utilities, etc.
  - Also learn multiple state specifications as well FAA specs
- Must Understand and Respect Airfields
- Often Pull the Night Shifts
- Are Always Learning
  - Changes to FAA Specs, New Airports, etc.



### Airport Inspectors

- Airport inspectors must be organized, communicate effectively with the Sponsor, Contractor, and Engineer, and plan ahead as much as possible.
- Inspection is an Integral Part of the Team
  - Not just a box to check.
  - Aren't gate guards the need to be on-site overseeing project
- Can Be an Integral Part of Project Success
  - And often project savings!



# Airport Inspectors

Make Sure Inspectors are Qualified and Prepared





### **Great Airport Inspectors**

- Approach Projects with a Team Mindset
  - GDOT / FAA / Engineer / Contractor / Airport / Inspector / CMAT
  - Everyone works together for a common goal project success
- Proactive Rather than a Reactive Approach
- Passion Treat the Airport Like it's Their Own
  - Become an extension of Airport Staff
  - Get to know the Airport Managers / Operations Staff
- Experience, Experience, Experience
- Finding the Right Fit is Important Too!



# To the Sponsor...

SOME INSIGHT WE'VE FOUND OVER THE YEARS.

### Lessons Learned

- Timely and Consistent Communication is Key
- Treat People with Respect and Kindness
- Try to Be Fair, Especially to Contractors
  - Teamwork can go a long way and everyone wins!
- A Little Time to Think/Discuss Can Go a Long Way
  - Before and during construction
  - Encourage brainstorming with the engineer, inspector, sponsor, contractor in the room together to work through best, fastest, cheapest solutions.



### Recommendations to Airport

- You'll Need to Rely On and Trust Your Engineer and Inspector
  - To build that trust, get out there and understand your Project.
  - Get to know your Inspector
- Sit Down with Engineer and Inspector to Review Plans
  - Do the plans meet your long-term needs?
  - Invite maintenance/operations to meetings
- Pay Attention to NOTAMs and 7460s can get forgotten
- Pay Attention to Haul Routes and Entry/Exit Points
- It's Your Airport Walk Around / Speak Up



# Questions?

How Airport Sponsors and Inspectors Should Team Together for Project Success

