# **WELCOME**







RE21 **AECOM** HUNT CLAYCO **BOWA** 

O'HARE

AVIATION LEARNING SERIES - SESSION 5



Good afternoon. On behalf of the Mayor, Chicago Department of Aviation Commissioner Jaime Rhee and the AECOM Hunt Clayco Bowa JV, we would like to welcome everyone and thank you for your time and participation today.

A few housekeeping items before we begin the presentation.

- 1- Please mute your microphones.
- 2- Turn off your cameras.
- 3- If you have dialed or called into the presentation, we kindly request that you use the chat function to identify the last four digits of your phone number, name and email address.
- 4- There is an opportunity at the end of the presentation for Questions. However, we do encourage the use of the Chat or raise your hand function to ask any questions during the presentation the more interactive the presentation is the better!

# AVIATION LEARNING SERIES DOING WORK ON

\*O\*HARE 21

SESSION 5
KEYS TO A SUCCESSFUL PROJECT
PRECONSTRUCTION

**AECOM HUNT CLAYCO BOWA** 

O'HARE

AVIATION LEARNING SERIES – SESSION 5

COO DEPARTMENT OF AVIATION

Today is Session No. 5 of the Aviation Learning Series – Doing Work on O'Hare21. The focus of today's presentation is "Keys to a successful project – Preconstruction".

This session is intended to provide information that potential bidders on trade packages should be aware of to construct their bids ensuring that all time, efforts and costs associated with the ancillaries and administration to performing the construction work are included.

# **AGENDA**

Introduction

Software

Safety

Quality

Schedule

Payment

Badging

O'Hare Airport Logistics

**Ethics** 

Conclusion - Aviation Learning Series

# O'HARE

AVIATION LEARNING SERIES - SESSION 5



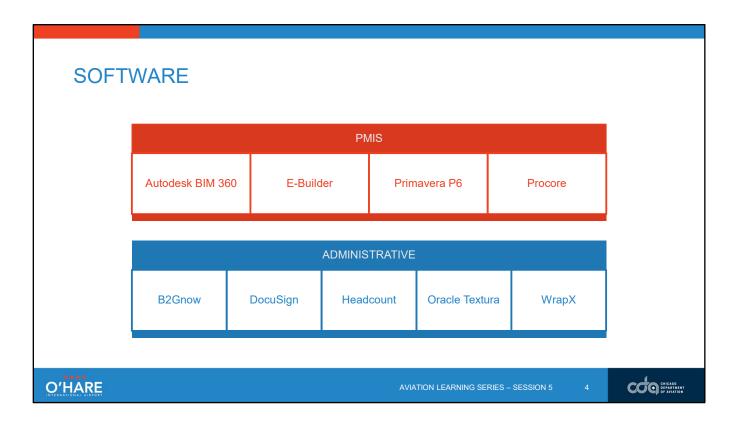
The agenda for today's Learning Series session highlights the major areas of time, resources or cost that can be overlooked when preparing a bid/proposal for a trade package. The intent is to provide some insight into these areas so that when you are preparing a bid/proposal for a trade package, especially as a prime contractor, there is a clear understanding of the effort required for the performance and administration of the project.

Of note however, the information contained within this presentation is included in the contract documents; as stated earlier these are items that can be overlooked. These areas include:

- 1- Software such as Procore, Primavera P6 and WrapX
- 2-Safety
- 3- Quality
- 4- Schedule
- 5- Payment
- 6-Badging and
- 7- Airport Logistics

Note that some of the agenda content items will center on activities that take place during construction. This is to provide an understanding of the time, resources or cost required for each trade package.

We want everyone to have the opportunity to prepare and submit a bid/proposal with an understanding of the work to be completed and the ancillary/administrative requirements of the trade package. And, if they are the successful low, responsive, responsible bidder, be able to execute the work according to plan with the anticipated return/profit margin. Otherwise known as "A Successful Project".



### KEYS TO A SUCCESSFUL PROJECT - SOFTWARE

There are multiple software platforms utilized at the airport, specifically the ORD21 Program. These platforms are easy to use but each has a specific use, and this use requires a certain level of time and resources.

Not including the appropriate time and resources into a bid/proposal can have significant consequences, such as lost profit margin or worse a "money losing" job.

We are going to discuss nine (9) different applications – for simplicity we have categorized the nine (9) into two (2) buckets, Project Management Information Systems or PMIS and Administrative.

The PMIS applications are generally used everyday throughout the trade package schedule in the performance of the work. There may be other software applications required for a specific trade package, but those specific applications will be detailed in the trade package project scope. These applications include:

- 1- Autodesk BIM360
- 2- e-Builder
- 3- Primavera P6
- 4- Procore

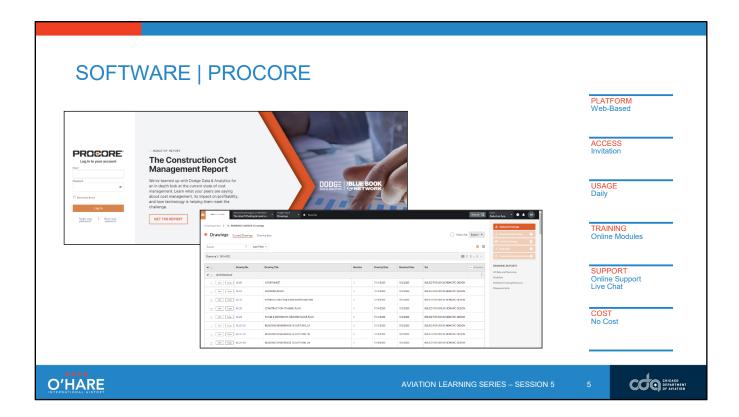
The Administrative applications are generally utilized weekly or monthly and are used for payment, compliance tracking and the OCIP program. These applications include:

- 1-B2Gnow
- 2- DocuSign
- 3- Headcount
- 4- Oracle Textura

# 5- Wrap X

A slide is provided for each application with the intent to provide a basic understanding of what the application is used for, how often it is used, and any specific resources required.

Many applications are used on other construction projects throughout the city so use/knowledge will improve skillset for other pursuits.



### SOFTWARE | PROCORE

Procore is a cloud-based construction management software which allows teams of construction companies, property owners, project managers, contractors, and partners to collaborate on construction projects and share access to documents, planning systems and data. The software includes features such as meeting minutes, drawing management, submittal and RFI management, photo documentation, daily logs, observations, punch list, bidding and document storage for all project-related material.

This program is used throughout the project, from the initial trade package bidding through closeout. No specific expertise is required to use this software as it is user-friendly and promotes intuitive navigation. Access and use of the software will be utilized daily. AHCB allows multiple log-ins per company to make use of the software easier.

As we will discuss in the next slide, there is some overlap with e-Builder however there will not be a duplication of effort on the part of the contractor.

Platform Web based

Mobile capability

Access Invitations are sent for access

Usage Daily for uploading submittals and RFIs and input of site activities in the daily logs.

Periodic access for other modules such as punch list and access of project-related

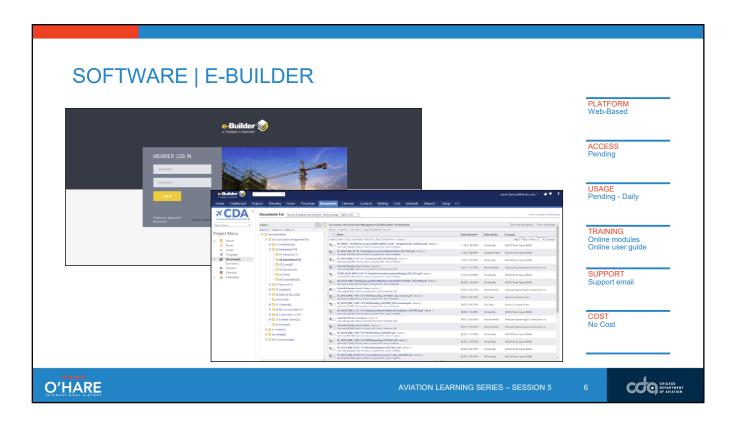
material.

Training Procore has online training modules
Support Procore has online support and Live Chat

AHCB assistance as needed No Cost

Cost

10 0031



### SOFTWARE | E-BUILDER

e-Builder is construction management software which allows teams of construction companies, property owners, project managers, contractors, and partners to collaborate on construction projects and share access to documents and data.

The software includes features such as meeting minutes, submittal and RFI management, photo documentation, daily logs, observations, and document storage for all project-related material.

E-Builder is very similar to Procore – both provide the same functionality. The difference being that Procore is managed by AHCB, and e-Builder is managed by the CCA and is the ORD21 programs official enterprise program/project management software or EPMS. eBuilder is currently being developed and is not fully implemented. That noted, while both systems may be required to be used daily, there will not a be a requirement to duplicate efforts such as provide a daily report in eBuilder and a daily report in Procore.

Platform

Access

Access to e-Builder for Contractors is currently in progress. Currently, Contractors are submitting and managing documents via Procore, with the AHCB project team bridging the gap between Procore and e-Builder.

Usage

Daily for uploading submittals and RFIs.

Periodic access and management of the project-related material may be required throughout the duration of the project.

Training

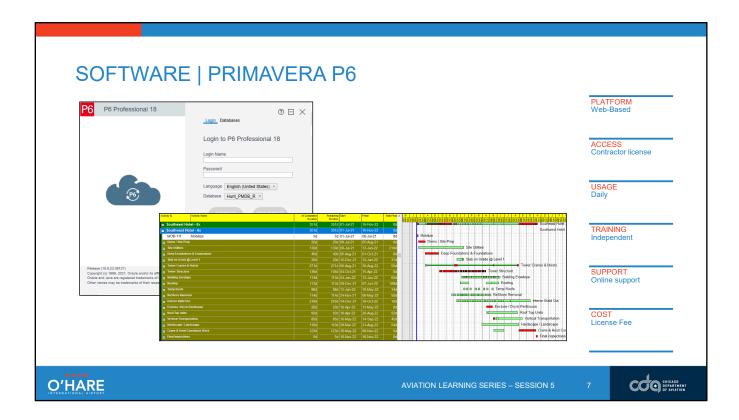
Once Contractor access is granted, an email will be transmitted which includes a link to a series of required training videos. Training video completion is required for

account login.

E-Builder online User Guide

Support Email eBuilderInfo@connectchicagojv.com

Cost No Cost



### SOFTWARE | PRIMAVERA P6

Primavera P6 is a scheduling management and resource tracking platform, I am sure that most of the people on this call are familiar with Primavera P6. The ORD21 projects require AHCB and our contractors to utilize P6 to develop and maintain the schedules. Schedule updates are required on a monthly basis. In addition, an updated or actualized schedule is required for payment. Further, there may be times when a recovery schedule is required or a fragnet is required for delay determination or a change order.

Primavera P6 is a sophisticated scheduling software platform and generally some expertise is required to use the software. Additionally, our schedules are required to be resource loaded which adds to the complexity of the schedule development.

Schedule is an agenda item that will be further discussed in the presentation to specifically discuss the resource loading of the schedule.

Lastly, there is a fee for a P6 license. That fee is approximately \$3,000 per year.

Platform Web based

Access Contractor to access Primavera through their license. Access can not be provided

through the JV's platform license.

Usage Scheduling updates are required weekly; if updates are made daily or more

frequently than weekly the schedule is easier to maintain

The prime contractor would be responsible to utilize P6 for schedule maintenance and updates. It would at their determination if they want their sub tiers to have P6

and provide them with updates through the platform.

Training AHCB does not provide training. Contractor to utilize independent sources as needed.

Support Online support

Cost License cost roughly \$3,000.



### SOFTWARE | AUTODESK BIM 360

- Autodesk® BIM 360™ Glue is a cloud-based BIM management and collaboration product that
  connects the entire project team and streamlines BIM project workflows. With anywhere, anytime
  access to the most recent project models and data throughout the project lifecycle, BIM 360 Glue
  accelerates project reviews and empowers multidisciplinary teams to quickly identify and resolve
  coordination issues.
- Model Coordination provides a coordination space to upload, review, and detect clashes between your latest set of project models.
- Revit® BIM (Building Information Modeling) software drives efficiency and accuracy across the
  project lifecycle, from conceptual design, visualization, and analysis to fabrication and
  construction.
  - Begin modeling in 3D with accuracy and precision.
  - Automatically update floor plans, elevations, and sections as your model develops.
  - Let Revit handle routine and repetitive tasks with automation so you can focus on highervalue work
- Navisworks® project review software improves BIM (Building Information Modeling) coordination.
  - Combine design and construction data into a single model.
  - Identify and resolve clash and interference problems before construction.
  - Aggregate data from multiple trades to better control outcomes

Platform Web based Mobile capability

Access BIM 360 Glue and BIM 360 Model Coordination – independent license not needed;

invitations will be sent from AHCB for access. Once project is complete access is terminated.

Revit and Navisworks - independent contractor license required.

Usage Pre-construction use: view design models and electronic documents.

During the MEP coordination process, we would use:

• BIM 360 Glue

BIM 360 Model Coordination

potentially REVIT and Navisworks

Usage requirements will be contained in the bid documents.

Training Autodesk online training

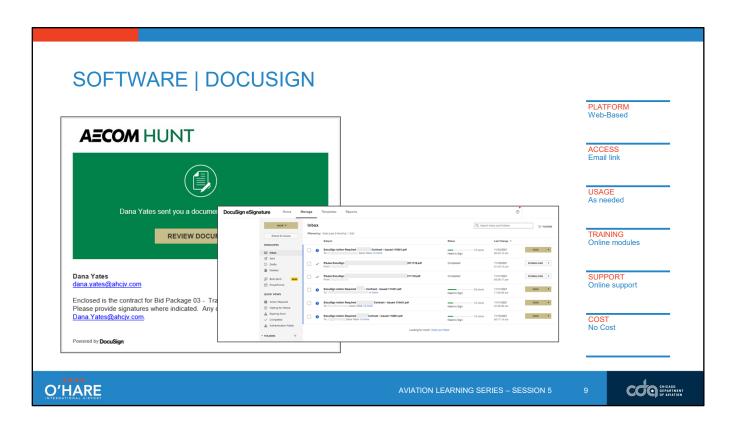
AHCB assistance as needed

Support Autodesk online support

AHCB assistance as needed

Cost BIM 360 Glue and BIM 360 Model Coordination – no cost

Revit and Navisworks - license cost, should be included in the bid price.



### SOFTWARE | DOCUSIGN

DocuSign is an online platform allowing individuals to electronically sign documents and agreements. DocuSign is utilized to execute all contract documents. This application may also be used for other documents.

This application is free to use and saves on postage and delivery cost.

Platform Web based

Mobile capability

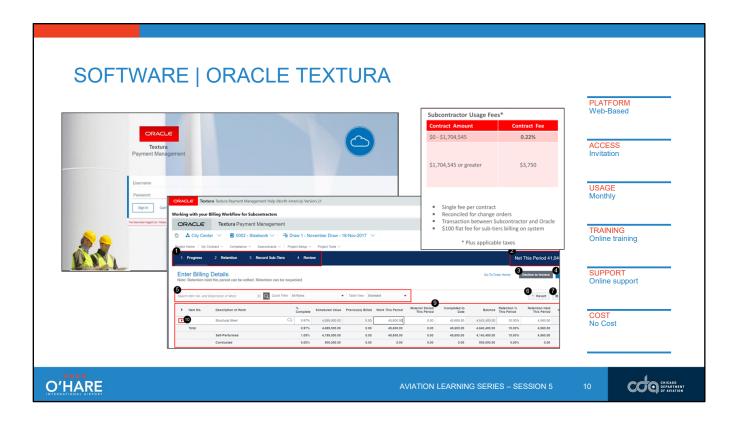
Access Contractor will receive an email with a link to take you directly to the document which requires signature(s).

Usage As needed for document review/signature

Training DocuSign online training

Support DocuSign online support

Cost No Cost



### SOFTWARE | ORACLE TEXTURA

This software is utilized for the submission of monthly electronic pay applications and lien waivers. Textura streamlines and automates processes to accelerate payment, mitigate risk, and improve cash flow.

Platform Web based

Access AHCB will invite the contractor to accept their contract in Textura. Textura will send the contractor an email to set up the company.

Usage Monthly

Training Textura online webinar training and Live Chat AHCB assistance as needed

Support Online support



### SOFTWARE | B2GNOW

B2Gnow is the system used by CDA to track diversity and compliance. Each contractor is required to use the software to track subcontracts for M/WBE participation requirements. The tracking includes contract award values and payments to prime and 2nd-tier contractors. In addition, all tier contractors will utilize B2Gnow to verify when payments are received. B2Gnow is also utilized for M/WBE compliance reporting.

Platform Web based

Access Web address (https://ord21.diversitycompliance.com/)

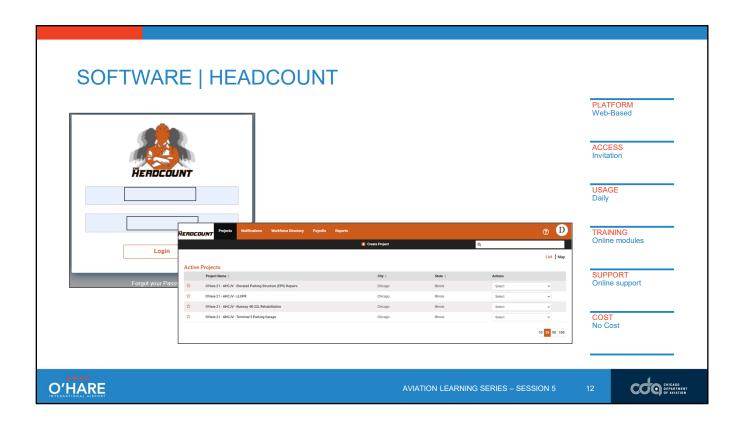
AHCB will enter all prime contractors. Prime contractors are responsible for entering sub-tier contractors/suppliers and reporting monthly payments.

Usage As needed

Training B2Gnow online training

Support B2Gnow online support

Cost No cost



### SOFTWARE | HEADCOUNT

Headcount is the system used by prime contractors and their tier contractors for payroll tracking, weekly certified payroll, apprentice documentation, and workforce management.

This application is required for certified payroll. All projects at the airport are required to submit certified payrolls. Certified payrolls are required to be submitted weekly for all on-site employees. Certified payrolls are used to document that all onsite employees are being paid, at a minimum, prevailing wage; for this program generally, that is the prevailing wage for Cook County, IL. While all projects at the airport are covered under the Multi-Project Labor Agreement, it should be noted that not all trade wage rates are equal to or greater than the prevailing wage. In addition, the contractor is responsible for ensuring that each employee is correctly categorized accordingly to the prevailing wage rates.

In addition, Headcount utilizes an RFID tag system to track personnel on-site; this tracking is limited to "checking in" and "checking out" for certified payroll purposes. Upon completion of the on-site safety program, each person is provided a Headcount RFID tag to place on/in their hardhat; each tag is specific to that individual. Tags are not to be shared or borrowed. While there is no cost for either the RFID badge or the software application, there is a fee for a lost RFID badge.

Lastly, it is highly suggested to complete the online training program as this will make using the software application much simpler.

Platform Web based Access Invitation

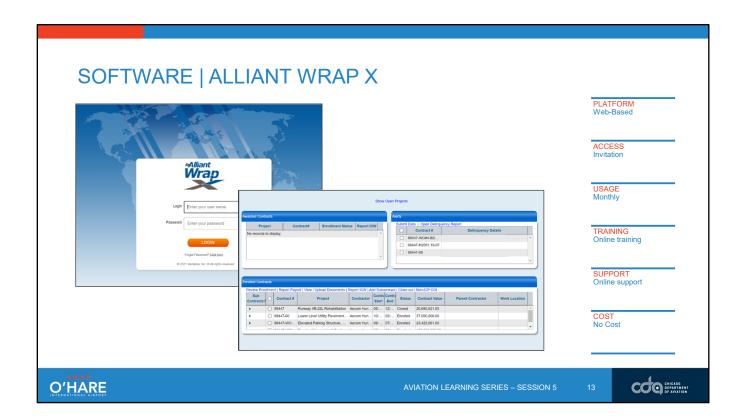
Usage Daily

Training Headcount online training

Weekly virtual trainings are held for new team members

Support Headcount online support

Cost No cost



### SOFTWARE | ALLIANT WRAP X

Alliant WrapX is the web portal for the Owners Controlled Insurance Program or OCIP. All contractors, regardless of tier, are required to enroll in the OCIP. WrapX is designed for the management of the OCIP including enrollment, insurance cost tracking, and certificate of insurance tracking. Completion of the enrollment process requires an initial effort to upload and record company information. This information includes certificates of insurance, declarations and rate pages, estimated labor hours and cost. Subsequently the actual labor expended by classification must be recorded in the portal on a monthly basis. If information is outstanding, this information is noted in the Alerts section of the portal. In addition, you'll receive a WrapX email notification; this notification will provide the details of the outstanding information. You will continue to receive these notifications until the outstanding information is provided.

The OCIP provider will provide an invitation for access to include a User Name. Like most of the applications we have discussed there is no fee for use.

The OCIP provides the following insurance for all eligible contractors, regardless of tier, that are approved for participation in the insurance program:

Commercial General/Excess Liability Workers Compensation & Employers Liability Builders' Risk

Contractors Pollution Liability

Note that OCIP Coverages do not apply to ineligible parties or to Work performed off-site.

"I'll hand the presentation to Eric Howe, a project executive with AHCB, to speak on keys to success for some additional aspects of the project specifically related to execution planning during preconstruction."

Platform Web based

Access Invitation

Usage Monthly

Training WrapX online training

Support WrapX online support

# SAFETY

- · Full-time Safety Representative
- Stretch & Flex (Everyday)
- CDA Construction Manual Requirements
- · Project Specific Safety Plan
  - Pre-Task Safety Assessments Required
- OCIP
  - Enrollment Required
  - Offsite Auto & GL Required
- Onsite Medic
  - COVID Check (Everyday)





CONSTRUCTION SAFETY MANUAL REVISED NOVEMBER 2020

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### KEYS TO A SUCCESSFUL PROJECT - SAFETY

Safety is the number one priority for both AHCB and CDA. As such, there are several safety requirements found on our projects and at the airport that may exceed what is typically expected on other projects. These expectations may require certain cost or productivity impacts that should be accounted for when preparing your bid or proposal.

- 1- AHCB requires the prime contractor to have a full-time safety representative any time work is occurring on-site.
- 2- AHCB requires all on-site workers to participate in a daily stretch and flex (once they have completed their COVID screening). Stretch and flex has proven to reduce incidences of muscle strains and sprains when performed correctly and regularly. AHCB will lead these daily exercises.
- 3- AHCB enforces the CDA Construction Safety Manual; compliance to this manual is required by participation in the OCIP. Further, there are many requirements in this manual that may exceed your normal expectations or have assumptions that will dictate certain requirements or action on your behalf. For example, jackhammering or demolition activities require the use of metatarsal guards. If your firm does not use these guards you would need to build the cost into your bid. Another requirement is the completion of a dig book prior to excavation or demolition of pavements. The dig book requires utility locates be performed, to include FAA locates, and airport stakeholders sign-off prior to activities. This dig book can take a week or two to get approval.
- 4- The lowest responsive, responsible bidder will be required to submit a Site-Specific Safety plan; an SSSP checklist is included in the bid documents. This plan is not a general safety plan, but a plan crafted specifically for the work to be occurring on-site. In addition, this safety plan must be congruent with and incorporate the necessary key tenants of the CDA Construction Safety Manual.

5- The CDA has chosen to implement an Owners Controlled Insurance Program. As such, all contractors are expected to enroll in the OCIP and therefore shouldn't carry the cost of insurance in their proposal or bid except certain limited coverages outlined in the bid documents such as Off-site General Liability and Auto insurance. In addition, all contractors must be enrolled in the OCIP prior to the initiation of activities on-site.

6- Lastly, AHCB has an On-Site Medic. This is for several reasons: (1) perform daily COVID screenings (2) first response for first aid (3) certain free health check services to on-site employees.

# **QUALITY**

- Contractor Quality Control CMR Quality Assurance
- QC is responsible for performing the quality inspections and quality on testing
- · Quality Personnel:
  - Third-Party
  - Meet Qualifications of Technical Specification
- Must be present when construction is occurring



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AVIATION LEARNING SERIES – SESSION 5

COR CHICAGO DEPARTMENT OF AVIATION

### KEYS TO A SUCCESSFUL PROJECT - QUALITY

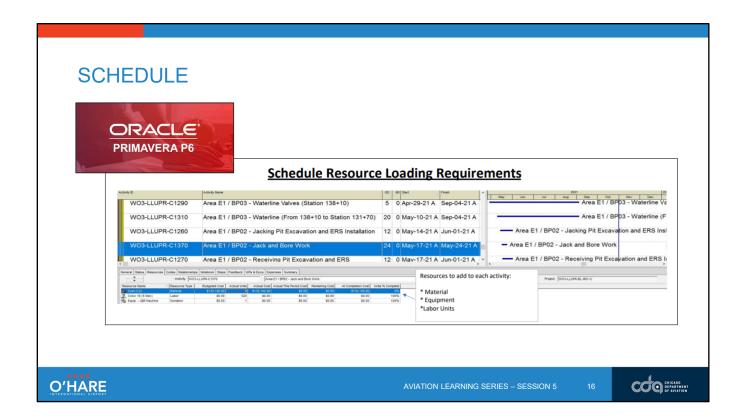
Quality is a key component to successful construction at O'Hare. A robust Quality Program is inplace that the contractor is expected to adhere to and there are some costs associated with this adherence that should be built into your bid/proposal.

In addition, another unique aspect of the Quality Program is the Contractor Quality Control and CMR Quality Assurance (not Owner Quality Control).

- 1- All construction projects at O'Hare are Contractor Quality Control and CMR Quality Assurance so what does this mean? Each prime contractor is responsible for performing their own quality inspections and materials test while the CMR will perform the respective quality assurances tasks. Further the CDA may from time to time perform independent quality testing or inspection.
- 2- The prime contractor is required to have an on-site Quality Manager while any construction activities are occurring. This individual must be submitted to AHCB for approval prior to the start of construction, The qualifications for this individual are outlined in the technical specifications 01 4000. The Quality Manager cannot be a member of the management team, project manager, superintendent, etc., The Quality Manager also reports to the Project Executive and AHCB, not the project manager.
- 3- The prime contractor is also required to prepare and submit a Quality Control Plan to AHCB for approval. This plan will identify key members of the quality team, testing and inspection procedures and requirements, and documentation of quality control, including template forms. The quality control plan must be congruent with the contract requirements for quality, such as the details and frequency for material testing.
- 4- Participation in a Pre-Activity meeting is required prior to the performance of any work. The prime

contractor will be responsible for preparing the information pertinent to the meeting and shall include the following:

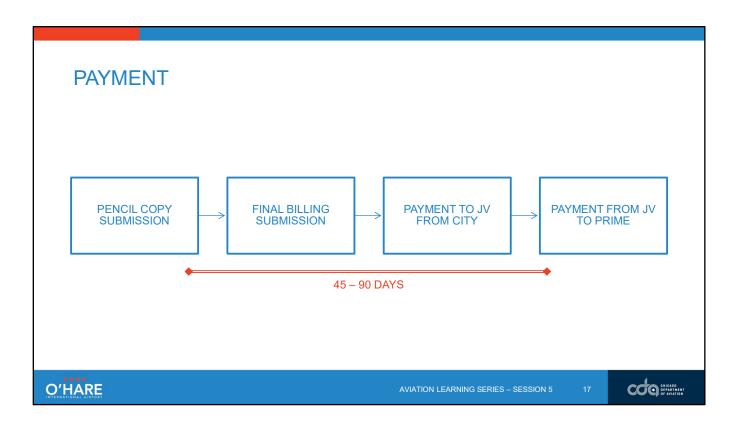
- 1. safety requirements,
- 2. quality addressing testing to be performed and inspections to be completed,
- 3. verification of approved submittals and shop drawings and corresponding materials
- 4. a detailed plan for executing the work including crew detail, equipment, and schedule of tasks



### KEYS TO A SUCCESSFUL PROJECT - SCHEDULE

Our contracts require resource loaded Primavera construction schedules which means that each prime contractor is required to submit the same to AHCB for incorporation into the project master baseline schedule. In addition to providing the schedule, coordinating schedule interfaces with the team are also required. Once the coordinated baseline schedule is compiled, this schedule is submitted to the Program Management Office for approval. No task or activity shall exceed a value of \$50,000 unless approved by the PMO. This can lead to a fairly sophisticated and complex schedule.

This complexity is further enhanced by the resource loading requirement, which includes at a minimum, production units, labor hours, equipment and company performing the work. The baseline schedule will further correspond to the schedule of values for payment. A schedule update is required every month to reflect the actual work completed and resources expended – this update is also used as the basis for monthly payment.



### KEYS TO A SUCCESSFUL PROJECT - PAYMENT

Cash flow is important for every contractor and understanding the payment cycle is important to determining the cash or access to capital needed for the performance of the trade contract. While AHCB utilizes software applications to make the process as easy as possible, such as Textura and B2Gnow, there is a multi-step approval process required prior to the payment from the CDA and in turn, payment to the Contractor and further in turn payment to their sub tier contractors and material suppliers. Due to the multiple steps required for approval the payment cycle can vary in duration from 45-days to 90-days; that noted usually the first couple of payment applications take a little longer than normal but soon the payment typically becomes consistent around 45-days. However, payments can be received in as little as 35-days, but this is the exception and not the rule.

AHCB will assist with the preparation of the final payment application through review of the contractor's Pencil Copy. In addition, the project will have a calendar specific to the deliverables and actions required for everyone to submit a timely payment application. If all parties adhere to this schedule, an invoice is prepared and submitted on time. Failure to do so could mean a late invoice submission or worse, your draw not being included in that month's invoice.

A tip that might assist with cash flow would be including payment for stored materials in your monthly billings assuming all provisions for such payments have been met.

If there is potential for access to your line of credit throughout the project, any associated costs should be included in your bid/proposal.

"If there aren't any questions on payments at this point, I'll hand the presentation back to Nate to highlight a few O'Hare specific keys to success."



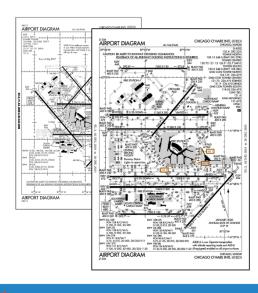
### KEYS TO A SUCCESSFUL PROJECT - BADGING

An identification badge is required when work is in the AOA or in other secured areas of the Airport. Badging policy guidance and hours of operation can be found on the Fly Chicago website. Badging is a significant process. It is important to be thoroughly familiar with the process before completing and submitting any ID Badge forms.

Badging Applicants are required to take the CDA Ethics training and provide proof of the training along with their application before they can be granted badging access.

To get an employee badged plan on approximately 3 to 6 hours to be expended by each employee; additional hours may be required for the signatory.

# **AIRPORT LOGISTICS**









AVIATION LEARNING SERIES – SESSION 5



### KEYS TO A SUCCESSFUL PROJECT - AIRPORT LOGISTICS

The airport is a complex environment. There are many operations and systems that must remain unimpacted by construction for everyone's safety and continuity of business. There are generally two (2) defined areas of the airport commonly know as "Landside" and "Airside". Each of these areas has its own set of working constraints and requirements. Every trade package will include the applicable work constraints based on the type of project, area of the airport impacted and projected operational impacts. In addition, every project will have a 7460-1 determination from the FAA; this determination defines the safe working conditions to maintain aeronautical operations safely.

Landside is generally defined as all the area outside the Airside – meaning the approach and departure roadways, parking garages and lots, curb frontage (upper and lower) and the portion of the facilities that are outside the Security Identification Display Area or SIDA. Badging is not generally required in these areas. However, there may be constraints in the performance of the work, such as:

- 1- Hours may be restricted due to type of work and proximity to the hotel;
- 2- Work areas may be restricted due to demand requirements; an example might be the removal of a certain number of parking spaces at a time;
- 3- Employee parking or laydown may have to be located off-site due to restricted real estate; or
- 4- Crane heights may be limited during certain times due to aeronautical safety.

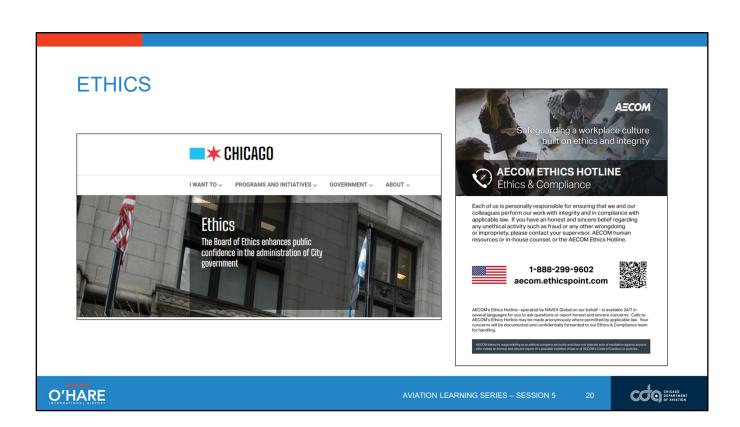
Airside is generally defined as everything inside the fence or the airfield. Access to the airside is limited to certain access points and certain portions of the airfield. A badge and permitted vehicle is required for airside access. Exceptions are made for escorting under certain provisions. The majority

of the landside constraints apply to the Airside; however, the Airside is a far more complicated operating environment considering the movement of aircraft, support vehicles and airline operations.

The Airside is a constantly moving environment from new taxiways and runways to taxiway and runway closures to peak arrival and departure times. When operating in the airside environment your head must always be on a swivel.

Lastly, FOD or Foreign Object Debris is everyone's responsibility on the airside. If you see FOD stop and pick it up; if the FOD is in an area that requires special clearance call CDA Operations, and they will send someone out to pick it up. Don't ever enter into a runway or taxiway safety area; if you are lost exit into the grass and call CDA-Operations; they will come and get you.

It is important to understand all the work constraints specific to the trade package. These constraints can impact normal productivity rates, require off-hour work and deliveries or require a workforce that meet the badging requirements. All of these elements need to be included in your bid/proposal and confirm with the trade package schedule.



### KEYS TO A SUCCESSFUL PROJECT - ETHICS

Lastly, there is no cost or resources required for a person or company to conduct business in an ethical manner; everyone wants an ethical environment in which to conduct business. AHCB performs integrity checks on the low, responsive, responsible bidder and their sub tiers to ensure there are no outstanding concerns – clearance of this check is required prior to notice of award.

In addition, the City has contracted Integrity Monitors to oversee the CMR's performance of the work; our job is to make their job boring. I say that only half jokingly. Please ensure prior to bidding that your M/WBE firms are performing a Commercial Useful Function (CUF). That bids containing incentives meet eligibility requirements. These are just a few of the items that AHCB will monitor throughout the performance of the trade contract.

The City has guidelines concerning ethics for contractors that is included in our bid documents; acknowledgement of these guidelines are required. These guidelines also include contact information should you have concerns regarding unethical activity. Additionally. AECOM has an online and toll-free Ethics Hotline. Both contacts are confidential and can be anonymous.

# CONCLUSION - AVIATION LEARNING SERIES Completed Aviation Learning Series Session presentations will be available on the AHCB JV website. Session 3: AHCB JV First Time Prime Contractors - Tier Contractor Management Session 4: AHCB JV Change Order Management Session 5: Keys to a Successful Project - Preconstruction Upcoming Aviation Learning Series Sessions Session 6: Keys to a Successful Project - Construction Session 7: Keys to a Successful Project - Closeout

Past session presentations will be located on the AHCB JV website.

Upcoming sessions will be scheduled after the New Year and continue the topic of Keys to a Successful Project for the construction and closeout phases.



# THANK YOU FOR YOUR TIME AND PARTICIPATION!







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