Birdi Systems, Inc.
From Solutions to Service

Birdi Systems, Inc. is a Los Angeles-based, award-winning, full-service systems engineering consulting and contracting firm.
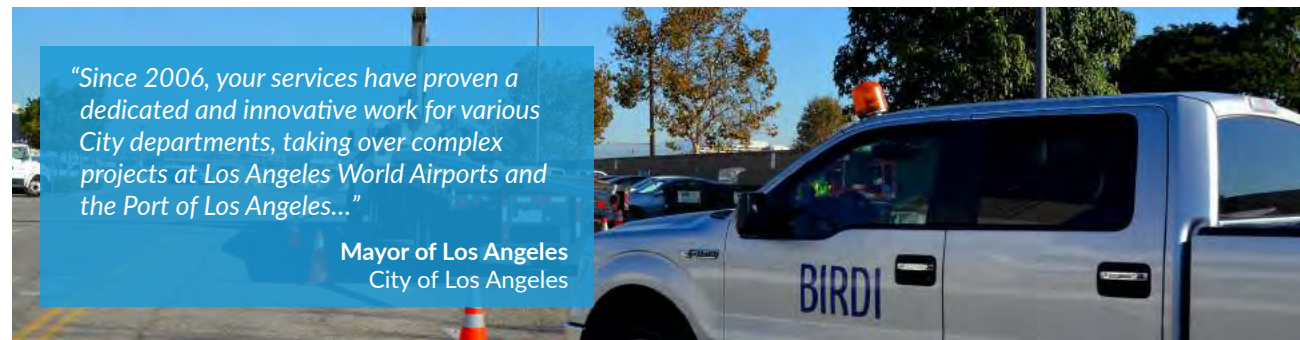
COMPANY PROFILE

OUR SERVICES

We are fully vested in our mission statement, "From Solutions to Service"

Birdi Systems, Inc. (BSI) is a Los Angeles based, award-winning, full-service systems engineering consulting and contracting firm. BSI is a leading provider of technology solutions to major airports and other transportation entities in Southern California. We are fully vested in our slogan, "From Solutions to Service." As system engineers, we are experts in developing the right solutions for our clients.

"Since 2006, your services have proven a dedicated and innovative work for various City departments, taking over complex projects at Los Angeles World Airports and the Port of Los Angeles..."

Mayor of Los Angeles
City of Los Angeles

Systems Engineering ◆ PM/CM ◆ Design-Build ◆ Systems Integration ◆ Technical Support

Services	Low Voltage Systems	Software Solutions
Award Winning Innovative	Turnkey Design-Build Maintenance	We get it right the first time
Strategic Planning	Access Control Systems	Consulting/Development/COTS
Program Development	CCTV & Video Management	
Vulnerability/Security Assessments	Intrusion Detection Systems	Flight Information on the Cloud (Cloud Based FIDS)
Concept of Operations	Command & Control Centers	
Business Process Engineering	Police Systems (CAD, RMS, MDC)	Systems Commander (Systems Monitoring & Management)
Project/Construction Management	Jail Control Systems	
Systems Design & Engineering	Electronic Personal Protection Systems	Capital Project Planner (Manage Projects, Pre-Construction)
Installation/Implementation	Radio Systems	
Systems Integration	Wireless Communications	Federal I/F Services for Credentialing (Automated Integration with TSC)
Testing & Commissioning	Flight & Baggage Information Display	
Interface Management	Passenger Processing/Operational Systems	Airport Security Assessment Tool (Ensure Regulatory Compliance)
Activation	Energy/Building Management Systems	
Quality Management	Parking Revenue Control Systems	Access Post Access Control System (Protects your Perimeter)
Operations & Maintenance	Automation Processes & Systems	
Technical Support Services	Business Information Systems	Risk Management Information System (Manage your Claims & Broker)
IT/Cyber Security	Network / Telecomm / Fiber Optics	

SBE
Small Business Enterprise (SBE)

LBE
Local Business Enterprise (LBE)

DBE
Disadvantaged Business Enterprise (DBE)

ACDBE
Airport Concession Disadvantaged Business Enterprise (ACDBE)

MBE
Minority Business Enterprise (MBE)

SBA 8(a) Certified
Small Business Administration (SBA) / 8(a) Business Development Program

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EXPERIENCE HIGHLIGHTS - DESIGN/BUILD

Design / Build · Systems Integration

SECURITY TECHNOLOGY INTEGRATION PROGRAM
Los Angeles World Airports (LAWA)
Programmed and developed concept designs for 12 Security related systems for LAWA's four airports

A comprehensive $105M security technology program at four airports—LAX, ONT, VNY, and PMD. Our planning, concept design, and program development services addressed all aspects of airport security, including terminal, cargo, airside, landside, and perimeter.

"BSI was very proactive in resolving any potential pitfalls ... I am hiring this contractor again to do some other work at Union Station Gateway. I am very picky about how things get installed, perform, and how things look. Being a past installer and project manager, I am very vocal about things and feel Birdi has responded to all my demands to make this a 'Class A' Project."
—**Metro Transit Security Technical Grants Program Manager, LA Metro**

MIDFIELD SATELLITE CONCOURSE (MSC)
SECURITY SYSTEMS
Los Angeles World Airports (LAWA)
Design/Build services for 1020 cameras, 400+ Access Control and ~100 Duress Buttons

- BSI is the security and special systems design-build subcontractor for this monumental project currently underway at LAX.
- The scope includes design (developing complete systems drawings and specifications) and implementation for CCTV/VMS and Access

Control (as well as wireless network infrastructure) throughout the entire terminal.
- This effort requires a thorough understanding of regulatory requirements for video surveillance and access control.
- The MSC will include 1000+ cameras and 450+ ACAMS card readers.

LAX AUTOMATED PEOPLE MOVER
Los Angeles World Airports (LAWA)
Responsibility includes Design & Build of all low voltage systems including data, voice, video and security Systems (2000+ cameras)

BSI is a key member of the team delivering the historic $4.9 Billion Automated People Mover (APM). The APM provides access to the long traffic-congested LAX terminals with a new, electric train system. The system involves complex integration and interface management requirements with over 18+ low voltage systems and numerous stakeholder groups spanning city agencies.

Our responsibilities include:
- Low Voltage Systems Design-Build
- Master Systems Integrator
- Interface Management and Activation Program using our innovative Quality and Risk Management process, Systems Facilities Operations Readiness (SFOR™)
- IT/Cyber Security and Security Operations Center Design-Build
- Low Voltage Systems O&M (25-year contract)

Terminal Development Program
San Diego International Airport (SAN)
Provided programming services, performance designs, PM/CM, commissioning and activation services for 18 low voltage systems

BSI provided Project, Design, Construction, and Commissioning Management Services for the systems component of the $1.027B San Diego International Airport Terminal Development Program (SAN TDP). Key accomplishments and client benefits include:
- Successfully implemented 15+ systems under the program with flawless activation
- Applied our Systems Facilities Operations Readiness (SFOR™) process to the entire $1B program to develop a comprehensive Concept of Operations for the program, achieving unanimous approval with 105+ stakeholder signoffs
- SFOR™ resulted in program savings, adherence to schedule, and integrated activation of systems, facilities, and operations

Retro-Activation Planning for Container Terminal
Port of Los Angeles (POLA)
Saved City of LA a $3M per day loss by applying company's innovation – The SFOR™

In 2015, BSI was task ordered to help determine the safety and ability of workers to return to work after a stop work action due to the automated (robotic) handling operation at one of the container terminals.

Efforts included:
- Operational test on the automation system and safety features
- Analysis of cyber security including an analysis of the intrusion prevention
- Methods utilized and network activity logs to date
- Configuration checks and control authority checks
- Conducting of regular meetings with the City of LA Leadership, the Port of LA
- Executive management, the terminal operator, and union representatives
- Resulted in saving the Port $3 Million per day

"Congrats and good work; this is excellent news! Major milestone in the program has been met." (For the ConOps developed for $1.027 billion Terminal Development Program)
—**Program Manager, San Diego Terminal Development Program**

"I am quite impressed with the level of detail and sophistication your team has demonstrated in planning for total security technology and security protocol integration."
—**Former Federal Security Director, Los Angeles International Airport**

Metro Union Station Video Surveillance System
Los Angeles County Metropolitan Transportation Authority - LACMTA
Design/Build services for 250 cameras

Designed and implemented a $1.36M closed circuit television (CCTV) system comprised of 270+ high resolution IP surveillance cameras (Axis), CCTV recording, wired and wireless network infrastructure, and video storage equipment with a video management system (Teleste VMS) to form a complete system for the LA Union Station Gateway Complex.

Security Systems Design
Hartsfield-Jackson Atlanta International Airport (ATL)
Designed (Lenel) Access Control System

- Systems engineering and design for access control, CCTV, and CATV
- Project management support and subject matter experts for federal regulatory compliance
- Designs helped modernize & expand security environment at ATL

LAX Airport Police Facility
Los Angeles World Airports (LAWA)
Design-build of all low voltage systems including data, voice, video and security systems

The new Airport Police Facility at LAX is part of a two-phase design-build project for the comprehensive engineering, design, demolition, preconstruction and construction for the new facility that will consolidate policing functions and responsibilities under one state-of-the-art roof.
- BSI is responsible for IT and Special Systems for the technology advanced facility

LAX Central Utility Plant (CUP)
Los Angeles World Airports (LAWA)
Retroactivation and Commissioning planning and programming for LAX's $550M CUP

As part of Technical Support Services for Los Angeles World Airports, BSI developed an assessment study of the Central Utility Plant (CUP) and proposed an Implementation Plan that can be used for the Facilities Maintenance Utility Group (FMUG) to help improve the CUP's performance and efficiency.

"Your team did an excellent job in understanding our requirements and appropriately re-engineered some of our old business processes to build a well-designed software application."
—**Risk Manager, LAWA**

"Congratulations everyone! A great deal of work completed in a short amount of time. A huge success for this team! Looking forward to seeing the renovated space."
—**IMTG Division Manager, LAWA**

Security Enhancements Program
Santa Monica Airport (SMO)
Programming, A&E designs and Project Management services

Conducted threat, vulnerability, and physical security assessments, and developed functional and technical specifications, and concept designs for the core systems at SMO – including Access Control, CCTV, Wired and Wireless Communications – to ensure regulatory compliance and Antiterrorism/Force Protection (AT/FP).

"I was especially impressed with their leadership, attention to detail, and their technical & operational understanding of the system."—**ONT Airport Manager**

Jail Control Systems & CCTV Design-Build
City of Beverly Hills and City of Glendale Jails
Systems Integration, design and build of a complete new jail control system including 50+ cameras

- Design/Build for a new integrated Jail Control System for City of Beverly Hills Jail and City of Glendale Jail.
- Cabling and low voltage infrastructure
- Video management system upgrades
- Assessment, design, and installation of hardware and software
- Cutover to City staff without incident
- Full Activation on Day One operations

"This is very well done. I really appreciate the thorough and professional approach."
—**CIO, Los Angeles World Airports**

EXPERIENCE HIGHLIGHTS - DESIGN/BUILD

LAX Fixed Automatic License Plate Recognition (ALPR) Design-Build
Los Angeles World Airports (LAWA)
Design-build for a multi-discipline turn-key project including civil, structural, electrical and low voltage systems

- Project was completed on budget and ahead of schedule
- Early implementation allowed traffic analysis related to the Nov 2013 Active Shooter incident
- Project was complex and involved complete physical infrastructure of camera locations including an outdoor pole structure and electrical and data services
- Project included structural, electrical, network & systems engineering; permitting

> *"Congratulations everyone! A great deal of work completed in a short amount of time. A huge success for this team! Looking forward to seeing the renovated space."*
> **—IMTG Division Manager, LAWA**

LAX Terminal Terminal 4 Federal Inspection Services (T4 FIS) Security Systems
Los Angeles World Airports (LAWA)
Programming, A&E designs and Project Management services

- Furnished and installed new CCTV, ACAMS, and Duress Buttons for T4 FIS
- Project included 160+ cameras, 45+ ACAMS card readers with 5 controllers, and 35+ duress buttons with audio recording
- Services included PM, design assist, installation, systems integration, testing, commissioning, and activation

> *"Birdi, Inc., during the implementation of the In Line Baggage Program at ONT, went beyond the call of duty by implementing an Operational Readiness and Activation program that ensured a seamless transition from construction completion to airport operations."*
> **—ONT Airport Manager**

ACAMS Installation for the American Eagle Terminal at LAX
Los Angeles World Airports (LAWA)
Design-build for all electrical and low voltage requirements for the LAX American Eagle Access Control System project

- 36 card readers and 6 microcontrollers at $250,000
- Project completed within budget and on schedule, successfully meeting a stiff TSA mandated deadline
- Included complete design and installation of electrical and access control systems

In Line Baggage Program Security & Special Systems
Ontario International Airport (ONT)
Design resolution and construction management for all low voltage systems

- Addressed design gaps for Baggage Handling System
- BSI with current team designed and implemented 60 Card Readers
- 10 Bag Belt Readers
- Systems Integration with In Line Baggage System
- PM/CM of IT Infrastructure Installation

EXPERIENCE HIGHLIGHTS - OTHER SERVICES

We have innovative procedures and tools that help deliver quality of service as well as achieve consistent client satisfaction and commendations. BSI holds an exceptional track record of completing all projects on time and within budget.

LGB Flight Information Display System (FIDS)
- » Responded to emergency request, developed FIDS in house & implemented in 10 days
- » **Received 2017 AAAE Corporate Cup of Excellence Award** for the rapid response & FIDS deployment

LAX Security Systems O&M
- » Access Control System with 4,000+ card readers and 450+ microcontrollers
- » Video Surveillance System with 4,000+ cameras and 2300+ active users
- » Police 911 Dispatch with complex mission critical interfaces
- » Credentialing / Identity Management System with 55,000+ badge holders

Los Angeles World Airports (LAWA) Technical Support Services
- » MAC system enhancements for LAWA over a three year term
- » Full-service support for assessment, project management, and design-build
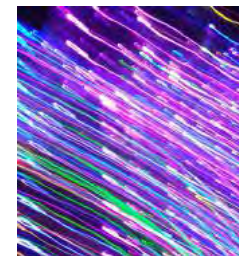- » Completed 45+ projects and tasks on time and within budget

Federal Interface Services for Credentialing (FISC)
- » First implementation of a fully automated exchange of information with the TSA TSC by any airport in the U.S.
- » Its capability to streamline the credentialing process at LAWA earned LAWA recognition from the TSA
- » LAWA in turn gave BSI the Wings of Achievement Award

LAWA Access Control & Alarm Monitoring System O&M and Technical Enhancements
- » One of the largest access control systems at 4000+, 400+ microcontrollers, 4 servers
- » BSI took over the responsibility of a complex, mission critical system with no impacts to operations
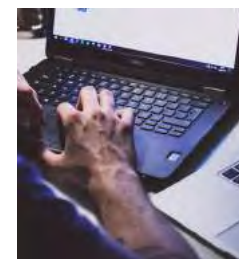
Fiber Optic Installation / Termination / Testing for LAX Telecomm Data Center
- » Installed, terminated, and tested 1700+ strands of fiber, drastically expanding the capacity for new connections in the airport back to the main network
- » The successful upgrade helped support $14B Capital Improvements Program at LAX

Van Nuys Airport (VNY) Customs and Border Protection (CBP) Physical Security System
- » Provided turnkey design-build for physical security system at VNY CBP facility including CCTV, Access Control, Intercom, Intrusion Detection System, and Duress Alarms

LAWA Service Desk / IT Support
- » IT/Service Desk Support spanning the four core technology groups, 2500+ personal computers, 1250+ mobile devices, printers, network issues, and A/V systems

Systems Integration Specialists

BSI's experienced systems integration specialists help manage the inherent challenges in planning, construction, testing, deployment, and beyond. Our solutions provide results quickly and allow the end user to make decisions in real-time to maximize returns on existing IT investments.

Our capability ranges from concept design to implementation and integration of security systems.

ACCESS CONTROL SYSTEMS (ACS)
ACS is a combination software and hardware application. The software application controls identity credentialing; The hardware application controls the physical access to a specific location. This security system is typically integrated into a CCTV program. ACS provides users the ability to assign badge holders different levels of security access to various entrance locations.

AUTOMATIC LICENSE PLATE REGISTRATION (ALPR)
ALPR is designed to capture license plate information and store the data with the timestamp.

VIDEO MANAGEMENT SYSTEM (VMS)
VMS allows security camera operators to manage images and sort through video images based on time, date, and location. It allows users to customize video recording according to motion sensors.

POLICE 911 COMPUTER AIDED DISPATCH (911 CAD)
911 CAD assists in automating the process of dispatch information through to the police and their vehicles. This system is used to increase the efficiency from the emergency call to the police response.

Some of our Clients

- Los Angeles World Airports
- San Diego County Regional Airport Authority
- Ontario International Airport Authority
- Santa Monica Airport
- Long Beach Airport
- Atlanta Hartsfield-Jackson International Airport

- City of Beverly Hills (Police)
- Port of Los Angeles
- Port of Los Angeles (Police)
- Los Angeles Department of Building & Safety
- Los Angeles Department of City Planning
- Los Angeles Police Department

Quality Management

The SFOR™ is an innovative process proven to mitigate:
- Cost Risks
- Performance Risks
- Schedule Risks

The SFOR™, through an innovative process integrates operations and design information to establish the scope of actions necessary to ensure project outcomes meet stakeholder requirements.

Concept of Operations
Aligning Project Outcomes with Stakeholder Expectations

- 0.1% investment can achieve 5% program savings
- Client expectation is fully realized from Day One:
  » 100% activation of new systems, infrastructure and facilities on opening day
  » Operations & Maintenance are prepared to operate all components of the new facility/system
  » Greatly reduces change orders and protects program schedule
- Developed by Birdi Systems, Inc., to eliminate the costly gap between project design and operations
- Keeps project aligned with stakeholder expectations
- Getting it right the first time brings significant savings in costs, adherence to schedule, and commissioning.

SYSTEMSFACILITIESOPERATIONS READINESS (SFOR™)

Birdi Systems, Inc., received an award for innovation in the implementation of its patent pending Quality/Risk Management program, the SFOR™ ConOps at the Green Build Program.

The SFOR™ helped the San Diego International Airport's Terminal Development program meet stakeholder requirements obtaining all 105 stakeholder signatures as acceptance of program functional scope commitments and risk responsibilities.

The structured process of the SFOR™ helps assess the gap between operational requirements and evolving plans/designs to identify risks to both the operation's readiness to operate the new system and facility as well as the project team's ability to deliver the new system and facility to the requirement of operations. These risks are otherwise difficult to identify during the early phases of the project and manifest late during activation.

SFOR™, for objectivity, is typically decoupled from the planning and the design process. It integrates operations and design information to establish the scope of actions necessary to ensure Systems Facilities and Operational Readiness.

"We had gold in the SFOR Concept of Operations."
—**Bob Bolton,**
Terminal Development
Program Director
San Diego International Airport

SOFTWARE DEVELOPMENT

In-House Custom Tailored Software Solutions

As experienced engineers, we understand that all software and technology serve only as secondary systems, which support a primary business function. With the exception of purely internet-based businesses, no business exists or fails to exist because of a software program. On the contrary, software can only exist and survive because it helps a business perform with greater efficiency. This fact serves as a guiding principle in our software development. Before we develop any software, we aim first to understand the problem that the software will solve. We do not begin the design and development of software until we fully understand the business processes the software is intended to support. We believe that our understanding of the business is a prerequisite for the successful development and integration of any software into the operations of the business—and this is one of the most underrated and often overlooked elements of software development.

ACCESS POST ACCESS CONTROL SYSTEM (APACS)
A specialized solution that caters to the specific needs of controlling vehicular access to secured areas at perimeter Access Posts.

FEDERAL INTERFACE SERVICES FOR CREDENTIALING (FISC)
A plug-and-play middle-ware which encapsulates interactions with the TSA and FBI through the TSC AIS interface. FISC is designed to interact with Airport Credentialing and personnel data system.

SYSTEMS COMMANDER
A monitoring capability that improves service response time and isolation of system problems by tracking the health of mission critical systems at airports.

FLIGHT INFORMATION ON THE CLOUD (FIC)
A straightforward, easy to deploy system that provides the mission critical function of flight and gate status information without the other complicated features seldom used at airports.

AIRPORT SECURITY ASSESSMENT TOOL (ASAT)
A software application that helps engage security and public safety stakeholders at airports, eliciting information critical to assessing vulnerabilities and gaps in regulatory compliance.

RISK MANAGEMENT INFORMATION SYSTEM (RMIS)
A web based program that helps manage claims and policies on a single, secure solution, while supporting the important business functions of reducing financial exposures to claims.

CAPITAL PROJECT PLANNER (CPP)
Created by project managers, for project managers, CPP is a budgeting tool that helps airport projects during the planning and construction phases.

SYSTEM FACILITIES OPERATIONS READINESS (SFOR)
The SFOR is a patent pending approach used to mitigate cost, performance and schedule risks to major Capital Improvement Projects.

> *"Your team did an excellent job in understanding our requirements and appropriately re-engineered some of our old business processes to build a well-designed software application."*
> **—Risk Manager, LAWA**

AWARDS & COMMENDATIONS

AAAE
Corporate Cup of Excellence Award
2017

City of Long Beach
The Best South Asian American Excellence in Service Award
2014

Los Angeles World Airports
Wings of Achievement Award
June 2013*

Birdi, Inc. is the only contractor to receive this award

California Legislature Assembly
Certificate of Recognition
2011

State of California Senate
Certificate of Recognition Minority-Owned Small Business of the Year
2011

San Diego Chamber of Commerce
"Minority-Owned Small Business of the Year"
2011

"...I commend and thank Birdi, Inc. for its leadership, adherence & purposeful work..."
—Mayor Eric Garcetti

"A great deal of work completed in a short amount of time."
—LAX Police

"The move of Airport Police Dispatch was a success!"
—LAWA STI Project Manager

"...A complex system delivered at such a short turnaround time"
—LAWA IMTG Division Manager

"APACS resolved access granting issues & helped save operational costs"
—LAWA APD

"It is amazing how we consistently produce top level talent."
—LAWA Division Asst. Manager

"In every instance, Birdi, staff excelled."
—LAWA Homeland Security & Intelligence Division

"Birdi, Inc. has consistently provided excellent service."
—LAWA Sr. Communications Engineer

"I really appreciate the thorough and professional approach."
—LAWA CIO

"Thank you for your excellent support during these difficult times."
—LAWA Sr. Communications Engineer

"We had gold in the SFOR Concept of Operations."
—San Diego International Airport TDP Director

"The SFOR ConOps helped pinpoint the important elements."
—San Diego International Airport ERP

"These technology improvements will enhance performance & security."
—LAX Police

"I am quite impressed with the level of detail & sophistication your team has demonstrated."
—LAX TSA Federal Security Director

"I sincerely thank your staff of dedicated IT professionals."
—LAWA CIO

"Thanks for the ACAMS upgrade & good work."
—LAWA Sr. Communications Engineer

"The SFOR ConOps ensured movement toward mission."
—San Diego International Airport ERP

"We have not received the same responsiveness from other contractors."
—City of Beverly Hills

"My review of your schematics convinced me that Birdi, Inc. was spot on..."
—LAX TSA Federal Security Director

"The SFOR ConOps kept people focused on target."
—San Diego International Airport ERP

"The (ACAMS) installation was done in a timely & professional manner."
—LAX T5 Delta Airlines

"I am impressed by the quality of service they (Birdi, Inc.) provide."
—LAWA Chief of Airport Police

"The newly designed FiSC... has valuable enhancements over the current system."
—LAWA Homeland Security & Intelligence Division

"Thank you for your excellent support during these difficult times."
—LAWA Sr. Communications Engineer

"We had gold in the SFOR Concept of Operations."
—San Diego International Airport TDP Director

"The SFOR ConOps helped pinpoint the important elements."
—San Diego International Airport ERP

"We turn to them (Birdi, Inc.) for all our security system needs."
—City of Beverly Hills

"Birdi, Inc. was spot on..."
—LAX TSA Federal Security Director

![Birdi Systems, Inc. logo] **Birdi Systems, Inc.**
From Solutions to Service
AN ISO 9001:2015 COMPANY

"From Solutions to Service"

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