



**International**

a GIS Consulting Group company

# RAIL AND TRANSIT EXPERIENCE

Collaborate-Innovate-Deliver

An aerial photograph showing a silver and blue Metro Rail train on an elevated concrete track. The train is moving from left to right. To the right of the track is a multi-lane highway with several cars. In the background, there are green hills and a clear sky. A large, white, dome-shaped structure is visible near the track.

**DELIVERING THE  
INFRASTRUCTURE  
OF CHANGE**

# AN INTRODUCTION TO THE **FUTURE** OF **TRANSIT**

## Partners in Opportunity: *Let's Take this Ride Together*

Today's rail and transit agencies enjoy unprecedented opportunities to realize more sustainable, more equitable, and more cost-effective systems for their ridership. The funding opportunities of the Infrastructure Investment and Jobs Act (IIJA) offer established agencies the support they need to enhance and maintain their systems and provide growing agencies with the resources they need to launch bold new programs to better serve their communities. Maximizing these opportunities is the next step for today's U.S. transit providers.

The rail and transit experts of Hill International are ready to help make your next project a success. We are backed by a culture of managing project and construction risk and equipped with the industry experience and technical know-how to select the right delivery methods, technologies, and outreach methods best suited for your agency's specific needs and challenges. From grant writing to asset management, Hill can be the partner your agency needs to transform funding into ridership.

For more than three decades, I have been fortunate to be part of the rail and transit industry and have seen first-hand the results agencies and owners can achieve. Today, we're breaking ground faster, smarter, and better than ever before—with greater access and equity for our communities, new tools and technologies to build more sustainably, and with even more consideration for the cities and neighborhoods we serve.

At Hill, we're excited for our industry, and we're ready for tomorrow.

Now, let's take this ride together.

**Thomas J. Spearing III**  
*Senior Vice President  
Rail and Transit Sector Lead*

Rail and Transit  
Experience

## TABLE OF CONTENTS



**BEST PRACTICES**  
Keeping the Rail Revolution On Track



**RIDING THE RAILS TO PROJECT SUCCESS**  
Innovations in Action

### **01 Hill International, Inc.**

- 03 *The Pure PM Advantage*
- 05 *GISI Family of Companies*
- 09 *Global Expertise, Local Experience*

### **02 Best Practices**

- 18 *Keeping the Rail Revolution On Track*
- 20 *How Hill Helps*

### **03 Riding the Rails to Success** *Innovations in Action*

- 23 *Metro Foothill Extension*
- 25 *Federal and State Special Inspections and Testing Services*
- 27 *City Line Bus Rapid Transit System*
- 29 *Project Management Oversight Program*
- 31 *Metrolink On-Call Engineering PM/CM and Staff Assistance Services*
- 33 *McKalla Station and Red Line Double-Track*
- 35 *Cairo Monorail*
- 37 *Valley Metro Expansion Program*
- 39 *Athens Metro*
- 41 *East Link Rail Extension*
- 43 *Riyadh Metro*
- 45 *Gateway Program*
- 47 *National Gateway Initiative (NGI)*

# The Pure PM Advantage:

*Collaborate, Innovate, Deliver*

Hill International provides program, project, and construction management services for clients in a range of sectors undertaking major construction projects across the world. Our services include cost engineering and estimating, quality assurance, inspection, scheduling, risk management, and advisory support.

We are the fourth-largest project and construction management firm in the U.S., as featured in the latest Building Design + Construction magazine rankings. We are also ranked the fourth-largest overall U.S. construction management firm by Engineering News-Record magazine. Our team has participated in over 10,000 project assignments with a total construction value of more than \$1 trillion.

Since 1976, we have developed the experience, expertise, and world-class talent that allows us to offer a deeper perspective on our clients' projects. We work with the entire team to define your goals and desired outcomes, and then drive these KPIs from concept to completion to support your success.

We operate in more than 100 offices around the world. Our regional teams have deep, intuitive local knowledge that helps our clients navigate any potential obstacles. We support this expertise with our wider team of internationally recognized experts.

Our focus as a business is project management, which means we are free of any potential design or contracting conflicts of interest. Our sole purpose is protecting our clients' needs, managing any potential risks, and delivering projects on time and within budget.

**Together, we deliver the infrastructure of change.**

Hill is a GISI Consulting Group company, part of the Global Infrastructure Solutions, Inc. (GISI) family of companies. Learn more about GISI Consulting Group at [www.gisi.com](http://www.gisi.com).

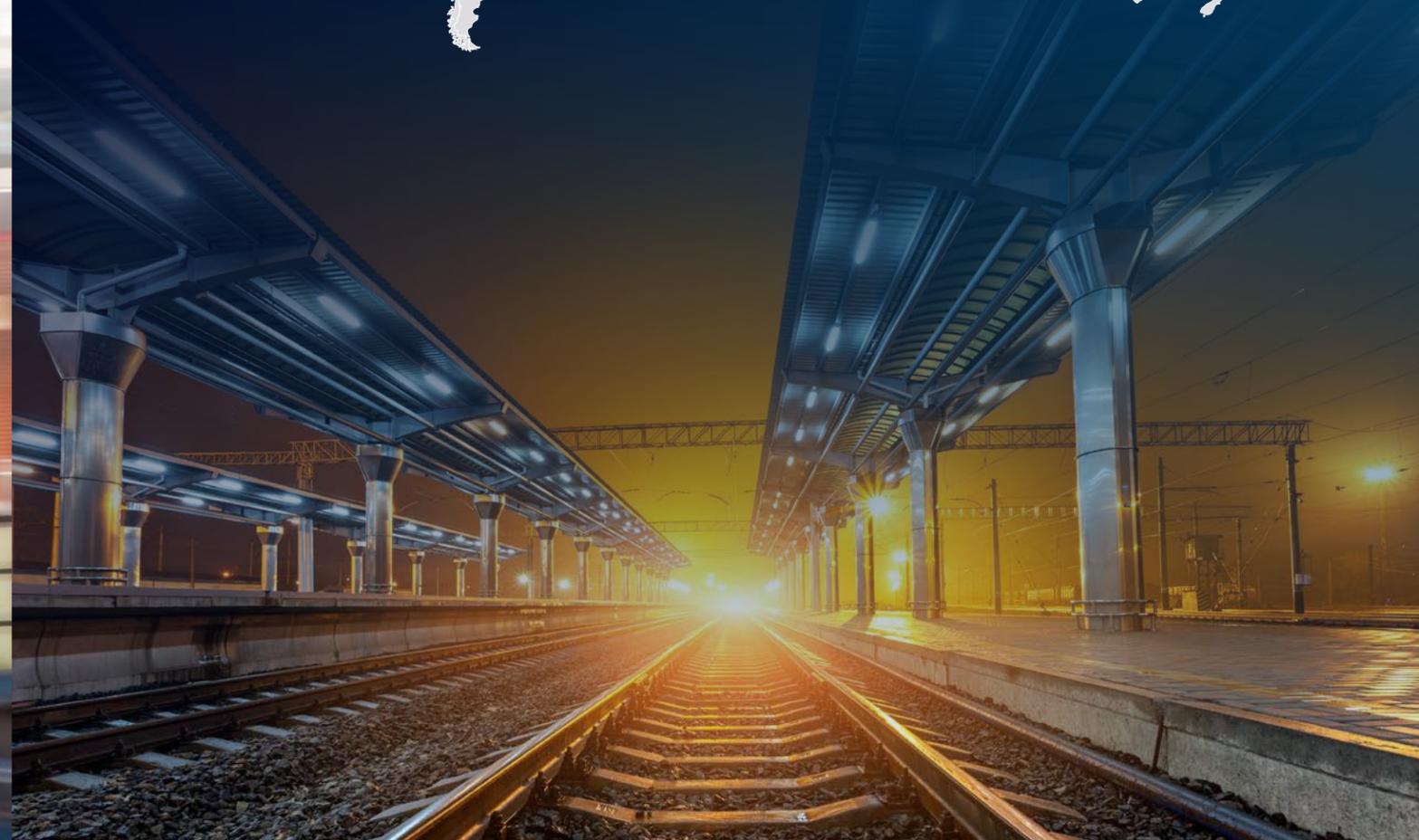
# HILL BY THE NUMBERS



**4,100+**  
PROFESSIONALS

NEARLY  
**50**  
YEARS OF  
EXPERIENCE

**\$1 TRILLION**  
CONSTRUCTED  
VALUE



# GISI Family of Companies

Three GISI Platforms



## 1. CONSTRUCTION SERVICES

GISI's Construction Services Platform, STO Building Group, is a family of thirteen companies and ~4,000 employees located in offices throughout the US, Canada, UK, and Ireland.

Together, we're able to provide a complete range of services, from site selection analysis, design constructability review, and aesthetic enhancements to renovated interior fit-outs for a wide range of terrific clients, new building construction, and major building infrastructure upgrades and modernization.



## 2. ENGINEERING & CONSULTING SERVICES (GECS)

With ~8,000 employees, GISI's Engineering and Consulting Services platform brings together complementary services and markets active in program and construction management, engineering consulting, and environmental services.



## 3. GLOBAL IMPACT & SUSTAINABILITY SERVICES

Under the leadership of Palladium, GISI's Impact and Sustainability Services Platform employs ~3,000 staff members operating in 90 countries.

At the end of 2020, Palladium was among the top 5 Official Development Assistance (ODA) providers to USAID, the UK Foreign, Commonwealth & Development Office, and the Australian Department of Foreign Affairs and Trade.

With capabilities ranging from corporate ESG, economic growth, and humanitarian aid, to health systems and impact investment, Palladium offers clients a balance of global scale and in-house technical expertise



## GLOBAL INFRASTRUCTURE SOLUTIONS INCORPORATED (GISI)

On December 27, 2022, Hill International merged with GISI to become a proud member of its family of companies serving the built and social environments. GISI believes an alignment of core values is key to merger success and focus on partners that help strengthen our collective mission. We serve our clients through three platforms; Construction Services, Engineering and Consulting Services, and Global Sustainability and Impact Services.

**15,000**  
PROFESSIONALS

**100**  
COUNTRIES

**10,000**  
PROJECTS PER YEAR

## GISI CONSULTING GROUP

GISI CONSULTING GROUP SERVICES – 11,000+ EMPLOYEES IN 50+ COUNTRIES



## STO BUILDING GROUP

STO BUILDING GROUP CONSTRUCTION SERVICES – 4,000+ EMPLOYEES IN US, CANADA, UK, IRELAND



## WORLDWIDE OFFICE LOCATIONS

### NORTH AMERICA

Mount Laurel, NJ (Headquarters)  
 Austin, TX  
 Boston, MA  
 Black River Falls, WI  
 Cleveland, OH  
 Columbus, OH  
 Denver, CO  
 East Hartford, CT  
 Fords, NJ  
 Houston, TX  
 Irvine, CA  
 Irving, TX  
 Jacksonville, FL  
 Miami, FL  
 New Orleans, LA  
 New York, NY  
 Oakland, CA  
 Ontario, CA  
 Philadelphia, PA  
 Phoenix, AZ  
 Pittsburgh, PA  
 Plantation, FL  
 Puerto Rico  
 Saint John, NB  
 San Diego, CA  
 San Francisco, CA  
 San Jose, CA  
 Seattle, WA  
 Spokane, WA  
 Toledo, OH  
 Uniontown, PA  
 Washington, DC  
 Windermere, FL

### EUROPE

Amsterdam, Netherlands  
 Athens, Greece  
 Barcelona, Spain  
 Belgrade, Serbia  
 Bucharest, Romania  
 Frankfurt, Germany  
 Istanbul, Turkey  
 Madrid, Spain  
 Nicosia, Cyprus  
 Nur-Sultan, Kazakhstan  
 Pristina, Kosovo  
 Rome, Italy  
 Skopje, North Macedonia  
 Tbilisi, Georgia  
 Tirana, Albania  
 Vienna, Austria  
 Warsaw, Poland  
 Wroclaw, Poland

### ASIA

Beijing, China  
 Bengaluru, India  
 Chennai, India  
 Faridabad, India  
 Gurugram, India  
 Hong Kong, China  
 Islamabad, Pakistan  
 Mumbai, India  
 Singapore

### MIDDLE EAST

Abu Dhabi, UAE  
 Baghdad, Iraq  
 Doha, Qatar  
 Dubai, UAE  
 Jeddah, Saudi Arabia  
 Manama, Bahrain  
 Muscat, Oman  
 Riyadh, Saudi Arabia

### AFRICA

Algiers, Algeria  
 Cairo, Egypt  
 Casablanca, Morocco  
 Tripoli, Libya  
 Tunis, Tunisia

### LATIN AMERICA

Mexico City, Mexico

## MULTI-MODAL EXPERTISE

- Light Rail
- Freight/Heavy Commuter Rail
- Intercity Rail
- Streetcar
- Intermodal
- Automated People Movers (APM)
- Monorail
- High-Speed Rail (HSR)
- Bus Rapid Transit (BRT)



## RAIL AND TRANSIT SERVICES

- Program Management
- Project Management
- Construction Management
- Project Management Oversight (PMO)
- Third-Party Coordination
- Utilities Coordination
- Real Estate Acquisition
- Track and Structure Construction Oversight
- Systems Safety and Security
- Public Outreach
- Stakeholder Management
- Financial Planning
- Cost Control
- Change Control
- Configuration Management
- Resident Engineering and Inspection
- Independent Engineer Consulting
- NEPA Compliance
- Signals and Communications Systems
- Positive Train Control (PTC)/ Communications-Based Train Control (CBTC)
- Underground Tunneling/ Geotechnical Support
- Certification and Start-up
- Surveying
- Procurement Staff Augmentation
- Right-of-Way Coordination
- Value Engineering
- Risk Analysis and Mitigation
- Vehicle Selection
- Project Delivery Method Selection
- Operations and Maintenance Planning
- Force Account Coordination
- Asset Management
- State of Good Repair (SGR)
- Grant Writing
- Independent Quality Monitoring
- Transit Oriented Development (TOD)



Hill employs more than 4,100 professionals and support personnel in local offices around the world. Our staff includes experts in all construction and building-related disciplines, including planners, schedulers, estimators, value engineering specialists, construction managers, resident engineers, construction inspectors and a full range of technical and support staff to represent owners.

For our rail and transit clients, Hill offers an exceptionally high caliber of staff. Hill's rail and transit leaders bring decades of experience on a variety of transit systems and types. This includes industry leaders in FTA grant application and compliance, risk management, and program oversight, as well as hands-on experience in inspection, QA/QC, systems integration, and many other areas. Brief introductions to some of our leaders follow.



**JOHN SKOURY, PE**  
FIRST VICE PRESIDENT, PROGRAM EXECUTIVE

John Skoury has more than three decades of experience in the management of major rail transportation programs. These programs have involved planning, design, right-of-way acquisition, and construction as well as community involvement, agency coordination, and minority, women, and disadvantaged business enterprise programs. John has worked on major infrastructure projects in Southern California, including Segment 3 of the Red Line Subway project and Phases I and II of the award-winning Foothill Extension project. John has a broad professional background and experience in management, engineering design and construction, business development, client contact, contract negotiations, project financing, and public relations. He is fluent in English and Arabic.

## PM LEADERSHIP



**THOMAS J. SPEARING III**  
SENIOR VICE PRESIDENT, RAIL AND TRANSIT SECTOR LEAD

Senior Vice President Thomas J. Spearing III leads Hill's Rail and Transit Sector. He is responsible for identifying and securing opportunities and ensuring client satisfaction with Hill's performance in support of ground transportation programs. He also helps to further our technical expertise, coordinate with regional leaders, and bring new rail and transit management talent to the company. Tom comes to Hill with an architecture, engineering, and construction career spanning more than three decades. A fixture in the U.S. rail and transportation market, Tom is known for his planning, pursuit capture, and mentorship and leadership skills.



**MICHAEL RADBILL, PE**  
VICE PRESIDENT, PROGRAM MANAGER

Michael E. Radbill serves as Principal, Program Manager, and Project Manager, and has worked on projects for such notable clients as FTA, the U.S. Department of Transportation (USDOT), and the U.S. Army Corps of Engineers (USACE). Working on construction projects ranging from \$1 million to \$9.2 billion, Mike has provided project management oversight for half a dozen megaprojects. He has consulted on development of construction project management plans and programs for contractors and owners; prepared and analyzed construction claims for owners; participated in the resolution of construction disputes during negotiation, mediation, mini-trial, and arbitration; developed, updated, and analyzed critical path method (CPM) schedules; facilitated partnering for construction projects; and testified as an expert at trials regarding delays and damages.



**TIFFANY H. BANKS**  
SENIOR VICE PRESIDENT, GLOBAL HUMAN RESOURCES

Tiffany Harmon Banks is Senior Vice President of Human Resources for Hill and oversees the corporate human resource policies and procedures, employee relations, training, benefits, organization development, compensation administration, HRIS, and affirmative action compliance. Tiffany's specialties include Human Resources global compliance, training implementation, policy and procedure implementation and administration, EEO and Affirmative Action, Human Resources metrics, recruiting, compensation, employee relations, managing diversity initiatives, developing and implementing mentoring programs, and project management.



**DERRICK CHAN, PE**  
VICE PRESIDENT, PROGRAM DIRECTOR

Derrick Chan has more than 35 years of experience managing and delivering major, complex rail and bus rapid transit infrastructure, stations, facilities, track work, train control, traction power, catenary, communication, life safety systems, special track works, streetcars, light rail, metro rail, and heavy rail projects. His expertise encompasses policy development, program management, planning, design and construction of transportation, utilities, public works, industrial and commercial buildings, structures, tunnels, heavy civil work, movable bridges, water resource capital projects, and mechanical, electrical, and plumbing (MEP) systems. Derrick excels at program management, project planning, construction management, design management, constructability, project management oversight, FTA Grant Management, regulatory compliance, cost, scheduling, system start-up and commissioning, safety and security certification, business development and public outreach. Derrick's management approach is that "people make projects successful." He has proven success in developing and mentoring agency and consultant staff to successfully deliver programs from project definition to revenue service.



**GAVIN MARTIN**  
VICE PRESIDENT, PROGRAM DIRECTOR

Gavin B. Martin has more than 20 years of experience in delivering complex rail and transit projects across the U.S. and brings specific expertise with rail systems and signals, including positive train control (PTC) implementation. Gavin has supported some of the most demanding and complex communications-based train control (CBTC) projects in the nation with a combined value approaching half a billion dollars. He is skilled in budget and schedule control, coordination with third parties and authorities having jurisdiction (AHJs), and overall team leadership. As Program Director, Gavin develops and oversees regular preparation of project status reports, including monthly reports for client agencies, as well as required quarterly reports for executive staff. He helps to ensure project compliance with all federal, state, and local laws, regulations, codes, and standards. Gavin applies industry best practices to address project management principles, construction regulations and standards, civil engineering, architectural and systems design and construction, project budget and estimating, and contractual compliance and administration. Gavin will drive innovation and monitor performance for the successful delivery of client contractual requirements.



**M. REZA MOHAMMADINIA, PhD, PE, PMP**  
VICE PRESIDENT

M. Reza Mohammadinia has nearly 30 years of experience in planning, design, risk assessment, and construction oversight, with the last 22 years focusing at the program management/executive level. Reza has a proven track record of successfully managing major multi-year design-build and design-bid-build contracts for clients including the Federal Transit Administration (FTA), NJ TRANSIT, New York Metropolitan Transportation Authority (MTA), New York City Department of Transportation, NYC Economic Development Corporation, Port Authority of New York and New Jersey, and Hudson River Park Trust.



**MARY TOUTOUCHI, PE**  
VICE PRESIDENT, CALIFORNIA RAIL/  
TRANSIT LEADER

Mary Toutouchi has more than 30 years of experience in the design, construction, and management of complex civil engineering and transportation projects in California's public and private sectors. She has helped oversee and implement several multi-billion-dollar programs, including support for LAMTA's Measure R and M (Los Angeles), OCTA's Measure M & M2 (Orange County), SBCTA Measure I (Riverside County), and state and federally funded projects. She has led the effort to secure federal funding on numerous projects including FTA 5307 and Congestion Mitigation and Air Quality (CMAQ) program funds, TIGER, TIRCP, and state fund (SB1) funding. She currently leads the Hill team supporting Metrolink's SOGR program across Southern California.



**DANNY ROGERS, PE**  
VICE PRESIDENT, PROGRAM MANAGER

Marvin "Danny" Rogers has more than 14 years of experience in the development, implementation, and maintenance of rapid transit projects. He has experience advancing transit projects through the federal New Starts process and into construction. He has spent more than ten years working to expand rapid transit in Charlotte, NC, and the Triangle Region of North Carolina. Danny assisted the Blue Line Extension in Charlotte to start operating, and advanced the Durham-Orange Light Rail project into the engineering phase of the New Starts process and positioned the project to receive a Federal Full Funding Grant Agreement. Danny also has experience in project management from planning through construction, real estate acquisition, FTA processes and procedures, and negotiating contracts with consultants and contractors.



**JOHN LEHMAN, PE**  
VICE PRESIDENT, SENIOR PROJECT  
MANAGER

John H. Lehman has more than 45 years of experience in the rail transportation sector identifying, monitoring, controlling, and reporting program risks that adversely affect program scope, schedule, budget, quality, and safety objectives. John has directed multi-disciplinary, multi-national engineering design teams on rail car manufacturing and large construction projects, and specializes in heavy equipment design, maintenance and operation, construction, and operations analysis for rail car procurement, rail car manufacturing facilities, and car repair and locomotive servicing facilities. Highlights of John's work include support for the Federal Railroad Administration Northwest Region's supervision of improvements on the Amtrak Cascades corridor in Washington and Oregon, oversight of heavy rail transit car and commuter rail locomotive and car procurements, review and assistance with rail fleet plans, and analysis of maintenance facility design and operation.



**DAN NAGY, PE**  
VICE PRESIDENT, PROGRAM MANAGER

Dan Nagy has more than 20 years of experience in operations, track construction, and track rehabilitation with UPRR, Amtrak, and the Southern California Regional Rail Authority. His expertise includes program management, construction management, constructability reviews, Scope of Work (SOW) development, Independent Cost Estimate (ICE) development, project management, construction phasing, civil engineering, product detailing, and plan reviews. Dan's understanding of delivering projects in an active railroad environment, track construction, and track rehabilitation allows him to view and plan construction projects through the eyes of the owner and to suggest improvements to construction procedures that minimize the impact on railroad operations. Dan's experience in delivering capital and rehab projects on a major Class 1 railroad refined his approach to program delivery which focuses on early planning to increase efficiency and productivity while maintaining safe project delivery.



**TERESA STEIN, PE**  
SENIOR PROJECT MANAGER

With more than two decades of experience in the management and engineering experience, Teresa is skilled in project and construction management; civil, systems and transportation engineering; construction inspection; and quality assurance/quality control (QA/QC). As Project Manager, Teresa has contributed to railroad, light rail transit, subway, airport, and roadway projects for clients such as the U.S. Department of Transportation (USDOT) and the Federal Transit Administration (FTA). She has served as a Design Engineer, Project Engineer, Task Order Manager, QA/QC Manager, and Systems Engineer.



**SAMI SOUFI, PE**  
VICE PRESIDENT, SENIOR PROJECT  
MANAGER

Sami Soufi has more than 30 years of experience providing program, project, and construction management and consulting services for high-profile rail and transit infrastructure projects, including the Maryland Transit Administration's (MTA) \$9.4 billion-plus Purple Line Rail Extension and Phase 1 of the Washington Metropolitan Area Transit Authority's (WMATA) Dulles Metrorail Extension – Silver Line. On his projects, Sami has provided everything from strategic, high-level programming and program controls to design and construction management, day-to-day project reporting, and asset life cycle planning and been responsible for managing quality, schedule, cost, risk, key performance indicators, change, communications, and safety and security. Sami is also an expert in several alternative project delivery methods, including development partnering (DP), construction manager at-risk (CMAR), design-build (DB), and public-private partnerships (P3).



**ANDREW DITTER, PE**  
CONSTRUCTION MANAGER/RESIDENT  
ENGINEER

Andrew Ditter has more than 25 years of experience in the engineering industry. With Hill, Andrew has helped to deliver several high-profile rail and transit assignments across the Southwestern U.S., including three rail infrastructure projects for CapMetro in Austin, TX, and the \$92 million Operations and Maintenance Center Expansion for Valley Metro in Phoenix, AZ. His experience includes metro, commuter rail, and light rail programs and projects. He began his career as a track engineer on Minnesota's Hiawatha Light Rail project and helped design the DCTA rail line from Denton to Dallas for Trinity Metro in Texas. More recently, before returning to the U.S., Andrew was a construction section lead for three segments of the \$37 billion Qatar Rail in Doha.



**YADIRA LA LUZ PAGAN, PE, PMP**  
SENIOR PROJECT MANAGER

Yadira La Luz has more than 24 years of experience in federal, state, and local transit and highway projects. She has worked for Federal Transit Administration (FTA) in the review and oversight of grantees' compliance with Federal requirements and for grantees in the development of project submittals compliant with FTA requirements and has also provided program and project management support for large transportation agencies including New York Metropolitan Transportation Authority (MTA), Port Authority of New York and New Jersey, and Washington Metropolitan Area Transit Authority (WMATA).



**REKY HIRAMOTO, PE**  
VICE PRESIDENT

Reky Hiramoto has more than 25 years of experience in construction management, design management, land acquisition due diligence and entitlements, engineering, and project management for light rail transit and land development projects. Reky specializes in managing construction and design teams using design-bid-build and design-build project delivery methods. Reky leads the Hill team on the Foothill Extension project in Southern California, overseeing construction; quality assurance/quality control; safety and coordination; and approval of third-party stakeholders, including municipalities, agencies, and utility owners.



**TIMOTHY BROWN, PE**  
SENIOR RAIL PROJECT MANAGER

Timothy Brown has nearly 30 years of experience as an engineering manager and construction manager at both public agencies and professional services firms for transit and rail transportation projects. He has extensive experience working with on-call service agreements. He has supervised and coordinated simultaneous design and construction programs and projects of all sizes, from planning, design development, and construction administration to closeout. Tim's specialty is managing complex rail programs and enforcing project contract requirements. He has managed rail projects with construction values of more than \$3 billion using delivery methods such as design-bid-build and design-build. He also has experience with coordinating, contracting, and managing outside consultants; collaborating with internal and external organizations; and providing client management.



**CHARLES WESTOVER**  
SENIOR PROGRAM MANAGER

Charles (Chuck) Westover has more than 35 years of experience leading and managing program, project, construction, and facilities management; facilities planning and programming; and master planning for a variety of projects, including multi-billion-dollar, multi-modal transit programs. On his assignments, Chuck's responsibilities include strategic planning, program and project management, construction management, resource and budget forecasting, training, and logistics management. He specializes in work involving complex requirements analysis and criteria, alternate project delivery, asset management, systems integration, and real estate. He is experienced in leading cross-functional, diverse, and geographically dispersed teams both domestically and internationally.



**MARK DINGMAN**  
SENIOR PROJECT MANAGER

Mark Dingman is a railroad signal specialist with more than 27 years in the signal department and two years in the track department with Class 1 railroads including Union Pacific Railroad (UPRR), Southern Pacific (SP), and Canadian Pacific (CP) Railroad. He has spent 12 years in progressive management roles, from project manager to senior manager of signal design railroad wayside signal system, wayside train control/PTC and communication and Level 1 train control system/PTC control center support. Mark is familiar with 49 CFR Parts 233, 234, 235, and 236 and understands the entire 49 CFR 200-299. Additionally, Mark is a member of AREMA Committee #36 (Highway-Rail Grade Crossing Warning Systems) and AREMA Committee #37 (Signal Systems).



**CHRISTOPHER HARDING**  
SENIOR RAIL TEAM LEADER/PROJECT MANAGER

Christopher Harding is an internationally recognized rail and transit expert with nearly 30 years of experience in the construction industry. He has helped to plan, engineer, integrate, and handover several megaprojects including rail and transit, metro, signaling (fixed- and moving-block), OHL, 3rd and 4th rail, S&C, CBTC, COM, AFC, SCADA, OCC, and depot and maintenance in Egypt, Qatar, Zambia, the United Arab Emirates, and the United Kingdom. This includes his work on the Cairo Metro, Dubai Metro, and several rail and signals assignments across the UK.



**JOHN BONAPARTE, PE, PMP, RMP**  
VICE PRESIDENT

John Bonaparte is an expert in program/project delivery. He has experience and qualifications in the successful delivery of large and multiple small scale complex projects primarily in the transportation field. His project delivery methods include the traditional design-bid-build (DBB), design-build (DB), design-build-operate-maintain (DBOM), Construction Manager/General Contractor (CMGC), and Public-Private-Partnership (P3). John has successfully served on both the owner and contractor sides on projects that provide a unique perspective of the entire program from funding to completion. His roles included overseeing project planning, engineering design, construction, testing, implementation, and contract closeout through warranty. He also has experience with all aspects of manufacturing, procurement, and testing of rolling stock for commuter rail, light rail, and automated people movers (APM).



**DAVID BURR JR.**  
SENIOR CONSTRUCTION MANAGER

David Burr Jr. has more than 35 years of rail construction and maintenance-of-way experience. He has a broad understanding of railroad operations, track construction, and track rehabilitation. David views and plans construction projects through the eyes of the owner and suggests improvements to rehab procedures that minimize the impact on railroad operations. He has several years of experience working with SCRRRA while managing the Los Angeles Union Station Rehabilitation and State of Good Repair (SOGR) projects.



**OMAR MISLA**  
SENIOR DIRECTOR, PROGRAM MANAGEMENT

Omar Misla has nearly 25 years of experience in the management and administration of complex multidisciplinary heavy rail transit projects during construction or in operating environments. He has held senior positions at Amtrak, serving as Senior Director and Deputy Chief Engineer responsible for managing their \$800 million a year Engineering capital construction portfolio. In addition, during his tenure at WMATA, he served as the Senior Program Manager overseeing the construction of the \$6 billion, 23 mile-11 station Silver Line Metro rail extension to Dulles Airport, in Virginia. Omar is familiar with Tren Urbano, having served as Sr. Mechanical Engineer and QA Engineer during the construction phase and Project Manager during O&M, as part of consortium teams.



**MIKE WARD, CCM**  
SENIOR CONSTRUCTION MANAGER

Mike Ward, CCM, has more than three decades of experience in construction management. As a licensed New Jersey Building Inspector and Certified Construction Manager, he is well-versed in New Jersey code compliance for industrial and residential structures and holds certificates in Fire Safety and Arson Investigation. Mike has contributed to many renovation and new construction projects for a variety of projects. He has served as Resident Engineer and Construction Manager for clients including NJ TRANSIT and the New Jersey Turnpike Authority (NJTA).



## SUBJECT MATTER EXPERTS (SMEs)



### FRANK T. MARTIN

SENIOR RAIL AND TRANSIT CONSULTANT

Frank Martin has more than four decades in the private and public transportation system sectors, providing transit operations, management, strategic business development, and sales services. Frank has worked for or served as an executive transportation manager, project manager, construction manager, program management or principal-in-charge for numerous transit agencies including Birmingham-Jefferson Country Transit Authority, Hampton Roads Transit/Norfolk Light Rail Transit, Metropolitan Atlanta Rapid Transit Authority, Central Phoenix/East Valley Light Rail Transit System, Santa Clara Valley Transportation Authority, Miami-Dade Transit, New Orleans Regional Transportation Authority, and Greater Richmond Transit Company. Recognized as a trusted advisor, Frank is a skilled and accomplished public transportation management executive, solving some of the most complex issues facing the public transit industry.



### ONALA ATALA, PTSSP, PTSCTP

SENIOR RAIL AND TRANSIT CONSULTANT

With 45 years of professional experience, Omar "Tony" Atala is a strategic expert in transit & rail systems. His skills include managing large scale rail transit projects, systems engineering and management, safety & security certification, fire/life safety, state safety oversight, proposal writing, and computer simulations. Tony served as Project Manager of the Lusail LRT in Doha, Qatar. Under his leadership, the project profit margin grew from -6% to over 9%. He achieved similar success managing the Hurontario LRT project in Mississauga, Ontario, where he delivered the project reference concept design within less than 15 months and within budget. He has also served on the Taiwan High Speed Rail Corporation serving as the Director for Systems Assurance, leading a team of over 40 multi-national professionals, successfully delivering the safety certification of the Taiwan High Speed Rail system.



### NAVINCHANDRA S. SAGAR, PE

SENIOR RAIL AND TRANSIT CONSULTANT

Navinchandra S. Sagar is a Senior Rail/Transit Manager with nearly four decades of experience of public/private experience in multi-modal rail and transit programs. He brings a thorough understanding of technology, rail/transit infrastructure programs, systems, rolling stock, planning, engineering, construction, construction management, QA/QC, systems assurance, cyber security matters, closeout, operation, and maintenance with constant performance monitoring. His areas of expertise include inter-city railroads (Amtrak-Northeast Corridor, Penn Central, and Reading), commuter rail (Denver RTD, Center City Commuter Rail Connection-Philadelphia, and Tri-Rail), light rail (Ottawa, Sac LRT, San Diego, Dayton, Houston METRO, NJ TRANSIT), street cars (Tuscan, Minneapolis, Fort Lauderdale, and Kansas City) mass transit (MTA-NYCT, CTA, PATH, Miami Dade Transit, MBTA, and SEPTA), and rolling stock.



### DANIEL HEILIG

PROJECT EXECUTIVE

Dan Heilig specializes in program, project, and construction management for the transportation industry. Dan has supported projects related to light rail, commuter rail, high speed rail, streetcar, and bus rapid transit, providing organization; leadership; project management training; scope, schedule, and budget control; contract development and negotiations; material and equipment tracking; and accountability. Dan has served as program manager or principal-in-charge on several large rail programs including Denver's \$6.7 billion FasTracks Rail Program, Amtrak's \$3.3 billion ARRA Commuter Rail and ADA Stations Program, the \$2 billion Denver RTD Eagle Commuter Rail Project, and TEX Rail's \$800 million design-build 37-mile commuter rail project. Dan has experience in numerous delivery methods, including design-build, design-build-operate-maintain-finance, construction manager/general contractor, and public-private partnerships (PPP).

## SPECIALTY SMEs



### JONATHAN STEWART

VICE PRESIDENT, PROGRAM AND PROJECT CONTROLS

Jonathan Stewart is a detail-oriented leader with more than 28 years transforming operational departments and projects by driving efficiency, accountability, and cost controls. He helps to bridge the gap between business and technology with expertise in managing complex programs and multiple concurrent projects, as well as mitigating underperforming programs. He directs project teams to develop high-quality programs that solve business problems and provide tangible results for large public and private enterprise-level financial systems and legacy workflow systems. His construction experience spans engineering, procurement, and construction management, fixed price, and design-build contract delivery methods. Specific areas of expertise include conflict management, risk & issue management, cost/benefit analysis, project scheduling/controls, change management, stakeholder management, client/vendor relations, earned value management, project management, indicated costs reporting, and department budget/planning/forecasting.



### WILLIAM ARNHART

CLAIMS AVOIDANCE AND RESOLUTION

William "Brad" Arnhart has more than 44 years of experience on civil engineering projects in the private and public sectors.

Throughout his career, Brad has provided planning, design, and on-site construction management services on major road, bridge, aviation, and rail projects from inception and planning to final closeout of construction claims. He has served as a resident engineer, senior designer, senior scheduler, claims analyst, and project manager. He has expertise with a variety of delivery methods, including design-bid-build, design-build, and construction manager at-risk. Having represented owners, contractors, and designers on projects and programs throughout the country, Brad understands how to develop true partnerships and establish effective claims avoidance on his project assignments. When issues do arise, Brad helps his clients resolve disputes and develop recovery schedules. He has served as technical lead for strategy on both design and construction claims, provided leadership and guidance to project staff in all aspects of claims resolution, and presented to dispute boards in Virginia, Florida, Texas, and California.



### STEVEN SANTORO

SENIOR RAIL AND TRANSIT CONSULTANT

Steven Santoro, former executive director of NJ Transit, has more than three decades of experience in the rail and transit industry.

With Hill, Steve is a subject matter expert who is available to provide background and insight on complex technical and programmatic matters related to mass transit and rail. He is a frequent speaker on alternative delivery methods and resilience at FTA events and contributes to the transportation industry through peer reviews and professional association meetings. Santoro spent 18 years with NJ Transit, in levels of increasing responsibility, joining in 2000 to manage the Hudson-Bergen light rail design-build-operate-maintain project. In 2007 he was appointed assistant executive director of capital planning/programs, where he managed multiple agency departments, including planning, project management, construction management, and infrastructure engineering. Prior to joining NJ Transit, Santoro was vice president for New York operations with a multi-office engineering and consulting company.



### GEORGE GOTTUSO

PROJECT MANAGER, PLA EXPERT

George M. Gottuso has more than 40 years of management experience in the construction of rail, commercial,

education, government, healthcare, industrial, institutional and residential facilities. His expertise includes project labor agreement (PLA) negotiation and implementation, claims analysis, project and construction management, contract administration and procurement support. Specializing in railway construction projects for federal, state, and local agencies, George understands the diverse needs of these clients and provides administrative management as well as staff and subconsultant oversight in support of complex capital programs.



**WILLIAM MUELLER, CHST**  
CORPORATE SAFETY MANAGER

William (Bill) J. Mueller has more than 37 years of construction experience providing managerial, supervisory, consulting, and technical advisor services to support occupational Health, Safety, and Environment (HSE) in both domestic and international capacities. Bill develops and promotes organizational safety ethics that translate into practice through program planning, leadership, education, coordination, and system-wide oversight. He is an industry expert in directing activities to support the highest possible quality, functional efficiency, and safety of physical and operational environments while interacting with HSE programs to achieve goals and resolve issues of mutual concern as they arise. Bill has led the primary coordination for interactions with federal, state, and local agencies including Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), and the Department of Health (DPH). His areas of safety program management comprise employee occupational health and safety programs, emergency management/preparedness, hazardous materials, and hazardous waste management.



**ELIZABETH WILSON, RSO, RSP, SSHO, CHST**  
REGIONAL SAFETY MANAGER

Elizabeth “Betty” Wilson is an experienced health safety environment consultant with a demonstrated history of working in the construction safety industry. She is skilled in Health, Safety, and Environment (HSE) management systems, HSE auditing, emergency management, workplace safety, and safety management systems. During Betty’s time on various projects with some of the world’s leading engineering and construction companies, she has developed a significant understanding of construction processes and support in high-risk environments. She also has experience leading and training a range of construction personnel from craft workers to supervisors and managers in all aspects of HSE. She is skilled at communicating advice and guidance on all construction HSE related matters throughout organizations.

## Best Practices

### *Keeping the Rail Revolution on Track*

Rail construction is undergoing a true revolution as the industry innovates and adapts to new market forces and expanded missions. The IJA offers agencies a generational opportunity to explore these opportunities and choose the right tools to deliver your projects and programs.

#### ***Collaborate, Innovate, and Deliver—with Accountability, Equity, and Diversity***

Digitization, agile manufacturing practices, equity and governance, and new alternate delivery methods are driving many of the changes owners must address when planning and executing their rail programs and projects—whether for new alignments and facilities or for maintaining and upgrading existing assets. In addition, owners are under increased scrutiny to deliver projects and services that address equity and sustainability.

Hill International, with our decades of rail experience, understands this new environment and is ready to help owners from the first to last mile. Leveraging our expertise in every type of rail and transit project from heavy freight operations to bus rapid transit corridors, our program, project, and construction management professionals can help you maximize the positive impact of new tools and technologies, delivery methods, and means and methods on your next project.

We achieve the above and more for our clients by combining our proven rail and transit construction best practices and lessons learned with the latest industry innovations.



COLLABORATE,  
INNOVATE, AND  
DELIVER—WITH  
**ACCOUNTABILITY**



# Opportunities for Success: Achieving Your Vision

## PROGRESSIVE DESIGN-BUILD AND ALTERNATE DELIVERY

Early contractor involvement can make all the difference on a complex, high-profile alignment or route. Hill, through our experience and work with DBIA, can help agencies effectively and fairly manage design liability and construction risk through progressive design-build, PPP, design-build-operate-maintain, design-build-operate-transfer, or other alternate delivery methods—all while keeping owners in control of the overall project.

## MONITORING AND COMPLIANCE

New opportunities can mean new risks, and Hill is here to help you navigate the path ahead. Hill has been at the forefront of funding and grant compliance for more than 40 years through our work with the Federal Transit Administration and other funding agencies and will make sure your next project meets all requirements of IIJA, BABA, New Starts, and other sources.

## EQUITY IN INFRASTRUCTURE

Equity in Infrastructure promotes racial equity and building generational wealth in underrepresented communities through infrastructure investment. This movement is intended to make national transit agency access easier for Historically Underutilized Businesses (HUB) and also promote them to take a “Prime” position on major projects within capital programs.

## PROGRAM MANAGEMENT INFORMATION SYSTEM (PMIS) SELECTION AND IMPLEMENTATION

Choosing the right PMIS for your program or project—or even your entire organization—can be a daunting task. Off the shelf or bespoke? Low-code or modular? Hill’s “best-of-breed” PMIS approach has been proven to give agencies the accurate, timely information they need to make the right decisions at the right time for their projects.

## GEOTECHNICAL AND UNDERGROUND CONSTRUCTION

Estimates suggest the cost of new tunnels in developed urban areas can reach \$1 billion per mile. Nevertheless, tunnels remain the most cost-effective new transit options available in urban cores. Hill’s geotechnical experts can help ensure underground construction is planned and executed correctly—with minimal ground movements and respect for ground conditions. This is the key to controlling costs and staying safe when building underground.

# RAIL AND TRANSIT EXPERIENCE

RIDING THE RAILS TO PROJECT SUCCESS



# Metro Foothill Extension

*Metro Foothill Extension Construction Authority*  
**San Gabriel Valley, CA**

Hill has been managing the Metro Foothill Extension (formerly known as the Gold Line) light rail program since 2009, providing expertise in design, construction, quality control, project controls, and third-party management. Hill professionals function as an extension of the Authority's staff, working in key roles to manage the planning, design, and construction of the light rail program's many elements. Phase 2A, from Pasadena to Azusa (11.3 miles) was completed on time and on budget in 2016, Phase 2B from Glendora to Montclair (12.3 miles) is ongoing.

## PROGRAM FACTS

- 23.6 miles of LRT track
- 16 miles of freight and commuter rail track relocation
- 44 Bridges (New or retrofitted) – Phase 2A (25) and Phase 2B (19)
- 12 new LRT Stations – Phase 2A (6) and Phase 2B (6)
- 34 at-grade crossings – Phase 2A (13) and Phase 2B (21)
- Parking facilities at each new station
- Signals and communications systems
- Maintenance and operations facility
- Power/electrification systems

## HILL'S SERVICES

- Program management
- Construction management
- Design management
- Planning and environmental management
- Procurement
- Quality oversight
- Document control
- Project controls
- Estimating

## HILL'S ADDED VALUE

- Verifying compliance with CEQA
- Supporting the Authority's public outreach team at community events
- Coordinating with BNSF, SCRRA, Caltrans, stakeholder cities, utility owners/companies and others
- Monitoring and reporting to keep everyone informed



**OPPORTUNITY:** PMIS selection and implementation.

**SUCCESS:** Hill helped specify and define the requirements for the project-specific build of e-Builder, the PMIS solution selected for the project. Hill was instrumental in determining the functionality and reporting of the system for the Construction Authority. Hill also provided e-Builder training to Construction Authority staff and other users to maximize functionality and make sure the Authority received the best possible ROI.





# Federal and State Special Inspections and Testing Services

*New York City Metropolitan Transportation Authority*  
**New York, NY**

Hill, as part of a joint venture, is providing special inspection and testing services to New York City Transit (NYCT) for multiple contracts. Projects assigned to the Hill team include work across the five boroughs and encompass Americans with Disabilities Act (ADA) upgrades, SOGR tasks, traction power, vertical transportation upgrades, and new maintenance yards, among others.

### PROGRAM FACTS

- Design-build accessibility and SOGR upgrades at eight stations
- 12 escalator replacements at stations in the Bronx, Manhattan, and Brooklyn
- Design-build rebuild of two AC traction power substations on Metro-North Railroad's New Haven Line
- Station circulation improvements at Flushing Main St. Station in Queens
- Demolition of existing facilities and construction of the New Jamaica Bus Depot in Queens

### HILL'S SERVICES

- Project management
- Construction management
- Project controls
- Estimating
- Third-party coordination
- Quality control/quality assurance
- Commissioning
- Risk management
- Force account coordination

### HILL'S ADDED VALUE

- Constructability reviews to verify designs meet project goals and requirements
- Close coordination with third-party utilities and external stakeholders
- KPI tracking and reporting to key decision makers
- Special inspection coordination and execution

**OPPORTUNITY:** Monitor construction to maximize ESG outcomes.

**SUCCESS:** Hill's reviews and inspection support reinforced MTA's reputation as a good steward of public funds through detailed reports, commissioning, and coordination.

# City Line Bus Rapid Transit System

Spokane Transit Authority  
Spokane, WA

The Spokane Transit Authority's (STA) City Line, a new electric bus rapid transit (BRT) system, runs six miles from the Browne's Addition neighborhood, through Downtown, and into the University District, where it serves the WSU Health Sciences Campus, the University of Washington Spokane campus, Eastern Washington University, Gonzaga University, and Whitworth University. According to STA, City Line "combines frequency and efficiency in a modern streetcar-like experience." Communities collaborated closely with nine local artists to create designs celebrating the identity of each neighborhood's bus stops.

## PROGRAM FACTS

- Funded through a combination of local, state, and federal funds including FTA's Capital Investment grant program
- Utilizes 11 zero-emission, modern electric buses
- Provides an expected 1 million rides per year
- Pre-board ticketing, level boarding
- Improved stations with custom-designed shelters, real-time signage, and other amenities
- Completed \$10 million under budget

## HILL'S SERVICES

- Project management
- Construction management
- Inspection
- Schedule management
- FTA support

## HILL'S ADDED VALUE

- Constructability reviews to verify designs met project goals and constraints
- Schedule recommendations to bring the project in on time
- Assistance with FTA-mandated Project Management Plan
- Change management to handle issues quickly and effectively

**OPPORTUNITY:** Move towards a net-zero system.

**SUCCESS:** Hill's help with FTA reviews and PMP documentation enabled STA to realize Eastern Washington's first zero-emissions rapid transit project as planned and with strong public support.



# Project Management Oversight Program

*Federal Transit Administration*  
**Nationwide, U.S.**

In 1985, as part of a project management oversight (PMO) contract with the Federal Transit Administration (FTA), Hill developed the FTA's original PMO guidelines. Today Hill is fulfilling its ninth PMO task order contract. As part of this ongoing contract, Hill oversees federally funded transit agency projects, providing technical, financial, and management oversight capabilities to FTA.

## PROGRAM FACTS

- More than 40 PMO assignments in 13 states
- More than \$20 billion in total project value
- Oversight of more than 200 stations and 300 miles of trackwork

## HILL'S SERVICES

- Project management oversight
- Project management
- Project monitoring

## HILL'S ADDED VALUE

- Helped develop FTA's original PMO guidelines
- Supported some of FTA's most challenging assignments, including work with WMATA, SEPTA, PATCO, and LA Metro

**OPPORTUNITY:** Establish PMO standards.

**SUCCESS:** Hill's SMEs worked with FTA to establish the first PMO requirements at the outset of the program and continue to partner with FTA to ensure the best and latest management tools and techniques are integrated into the program through training and workshops.



# Metrolink On-Call Engineering PM/CM and Staff Assistance Services

*Southern California Regional Rail Authority*

**Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties, and connects to Oceanside in San Diego County, CA**

The Hill team is providing PM/CM and staff assistance services through seven different tasks for Metrolink. These tasks include supporting the implementation of the Southern California Regional Rail Authority's (SCRRRA) Southern California Optimized Rail Expansion (SCORE) capital program, construction of El Toro and Irvine Freeway Bridge Maintenance, the Moreno Valley March Field Station Expansion Project, maintaining state of good repair (SOGR) across seven commuter rail lines, the Interstate 10 Toll Lanes Improvement Project, design review for individual projects on Metrolink property, and oversight of upgrades at the Pacific and Bogart grade crossing.

## PROGRAM FACTS

- Maintain SOGR across 7 commuter rail lines and more than 60 stations across 538 route miles of track in Southern California
- Replacing approximately 27,000 ties, replacing approximately 43,000 LF of rail, upgrading 1,146 LF of wood tie track to concrete ties, and rehabilitating 16 turnouts
- Design, permitting, and rehabilitation of multiple culverts; rail-top bridge replacements; grading; nearly two dozen crossing upgrades; and more than 8 signal systems rehabilitation projects to improve systems at more than 25 locations
- Signal shelter replacements, signal mast and head upgrades, crossing gate replacements, data recorder replacements and grade crossings, crossing warning equipment upgrades, power switch machine replacements, and the replacement of wayside detectors
- Rehabilitation of culverts and rail-top bridge replacements

## HILL'S SERVICES

- Program management
- Construction management
- Contract management
- Inventory management
- Condition assessments
- Document management
- Design reviews
- Resident engineer services
- Submittal reviews
- Project planning
- Independent cost estimating (ICE)
- Developing bid documents
- Risk management
- Project charters

## HILL'S ADDED VALUE

- Prioritizing SOGR projects to lessen backlog
- Detailed pre-construction and post-construction documentation
- Utilization of technologies such as time lapse cameras, GoPros, drones, and GPS-enabled cameras to document conditions during all phases of construction
- Hill International SharePoint development for document control
- Client accessibility to Hill University training to expand employee development
- Enabling smooth and efficient procurements
- Identification and dissemination of program best practices and lessons learned
- Utilizing Power BI dashboards to track project budgets and KPIs

**OPPORTUNITY:** Build a team with added availability and services ready as needed for client support.

**SUCCESS:** Integrated with SCRRRA staff to learn processes and procedures and become familiar with conditions of existing assets and capabilities to quickly develop SOWs for new funding.

# McKalla Station and Red Line Double-Track

Capital Metropolitan Transportation Authority (CapMetro)  
Austin, TX

Hill is providing construction management services for three rail infrastructure projects in Austin, TX. Project 1 is the design-bid-build construction of an additional main line track to provide double-track service along a 1.5-mile alignment from north of Braker Lane to the existing CapMetro North Operations Yard in North Austin. Project 1A is another design-bid-build project that involves an early drainage package in preparation for the replacement of a critical railroad bridge. Project 2 involves the construction of McKalla Station, a new regional rail station next to Q2 Stadium, home of Major League Soccer team Austin FC.

## PROGRAM FACTS

- Design-build McKalla Station will accommodate up to 20,000 fans on game days
- The new station includes multiple ADA-compliant accessibility features and a variety of amenities such as bike racks, ticket machines, signage, cameras, Wi-Fi, emergency phones, a shared-use pedestrian and bike path
- Enhanced plaza space to support an outdoor amphitheater just outside of Q2 Stadium

## HILL'S SERVICES

- Project management
- Design review
- Document control
- Inspection
- Schedule and cost management
- Commissioning

## HILL'S ADDED VALUE

- All work conducted without disrupting operations of freight rail corridors
- Team coordination and communication promotes efficient construction of all three projects



**OPPORTUNITY:** Reduce impacts and improve connections for the community.

**SUCCESS:** Support outreach efforts to keep residents and businesses informed and review designs for future proofing and accessibility.

**OPPORTUNITY:** Maximize benefits of DBOM delivery.

**SUCCESS:** Manage procurement cycle proactively across entire lifecycle, including staffing, agile staging and logistics of materials delivery, and vehicle procurement.



# Cairo Monorail

*National Authority for Tunnels*

**Cairo, Egypt**

The two lines of the New Administrative Capital City and 6 October City Monorail project will transport approximately 45,000 passengers per hour at peak capacity, greatly improving mobility for Egyptian citizens in a safe and sustainable manner.

## PROGRAM FACTS

- U.S. \$4 billion project
- First monorail in North Africa
- Longest monorail system in the world at a combined 98.5 KM
- 34 stations (elevated and at-grade)
- DBOM delivery
- Connections to Cairo Metro and HSR network

## HILL'S SERVICES

- Project management
- Design review
- Implementation supervision

## HILL'S ADDED VALUE

- Procurement support to address supply chain bottlenecks
- Risk management
- Coordination with multiple stakeholders and third parties
- Project monitoring for compliance with and adherence to client goals

# Valley Metro Expansion Program

Valley Metro Regional Transportation Authority  
Phoenix, AZ

In 2015, Phoenix voters opted to fund a 35-year, \$31 billion transit plan encompassing new bus service, light rail capacity, and street improvements spanning approximately 42 miles and connecting the major metro areas of Phoenix, Mesa, Chandler, Gilbert, and Tempe. Hill is supporting Valley Metro as Project Manager in delivering this ambitious program, providing program management and construction management services across multiple phases of the program.

## PROGRAM FACTS

- \$7 billion initial phase
- Projects include streetcar, light rail route extensions, operations & maintenance facilities, and multiple stations
- Multiple delivery methods
- Intermodal connections
- Overhead catenary systems
- 300-space parking garage
- First elevated light rail station in the system
- Multiple bridge, canal, and highway crossings
- New substations

## HILL'S PM/CM SUPPORT

- Program management
- Project management
- Construction management
- Resident engineering
- Document control
- Quality verification/quality assurance
- FTA compliance/Buy America support
- Scheduling and estimating
- Communications and coordination
- Public Art Program management

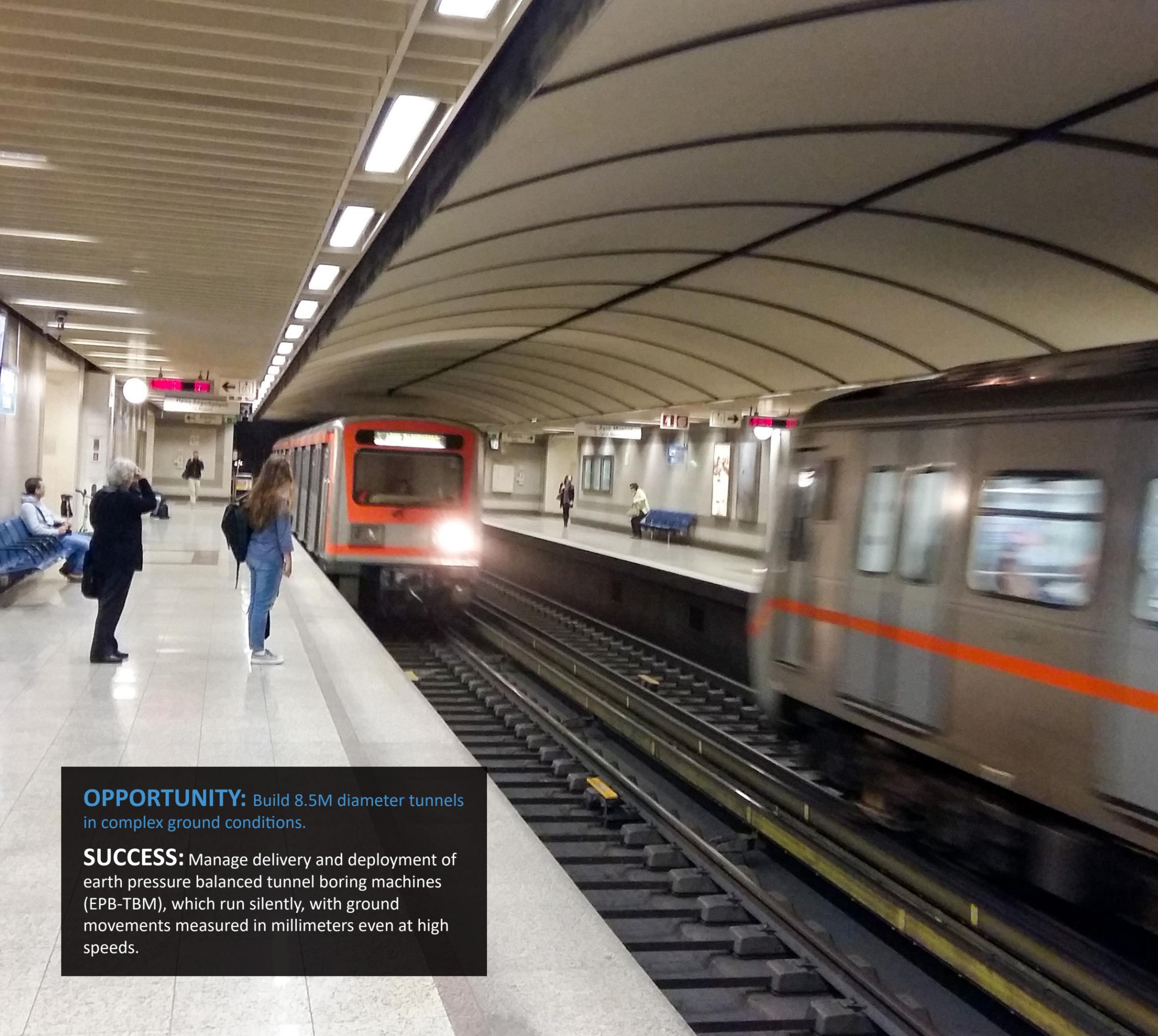
## HILL'S ADDED VALUE

- Design evaluation support helped save Valley Metro \$4 million on O&M project
- Long lead item scheduling helped to avoid delays due to procurement
- Risk management and avoidance
- Lessons learned captured for future projects
- Hill rail best practices integrated with Valley Metro requirements program-wide
- Alternative delivery expertise



**OPPORTUNITY:** Change management approach.

**SUCCESS:** The Hill team's proactive change management approach has led to more than \$2 million in change order savings to date for Valley Metro.



**OPPORTUNITY:** Build 8.5M diameter tunnels in complex ground conditions.

**SUCCESS:** Manage delivery and deployment of earth pressure balanced tunnel boring machines (EPB-TBM), which run silently, with ground movements measured in millimeters even at high speeds.

# Athens Metro

*Attiko Metro S.A.*

**Athens, Greece**

Attiko Metro is planning multiple metro and tramway projects throughout the Attica Region in Greece to improve transit options for residents. Hill, as the leader of international consortia, is supporting Attiko Metro in these efforts with best-in-class technical assistance consultancy services. Once complete, these projects are expected to increase ridership by 132,000 passengers per day, reducing the associated carbon emissions by 120 tons daily.

## PROGRAM FACTS

- Athens Metro Line 4: Section A – 12.8 KM
  - Tunnel connecting with Lines 2 and 3
  - Maintenance yard
  - 15 underground stations
  - 9 intermediate terminal shafts
  - Serving one of the most densely populated areas of Athens
- Athens Metro Line 3 Extension
  - 7.6 KM tunnel
  - 6 new stations
  - 7 ventilation shafts

## HILL'S SERVICES

- Design support
- Tendering
- Construction oversight
- Testing and commissioning

## HILL'S ADDED VALUE

- Specialized technical solutions
- Information and optimization recommendations
- Design issue resolution
- Supervision management
- Future proofing

# East Link Light Rail Extension

Central Puget Sound Regional Transit Authority (Sound Transit)  
Seattle, WA

Hill is providing design-build project management (DBPM) services for the E360 Segment of the East Link Light Rail program, stretching from East Bellevue to the dense, bustling campus headquarters of Microsoft. As Microsoft operations had to be maintained during construction, the Hill DBPM team worked with the design-builder to develop construction phasing plans that accommodated the thousands of employees and visitors that were impacted by the construction activity, ensuring that safe pedestrian flows were accommodated at all times.

## EAST LINK FACTS

- Design-build delivery
- 1.8-mile guideway with overhead catenary system
- \$225 million LRT alignment
- At-grade and aerial guideways
- Pedestrian bridge across active Interstate
- Two new LRV/transit stations
- 320-vehicle parking garage
- Multimodal Transit Center at the Microsoft campus supports Sound Transit Link Light Rail, King County Metro, Sound Transit Bus, and Microsoft Commuter Bus
- Integrated driver/operator comfort station

## HILL'S SERVICES

- Design-build project management
- Construction management
- Design-build procurement support
- Compliance review
- Change management
- Commissioning

## HILL'S ADDED VALUE

- Coordination with local utilities avoided service disruptions
- Managed critical local stakeholders, including Microsoft
- Safety audit and oversight on behalf of Sound Transit
- Worked with WSDOT on MPT
- Worked with multiple AHJs including City of Redmond and City of Bellevue.
- Change management processes developed on E360 were adopted by Sound Transit across the entire East Link Capital program
- Hill pioneered the use of Headlight on E360 project, providing a visual-based inspection and risk mitigation technology that was adopted on other East Link projects



**OPPORTUNITY:** Optimize permitting process.

**SUCCESS:** A lack of understanding of the design-build process by the permitting authority caused incomplete and delayed design review comments, impacting the overall project schedule. Hill worked with the permitting organization and other stakeholders to develop a design-build permit documentation process and checklist that expedited and optimized design reviews and minimized further impacts to the project schedule.



# Riyadh Metro

Arriyadh Development Authority  
Riyadh, KSA

Hill provided the Arriyadh Development Authority (ADA) with project management and construction management services for the new \$28 billion Riyadh Metro system.

As the intermediary between ADA and the design-build contractors, the Hill team oversaw design and construction deliverables through the project life cycle for Package 3 of the project, which consisted of three of six lines (4, 5, and 6) of the new Riyadh Metro system.

## PACKAGE 3 FACTS

- 67 KM of track
- 48 KM of elevated alignment
- 5.5 KM of mined tunnel
- 22 stations
- 13 KM of bored tunnel

## HILL'S SERVICES

- Design-build contract administration
- Design management
- Procurement support
- Construction management
- Financial management
- Quality management
- Project controls
- Value engineering
- Testing and commissioning

## HILL'S ADDED VALUE

- Driving ADA's vision across the project team
- Verifying the project delivered was the project ADA paid for
- Maximizing value through innovation
- Providing PMIS support to keep all stakeholders informed

**OPPORTUNITY:** Track design-build deliverables.

**SUCCESS:** The Hill team used the Aconex PMIS to maintain "ball-in-court" accountability with the design-builder throughout the project life cycle.

# Gateway Program

National Railroad Passenger Corporation (Amtrak)

## New Jersey and New York

Amtrak's Gateway Program is a critical passenger rail infrastructure renewal program envisioned to improve capacity and reliability along the Northeast Corridor (NEC) between Manhattan and Newark, NJ. Gateway is a multi-billion-dollar program that encompasses two primary groups of projects: (1) Critical Infrastructure Resiliency and (2) Operational and Capacity Improvements. Both types of projects will enhance Amtrak's services and double capacity for passenger rail travel in Manhattan and Northern New Jersey. Ultimately, the Gateway Program will allow twice the current number of passenger trains to operate under the Hudson River. The program will increase track, tunnel, bridge, and station capacity, creating four mainline tracks between Penn Station Newark, New Jersey, and Penn Station in New York City, NY including two new, single-track Hudson River tunnels.

## PROGRAM FACTS

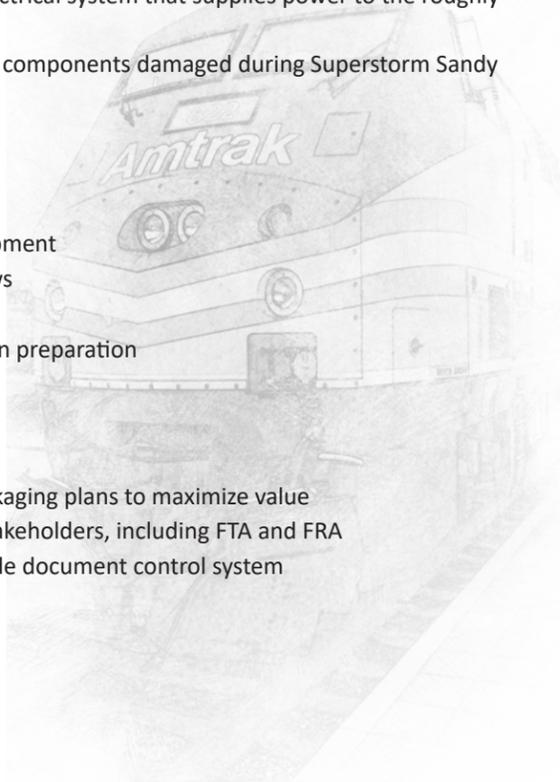
- \$20 billion total program cost
- Construction of new tunnels
- New, eight-track NY Penn Station South and Portal South Bridge
- Improvements at the Lautenberg Secaucus Station and construction of a Secaucus Loop facilitating NJ Transit services
- New fourth track at the Harrison PATH Station
- Highline renewal/expansion from two to four tracks
- Modernization of the electrical system that supplies power to the roughly 450 weekday trains
- Rebuilding and replacing components damaged during Superstorm Sandy

## HILL'S SERVICES

- Program management
- Environmental review
- Master schedule development
- Value engineering reviews
- Constructability reviews
- Project Management Plan preparation
- Design reviews

## HILL'S ADDED VALUE

- Developing contract packaging plans to maximize value
- Coordinating with key stakeholders, including FTA and FRA
- Establishing program-wide document control system



**OPPORTUNITY:** Identify, capture, and realize program-wide efficiencies.

**SUCCESS:** Hill is assisting Amtrak in establishing systems to manage the program's components and realize efficiencies and innovations across the entire program.

**OPPORTUNITY:** Coordinate work across more 40 individual projects stretching across six states and Washington, DC.

**SUCCESS:** Hill developed and maintained and integrated master schedule for Phase 1 of the program to highlight interfaces and resolve potential clashes before work started.

*“The Leadership provided is excellent. Responsiveness in resolving Construction problems is one of Hill’s greatest strengths, as is addressing budget and schedule issues.”* - Director-Program Mangement, CSX Transporation

# National Gateway Initiative (NGI)

*CSX Transportation, Inc.*

**Ohio, Pennsylvania, Maryland, West Virginia, Virginia, North Carolina, and Washington, DC**

The National Gateway Initiative (NGI) was an extensive transportation infrastructure undertaking for the Class 1 railroad CSX. The NGI involved work across six states and Washington, DC. The NGI allowed for double-stack intermodal freight train service by clearing obstructions in Ohio, Pennsylvania, Maryland, West Virginia, Virginia, North Carolina, and Washington, DC. Phase 1 of the initiative was the CSX route between Greenwich, OH, and Chambersburg, PA. Hill provided construction management services for Phase 1.

## PROGRAM FACTS

- 40 Phase 1 obstructions resolved
- \$183 Million Project Cost for Phase 1
- Tracking lowering at 7 overhead bridges
- Modification to 2 through-truss bridges
- Replacement, removal, or modification of 20 overhead bridges
- Modifications to 10 mountain tunnels
- Reconstruction of J&L Tunnel
- Total of 15,595 LF of tunnels modified
- Three new interlockings built

## HILL’S SERVICES

- Project Management
- Construction Management
- Cost Estimating
- Scheduling

## HILL’S ADDED VALUE

- Responded in the field with viable recommendations and solutions
- Provided high-level reporting to CSX stakeholders
- Interfaced with CSX personnel to maintain safe and secure worksites



**CONNECT WITH**

**Thomas J. Spearing III**

*Senior Vice President*

*Rail and Transit Sector Lead*

[tomspearing@hillintl.com](mailto:tomspearing@hillintl.com)

18000 Horizon Way Suite 200

Mt. Laurel, NJ 08054

[www.hillintl.com](http://www.hillintl.com)

1-800-283-4088

