

**Halcrow, Inc**

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May 29, 2008

Mr. John Bardwell  
US Department of Transportation  
Federal Transit Administration  
Office of Procurement  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Mr. Bardwell:

Halcrow, Inc. is pleased to submit our Statement of Capabilities for the FTA's Project Management Oversight program. Halcrow brings global experience and perspective to the transit field. Our services have ranged from the traditional planning and engineering to program and construction management to public-private partnerships to operations and maintenance and procurement. Within these areas we have developed and applied strong capabilities in both the US and international markets. The firm has taken on and delivered assignments for some of the largest transit and commuter rail properties in the world. These projects include all transit modes—light and heavy rail, commuter rail, rail airport links, and bus systems. Having worked with some of the most innovative delivery tools in the industry, Halcrow is comfortable operating in all modes from turnkey to traditional design-bid-build.

Halcrow has developed a capability for operations and maintenance in the transit area, serving as a consultant to the Heathrow Express, providing express rail service from Heathrow Airport to downtown London. We are also playing a project oversight role for London Transport's multi-billion dollar investment program. Additionally, we have developed an extensive portfolio in the area of public-private partnerships, including assignments being performed from the perspective of both the government and investor. Over the past year, the firm has advised state DOT's in P3 transportation projects in New Jersey, Virginia, Texas and Florida. In addition to this, we have worked on the investor side of transportation projects in Illinois and Indiana.

Halcrow has and continues to deliver transportation projects for public authorities such as the Los Angeles Port Authority, the Port Authority of New York and New Jersey, the Maryland Department of Transportation and the Houston Port Authority to name but a few.

With 17 offices in the United States and a staff of 7,800 worldwide, Halcrow looks forward to an opportunity to work with the FTA on the Project Management Oversight program.

Very truly yours,

A handwritten signature in black ink that reads 'Michael Della Rocca'.

Michael Della Rocca, P.E.  
President  
Halcrow, Inc.



## Who We Are

*One of the world's leading multidisciplinary consultancies, Halcrow combines global knowledge with local understanding to identify with clients' key drivers. We deliver value-driven design solutions, while ensuring corporate responsibility is reflected in everything we do.*

Halcrow provides consulting services to a full spectrum of private and public sector organizations. Our client list includes many familiar names from around the world, and is made up of organizations including contractors, developers, financial institutions and local/regional governments. We have also worked extensively for national governments, international funding agencies, regulators and infrastructure operators.

## Our Clients

Halcrow's clients range from the governments of major world economies, to the largest contractors in the industry. We provide services for rail operators, private financial institutions and franchisees, through to major international institutions such as the World Bank, Asian Development Bank and European Bank for Reconstruction and Development. We have experience in all types of design and construction contracts including Turnkey, PFI, PPP and DBOT.

## Our People

With over 7,800 employees working across our international network of 75 offices, including 17 offices in the North American region, Halcrow has an outstanding resource base able to provide solutions across a wide range of design disciplines. Experts in fields as diverse as tunneling to fire safety modeling, rail operations to sustainability, allow us to keep tasks in-house, producing a stronger, more refined team across all design disciplines.

Halcrow has Investors in People (IIP) accreditation demonstrating our commitment to our team. We invest in employee personal and professional development, resulting in a committed, focused team ready to work on the most challenging projects.

## Halcrow rail

Delivering over 3,000 rail projects in the past ten years alone, Halcrow is a leading provider of consultancy services for all aspects of rail systems. From operations planning to alignment design, from rolling stock to regulatory process, and from signaling to safety systems management, Halcrow has the experience, the resources and above all the drive to meet the challenges posed by any rail project in any location.

Halcrow understands that rail projects can encompass the widest range of disciplines of any infrastructure project, and our matrix resourcing structure ensures the right people are made available for each project. Halcrow brings together specialists in rail systems, civil infrastructure, rail operations, tunneling and underground structures, project managers, and safety and assurance advisors. These experts are supported by other members of the Halcrow Group from disciplines such as architecture, environment, transportation planning, urban planning, fire safety, and information systems.

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*We have a track record of successful delivery across all these disciplines and have effectively combined many of these areas on a single project, resulting in some of the leading transportation systems in the world today.*

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In addition to high speed, freight and mainline, light rail and metro projects, Halcrow has delivered transportation links to some of the world's major airports. From dedicated airport links such as London's Heathrow Express, extensions of existing light rail and metro lines, to design of the only in-town, checkout facility in the world at Kuala Lumpur's City Air Terminal, Halcrow has been at the forefront of airport rail link design.

## Urban rail systems

Cutting across traditional disciplinary boundaries, our Light Rail and Metro team has experience in the core areas of LRT and metro systems: operations and maintenance, systems, vehicles, alignment,

## Commercial rail projects

Independent Reporter to the Office of the Rail Regulator  
Vision 42 LRT cost study  
Project Evergreen: technical advice and due diligence  
Independent Reporter to the Office of the PPP Arbiter  
Manila LRT1 Southern extension: technical advice  
ISPA rail rehabilitation project E30 corridor  
Network Rail expenditure review  
Turnaround of Spoornet, South Africa  
Parramatta Rail Link timetable studies  
Northwest rail link operational requirements study  
Network Rail business plan review  
Rail corridor II PPP strategic review  
Eurotunnel business review  
Bulgarian Railways masterplan  
Operational simulation of London rail projects  
Bulgarian Railways finance improvement study  
Long Island Railroad (LIRR) scheduling software

signaling/train control, safety, quality and depots, whether they be street running tram networks or fully automated fixed guideway systems. Our direct involvement in the design, specification, procurement, testing, commissioning and operation of LRT systems across the continents brings unrivalled experience to multidisciplinary projects.

Halcrow can also cover all related disciplines such as traffic planning, passenger forecasting, operational simulation modeling, economic studies, PFI and funding options, procurement strategies, station design, environmental, civil and structures, tunneling, geotechnical, etc.

### Program management

The development of a transit system is an integrated and multi-disciplinary process requiring the management of diverse functions. For a system to be successfully delivered the interfaces between all parties and all functions must be robust and effectively managed. In particular, the interpretation of client requirements and those of the statutory authorities, the formulation of business cases and strategic directions, and the evaluation of financing options are control functions.

At the project level Halcrow undertakes cost schedule and quality management functions that include the monitoring of performance and the implementation of remedial actions when elements of work are not performing as planned.

Halcrow also has extensive experience in the establishment of multi-disciplined management teams and procedures, allowing timely decisions to be made during the system's development and to manage, document and track changes that are made.

### Design services

Halcrow provides a full-service offering for all aspects of a rail system—from a new railway or metro line, an extension to an operating system, or the renovation and refurbishment of existing infrastructure. We have the people, the experience, and the track record of successful delivery on major infrastructure projects worldwide.

Halcrow's civil engineering capability is among the best in the industry. Our expert bridges group is working on some of the most exciting bridge and viaduct projects in the world; we have delivered over 300 station projects in the last ten years alone, and our reputation in tunneling and underground infrastructure is unparalleled.

Our permanent way experts, as part of the Rail Link Engineering consortium, have helped to successfully deliver the UK's first high speed railway: High Speed 1. In addition to designing and detailing new alignments and track formation for everything from tram alignments in highways to high-speed lines and adaptations of freight lines to accommodate high-speed tilting trains, Halcrow's permanent way capability includes designing improvements





to existing infrastructure to achieve higher speeds while optimizing capital expenditure, specifying plant and materials, quality assurance and all aspects of maintenance.

Halcrow’s M&E engineers offer outstanding experience gained on some of the largest rail infrastructure projects in the world. We offer industry leading capability in electrification, signaling and train control systems, telecommunications, SCADA, AFC, fire and ventilation, and traction power supply together with a suite of specialist computer design, modeling and simulation programs.

*Clients choose Halcrow because they have come to expect the best in knowledge, innovation and teamwork. We have an enviable breadth of skills and expertise at our fingertips. So our ability to bring together the right combination of experience and expertise for each project is second to none.*

*Some of Halcrow’s relevant program and project management experience includes:*

### **DLR City Airport Extension**

*award winning transportation project*

**Client:** Amec Group Limited, Royal Bank of Scotland

The Docklands Light Railway City Airport projects extends the existing light rail network from Canning Town to London City Airport in the heart of London’s Docklands area, providing an essential connection between the airport, London Underground and national railway networks. The overall length of the scheme is 2.7 miles and includes 1.7 miles of post-tensioned segmental elevated viaduct. The project was open for public service two weeks ahead of schedule.

### **Technical advice: Manila LRT 1 south extension**

*another major metro project; on time and on budget*

**Client:** International Finance Corporation

Manila LRT Line 1 (the Yellow Line) is a 9.4-mile light railway from Baclaran in Pasay City to Monumento in Caloocan City. There are 18 stations along the fully elevated Line 1 used by some 105,000 passengers in 2005. The project extends the existing LRT Line 1 southward by 7.3 miles from Baclaran Station in Pasay City to Bacoor City in the Province of Cavite. Halcrow provided technical advisory services including light rail engineering, cost modeling, commercial/ contracts advice, demand forecasting, economic appraisal.

### **Transport for London Investment Program Management Office**

*providing a constructive “second opinion” to the project teams and assist in the dissemination of best practice throughout TfL*

**Client:** Transport for London (TfL)

Halcrow is currently appointed in the UK as an Independent Engineer by London’s transport authority, Transport for London (TfL). In its IE capacity Halcrow undertakes forward-looking project peer reviews, which provide delivery assurance to the TfL investor community, TfL senior management and the TfL Commissioner. Following a prescribed reporting regime, the focus of each review is on providing an overall opinion of the viability of the final operational, financial and timely success of the project.

Since 2006 Halcrow has undertaken independent engineer reviews for the following rail projects:

- » CTRL King’s Cross Redevelopment - Provision of a new London Underground ticket hall and access tunnels under King’s Cross mainline station
- » North London Line Infrastructure - Upgrade of all fixed infrastructure

## Selected Halcrow urban rail projects

- London Crossrail
- Docklands Light Rail extension to London City Airport
- Manila LRT
- Kuala Lumpur LRT Kelena Jaya Line (PUTRA)
- Copenhagen Metro
- Docklands Light Railway extension to Woolwich Arsenal
- Bangkok Blue Line
- Singapore MRT
- Hong Kong MRT
- London Underground Jubilee Line extension
- Dublin LUAS LRT
- Heathrow Express airport link
- West London Tram
- Edinburgh Tram
- Manchester metrolink
- Hong Kong West Rail
- Lisbon Metro southern extension
- New Metro Rail Perth
- London Underground Piccadilly Line extension
- Sao Paulo Metro
- Seoul Metro
- Kuala Lumpur LRT Ampang Line (STAR)
- Kuala Lumpur Monorail
- Barcelona Metro

- » North London Line Stations - Upgrade of all station fabric and systems
- » East London Line Project - The extension of the existing East London Line and renewal of 150-year-old infrastructure
- » Paddington Station Development - A station congestion relief project
- » Docklands Light Railway Dagenham Dock Extension - Extension of an existing mass transit railway

## Project Evergreen II

### *The UK's first public-private partnership DBFT project*

**Client:** Confidential

Halcrow provided due diligence services for the lenders including railway engineering, (track, signal, civil, M&EE) advice, cost modeling, project & program management advice, commercial/contracts management advice, monitoring project delivery, certifying drawdown from loan facilities; Design Build Finance Transfer (DBFT); Public-Private Partnership (PPP)

Project Evergreen II sought to establish an alternative commuter route to rival the West Coast Mainline. Greater operational resilience, increased capacity and improved performance were required from the project. Consequently the works were diverse, including new platforms, track, signals, signaling control center, and track realignments.

## Network Rail Independent Reporter - Major Project Reviews and Monitoring

*emphasis focused on the successful outcome of the major projects reviewed*

**Client:** Network Rail and The Office of Rail Regulation (ORR)

Halcrow was appointed as an independent reporter (IR) to provide ORR with advice and opinion on Network Rail's efficient delivery of its major projects, focusing primarily on cost, schedule, access and resource considerations.

Halcrow is currently engaged in monitoring the following Network Rail project / programs:

- » West Coast Route Modernization - Route renewal and enhancement of the West Coast mainline between London, Midlands, Northwest and Scotland
- » Thameslink Program - Route renewal and enhancement of the North / South mainline through central London
- » King's Cross Redevelopment - Station renewal and enhancement of the East Coast Route London terminus
- » FTN / GSMR - A national telecommunications program
- » Access for All - A national program to provide 'step free' facilities at key Network Rail stations permitting access to disabled customers



## Commercial rail support

PPP/PFI formulation, tender support, assessment  
Due diligence  
Service delivery and retail  
Rail safety  
Traction and rolling stock  
Rail access and contracts  
Restructuring and commercialization  
Rail privatization advice  
Institutional establishment and support  
Rail regulation expertise  
Strategic reviews  
Business reviews  
Railway master planning  
Regulatory and policy framework advice to governments and regulators  
Development of regulatory frameworks  
Policy studies and optioneering  
Contractual development  
Marketing and business planning  
Review of existing strategies  
Organizational structure and design

### Contact Us:

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## Office of the PPP Arbiter (OPPPA)

### *measuring economies and efficiencies*

**Client:** London Underground Ltd (LUL)

LUL has entered into three Public-Private Partnerships for the maintenance, renewal and upgrading of its infrastructure. Under the agreements, the 3 private sector companies maintain, renew and upgrade discrete parts of LUL's infrastructure under separate 30-year agreements. Halcrow has supported the PPP Arbiter in since 2003 as Technical Adviser / Independent Reporter. Assignments have included:

- » benchmarking utilization of engineering access
- » cost and performance benchmarking
- » asset management good industry practice
- » extraordinary review technical advice
- » periodic review preparation

### Singapore Mass Rapid Transit

#### *new metro system in densely populated city center*

**Client:** Transit Corporation, Kumagai Gumi / SembCorp Joint Venture

Halcrow, as part of a joint venture consortium, undertook preliminary engineering studies for the MRT system, followed by a review and update of this preliminary design. Subsequently Halcrow won the assignment to proceed with the detailed design.

Halcrow provided preliminary engineering design; project staging development of detailed design criteria; construction staging, project assessment, design and build extension; M&E engineering, detailed design of underground and elevated stations



### Amtrak Acela high speed rail service

#### *USA's first high speed rail link*

**Client:** Balfour Beatty-Mass Electric Inc. Amtrak

Halcrow provided the Project Manager and a team of engineers to develop a strategy, program and all supporting documentation, then conduct final works inspections, and managed the modification, testing and commissioning of the 25kV auto transformer Power Supply and OHLE system of this "Blue Ribbon" high speed line. These major works were carried out around a live and running rail service.