



September 21, 2011

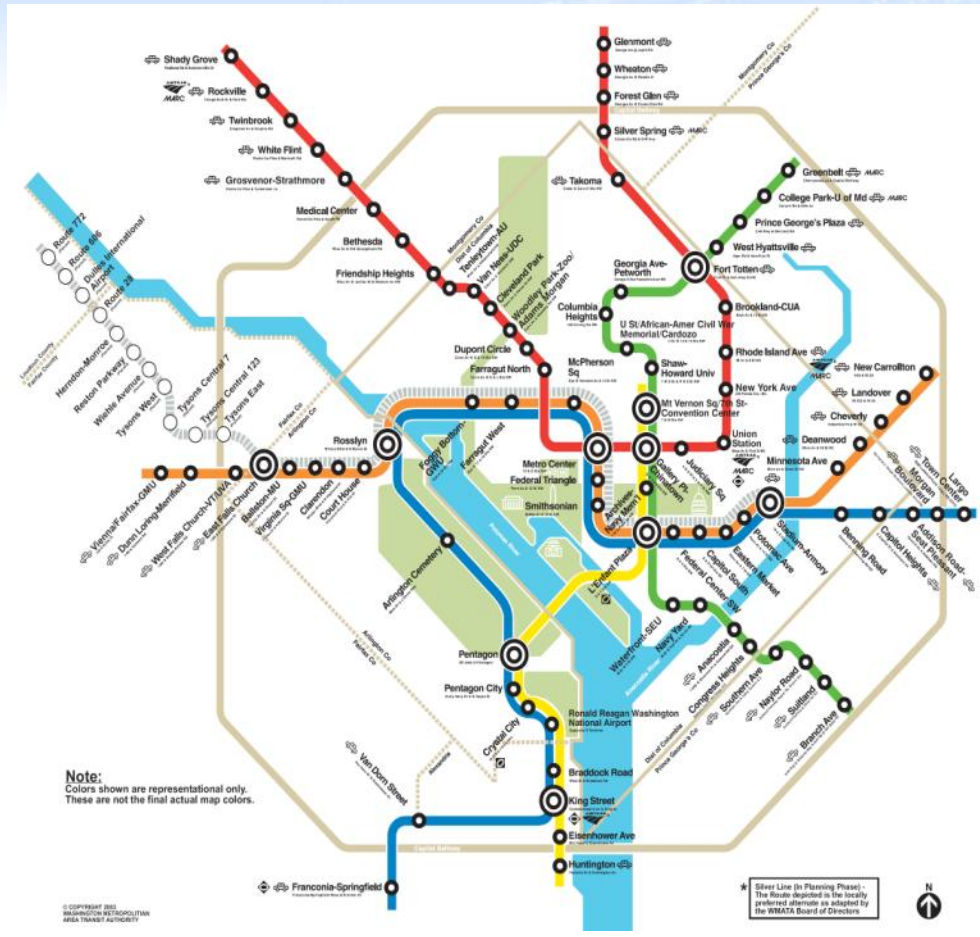
Jon Christensen

Project QA/QC and Safety Manager

Dulles Corridor Metrorail Project

At-a-Glance

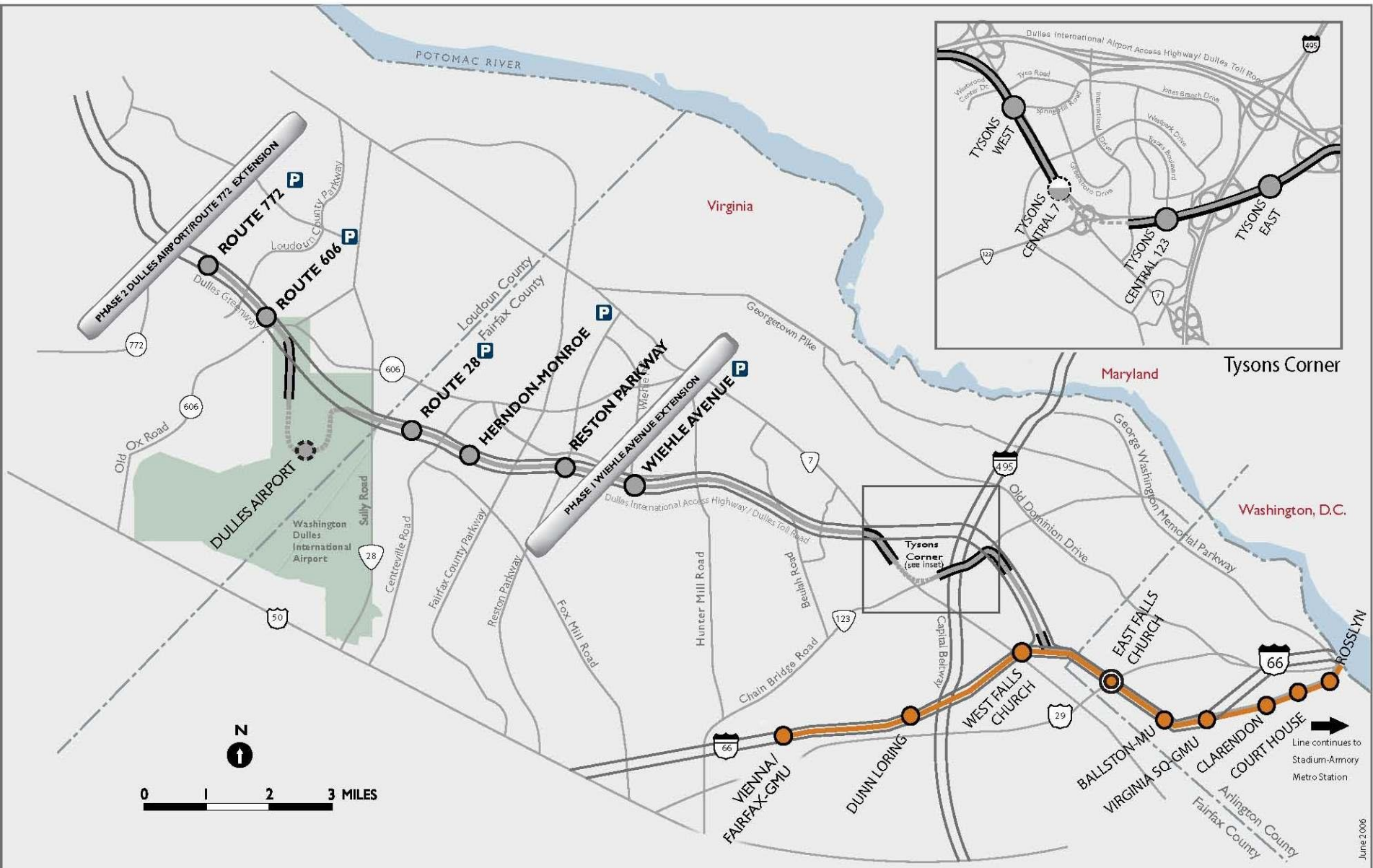
- Seamless integration with current 106-mile Metro system
- 23-mile extension that branches off existing Orange Line after East Falls Church Station, providing direct connections to DC without transfers
- 11 new stations
 - 5 in Phase 1
 - 6 in Phase 2
- Phase 1: East Falls Church to Wiehle Avenue in Reston; Construction completion 2013
- Phase 2: Wiehle Avenue through Dulles Airport to Ashburn; complete in 2017, opening date not set



Dulles Corridor Metrorail Project



Route Map



Construction Marching Forward

Phase 1 from I-66 to Reston

Construction of the Dulles Corridor Metrorail Project is under way along the 11.7-mile corridor, from East Falls Church to Reston

- **Both Outbound and Inbound Tunnel nearing completion**
- **Utility relocation 99 percent complete**
- **All five stations are under construction**
- **Guideway across I-495 nearly complete**
- **Guideway along Route 123 40% complete**
- **Piers along Route 7 nearly complete**
- **Orange Line connection work intensifies**

**CONSTRUCTION REACHES
50 PERCENT**



Tysons East Station



Tysons Central 123 Station



Tysons Central 7 Station



Tysons West Station



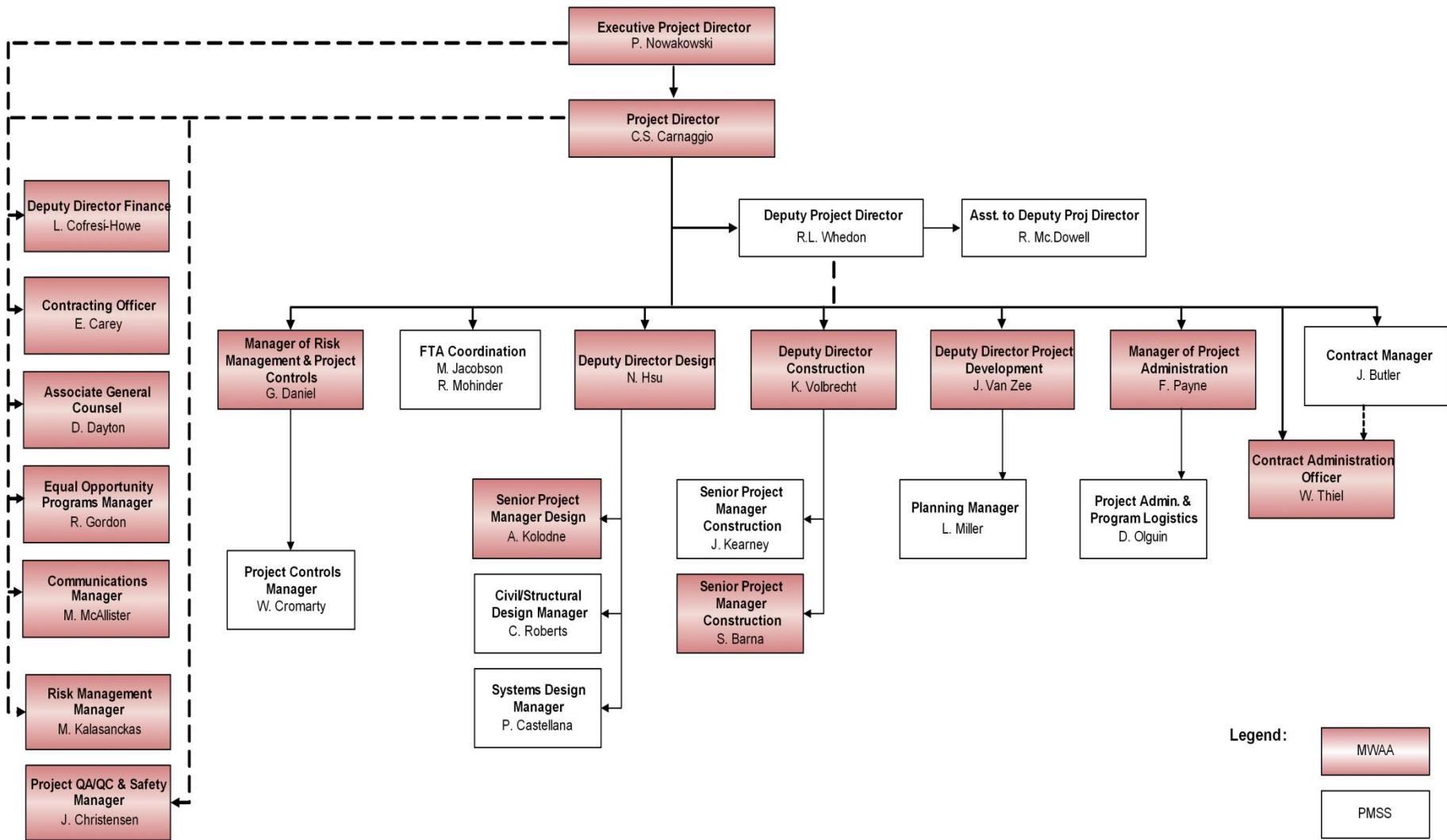
Wiehle Ave. Station

Dulles Corridor Metrorail Project

Who is building the project?

- Metropolitan Washington Airports Authority (MWAA) is building the project
- Dulles Transit Partners is the design-build contractor
- Upon construction completion, project will be turned over to Washington Metropolitan Area Transit Authority (WMATA)





Phase 2

- 11.6 –mile extension from Wiehle Avenue in Reston to Ashburn
- Preliminary Engineering Underway
- 6 stations:
 - Reston Parkway
 - Herndon-Monroe
 - Route 28
 - Dulles Airport
 - Route 606
 - Route 772/Ashburn
- Rail Yard & Maintenance Facility
- 5 Parking Garages



Dulles Transit Partners, LLC



Direct Hire / Subcontract

- Phase 1 Extension to Wiehle Avenue 11.7 miles
- DTP Design/Build Contract Value: \$1.7 billion
- DTP Direct Hires Perform
 - **Site Preparation**
 - **Earthworks**
 - **Station Civil Works**
 - **Aerial Guideways Substructure and Superstructure**
 - **Traction Power**
 - **Train Control**
 - **NATM Tunnel**
- Subcontractors Perform
 - **Stations Finishes**
 - **Road Modifications**
 - **Track Installation**
 - **Elevators and Escalators**
 - **Communications and Security**



PROJECT QUALITY ASSURANCE REQUIREMENTS

FEDERAL TRANSIT ADMINISTRATION (FTA)

Quality Assurance and Quality Control Guidelines, February 2002

Based upon ISO 9001-1994, Quality Systems – Model for Quality Assurance in Design, Development, production, Installation, and Servicing

METROPOLITAN WASHINGTON AIRPORTS AUTHORITY (AIRPORTS AUTHORITY)

Quality Program Plan

Meets FTA requirements above and establishes Quality Assurance requirements for all Project Participants

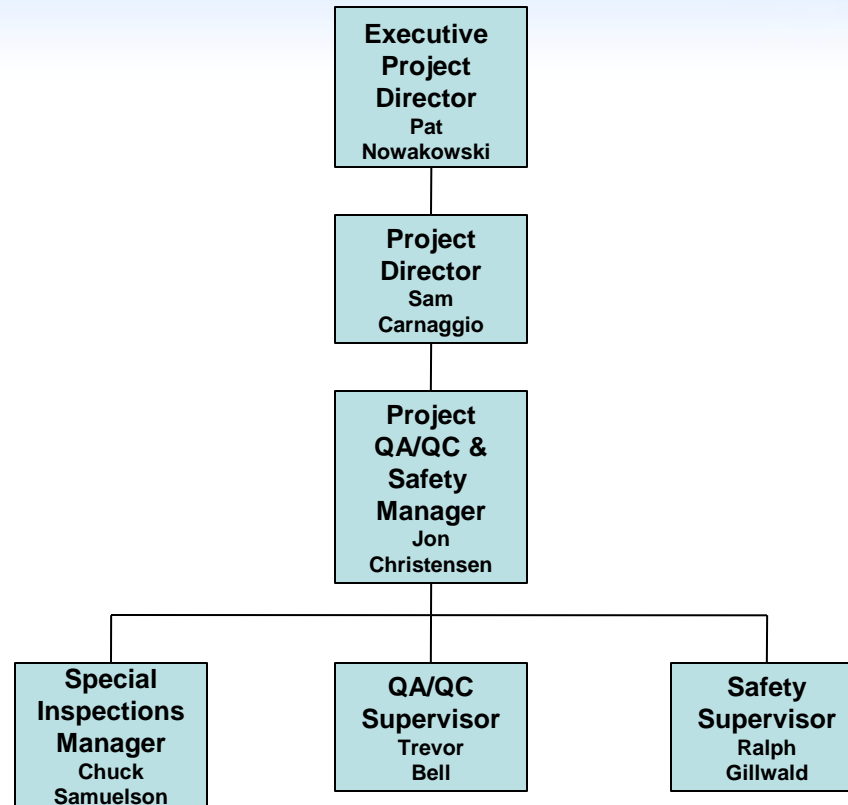
DULLES TRANSIT PARTNERS

Project Quality Management System Manual

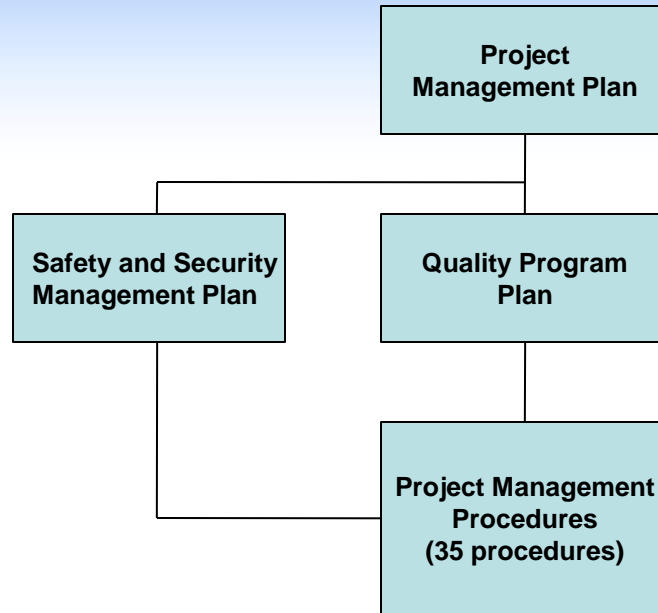
Meets Airports Authority's Quality Program Plan Requirements and ANSI/ISO/ASQ Q9001-2000



AIRPORTS AUTHORITY QUALITY ORGANIZATION



AIRPORTS AUTHORITY QUALITY DOCUMENTS



AIRPORTS AUTHORITY QUALITY ACTIVITIES

QA/QC

- **Conduct QA audits and surveillances**
- **Review Contractor documents**
 - **Procedures and instructions**
 - **Specifications**
 - **Inspection and test plans**
 - **Deficiency reports**

Special Inspections (Required by the Virginia Uniform Statewide Building Code)

- **Using and independent inspection agency (CTI Consultants Inc.)**
 - **Inspect and test steel construction**
 - **Inspect and test soils**
 - **Inspect and test concrete**
 - **Inspect and test masonry construction and fireproofing**

Safety

- **Monitor the Contractor's Construction Safety Program**
- **Manage the Project's System Safety and Security Certification Program**

DULLES TRANSIT PARTNERS QUALITY PROGRAM

DINESH C. KANSAL, P.E. DTP Quality Assurance Manager

CAREER SUMMARY:

40 Years experience in Design, Construction, Management, Quality Control and Quality Assurance

35+ years with Bechtel organization

FIELDS OF EXPERIENCE:

Oil, gas processing and petrochemicals plants; pipelines; refineries; fossil & nuclear power plants; mining; industrial manufacturing; infrastructure transportation and marine projects in USA and several international locations including France, India, Kuwait, New Zealand, Romania, United Arab Emirates and United Kingdom.

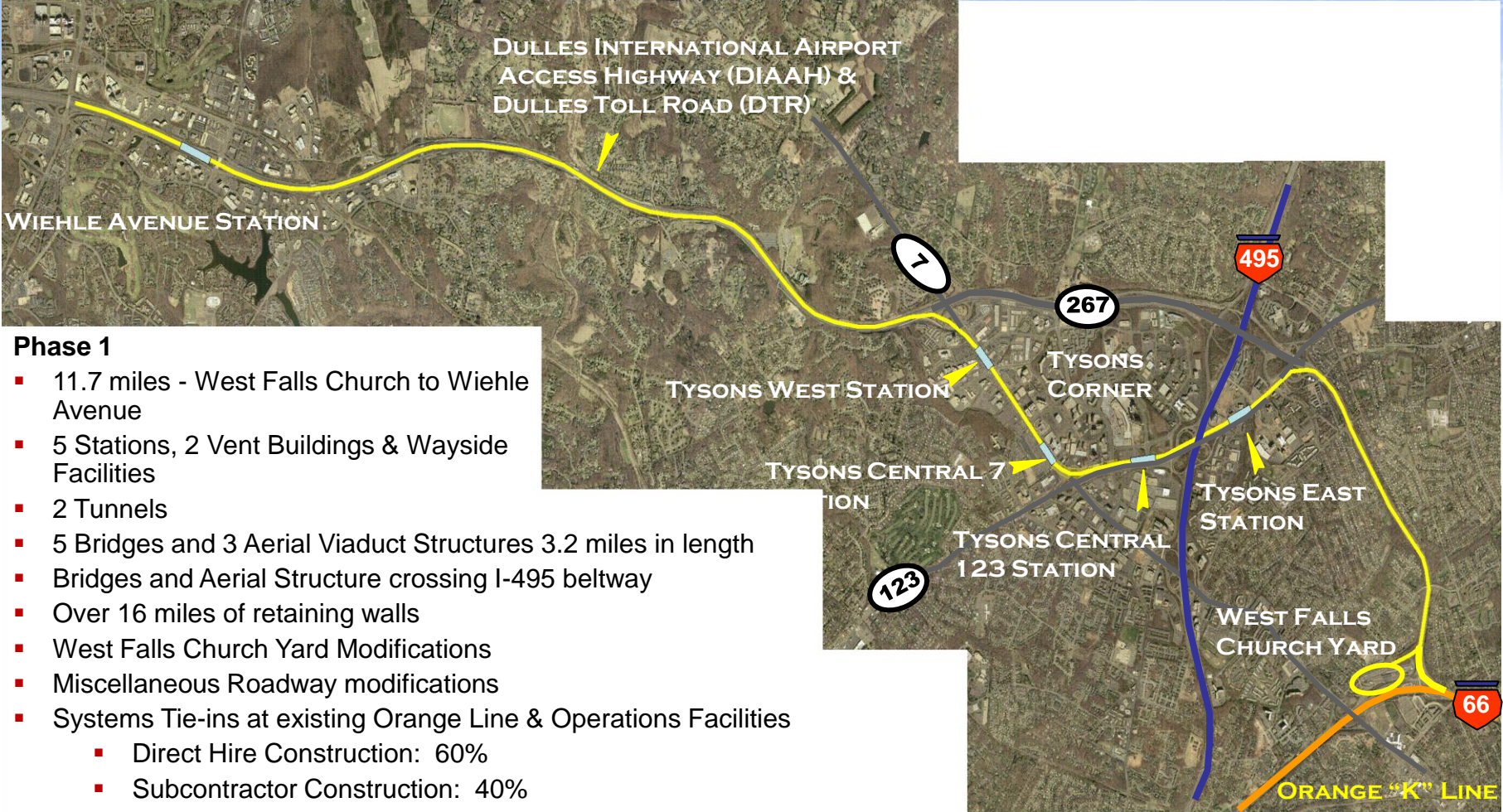
REGISTRATION/CERTIFICATION:

Professional Engineer – Pennsylvania, USA

Professional Quality Engineer – California, USA

Scope of Work - Phase 1

From West Falls Church to Wiehle Avenue

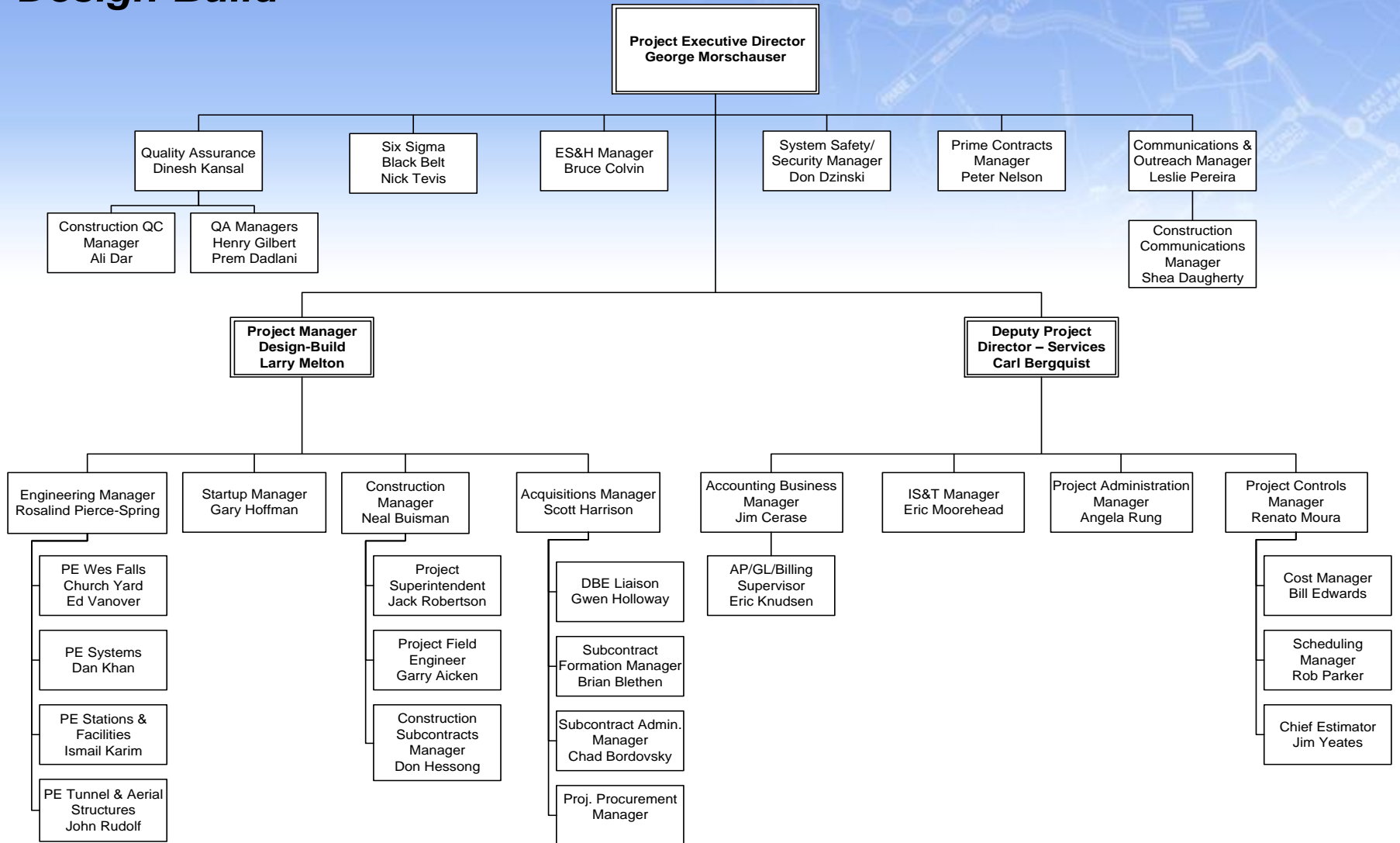


Phase 1

- 11.7 miles - West Falls Church to Wiehle Avenue
- 5 Stations, 2 Vent Buildings & Wayside Facilities
- 2 Tunnels
- 5 Bridges and 3 Aerial Viaduct Structures 3.2 miles in length
- Bridges and Aerial Structure crossing I-495 beltway
- Over 16 miles of retaining walls
- West Falls Church Yard Modifications
- Miscellaneous Roadway modifications
- Systems Tie-ins at existing Orange Line & Operations Facilities
 - Direct Hire Construction: 60%
 - Subcontractor Construction: 40%

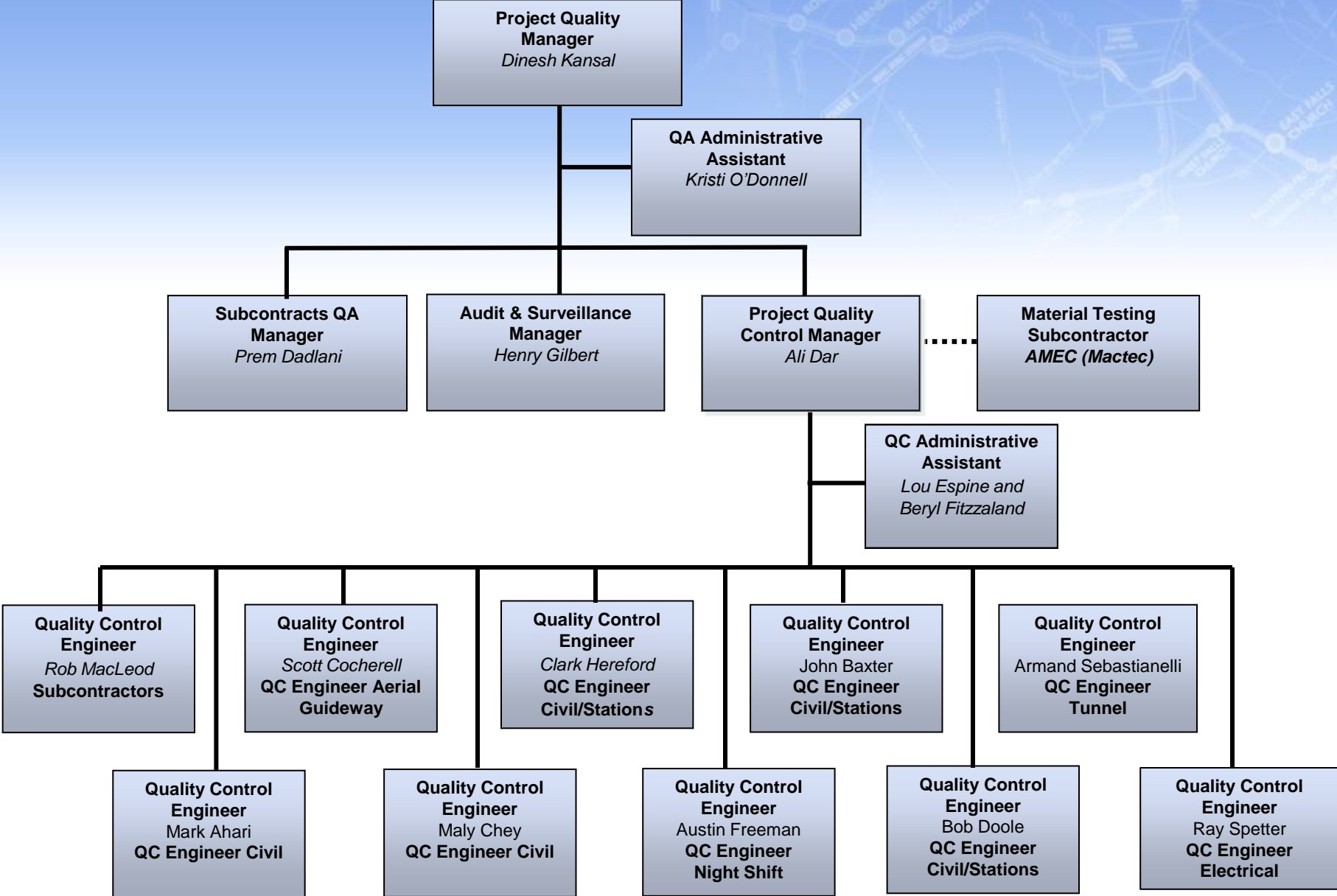
Dulles Transit Partners, LLC

Design-Build

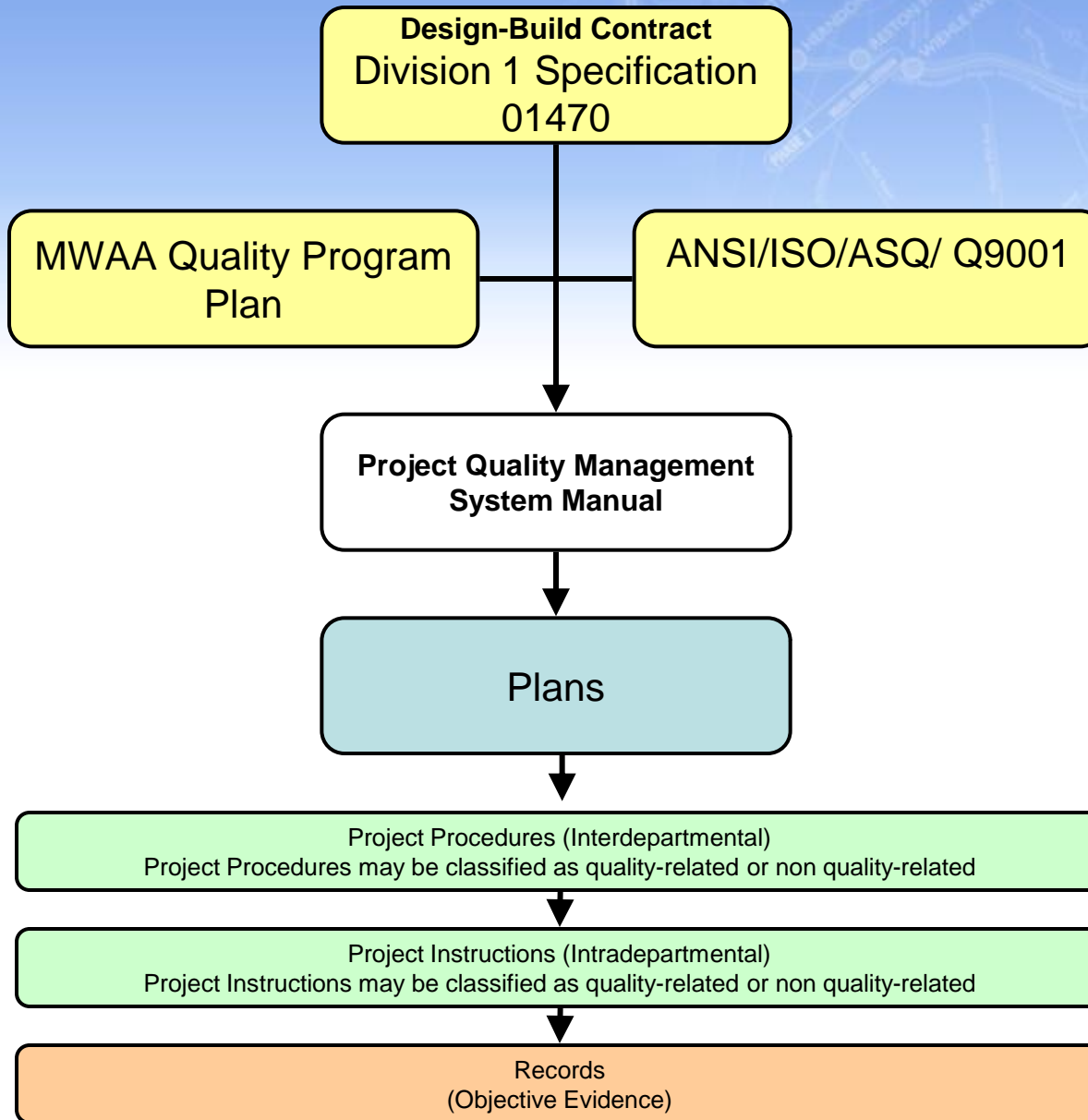


Updated August 2011

DTP QUALITY DEPARTMENT ORGANIZATION



Quality Document Hierarchy



Major Suppliers and Scope of Work

- | | |
|----------------------------------|--|
| 1. Bayshore Concrete Products | Structural Precast Concrete for Stations |
| 2. Coastal Precast | Precast, Prestressed Concrete Bridge Products
At-Grade Acoustical Barriers
Sign Post Foundations |
| 3. Concrete Safety Systems | Aerial Acoustical Barriers |
| 4. Contech Construction Products | Fabrication of Steel Truss Superstructures |
| 5. Crystal Steel | Station Mezzanine Structural Steel
Acoustical Panel Support Steel |
| 6. Delta Railroad/KSA/Rocla | Standard & Switch Concrete Ties |
| 7. DS Brown | Guideway Expansion Joints |
| 8. Formit Steel | Structural Steel |
| 9. High Concrete Group | Plant Architectural Precast Concrete |
| 10. High Steel | Structural Steel Plate Girders |



Major Suppliers and Scope of Work

11. Northeast Prestressed Products	AASHTO Box Girders
12. Okonite	High & Medium Voltage Electrical Cable
13. R J Watson	Bridge Bearings
14. Rizzani	Precast Aerial Segments
15. RSCC Rockbestos	Traction Power Cable
16. RTR Technologies	Heat Tape
17. SAS Electric / Smith-Midland	Electrical Manholes and Inlets
18. VSL Structural	Post Tensioning Material



On-Site Subcontractors and Scope of Work

- | | |
|-------------------------|--|
| 1. A & A Industrial | Tunnel Ventilation |
| 2. Alstom | Automatic Train Control |
| 3. Brayman Construction | Concrete Drilled Piers
Secant Pile Wall |
| 4. Crystal Metalworks | Miscellaneous & Ornamental Metalworks |
| 5. Delta Railroad | Track Work Installation |
| 6. F.H. Paschen | Station Finishes (Masonry, Ceiling Panels,
Drywall, etc.) |
| 7. Facchina | Early MOT/Roadwork
Permanent Roadwork/Site Work |
| 8. Flippo Construction | Wayside Facilities / Site Development |
| 9. Gordon | Waterproofing |
| 10. High Concrete Group | Architectural Precast Fabrication / Site Erection |
| 11. High Steel | Structural Steel Installation |
| 12. Kone | Elevators & Escalators |



On-Site Subcontractors and Scope of Work

14. Lane Construction	Early MEP - All Stations WFCY Early Site Work
15. Long Fence	Permanent Fences and Gates-Installation
16. M.C. Dean	MEP (Mechanical, Electrical & Plumbing)
17. Midwest Fireproofing	Fireproofing
18. Powell	Traction Power Equipment & Appurtenances
19. Prospect Waterproofing	Cut & Cover Tunnel Bentonite Waterproofing
20. Snyder	Jacking & Boring
21. Truland Walker Seal	Communications & Security Systems
22. Turner Construction	Shell Enclosure Trades
23. URTS	Cathodic Protection
24. Wisko America	NATM Tunnel Waterproofing



DTP Project Supplier Quality Surveillance

	Number of Assignments
DTP – Suppliers	18
DTP – Subcontracts and Sub-Tier Suppliers	25
Total	43

