

037

DECEMBER 1991

METRO RED LINE PROJECT

SEGMENT - 1

CONTRACT UNIT DESCRIPTIONS

REVISION 1



**Rail
Construction
Corporation**



a Subsidiary of
the Los Angeles County
Transportation Commission



DECEMBER 1991

METRO RED LINE PROJECT


SEGMENT - 1

CONTRACT UNIT DESCRIPTIONS

REVISION 1



**Rail
Construction
Corporation**

 a Subsidiary of
the Los Angeles County
Transportation Commission



RAIL CONSTRUCTION CORPORATION
818 WEST SEVENTH STREET
LOS ANGELES, CALIFORNIA 90017

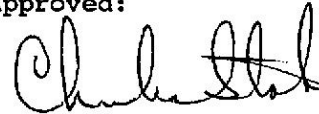
METRO RED LINE PROJECT
SEGMENT 1
CONTRACT UNIT DESCRIPTIONS

This document contains the listing of Metro Red Line Project Segment 1 (Seg-1) design, construction, procurement, and professional services contracts. It includes descriptions of the scope of the contracts, and geographic references where applicable.

The Metro Red Line Project Segment 1 alignment extends from the Yards and Shops south of Union Station north to Union Station, southwest along Hill Street to Seventh Street, northwest on Seventh Street to a western terminus at Westlake/MacArthur Park.

Information concerning this document can be secured by contacting Jeffrey C. Christiansen, Vice-President of Program Management and Control for the Rail Construction Corporation at (213) 236-9587.

Approved:



Charles Stark
Project Manager, Segment 1
Rail Construction Corporation
A Subsidiary of the Los Angeles
County Transportation Commission

12/12/91 -
Date

SEGMENT 1 CONTENTS

	<u>Page</u>
DEFINITIONS FOR FACILITIES CONSTRUCTION	iv
FACILITIES CONTRACT UNIT DESCRIPTIONS	1
SYSTEMWIDE CONTRACT UNIT DESCRIPTIONS	15
PROFESSIONAL SERVICES CONTRACT UNIT DESCRIPTIONS	35

FIGURE

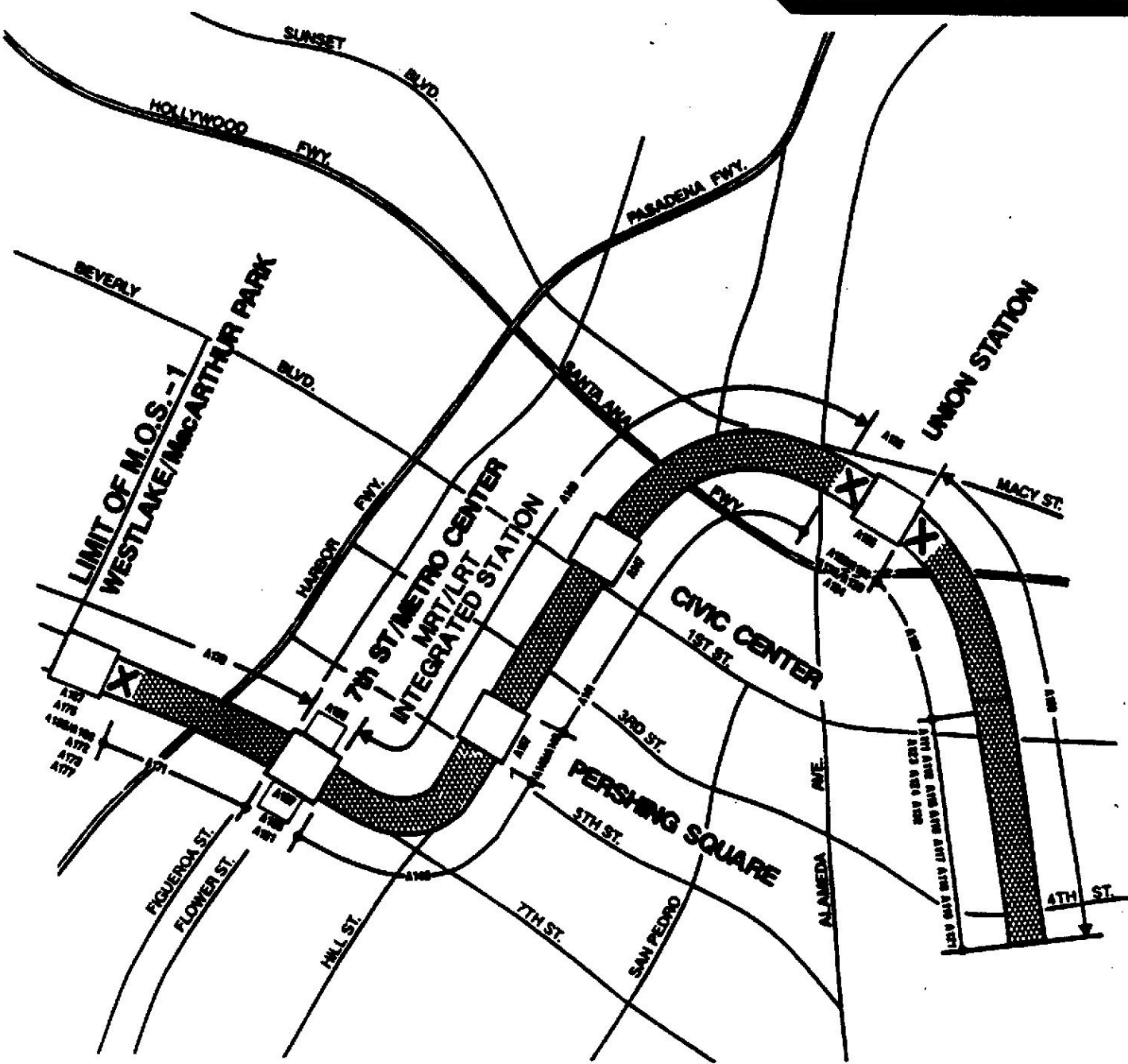
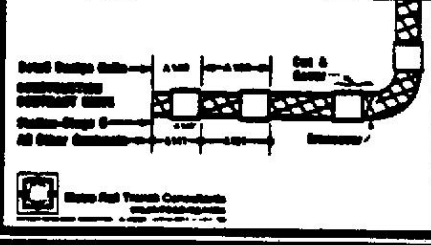
	<u>Page</u>
ROUTE MAP	iii

M Rail Construction Corporation, a subsidiary of the Los Angeles County Transportation Commission
METRO RED LINE PROJECT

001062DC



PROJECT UNIT INDEX



111

12/07/90

DEFINITIONS OF CONTRACT TYPES

FACILITIES

CONSTRUCTION:

Station shell (Stage I) and/or line construction generally includes all civil and structural construction plus embedded items for installations of architectural finishes, embedded mechanical items, and electrical conduits, unless specifically included elsewhere. Other items of work include, but are not limited to, the following:

Demolition, site clearing, underpinning, compaction grouting, dewatering, excavation support systems, decking, instrumentation, excavation, access shafts, crosspassages, tunnel lining, backfill, pavement, sidewalks, curbs, pavement markings, traffic stripes, signs, traffic signals, maintenance of traffic, fencing, maintenance of utilities, utility relocation, storm drainage, sanitary lines, embedded electric and telephone lines, lighting, installation of HDPE membrane, structural concrete, structural steel, reinforcing steel, waterproofing, emergency access exterior doors, ventilation shaft gratings at street level, interior walls, sleeves through walls for conduit work, and magnetometer surveys.

Station finish (Stage II) construction includes all architectural work, site work, landscaping, and mechanical and electrical work, unless specifically included elsewhere. Other items of work include, but are not limited to, the following:

Irrigation systems, tree wells, landscape benches, topsoil, seedings, trees, shrubs, exterior slab on grade concrete, granite, unit masonry, stainless steel and aluminum assemblies, metal fabrication, steel stairs, ladders, railing, interior gratings and floor plates, custom sheet metal, carpentry, sprayed-on fireproofing, fillers, gaskets, sealants, doors and frames, overhead grilles, finish hardware, glazing, furring and lathing, floor and wall tiles, acoustical panels, coatings, painting, identifying devices, telephone enclosures, toilet accessories, trash and waste receptacles, plumbing, and mechanical and electrical work, including installation of some equipment such as ventilation fans, elevators and escalators, provided by systemwide procurements. Also included are Safety, Fire/Life Safety and Security items involving sprinklers, standpipes, undercar deluge systems, Halon and other fire suppression systems, fire detection and alarm systems, emergency management and communications systems; ventilation, seismic and gas detection systems; CCTV, intrusion alarms and other security systems; handicapped access systems; warning and safety graphics and lighting systems and electrical safety and trip systems.

AGENCY AGREEMENT:

Services related to the rearrangement of city, county, or state agency facilities so that Metro Red Line construction may be accomplished. Work is to be performed by agency personnel under a master agreement with the Rail Construction Corporation.

DEMOLITION:

Demolition and removal of existing structures and material from the Metro Red Line construction sites.

UTILITY AGREEMENT:

Services related to the rearrangement of privately-owned utility facilities or equipment so that Metro Red Line construction may be accomplished. Work is to be performed by agency personnel under a master agreement with the Rail Construction Corporation.

SYSTEMS/SYSTEMWIDE CONTRACTS

Systems/Systemwide contracts consist of contracts for procurement and/or installation of equipment. These contracts are of two primary types:

PROCUREMENT (Supply Only):

Procurement of equipment that does not require installation, such as passenger vehicles and auxiliary vehicles, or procurement of equipment for installation by another contractor, such as contact rail, protective coverboard, track fasteners, traction power equipment, and ventilation fans.

PROCUREMENT AND INSTALLATION:

Procurement and installation of equipment under a single contract. These contracts include trackwork, automatic train control, communications (including fire protection and alarm systems, seismic and gas detection systems, CCTV, radio, public address and SCADA), traction power installation, escalator and elevators and fare collection system.

PURCHASE ORDER:

Direct procurement under a Purchase Order following evaluation of proposals from a minimum of three qualified suppliers based upon set specifications.

SPECIALTY:

Provide specialty services such as hazardous material handling and disposal at various construction sites as required based on previously established unit prices.

PROFESSIONAL SERVICES

Service related to the preparation of design packages for the various facilities construction, procurement and installation contracts; and construction management of those contracts.

SEGMENT-1
FACILITIES CONTRACT UNIT DESCRIPTIONS

UNION STATION TO WESTLAKE/MACARTHUR PARK

Detail Design Unit	Design Scope	Construction Contract Unit	Approx. Quantities	Contract Type	Contract Scope
A100	Detailed Design of the following packages: Main Shop Building	A112	186,000 Sq Ft of Building Floor Area	Construction	Construct the Main Shop Building, Yard Control Tower, and the Segment 1 Rail Control Center. Construction includes architectural, mechanical, electrical, and trackwork within the building area, and associated utilities.
	Yard Storage Area	A115			For design and construction scope, see Contract A610/115.
	Yard Site: Security Fencing	A116	17,000 Ft	Procurement and Installation	Install security fencing and gates around the Yard complex.
	Yard Site: Lighting	A117	100 Poles	Procurement and Installation	Furnish and install lighting at the Yard to conform to System Design Criteria and Standards.
	Yard Site: Landscaping	A118	2.5 Acres	Installation	Install sprinkler system and landscaping around Main Shop, Maintenance-of-Way Building, and other designated areas. Plantings to conform to System Design Criteria and Standards.
	Track Relocation, First Street and Hobart Yard	A119	40,000 Ft	Railroad Force Account	Demolition of existing trackwork, installation of new alignment trackwork, and realignment of existing Santa Fe and Amtrak trackwork.
	Maintenance-of-Way Shop Building	A121	50,800 Sq Ft	Construction	Alterations and improvements to existing Santa Fe Freight Building for Maintenance-of-Way Shop function, including associated utilities.

Detail Design Unit	Design Scope	Construction Contract Unit	Approx. Quantities	Contract Type	Contract Scope
A100 Cont.	Demolition of structure on parcel A1-009, 330 Santa Fe Avenue	A123	50,000 Sq Ft (Building), 27,800 Sq Ft (Canopy)	Demolition	Demolish building and canopy; clear the site including rough grading the area.
	Yard Leads and Transfer Zone	A130	4.0 Acres 2,700 Ft	Construction	Main line, Yard Leads and Transfer Zone, Yard portion north of First St., and double crossover structure east of Union Station. Cut-and-cover construction of Yard Leads and Transfer Zone, mined tunnel, demolition, grading, and paving, dewatering, retaining walls, box structure, traction power substation, and finish work for crossover east of Union Station. Underpinning of existing busway piers, installation, temporary support during construction, rerouting of utilities, and restoration. Design and Construction of passenger vehicle car wash.
	Yard/Shops and Yard Leads: Telephone Relocation	MA007	150-Ft Ductbank & Cables; Adjust Aerial and Underground Services	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Yard/Shops and Yard Leads: Gas Relocation	MA093	400-Ft 16-In. (HP), 500 Ft 20 In. (HP)	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Yard/Shops and Yard Leads: Western Union Replacement	MA-008	Yard Site	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A100 Cont.	Yard/Shops and Yard Leads: Water Relocation	MA-A09	50-Ft 4-In. Steel Pipe, 750-Ft 8-In. Steel Pipe, 200-Ft 12-In. Steel Pipe, 6 Service Connections, 10 Hydrants & Laterals	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Yard/Shops and Yard Leads: Power Relocation	MA-009	Rearrange 10 Aerial Cables	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Yard/Shops and Yard Leads: Chevron Relocation	MA-545	200-Ft 8-In. Steel Pipe	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Yard/Shops and Yard Leads: City of L.A.	MA-002	Yard Site	Agency Agreement	Provide construction and inspection for impacted City facilities and other related services required for Segment 1 Project implementation.
	Yard/Shops and Yard Leads: Caltrans	MA-056	Yard Site	Agency Agreement	Provide construction and inspection for impacted Caltrans facilities and other related services required for Segment 1 Project implementation.
	Yard/Shops and Yard Leads: County of L.A.	MA-094	Yard Site	Agency Agreement	Provide construction and inspection for impacted County facilities and other related services required for Segment 1 Project implementation.
A135	Detailed Design of the following packages: Demolition of structure on parcel A1-032, 719 Vignes St.	A134	14,000 Sq Ft	Demolition	Demolish existing buildings and foundation; clear the site, including rough grading the area.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A135 Cont.	Union Station and west double crossover, Stage I	A135	980 Ft	Construction	Stage I construction of Union Station box structure, east entrance, AMTRAK relocated ticketing, baggage, and crew base facilities, ancillary facilities, and the double crossover structure west of station except for the westerly 107 feet, including all civil and structural construction (shell), and dewatering (including a one-train addition to the WTF with the necessary chemicals, materials, and activated carbon), plus embedded items for installation of architectural finishes, embedded mechanical items, and electrical conduits. Construction requires the removal and construction of railroad facilities for passenger train operations.
	Union Station and west double crossover, Stage II plus West Entrance	A136	1,100 Ft	Construction	Union Station and west double crossover and west entrance. Stage II construction includes all architectural, mechanical, and electrical work except those items embedded in Stage I construction. Also included is a portion of finish work in the A130 double crossover structure. Demolish and rebuild passenger tunnel ramps in order to comply with commuter rail workscope for handicap.
	Southern Pacific Transportation Company Communication Cable Rearrangement	A137	5,000 Ft	Utility Agreement	Rearrange communications cable at Union Station.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A135 Cont.	Union Station: Site Work	A138	7.8 Acres	Construction	Provide curbs, gutters, sidewalks, paving, sprinklers and landscaping at Union Station. Plantings to conform to Systems Design Criteria and Standards. Construction of an on-ramp to the El Monte Busway utilizing a structural bridge, provided from the off-street east side bus facility*. Remove and store the water treatment plant when no longer required.
	Union Station: LAUPT Restoration	A139	2.7 Acres	Construction	Restore a portion of the R.E.A. Building, and reconfigure the historic Northwest Service Ramp at Union Station including all civil, structural, architectural, mechanical and electrical, shell and finish work, curbs, gutters, sidewalks, paving, sprinklers, and landscaping on the west side of the station. Plantings to conform to System Design Criteria and Standards.
	Union Station: Telephone Relocation	MA-007	Station Site	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Union Station: Power Relocation	MA-009	Station Site	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Union Station: Water Relocation	MA-A09	2 Service Connections	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Union Station: Western Union Facilities Replacement	MA-008	Station Site	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Union Station: City of L.A. Facilities	MA-002	Station Site	Agency Agreement	Provide construction and inspection for impacted City facilities and other related services required for Segment 1 Project implementation.

*Funding source to be determined.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A135 Cont.	Union Station: Caltrans Facilities	MA-056	Station Site	Agency Agreement	Provide construction and inspection for impacted State facilities and other related services required for Segment 1 Project implementation.
A140	Detailed Design of the following packages: Line Section, Union Station to Pershing Square and Civic Center Station, Stage I	A141	5,900-Ft Line, 570-Ft Station	Construction	Construct that portion of the line and crossover structure beginning in the westerly 107 feet of the crossover, which is west of Union Station, proceeding beneath Macy St. and Sunset Blvd., deviating at Spring St., crossing under Broadway and continuing under Hill St. just north of the Santa Ana Freeway. Line continues through Civic Center Station to the Pershing Square Station. Work also includes mechanical and electrical finish work in tunnel. Stage I construction of Civic Center Station with a traction power substation; including all civil and structural construction (shell), the relocation of all sewer and storm water lines, and the required architectural and mechanical items and electrical conduits. Construct temporary facilities (baggage handling ramp, maintenance shop and upper and lower level parking lots) for railroad interim operations.
	Chemical Procurement for the Water Treatment Facility	A143	11,925,000 lbs, sulfuric acid (H ₂ SO ₄) 11,448,000 lbs, NaOH (caustic soda); 288,000 lbs, activated carbon	Purchase Order	Furnish and deliver chemicals, materials, and activated carbon under multiple purchase orders for the treatment of the contaminated groundwater resulting from dewatering operations for the A141 and other contracts.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A140 Cont.	Operations and Maintenance of the Water Treatment Facility	A144	WTP	Specialty	Procure, install, operate, and maintain the Water Treatment Plant Facility in compliance with the requirements of the NPDES Permit No. CA-0059714 including Monitoring and Reporting Program No. 6763 during dewatering operations for Contracts A141, A135, and A130.
	Civic Center: Power Relocation	MA-009	300-Ft Ductbank and Cable Network	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Civic Center: Telephone Relocation	MA-007	2,200-Ft Ductbank and Cables	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Civic Center: Gas Relocation	MA-093	400-Ft 4-In. Steel Pipe	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Civic Center: Western Union Replacement	MA-008	Station Site	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Civic Center: Water Relocation	MA-A09	300-Ft 12-In. Steel Pipe, 800-Ft 8-In. Steel Pipe, 5 Hydrants & Laterals, 3 Customer Services	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Civic Center: Cable TV Replacement	MA-533	Station Site	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Civic Center: City of L.A.	MA-002	Station Site	Agency Agreement	Provide construction and inspection for impacted City facilities and other related services required for Segment 1 Project implementation.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A140 Cont.	Hill Street One-Way Project: City of L.A.	MA-002	15,000 Ft	Agency Agreement	Rearrange traffic control devices to convert Hill Street to one-way operation, and modify Broadway to accommodate construction of Civic Center and 5th/Hill Stations.
	Civic Center: County of L.A.	MA-094	Station Site	Agency Agreement	Provide construction and inspection for impacted County facilities and other related services required for Segment 1 Project implementation.
	Civic Center: Caltrans	MA-056	Station Site	Agency Agreement	Provide construction and inspection for impacted State facilities and other related services required for Segment 1 Project implementation.
A145	Pershing Square Station: Utility Relocation and Vault Modifications, Pershing Square Station, Stage I	A145/A145A	850 Ft	Construction	Stage I construction of Pershing Square Station with an auxiliary power substation, including all civil and structural construction(shell). This contract also includes the embedment of all required architectural and mechanical items, as well as electrical raceways. Construct and/or install conduit, manholes, pipes, and other related facilities for gas, water, power, telephone, and cable TV in accordance with utility company plans and specifications. Coordinate connection; remove and modify existing vaults and basements, and relocate building utility services.
	Pershing Square: Power Relocation	MA-009	Cable Networks in 2,000-Ft Ductbanks by District, 2 Transformer Substations, 18 Customer Services	Utility Agreement	Provide Construction and inspection services required to accommodate Seg-1 Project.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A145 Cont.	Pershing Square: Telephone Relocation	MA-007	650-Ft Ductbank and Cables, 6 Customer Services	Utility Agreement	Provide construction and inspection services required to accommodate Seg-1 Project.
	Pershing Square: Gas Relocation	MA-093	Station Site	Utility Agreement	Provide construction and inspection services required to accommodate Seg-1 Project.
	Pershing Square: Water Relocation	MA-A09	6 Main Connections, 6 Hydrants & Laterals, 11 Customer Services	Utility Agreement	Provide construction and inspection services required to accommodate Seg-1 Project.
	Pershing Square: Cable TV Replacement	MA-533	Station Site	Utility Agreement	Provide construction and inspection services required to accommodate Seg-1 Project.
	Pershing Square: Western Union Replacement	MA-008	Station Site	Utility Agreement	Provide construction and inspection services required to accommodate Seg-1 Project.
	Pershing Square: City of L.A.	MA-002	Station Site	Agency Agreement	Provide construction and inspection for impacted City facilities and other related services required for Segment 1 Project implementation.
					Rearrange traffic control devices to convert Hill Street to one-way operation, and modify Broadway to accommodate construction of Civic Center and Pershing Square Stations.
	Line Section, Pershing Square to 7th St/Metro Center	A146	2,100 Ft	Construction	Construct that portion of the line, including protection of structures adjacent to and above the line, beginning just south of Pershing Square Station, turning west under 7th St. to 7th St/Metro Center Station. Work also includes mechanical and electrical work in tunnels.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A145 Cont.	Civic Center Station, Stage II	A147	570 Ft	Construction	Construct Civic Center Station, Stage II, including all architectural, landscaping, mechanical, electrical, and restoration work except for those items embedded in Stage I construction.
	Pershing Square, (5th/Hill) Station Stage II	A157	850 Ft	Construction	Construct Pershing Square (5th/Hill) Station, Stage II, including all architectural, landscaping, mechanical, electrical, and restoration work except for those items embedded in Stage I construction.
A165	Detailed Design of the following packages: 7th St/Metro Center Station: Utility Rearrangement	A161	MRT 700 Ft LRT 1,000 Ft	Construction	Construct and/or install pipes, conduits, vaults and manholes, building service connections, and appurtenant utility facilities for the rearrangement of gas, water, power, telephone, telegraph, cable TV, and traffic signal facilities to accommodate construction of the integrated LRT*/MRT 7th St/Metro Center Station.

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Approx. Quantities	Contract Type	Contract Scope
A165 Cont.	7th/Metro Center Station, Stage I	A165	MRT 670 Ft LRT 1,000 Ft	Construction	Construct the integrated LRT*/MRT 7th St/Metro Center Station, Stage I, including all civil and structural construction (shell), the relocation of all sewer and storm water lines, and the support in place of all other utilities. This contract also includes the embedment of all required architectural and mechanical items, as well as electrical conduits. Contract does not include the west entrance and traction power substation shell, and portions of the east entrance, provided by others.
	7th St/Metro Center: Power Relocation	MA-009	Cable Network in 2,500 Ft Cable of Ductbank by District, 15 Customer Services	Utilities	Provide construction and inspection services required to accommodate the Segment 1 Project.
	7th St/Metro Center: Telephone Relocation	MA-007	Station Site	Utilities	Provide construction and inspection services required to accommodate the Segment 1 Project.
	7th St/Metro Center: Gas Relocation	MA-093	Station Site	Utilities	Provide construction and inspection services required to accommodate the Segment 1 Project.
	7th St/Metro Center: Water Relocation	MA-A09	10 Main Connections; 10 Hydrants & Laterals; 25 Customer Services	Utilities	Provide construction and inspection services required to accommodate the Segment 1 Project.
	7th St/Metro Center: Cable TV Relocation	MA-533	Cable in 800-Ft Ductbank by District	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	7th St/Metro Center: Western Union Replacement	MA-008	Station Site	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A165 Cont.	7th St/Metro Center: City of L.A.	MA-002	Station Site	Agency Agreement	Provide construction and inspection for impacted City facilities and other related services required for Segment 1 Project implementation.
	7th St/Metro Center: Stage II	A167	MRT 670 Ft LRT 1,000 Ft	Construction	Construct the integrated LRT*/MRT 7th St/Metro Center Station, Stage II, all architectural, landscaping, mechanical, electrical, and restoration work, except for those items embedded in Stage I construction. Contract includes finish for the west entrance, traction power substation, and east entrance.
A170	Detailed Design of the following packages: Line Section, 7th St/ Metro Center to Westlake/MacArthur Park	A171	5,000 Ft	Construction	Excavate the easterly 100-foot portion of the double crossover structure east of the Westlake/MacArthur Park Station, and construct the tunnel line segment continuing in a southeasterly direction to the 7th St/Metro Center Station. Work also includes mechanical and electrical work in tunnels.
	Demolition of structure on parcel A1-208, W. 7th St.	A172	14,000 Sq Ft	Demolition	Demolish existing building; clear the site, including rough grading the area.
	Demolition of structures on parcels A1-221, A1-222, A1-224 and A1-225; 676-682, 670-674, 660-668, 684-686, Alvarado St.	A173	42,000 Sq Ft	Demolition	Demolish existing buildings; clear the site, including rough grading the area.

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A170 Cont.	Westlake/MacArthur Park Station, Stage I	A175	900 Ft	Construction	Construct Westlake/ Macarthur Park Station, Stage I, (including double crossover) and a traction power substation, including all civil and structural construction (shell), restoration of streets and curbs on Westlake, Alvarado, and Bonnie Brae Streets, the relocation of all sewer and storm water lines, and the support in place of all other utilities. This contract also includes the embedment of all required architectural and mechanical items, as well as electrical conduits. Excavation of the easterly 100 feet of the double crossover is not included.
	Westlake/MacArthur Park: Power Relocation	MA-009	400-Ft Overhead Cable	Utilities	Provide construction and inspection services required to accommodate Segment 1 Project.
	Westlake/MacArthur Park: Telephone Relocation	MA-007	400-Ft Ductbank	Utilities	Provide construction and inspection services required to accommodate Segment 1 Project.
	Westlake/MacArthur Park: Gas Relocation	MA-093	100 Ft, 3-In. Steel Pipe, 100-Ft, 4 In. Steel Pipe	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Westlake/MacArthur Park: Water Relocation	MA-A09	800-Ft, 8-In. Steel Pipe; 2 Service Connections; 3 Hydrant Connections	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Westlake/MacArthur Park: City of L.A.	MA-002	Station Site	Agency Agreement	Provide construction and inspection for impacted City facilities and other related services required for Segment 1 Project implementation.
	Westlake/MacArthur Park: Caltrans	MA-056	Station Site	Agency Agreement	Provide construction and inspection for impacted State facilities and other related services required for Segment 1 Project implementation.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A170 Cont.	Westlake/MacArthur Park: Cable TV Rearrangement	MA-533	15,000-Ft TV Cable	Utility Agreement	Provide construction and inspection services required to accommodate Segment 1 Project.
	Westlake/MacArthur Park: Station and east double crossover, Stage II	A187	1,000 Ft	Construction	Construct Westlake/MacArthur Park Station, Stage II, with a traction power substation and double crossover east of station, including all architectural, mechanical, and electrical work except for those items embedded in Stage I construction.
	Westlake/MacArthur Park: Restoration and Landscaping	A185	2,300 Sq Yd	Site Work	Work includes kiss-and-ride facility, entry plaza, curbs, gutters, walkways, sprinklers and landscaping at station site. Planting to conform to System Design Criteria and Standards.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
<u>SYSTEMWIDE CONTRACT UNIT DESCRIPTIONS</u>					
N/A	Systemwide Services: City of L.A.	MA-002	Systemwide	Agency Agreement	Provide plan review, inspection, construction, and other services for Segment-1 contracts.
N/A	Systemwide Services: Central and West Basin Water Replenishment District	MA-005	Systemwide	Agency Agreement	Purchase treated water to replace river water lost because of unacceptable quality groundwater discharged from Metro Rail construction sites.
A610/A115	Trackwork Installation/ Yard Storage Area Design: Detailed design and Bid Document preparation for procurement and installation of trackwork, including running rail timber ties, special welding, manual yard switch machines, and Yard trackwork work for Segment 1 south of First Street.	A610/A115	29,000 LF Yard Track, 38,000 LF Main line 35 Acres Yard Storage	Construction, Procurement and Installation	Procure, furnish, and install trackwork, including running rail, special trackwork, manual yard switch machines timber ties, and ballast. Also included: weld rail, install District-furnished direct-fixation rail fasteners, contact rail insulators and running rail, coverboards, contact rail, and contact rail anchors. Construct the Segment 1 at-grade Train Storage yard. Construction includes demolition of existing facilities, rough grading and drainage work of full yard, installation and relocation of utilities, rail connection to Santa Fe Railroad, and installation of conduits and duct banks. Includes service roads within the yard and parking lots.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A612	Contact Rail: Design preparation of Bid Documents for procurement of contact rail and appurtenances for Segment 1	A612	64,000 LF	Procurement	Manufacture, test, and deliver contact rail, support insulators, and associated hardware, including side approach sections, end approach sections, anchor assemblies, expansion joint assemblies, and splice joint assemblies. This contract excludes handling and storage after delivery. Installation is covered under Contract A610. Procurement of the protective coverboard is covered under Contract A615.
A615	Protective Coverboard: Design and preparation of Bid Documents for rail protective coverboard and appurtenances for Segment 1.	A615	64,000 LF	Procurement	Detail design, qualification test manufacture, test, and deliver contact rail protective coverboard, procurement of contact support brackets, and associated hardware, including fastener assemblies and expansion joint hardware. Work does not include handling and storage after delivery. Installation is covered under Contract A610. Procurement of contact rail system is covered under A612.
A616	Design and preparation of Bid Documents for fixation rail fasteners for Metro Rail Project Segment 1, and for LACTC requirements*	A616	29,000 MRT 50,500 LRT*	Procurement	Detail design, qualification test, manufacture, production test, and procurement of direct deliver direct fixation rail fasteners for Segment 1, as well as for LRT requirements.*

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A620	Automatic Train Control: Establish design criteria, specifications, and test parameters; prepare Bid Documents for the designing, furnishing, and installing of an System for Segment 1.	A620	Five Train Control and Communications rooms at Seg-1 stations. Two bungalows and Yard tower equipment in Yard. 16 ATC Vehicle Equipment package.	Procurement and Installation	<p>Design, furnish, and install an Automatic Train Control (ATC) System for Seg-1. The ATC System is composed of main line and vehicular elements that are procured in quantities proportional to the length of the rail system. The work includes start-up of the ATC system, including testing, training, Automatic Train Control and making ready for full passenger-carrying operation. Installation includes all train control cables, track-side equipment, and room equipment along the mainline and in the Yard.</p> <p>It also includes installation of the communication cables (except the lossy lines) and gas monitoring tubing in the tunnels, and laying of the 34.5 kV tunnel feeder cable in the circular tunnel sections. The Contract also includes procurement and installation of the conduit for the 34.5 kV tunnel feeder cable. All radio antennae and Yard communications cables installation and local wiring to Communications apparatus located in tunnels and crosspassages are done under A640. Completion of the 34.5 kV tunnel feeder installation is done under A631. A620 also includes installation of wayside ATO equipment furnished under A650. The main line elements include equipment along the trackway (including track switch machines) and in equipment rooms at passenger stations. Vehicle elements will be installed under</p>

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A620 Cont.					A650. The Yard elements include the Yard Tower controls; signals, track circuits, and switches for the Yard tracks; and bungalows to house the Yard train control hardware. Since the Yard facility design provides for additional storage tracks to be provided when the rail system is extended beyond Seg-1, the Yard train control bungalows will be furnished with sufficient additional space and power capability to accommodate additional train control hardware for the future storage tracks. The Yard Tower control panel will also accommodate controls for added storage tracks. Not included are furnishing and installing ATS equipment for the Rail Control Center, furnishing carborne ATO equipment to be installed by the vehicle contractor under Contract A650, furnishing insulated rail joints to be installed under Contract A610, or the data communications equipment to transmit information between the Rail Control Center and train control and communications rooms.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A630	Traction Power Equipment: Establish design criteria, specifications, and test parameters; prepare Bid Documents for a design and furnish contract for Traction Power System for Segment 1, including the Yard and Shops.	A630	Full complement of equipment at 7 power substations: 1 at each station, 1 in Yard, 1 in shop.	Procurement	Manufacture, test, deliver, and supervise installation of Seg-1 traction power and auxiliary power electrical equipment, including LRT equipment* at 7th St/ Metro Center substation. The traction power equipment includes high-voltage ac switchgear assemblies, ac-to-dc conversion assemblies, metal-clad dc switchgear assemblies. In Segment 1, the operating requirements defined by SCRTD Design Directives DD-003 and D-004 require only one ac-to-dc conversion assembly; provisions are made to add a second unit in the future. Auxiliary power electrical equipment in each substation includes redundant power transformers and 480 V switchgear. Both of the redundant units must be provided in Segment 1 as part of the dual independent feeds required by the System Design Criteria and Standards for emergency lighting and ventilation. The contract covers Segment 1 and includes a small amount of equipment for interfacing with the LRT at the 7th St/ Metro Center Station.* The contract does not include installation of the procured equipment, the structures in which the equipment is to be installed, or the central supervisory control equipment. Participation and technical assistance is required during installation and testing.

* LRT work funded by Los Angeles County Transportation Commission

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A631	Traction Power Installation: Design and prepare Bid Documents for installing the equipment procured under Contract A630 and furnishing and installing associated substation material and installation associated substation material and equipment for Segment 1.	A631	(See A-630)	Installation	Finish preparation of the electrical substation rooms, construct the Yard outdoor substation slab, fence and preengineered building, install traction power equipment procured under Contract A630, and furnish and install associated miscellaneous substation equipment and material, including LRT equipment for Segment-1 equipment*, at the 7th St/Metro Center substation and the emergency backup generator in the yard. Procure the 34.5 kV tunnel feeder cable and splice after it is installed by the A620 contractor. Install the 34.5 kV tunnel feeder cable in the rectangular tunnel areas and Yard. The installation work includes furnishing labor for installing and field testing all material furnished under this contract and Contract A630, and the handling and storage of all these materials. The associated miscellaneous materials and equipment to be furnished include, but are not limited to, cont. distribution panelboards, annunciator panels, wire and cable to contact rail locations, raceway systems, supports and accessories, negative bus boxes, dc connect switches and substation negative return cables to wayside locations.

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A631 Cont.					The work does not include procurement of the traction power equipment, which is covered in Contract A630; installation of the 34.5 kV tunnel feeder in circular tunnel sections, which is included in Contract A620; procurement and installation of impedance bonds, embedded raceways (except the Yard and Main Shop building structures (except in the Yard); or lighting and mechanical systems within the buildings (except the Yard sub-station area).

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A640	Communications: Establish design criteria, specifications, and test parameters; prepare Bid Documents for a contract to design, furnish, and install a Communications System for Segment 1, including the Yard and Shops, Rail Control Center, vehicles, and portions of LRT equipment* at 7th St/Metro Center.	A640	Five Train Control and Communications rooms at Segment 1 Stations; Rail Control Center and Yard tower communications room in Yard.	Procurement and Installation	Design, furnish, and install the systemwide Communications System and subsystems for passenger stations, trackway, wayside equipment and facilities, Yard and Shops, and Rail Control Center. The major communications subsystems include: radio (including train-to-wayside radio and L.A. City Fire Department 800 MHz radio system), vehicle-borne train identification control unit, fire and emergency management, gas and seismic detection, public address, CCTV, cable transmission, SCADA and central control. All of these subsystems are needed for Segment 1 in accordance with System Design Criteria and Standards. Elements of the Communications System which are sized to accommodate future growth are the central computer equipment (hardware and software) and the cable transmission system (CTS). The CTS will have extra fiber optic cables installed in order to economically facilitate future expansion. The growth capability in the computer equipment is needed to be able to extend the system without a environmental control system and miscellaneous electromechanical facilities. The work includes furnishing and installing emergency trip stations. Also included are SCADA scan points, gas monitoring, and fire and emergency management Station. Installation includes installing, testing, training, and making all communication equipment

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A640 Cont.					equipment for the LRT portion* of the 7th St/Metro Center Station. Installation includes installing, testing, training, and making all communication equipment operational. The cables in the tunnel areas, except the lossy line, will be furnished under this contract but installed under A620. The lossy line is furnished and installed under A640. Participation and technical assistance is required during testing.

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A640 Cont.	Telephone System: Establish design criteria, specifications, and operational requirements; procure as an option under District Contract 4239 to design, furnish, and install a multi-location multinode network for Seg-1, including Rail Control Center, 7th St/Metro Center.	District Contract #4239	6 EPABX and associated equipment and instruments required for Segment 1	Procurement and Installation	Design, furnish, and install a multilocation, multinode digital EPABX telephone network for passenger stations, wayside facilities, Yard and Shops, and Rail Control Center (RCC). Major subsystems include: digital EPABX at each passenger station and RCC; emergency, hotline, maintenance, and administrative telephone services, passenger digital EPABX telephone assistance intercom, and access to paging and public address. All of these subsystems are needed for Seg-1 in accordance with System Design Criteria and Standards. The EPABX at the RCC is sized to economically accommodate future expansion without a significant impact on ongoing operations. Also included are emergency, hotline, maintenance, and administrative telephone services, passenger assistance intercom, and access to paging and public address for the LRT* portion of the 7th St/Metro Center Station. Participation and technical assistance is required during testing.

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A650	Passenger Vehicles: Establish design criteria, specifications, and test parameters; prepare Bid Documents for a Passenger Vehicle	A650	30	Procurement	Design, manufacture, test, and deliver 30 vehicles (15 dependent pairs) along with spare parts, maintenance manuals, special tools, and vehicle testing services. The contract will contract for Segment 1 require the installation of District-furnished train control equipment (i.e., automatic train protection, interfaced train-to-wayside radio, and antennae) and the provision and installation of speed-maintaining and station-stopping control equipment. Also, furnish way-side ATO equipment for installation by ATC contractor under A620. Participation and technical assistance is required during testing.
A655	Transportation Test Center Testing: Establish test parameters; prepare procurement documents; assist with contracts negotiations, monitoring, and evaluation of test results.	A655		Agency Agreement	Unload and move vehicles; furnish powered test track, personnel, test support equipment (including brackets and fixtures for mounting instruments), communications, office space, safety, security, fire protection, and overall supervision and coordination of test facility. Test Center to provide data reduction and report preparation on ride quality and truck characterization tests, and provide interface with client, consultant, and car builders.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A660	Fare Collection: Establish design criteria, specifications, and test Bid Documents for a Fare Collection Equipment contract for Seg-1, with Seg-2 option. Design work is on-hold at the 85% design level, as Segment 1 is to open with a barrier-free fare collection system on a trial basis. (See H840 Contract Unit Scope.) Work will be reactivated in the event of a Board decision to convert to a barrier system.	A660 (On Hold See H840)		Procurement and Installation	<p>Design, furnish, install, test, and place into operation the fare collection gates, ticket vending machines, (with bill-accepting parameters; prepare and change-making capabilities), add fare machines, station control panels, revenue collection cars, and ticket and ticket encoding equipment, including LRT-related equipment* at the 7th St/Metro Center Station. Also, provide the Fare Collection Central Computer in the Rail Control Center.</p> <p>Equipment counts are established in accordance with the System Design Criteria and Standards, using either the Seg-1 year 2000 patronage defined in SCRTD DD-003 or the required minimum levels of redundancy.</p> <p>Software and equipment provisions are included in order to be able to add more equipment in the Segment 1 stations later as patronage increases, to allow changing the machines to accommodate more destinations as the system expands beyond Segment 1, and/or to allow adding more stations with more equipment in the future. The equipment will be changed primarily by modifying its attendant software as supplied under the original contract. The fare collection computer, which monitors the operational status of the fare system, will be sized to</p>

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A660 Cont.					be expandable to cover the extended system, but initially will accommodate only Segment 1. Participation and technical assistance is required during testing.
A670	Auxiliary Vehicles: Complete design, specification, and test parameters for Auxiliary Vehicles				
	Procurements:				
	Car Mover with Crane	A671	1	Procurement	Design, manufacture, and deliver. Includes spare parts, maintenance manuals, special tools, and vehicle testing services.
	Flat Cars	A672	3 ea	Procurement	Furnish and deliver flat cars ready for refurbishment. Includes spare parts, maintenance manuals, and spare tools.
	Flat Cars	A673	3 ea	Refurbish	Refurbish 3 flat cars in accordance with specification requirements. (Flat cars are provided by A672.)

Detail Design Unit	Design Scope	Construction Contract Unit	Approx. Quantities	Contract Type	Contract Scope
A680	Operational Graphics: Establish design criteria. Prepare typical drawings, detailed lists, and schedules for track wayside fixed signs; cross-passage and pumping station signs; blue light station signs; Yard and Main Shop track number signs; hazard signs; fire hose valve reflective indicators; Yard fence signs; Yard signs at ATSF entry; and station ancillary, Main Shop Building, and MOW Building room name and number signs. Exclude signs provided under other contracts; for instance: trainway exit signs, incident command location signs, coverboard high voltage signs, wayside signal identification signs, and berthing signs. Furnish construction details and fabrication, assembly, and installation methods for Segment 1.	5283	Segment 1 Requirements	Procurement and Installation	Prototype, manufacture, and install operational graphics.
A710	Escalators and Elevators: Establish design criteria, specifications, and test parameters; prepare Bid Documents for an Escalator and Elevator contract for Segment 1.	A710	Escalators: -39 MRT (24 Class A 15 Class B) -3 LRT (Class A) Elevators: -13 MRT -3 LRT	Furnish and Install	Furnish, install, test, and place into operation the station escalators for all Seg-1 stations, including escalators and elevators for the LRT Station* at 7th St/Metro Center.

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A732	Wheel Truing Machine: Prepare bid documents for procurement of underfloor wheel truing machine for segment 1.	A732	One underfloor wheel truing machine	Procurement and Installation	Furnish, install, test and place into operation an underfloor wheel truing machine for the Heavy Repair Area of the Main Shop building. Specification to permit either underfloor lathe or underfloor milling machine, and either computer control or tracer plate mechanism for guiding lathe operation. Upon award, Contractor to supply necessary drawings to permit design and construction of the wheel truing machine pit by others, and to ensure proper electrical and mechanical interfaces are provided.
A736	Portable Passenger Vehicle Jacks: Prepare Bid Documents for procurement of Portable Passenger Vehicle jack Equipment for Segment-1.	A736	8 ea	Procurement	Design and furnish Portable Passenger Vehicle Jacks, including testing and field assistance to the Engineer during the period of performance evaluation and testing.
A740	Ventilation Equipment: Establish design criteria, specifications, test parameters, and Bid Documents for procurement and ventilation, emergency, and underplatform exhaust fans, dampers, and controls for Segment 1.	A740	Seg-1 Requirements	Procurement	Furnish subway ventilation, emergency underplatform, and overhead trackway, exhaust fans, dampers, and sound attenuators, including equipment for the LRT portion* of the 7th St/Metro Center Station. Quantities and sizes of fans are based upon System Design Criteria and Standards, primarily the Fire/Life Safety emergency ventilation requirements.

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A745	Establish design criteria, design, and preparation of Air Handling Equipment: Bid Documents for manufacturing and delivery of traction power room air handling equipment for Segment 1.	A745	Segment 1 Requirements	Procurement	Furnish station air handling equipment, consisting of station air supply units, filters, and dampers, and TPSS ventilation equipment, consisting of supply fans, filters, and dampers. Quantities and sizes of fans are based upon System Design Criteria and Standards.
A750	Hazardous Material Removal: Preparation of bid documents for procurement of specialty services for removal of hazardous materials.	A751 A752 A753 A754 A755 A756	As required by Site Conditions	Specialty	Abate hazardous wastes by removal, treatment, or other means, on the Metro Rail project. If necessary, haul, dispose of, and treat in certified facilities.
A760	Signs and Edgelights: Preparation of complete set of contract documents defining separate station sign schedules, prototype messages, edge lighting fixtures, and other pertinent information. Furnish construction details necessary to describe fabrication, assembly, and installation methods for Segment 1.	A760A	Segment 1 Requirements	Procurement	Design, manufacture, and deliver platform edgelight system for five stations, including LRT* platform at 7th St/Metro Center.
		A760B	Segment 1 Requirements	Procurement (Negotiated)	Design, manufacture, and deliver signs and graphics for all Seg-1 stations, including signs and graphics for the LRT Station* at 7th St/Metro Center. Quantities and locations of signs and graphics are based upon System Design Criteria and Standards.
A770	Rubber-Tired Vehicles: Preparation of specifications and Bid Documents for the following procurement contracts: Automobiles and Light Trucks	A771	4 Maintenance Vans 3 Sedans 3 Pick-up Trucks	Purchase Order Procurement	Furnish four maintenance vans, three light trucks, three pick-up trucks, and three supervisory sedans. Use existing SCRTD specifications.

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
	Lift Trucks	A772	2 Fork Lifts 1 Hi-Lift Truck	Procurement	Furnish two electric fork lifts with 4,000 lb. capacity and one non-powered hi-lift truck. Use existing SCRTD specifications.
A775	Mobile Emergency and Maintenance Equipment: Design and prepare Bid Documents for procurement of mobile maintenance equipment for Segment 1.	A775	Seg-1 Requirements: 1 Emergency Pump, 1 Rerailing Equipment, 1 D.C. Welder (Portable), 1 Acetylene Burning Wagon, 1 Rail Saw, 1 Rail Drill, 1 Huck Bolt Machine, 1 Portable Grinder, 1 Emergency Equipment (as required), 5 Portable Gas Detection Units	Purchase Order	Furnish mobile maintenance equipment under multiple contracts. Includes an emergency pump, rerailing equipment, portable dc welder, acetylene burning machine, rail saw, rail drill, huck bolt machine, portable grinder, portable gas detection unit, and other emergency equipment. Quantities are based upon the Seg-1 Operating Plan, the Yard and Shops Functional Plan, and the System Design Criteria and Standards.
A776	Rerailing Equipment:	A776	Seg-1 Requirements	Procurement	Design and furnish the specified Rerailing Equipment, including testing and field assistance to the Engineer during the period of performance evaluation and testing.
A780	Furniture: Preparation of Bid Documents for procurement of Shops and Stations furniture for Segment 1.	A780	Shops and 5 Passenger Stations	Procurement	Furnish shop and station furniture under multiple contracts. Quantities are based upon the Segment 1 Operating Plan, the Yard and Shops Functional Plan, and the System Design Criteria and Standards.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
A785	Fire Suppression and Emergency Equipment: Prepare specification and Bid Documents for the procurement of fire extinguishers, fire hose, fire hose nozzles and emergency equipment for Segment 1.	A785	Segment 1 Requirements	Purchase Order	Manufacture, test, and deliver fire extinguishers, fire hose, fire hose nozzles, and emergency equipment. The contract does not include installation of the procured equipment or facilities for the installation of the equipment. The handling and storage after delivery is also excluded from this contract. Quantities and types are based upon the System Design Criteria and Standards, primarily the Fire/Life Safety requirements.
A790	First Stores and Consumables: Preparation of Bid Documents for procurement of first stores and consumables for Segment 1.	A790	Segment 1 Requirements	Purchase Orders	Furnish first stores and consumables under multiple purchase orders. Includes filters, lubricants, solvents, Freon, cleaning supplies, car wash detergents, etc.
A795	Uninterruptible Power Supplies: Establish design criteria, specifications, test parameters, and Bid Documents for procurement and delivery of uninterruptible power supplies for Segment 1.	A795	11 Units: 2 at each station, and 1 additional at the 7th St/Metro Center Station for LRT.*	Procurement	Procure uninterruptible power supplies (UPS) for all Segment 1 Stations. Each UPS shall include the electronics and batteries needed to provide station and tunnel emergency lighting, and battery supply for the electrical substation's switchgear as required by the System Design Criteria and Standards. Installation will be performed by the station Stage II contractor.
A796	Uninterruptible Power Supplies: Establish Purchase Order for procurement and delivery of uninterruptible power supplies for Segment 1's RCC.	1 Unit: 125kVA/100 kW	Purchase Order		Procure uninterruptible power supply (UPS) for the RCC at the Main Shop Building. Installation will be by A112 contract.

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
H840	Fare Collection: Establish design criteria for a barrier-free system; support LACTC and its consultants in preparation of Bid Documents and in contract negotiations. Support resolution of problems identified during construction, installation, and testing of equipment installed in Seg-1 stations. Make provisions for retrofit to a barrier system in the future.	H840 (LACTC)	37 TVM's, under-floor ducting, 9 SFCCU's-6 additional TVM's for LRT* at 7th St/Metro Center Station.	Procurement and Installation	<p>Fare collection equipment for Seg-1 and Seg-2 are procurement options in LACTC Contract H840, which procures the fare collection system for the Long Beach Los Angeles Rail Transit Project. For Seg-1, the contract scope is as follows:</p> <p>Design, furnish, install, test, and place into operation the following: ticket vending machines (with bill-accepting and change-making capabilities) at the Seg-1 stations; fare collection computers at the RCC; and revenue collection carts.</p> <p>Equipment counts are established in accordance with the System Design Criteria and Standards, using patronage estimates and equipment transaction rates.</p> <p>The Seg-2 option provides for procurement of additional equipment for the Segment 1 stations to accommodate patronage increases, and for the stations that are opened on Segment 2. Installation is not included as there is insufficient design detail for the Seg-2 stations at the time of H840 advertisement. Participation and technical assistance is required during testing.</p>

* LRT work funded by Los Angeles County Transportation Commission.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
<u>PROFESSIONAL SERVICES CONTRACT UNIT DESCRIPTIONS</u>					
E002	The Metro Red Line is a two-track rail line in subway configuration. Construction is being accomplished in stages. The Segment 1 stage includes the yard and shops area and a 4.4 mile mainline segment from Union Station to the intersection of Wilshire Boulevard and Alvarado Street. Segment 1 contains five stations designed for unattended operations.	E002	1 LOT	Professional Services	The MRTC contract provides professional and other services for design and construction of the Metro Red Line, including: preliminary-design and management of the final design efforts, systems/facilities integration, project capital cost estimating, project cost and schedule reporting and control, technical coordination, preparation of all camera-ready construction and design/furnish/install bid documents, design services during construction, preparation of project record drawings and implementation of a design phase QA/QC program.

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
MC01	The Metro Red Line is a two-track rail line in subway configuration. Construction is being accomplished in stages. The Segment 1 stage includes the yard and shops area and a 4.4 mile mainline segment from Union Station to the intersection of Wilshire Boulevard and Alvarado Street. Segment 1 contains five stations designed for unattended operations.	MC01	1 LOT	Professional Services	<p>Parsons-Dillingham provides construction management (CM) services with responsibility for preconstruction and construction management services for the construction, testing and startup of the Metro Red Line Project.</p> <p>Services include constructibility and claims avoidance reviews; reviews of cost estimates; assistance in procurement of long lead materials and equipment; assistance in evaluating bids from construction contractors; implementation of a safety program; supervision, administration, and inspection surveillance of facilities construction and systems contracts; the scheduling and cost control of construction; configuration management; and field contract administration.</p> <p>The CM is also responsible for certain systems aspects of the project and CM support services.</p>

Detail Design Unit	Design Scope	Construction Contract Unit	Aprox. Quantities	Contract Type	Contract Scope
K001	The Metro Red Line is a two-track rail line in subway configuration. Construction is being accomplished in stages. The Segment 1 stage includes the yard and shops area and a 4.4 mile mainline segment from Union Station to the intersection of Wilshire Boulevard and Alvarado Street. Segment 1 contains five stations designed for unattended operations.	K001	1 LOT	Professional Services	Booz-Allen & Hamilton's scope of services for the Metro Rail segment include systems analysis of: Operations/Maintenance/Rail Activation, Safety/Security/Systems Assurance, Fare Collection Equipment Procurement Management, Administration Support, and Special Studies Management of the passenger vehicle procurement involves: Program Management, Design Reviews, Interface Management, Q.A. Monitoring, TTC Testing, and Vehicle Acceptance.
MY005	The Metro Red Line is a two-track rail line in subway configuration. Construction is being accomplished in stages. The Segment 1 stage includes the yard and shops area and a 4.4 mile mainline segment from Union Station to the intersection of Wilshire Boulevard and Alvarado Street. Segment 1 contains five stations designed for unattended operations.	MY005	1 LOT	Professional Services	LKG'S scope of services for the Metro Red Line Segment 1 consists of closeout, storage and retrieval of field documents and maintenance of completed project record drawing.