

ATTACHMENT A: PROFILE OF THE PUBLIC WORKS DEPARTMENT Nashville and Davidson County, Tennessee

The pages which follow describe our understanding of the Public Works Department operations based on interviews with the Department's Director, Assistant Director, Division Managers, Superintendents, Internal Audit staff, Finance Department managers and representative numbers of Public Works staff, as well as a review of various reports and development of workload data. This summary provides the results of the project team's data collection and interviews information in two areas:

- It describes our understanding of current organization and staffing of the Department in place during the early part of the audit fieldwork including responsibility assignments.
- It outlines our understanding of the Department's major service programs including, where appropriate, workload and/or service levels.

The purpose of this summary is to document our understanding of major programs and activities by the Department to assure accuracy and to provide the basis for identifying issues for additional analysis.

1. INTRODUCTION

The Department of Public Works provides infrastructure maintenance of paved streets, drains and sidewalks; mows canals, ditches and rights-of-way; provides engineering and contracts management services, as well as administrative services such as financial, contractual, legal and budgetary functions, training coordination, safety training and payroll processing of Departmental time records; provides parking meter services and enforcement, administers special parking zones, and administers a private contract for operation of the City's parking garages and surface lots.

The Director of the Department answers directly to the Mayor and has the overall responsibility for planning, budgeting, directing, and coordinating departmental operations so as to provide services in accordance with the overall guidance provided by the Metro Council.

2. ORGANIZATION

The department is organized into the six divisions of Waste Management, Streets and Roads, Fleet Management, Engineering, Parking, and Staff Services. This audit includes all functions of the Division except for Solid Waste Management (other than Chipper Services) and Fleet Management. These divisions are staffed as shown by the overall Departmental organization chart, as well as the individual charts on the at the end of this report.

3. STAFFING

In the table, which follows, is provided a summary of Public Works staffing and key elements of how staff are scheduled and deployed.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Department Administration	Director Council Liaison Public Information Representative Administrative Assistant	1 1 1 1	<ul style="list-style-type: none"> • The Director provides guidance in the creation and implementation of Department policies, budgets, personnel matters, management controls, planning of annual activities, as well as other related functions. Also, serves as liaison with public, contractors and County management. • The Council Liaison is a new position, created during this project. The Liaison will be responsible for communication with elected officials concerning the status of capital projects. • Although budgeted in the Engineering Division, the Public Information Officer is responsible for answering calls for information and providing public information to other Departments, the news media, and the public on Department activities and work schedules, and for the preparation of general public information statements and brochures. • The Administrative Assistant provides administrative and clerical support to the Director.
Contract Management	Contract Administrator	1	<ul style="list-style-type: none"> • Reports directly to DPW Director as a one-person "Division". • Provides assistance in writing legislation regarding issues such as "satellite city" agreements, excavation ordinance, etc. • Alerts Division Managers as to the expiration dates of contracts, asking if they desire to renew or rebid. • Assists in writing contractual language for non-boilerplate contracts. • Interprets policy for Departmental administration

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Staff Services--Finance	Finance Manager Administrative Assistant Finance Officer 2 Finance Officer 2 (Part Time) Administrative Services Officer 2 Office Support Representative 3 IS Analyst 2 (Network Administrator) IS System Technician 2 (Network Technician)	1 1 1 1 1 2 1 1	<ul style="list-style-type: none"> • Purchasing of materials, supplies, services – liaison with Metro Purchasing, including monitoring and review of procurement card system. • Accounting – processing of Accounts Payable • Receives payments for fees, maintains ledger and deposits funds. • Preparation of fixed asset tracking for Metro compliance with GASB 34 requirements • Monitors and prepares financial reporting for state and federal grants • Manages financial matters for supplies and construction contracts, maintains records of invoices and payments. • Develops and tracks of Department and divisional budgets • Performs routine clerical and administrative duties such as filing and retrieval of documents, answering phones, faxing, etc. • Processes payments and receipts of goods, materials, supplies. • Establishes and maintains contractor reserve or escrow funds • Establishes and monitors local investment pool for the local share of State projects. • Writing of Council legislations (ordinances and resolutions) in conjunction with the Contract Administrator • Administers computer networks, including acquisition, installation, and hardware and networking software maintenance • Coordination of computer systems planning with Department Technology Committee

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Staff Services--Human Resources Division-Administration	Manager Administrative Assistant Equipment and Supply Clerk Maintenance and Repair Worker I	1 1 1 1	<ul style="list-style-type: none"> • Manager oversees Department’s Human Resource functions and personnel. • Provides administrative support to Human Resources Manager. • Maintains personnel files of all staff. • Administrative Assistant reviews payroll data from other centers and performs payroll function for Staff Services; process HR transactions for department; serves as lead person and in-house authority on all HR/payroll transactions. • Reviews and monitors data entered by personnel at other centers • Tracks evaluations of staff and informs centers of employees’ evaluation due date. • Interviews and hires all entry level staff. • Maintains facilities and grounds at the South 5th Street center. • Equipment and Supply Clerk provides internal courier service and performs light building maintenance.
Staff Services--Human Resource Division-Center Support Staff	Office Support Manager Office Support Rep II	3 3	<ul style="list-style-type: none"> • Reports to the Human Resources Manager • Assigned to one of the three Public Works centers. • Performs payroll function for center. Enters exceptions into FastNet weekly. • Maintains leave time information in a separate database. • Maintains “working” personnel files for staff based in center. Prepares evaluations. • Processes work orders and computes project cost data. • Compiles data to create monthly reports for Public Works Department. • Provides administrative support to Public Works’ supervisory and management staff, including interpretation of policies and procedures; assists employees on HR and benefit issues. • Assists Office Support Managers at centers with administrative duties. Answers phones and files. • Helps to process work orders and compile data for monthly reports. • Assigned to each center, Training and Safety divisions.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Staff Services--Human Resources Division- Training	Training Coordinator Office Support Rep II	1 1	<ul style="list-style-type: none"> • Oversees training within Public Works. • Coordinates training provided by various divisions within Public Works, as well as Metro Human Resources and Community Career Center. • Develops and delivers supervisory and management training. • Reviews training requests and seeks most efficient procurement and delivery of training. • Develops and schedules comprehensive training plan. • Maintains training records of staff. Monitors recertification requirements and needs of staff. • Works with supervisors and managers to identify training needs. • Works with Office Support Rep to increase staff awareness of training opportunities. • Offers GED, CDL courses, plus other in-house training. • Provides administrative support to the Training Coordinator. • Develops and distributes flyers regarding training opportunities. • Maintains training records of Department staff.
Staff Services--Human Resources Division- Safety	Safety Coordinator Safety Inspector Office Support Rep II	1 1 1	<ul style="list-style-type: none"> • Oversees Department's compliance to Federal and State safety regulations. • Investigates incidents, including employee accidents and citizen complaints. • Writes and maintains Department's safety policy handbook. • Conducts training courses in accordance with State and Federal requirements. • Works with Metro Safety Department to ensure Public Works adherence to safety requirements; works with training coordinator to develop safety training. • Supports Safety Coordinator. • Conducts internal inspections relating to safety. Inspects work sites and equipment. • Ensures adherence to safety regulations. • Reports violations and unsafe behavior to Coordinator and Department. • Provides administrative support to the Safety coordinator and inspector.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Streets and Roads – Administration	Asst. Director – Streets and Roads Office Manager Secretary Asst. Customer Service Supervisor Customer Service Representative II Office Assistant II Compliance Inspector	1 1 1 1 1 2 1 3	<ul style="list-style-type: none"> • The Assistant Director administers the Streets and Roads. • Compliance Inspectors physically examine sites of complaints after receipt of AIMs work orders. • Assistant Customer Service Supervisor, 2 Customer Service Representatives, and Office Assistant receive, code, log and transmit AIMs work orders to Compliance Inspectors for investigation. This team also closes out work orders as completed.
Streets and Roads – Special Operations Section – Technical Services	Technical Services Coordinator Office Clerk II Engineering Technician III	1 1 3	<ul style="list-style-type: none"> • Inspects roads for various conditions to determine requirements for replacement. • Oversees the rating of roads by private contractor (IMS). • Runs scenarios on street conditions and probable costs of paving. • Maintains database of paved streets, utility “holds”, street ratings and other data. • Identifies optimum street segments for paving based on equitable distribution of funding by District in combination with available funding and street ratings. • Responds to requests for street condition ratings. • Inspects paving performed by contractors for quality and conformance to specifications. • Analyzes requests for street lighting; tests for need based on physical properties of street.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Streets and Roads - Traffic Control Section - Administration	Traffic Control Mgr Signal Technician III	1 1	<ul style="list-style-type: none"> • Manager ensures that traffic control signals operate properly, and that supervisors and employees in each of the 3 sections has necessary resources and materials to complete assigned functions. • Conducts cost calculations of contractor versus in-house projects – makes decisions on feasibility of work based on calculations. • Performs productivity analyses of work crews in Section – makes adjustments in staffing, work standards and methods based on analyses. • Determines priorities of work and communicates to supervisors. • Manager completes and reports performance evaluations of supervisors. • Manager ensures adherence of Section employees to policies and procedures. • Technician reports directly to Manager. • Technician completes electronics PM on signals. • Tech. coordinates inspections of new signal installations by contractors. • Tech. locates and stakes poles for signals.
Streets and Roads - Traffic Control Section – Signal Maintenance Unit	Signal Tech Supervisor Signal Technician III Signal Technician II Signal Technician I	1 2 3 2	<ul style="list-style-type: none"> • Maintains electronic components of traffic signals. • Bench maintenance of signals and controllers performed in shop. • Checks signals for operability prior to contractor installation. • Makes Tenn. One-Calls prior to excavations; responds to these calls as necessary. • Programs controllers, strings wires, changes controller parts. • Schedule: One Tech. works 10:30 p.m. – 6:00 a.m. answering emergency calls, placing temporary signs, performing PM's. Other Techs. rotate through the following shift schedules: <ul style="list-style-type: none"> - M-F, 7:00 a.m. – 3:30 p.m. - M-F, 6:00 a.m. – 2:30 p.m. - M-F, 2:00 p.m. – 10:30 p.m. - M-F, 10:00 p.m. – 6:30 a.m. - Sa-Su, 7:00 a.m. – 3:30 p.m. <p>Note that the same Tech. takes the 10:00 p.m. – 6:30 a.m. shift each week. The other Techs. rotate through the other shifts.</p>

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Streets and Roads - Traffic Control Section – Signal Construction Unit	Signal Maintenance Supervisor M&R Leader III M&R Leader I M&R Worker III M&R Worker II	1 1 1 1 2	<ul style="list-style-type: none"> • Sets poles, controller box change outs, installs video cameras. • Changes lamps in signals as necessary. • Installs some signals, wiring. • PM on signals (change lamps, cleans lenses, repair/replace loops, etc.) • Makes and responds to Tenn. One-calls.
Streets and Roads - Traffic Control Section – Signs and Markings Unit	Signs & Marking Supervisor Maintenance and Repair Leader I Skilled Craft Worker Maintenance and Repair Worker III	1 1 1 4	<ul style="list-style-type: none"> • Responds to AIM’s work orders by performing maintenance or replacing signs. • Designs and fabricates new signs • Oversees striping and marking performed by contractor. Identifies street markings needing re-painting.
Streets and Roads – Special Operations Section – Milling Crew	M&R Leader II EO III EO II EO I M&R Worker II M&R Worker I	1 2 5 2 3 2	<ul style="list-style-type: none"> • Provides all milling services for Metro streets and roads. • Crew operates a variety of equipment, ranging from the milling truck and dump trucks to jack hammer. • Cuts base failures and knots. • Coordinates with paving crew for clean up. • Occasionally, assists with litter removal, alley clean up, and shoulder work. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Streets and Roads – Special Operations Section –Paving Crew	M&R Leader II EO III M&R Worker I EO II M&R Worker II	1 2 4 5 1	<ul style="list-style-type: none"> • Responsible for all paving within Metro that is not assigned to contractors. • Operates asphalt trucks, grader, dump trucks, water truck, and other like equipment. • Hauls materials to job sites, as well as recyclable materials to plants. • Completes some preventative maintenance on equipment. • Supports milling crew with clean up. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.
Streets and Roads – Special Operations Section –Guardrail and Concrete Crew	M&R Leader I Skilled Craft Worker M&R Worker II M&R Worker I EO III	1 1 2 1 1	<ul style="list-style-type: none"> • Responsible for installing and maintaining Metro guardrails. • Repairs sidewalks. • Completes special projects for Department, including construction and carpentry work. • Constructs sidewalk ramps to meet ADA requirements. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.
Streets and Roads – Special Operations Section –Sidewalk Crew	M&R Leader I EOIII Skilled Craft Worker M&R Worker I	1 1 2 2	<ul style="list-style-type: none"> • Constructs and repairs sidewalks. • Assists with curb repairs. • Constructs sidewalk ramps to meet ADA requirements. • Supports other crew s as needed. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Streets and Roads – Special Operations Section – Grading/Base Crew	M&R Leader II EO III Skilled Craft Worker EO II M&R Worker II M&R Worker I	1 2 1 1 2 2	<ul style="list-style-type: none"> • Clear cuts trees and topsoil, shoots grade and builds subgrade to widen shoulders of Metro roads for installation of guardrails, and to prepare for construction of parking lots. • Repairs road base failures. • Builds headwalls for larger (e.g., 60” pipe) structures. • Crew is trained to m back up milling machine as necessary. • Hauls debris from work sites to fill areas; sweeps debris from road as work progresses. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.
Streets and Roads – Special Operations Section –Carpentry Crew	Sr. Carpenter EO III Skilled Craft Worker Blaster M&R Worker II M&R Worker	1 1 1 1 1 1	<ul style="list-style-type: none"> • Performs a variety of carpentry jobs for Department. • Operates concrete truck for sidewalk crew. • Maintains buildings. • Provides dynamite and blasting services to Metro. This is the only position in Metro. • Provides electrical and plumbing work. • Crew will divide to support other crews when they are short staffed for a job. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.
Streets and Roads – Special Operations Section –Lowboy Crew	EO III	3	<ul style="list-style-type: none"> • Transports all equipment to and from job sites and centers. • Transport broken equipment to mechanics. • Respond to requests throughout the day. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October. • Maintains fill site.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Streets and Roads – Special Operations Section –Materials Management	Parts Supervisor Equipment Supply Clerk I Equipment Supply Clerk II	1 1 1	<ul style="list-style-type: none"> • Receives, disburses, accounts for, monitors and purchases materials in warehouse. • Serves as USAR coordination point in Metro. • Serves as HazMat coordination point for Public Works.
Streets and Roads – Special Operations Section –CBD Night Crew	Sanitation Supervisor EO III M&R Worker I	1 4 18	<ul style="list-style-type: none"> • Sweeps downtown business district streets on periodic basis. • Picks up litter in CBD. • Cleans alleys in CBD. • Periodically cleans and maintains street furniture, tree wells, litter receptacles.
Streets and Roads - Shoulder Crew	WEST M&R Leader II EO III EO II EO I M&R Worker II M&R Worker I EAST M&R Leader II EO III EO II EO I M&R Worker I	 1 2 2 1 1 2 1 2 1 2 2	<ul style="list-style-type: none"> • Responsible for the construction of all shoulders. • Repairs shoulders. • Widens shoulders. • Rebuild alleys. • Operates grader, power broom, front ender loader, truck and other like equipment. • Cleans alleys, storm drains, inlets, and repairs ditches as needed during the winter months. • Paving crew generates most shoulder work orders for the Shoulder crew. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.

Function	Staffing by Classification	Key Elements of Staffing and Scheduling
Streets and Roads- Tree Crew	<p>WEST M&R Leader II 1 EO III 1 EO II 2 M&R Worker II 2 M&R Worker I 3 EAST M&R Leader II 1 EO III 2 EO II 1 EO I 1 M&R Worker I 4</p>	<ul style="list-style-type: none"> • Responsible for removal of trees, including cutting, chipping and hauling. • Completes roadside trimming. • Operates equipment including, loader, chipper, dump truck as well as chain saws. • Responsible for storm clean up. Receives support from other crews during emergencies and high workload volumes. • Other crews provide assistance during emergencies and storm clean up. • Trims trees along right-of-ways. • East center crew operates the sweeper when necessary. • Assists with cemetery as needed. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.
Streets and Roads- Construction Crew	<p>WEST M&R Leader II 1 EO III 1 EO II 1 EO I 1 M&R Worker II 1 M&R Worker I 1 EAST M&R Leader II 1 EO III 1 EO II 1 EO I 1 M&R Worker II 1 M&R Worker I 3</p>	<ul style="list-style-type: none"> • Constructs ditches. • Installs and repairs base failures, cross drains, and driveway pipes. • Builds alleys. • Repairs pipes and ditches. • Cleans ditches during winter months. • Operates backhoe, roller, mower, concrete saw, front end loader, and jack hammer. • Also, builds headwalls and cuts right-of-ways. • Digs graves and buries persons for Metro. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.

Function	Staffing by Classification	Key Elements of Staffing and Scheduling
Streets and Roads-Patch Crew	<p>WEST M&R Leader I 2 M&R Worker I 4</p> <p>EAST M&R Leader I 2 M&R Worker I 4</p>	<ul style="list-style-type: none"> Repairs potholes and shoulders. Ramp driveways and constructs ramps in accordance with ADA requirements. Equipment used includes roller, power rakes, and sledge hammers. Transports materials and provides patch work to other crews' job sites as necessary. Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.
Streets and Roads-Drainage Crew	<p>WEST M&R Leader I 1 EO II 2 M&R Worker I 2</p> <p>EAST M&R Worker I 1 EO II 1 M&R Worker I 1</p>	<ul style="list-style-type: none"> Maintains drains and pipes, cross drains. Installs driveway pipes. Cleans pipes and storm drains. Sets curb lines. Cleans inlets, curbs, and yard debris when finished with work orders, as well as brush removal and trim right-of-ways. Supports construction with graveyard work. Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.
Streets and Roads-Mason Crew	<p>WEST M&R Leader I 1 Skilled Craft Worker 1 M&R Worker I 2</p> <p>EAST M&R Leader I 1 EO II 1 M&R Worker I 2</p>	<ul style="list-style-type: none"> Builds headwalls. Constructs and maintains catch basins. Lay rock for storm drain boxes. Operates jack hammer and uses hand tools. Digs and stacks rock for projects during slower months. Also, cleans pipes, catch basins, gutters, ditches, alleys and dumpsites. Trims limbs and right-of-ways. Repairs shoulders. Supports other crews as needed. Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Streets and Roads-Storm Sewer Crew	WEST M&R Leader I EO III EO I M&R Worker I EAST M&R Leader II EO III EO II M&R Worker I	1 1 1 3 2 1 2 3	<ul style="list-style-type: none"> • Installs pipes, cross drains, and catch basins. • Repairs drainage systems damages. • Also, cuts blind corners and roadsides. • Responds to roadside flooding. • Repairs shoulders. • Supports construction crew with graveyard work. • When work is completed, crew cleans curbs, gutters, and dumpsite. Trim right-of-ways. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.
Streets and Roads-Mowing Crew	WEST M&R Leader I EO II EO I EAST M&R Leader I EO I M&R Worker I	1 1 4 1 1 1	<ul style="list-style-type: none"> • Mow Metro grounds on a rotating schedule, as well as respond to work order requests. • During winter months and/or poor weather, crew cleans dump sites, cleans and trims alleys, removes litter, and trims overhanging limbs. • Supports other crews as needed. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.
Streets and Roads-Median Crew	WEST Sanitation Leader M&R Worker I EAST Sanitation Leader M&R Worker I	1 2 1 3	<ul style="list-style-type: none"> • Maintains medians. • Mows, trims, and rakes right-of-ways on a 2 week rotating schedule from April to October. • Cleans and cuts alleys. • Cleans inlets, curbs, and blind corners. • Supports other crews as necessary. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Streets and Roads- Street Cleaning Crew	WEST EO II M&R Worker I EAST M&R Leader I M&R Worker I	1 2 1 2	<ul style="list-style-type: none"> • Maintains grounds surrounding sidewalks, cleans and cuts bushes and grass. • Monday and Thursday mornings, crew completes route to remove trash from “baskets.” The packer is operated during this time. • Operates spray truck, which sprays herbicide on sidewalks. • Winter months’ activities include litter and/or brush collection and removal, as well as dumpsite clean up. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.
Streets and Roads- Lot Crew	WEST M&R Leader I EO II M&R Worker I EAST M&R Leader I EO III EO II EO I M&R Worker I M&R Worker II	1 3 4 2 1 1 1 2 1	<ul style="list-style-type: none"> • Responsible for the maintenance and repair of vacant and abandon lots within center area. • Removes litter and larger dumped items, mows property, and trim bushes. • Operates mower, weed eaters, chain saws, and trucks. • Receives work orders from Code department, which has sent prior notification to lot owners. • Photographs lot sites for records. • Also, cuts and cleans alleys. • Supports other crews as needed. • Works 6:30 am to 3:00 pm from October to April and 4-10 hour shifts from 6:00 am to 4:30 from April to October.
Streets and Roads- Center-Shop Maintenance/Night Watch Crew	WEST M&R Worker I EAST EO II	1 1	<ul style="list-style-type: none"> • Provides night security for centers and fuels all trucks and equipment.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Waste Management Division – Chipper Service	Asst. Director Solid Waste Supv. Route Supervisor	1 1 4	<ul style="list-style-type: none"> • Chipper Service is one of several functions performed in the Solid Waste Division of Public Works, consuming only a portion of the time of the administrative staff represented in this section of the profile. • Oversees the operations of 2 private contractors collecting and disposing of curbside brush on 20 routes in Metro. • Monitors the quality of services, and tracks productivity of crews. • Designs and refines routes for brush collection.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Parking Division	Assistant Director	1	<ul style="list-style-type: none"> • Assistant Director current works on a part-time (3 days per week) basis, supervising operations of this Division and makes recommendations to the Traffic and Parking Commission. • Finance officer monitors financial reporting of garage contract, receives and processes payments for the garage contract. • Finance officer bills for special zones, receives and records payments, and prepares special reports as requested. • Administrative Service Officer supervises work of the meter repair and collections staff and parking meter enforcement officers, investigates requests for special zones. • Maintenance and repair worker install and maintain meters and parking zone signage, collects parking meter revenues. • The Corrections Officers are hired by the Sheriff's Office and serve on 6-month rotations with this Division, patrolling parking meters and parking zones and issuing violation tickets.
	Finance Officer II	1	
	Administrative Service Officer III	1	
	Maintenance and Repair Worker II	1	
	Maintenance and Repair Worker I	2	
	Corrections Officers	6	

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Administration	Assistant Director - Engineering	1	<ul style="list-style-type: none"> The Assistant Director provides direction in the creation and implementation of division policies, budgets, personnel matters, management controls, planning of annual activities, as well as other related functions. Also, serves as liaison with public, contractors and Metro Nashville management.
	Office Support Manager	1	<ul style="list-style-type: none"> Provides administrative support to the Assistant Director – Engineering, and supervises the Office Support Representative 2
	Office Support Representative 2	1	<ul style="list-style-type: none"> Acts as the receptionist for the Division. Provides administrative support including the performance of clerical and administrative duties such as filing and retrieval of documents, answering phones, faxing, etc.
Traffic Engineering	Engineer 3	1	<ul style="list-style-type: none"> Manages the Traffic Engineering Section. Supervises two staff: an Engineer 2 and an Engineer 1. Prepares Traffic and Parking Commission agenda items. Makes presentations to the Commission.
	Engineer 2	1	<ul style="list-style-type: none"> Supervises six staff including an Engineer 1, two Engineering Technician 3’s, an Engineering Technician 2, and two Engineering Technician 1’s. Receives requests from the public regarding installation/modification of traffic control devices and assigns staff to conduct studies regarding these requests (i.e., requests for stop signs, traffic signals, speed limit changes, four-way stops, etc.). Reviews development submittals (subdivision plats, commercial and industrial building permits) referred by the Planning Department and Code Enforcement Department. Reviews the associated traffic impact studies, proposed mitigation measures, site layout, and attends Planning Commission meetings. Reviews proposed driveways for zoning/building permit approvals to assure the driveways will not create egress and ingress problems. Review approximately four to five a week. Prepares zoning appeals agenda items. Makes presentations to the Zoning Appeal Board.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
	Engineer 1	1	<ul style="list-style-type: none"> Allocates 70% of his time to conducting studies regarding installation/modification of traffic control devices in response to requests from the public (i.e., requests for stop signs, traffic signals, speed limit changes, four-way stops, etc.). Assigned four to five geographical districts. Allocates the remaining 30% of his time to the review of development submittals (subdivision plats, commercial and industrial building permits) referred by the Planning Department and Code Enforcement Department. Reviews the associated traffic impact studies, the proposed mitigation measures, site layout, and attends Planning Commission meetings.
	Engineering Technician 3 Engineering Technician I	2 1	<ul style="list-style-type: none"> Conduct studies regarding installation/modification of traffic control devices in response to requests from the public (i.e., requests for stop signs, traffic signals, speed limit changes, four-way stops, etc.). Each of these technicians are assigned to 8 to 9 geographical districts.
	Engineering Technician 2	1	<ul style="list-style-type: none"> Allocates 50% of her time to conducting studies regarding installation/modification of traffic control devices in response to requests from the public (i.e., requests for stop signs, traffic signals, speed limit changes, four-way stops, etc.). Allocates the remaining 50% of her time to the data entry of each of the requests received from the public regarding traffic control devices, in terms of the date received, the location, the name of the citizen, the recommendation of staff, etc. The Engineering Technician 2 also assists in manual traffic counts at peak hours (i.e., 7 a.m. to 9 a.m., 11 a.m. to 1 p.m., and 4 p.m. to 6 p.m.) to determine exactly what the traffic counts are at those hours, the number of left and right hand turns, etc.
	Engineering Technician 1	1	<ul style="list-style-type: none"> Conducts traffic counts using eight new traffic counters. These are computer-based traffic counters. Files all of the accident reports received from the Police Department.
	Engineer 1	1	<ul style="list-style-type: none"> Supervises an Engineer 1 and an Engineering Technician 3. Designs traffic signals for road widening or modifications to existing signals using AutoCAD. Conducts modification studies of traffic signals such as signal timing, loops, programming, etc.
	Engineer 1	1	<ul style="list-style-type: none"> Allocates 25% of his time to signal design, 50% of his time to conducting studies regarding installation/modification of traffic control devices in response to requests from the public (i.e., requests for stop signs, traffic signals, speed limit changes, four-way stops, etc.), and 25% of his time to collecting data in intersections for signal design.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
	Engineering Technician 3		<ul style="list-style-type: none"> • Maintains inventory of traffic signals, school flashers, etc. • Maintains an inventory of signal capital improvement projects including the date of approval, design, construction cost, etc.
Capital Projects Management	Engineer 3	1	<ul style="list-style-type: none"> • Supervises seven staff: two Engineer 2's, three Engineer 1's, an Engineering Technician 3, and a Technical Services Coordinator. • Manages the capital projects program for the Engineering Division.
	Engineering Technician 3 Engineering Technician 2	2 1	<ul style="list-style-type: none"> • Provide street addresses and names for new development after the plat is recorded. Utilize the Land Information System to maintain the street name index. • Microfilm plans including plat grading and drainage plans, and plat construction plans. • Maintain the Street and Alley index. Index of streets and alleys owned and maintained by Metro Nashville. Update with new streets and alleys resulting from development. At the end-of-the-year, prepare a report for the City Council formally accepting the new streets and alleys. Also update mylars to reflect the new streets and alleys. • Research right-of-way in response to questions from the public. Maintain a database regarding right-of-way. • Maintain the E-911 database, inputting new addresses, on behalf of utilities, U.S. Post Office, and public safety services.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
	Engineer 2	1	<ul style="list-style-type: none"> • Supervises an Engineering Technician 3, the survey crew, and manages the design and construction of capital improvement projects, primarily bridges. • There are 384 Metro Nashville bridges over twenty feet in length. These are inspected once every other year by TDOT. The last inspection generated a list of 66 bridges in need of repair with the repair ranging from the simple to the complex. \$1.2 million is available for repairs and the consulting engineer retained to evaluate and prioritize the 66 bridges needing repair. • Supervising a consulting engineer retained to evaluate and prioritize the 66 bridges needing repair. The consultant is approximately 10% to 15% complete in this evaluation. The Engineer 2 is allocating an estimated 15% to 20% of his time to the supervision of the bridge consultant. • Allocating a large proportion of time bridge capital improvement projects that are being designed and their construction managed by TDOT. These include the following: <ul style="list-style-type: none"> - <u>Gateway Bridge</u> (\$36,965,627) project number 94-B-1. This project is under construction, and will be completed in another 2 ½ years. It is approximately 5% to 10% complete at present. Allocating an estimated 25% of his time to this project, but this allocation will increase. - <u>Gateway Corridor</u> (\$6,380,121) project number 95-R-1. This project is under design and is approximately 75% complete in terms of design. This is a road-widening project: two lanes to six lanes. This project will begin construction this fall, and be completed in another 1-½ years. Allocating an estimated 15% of his time to this project. - <u>Shelby Bridge</u> (Phase one: \$5,354,054. Phase two: \$6,550,144) project number 97-B-4. Phase one is 98% complete. Phase two is 10% to 15% complete. Phase two will be completed in mid 2003. Allocating an estimated 20% to 25% of his time to this project. • Managing the design and construction of various other capital projects including the following: <ul style="list-style-type: none"> - <u>Shelby Avenue Extension</u> (\$500,000). Designed by consulting engineer. Design has not yet begun; design will be completed by April or May 2002, and construction completed in late fall 2002. Allocating an estimated 10% of his time to this project. - <u>Shelby Avenue Phase 2B Pier Rehabilitation</u> (\$1,483,308). Design completed. Bid in late spring. Construction will require three to four months. Allocating an estimated 5% of his time to this project.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
			<ul style="list-style-type: none"> - <u>Polk Avenue Bridge Rehabilitation (\$737,581)</u>. Design is 95% complete. CSX is requesting some design changes. Using a bridge consultant to respond to design change request. Construction planned for this fall. - <u>Chestnut Street (\$1,500,000)</u>. Design has not yet begun. Will utilize consulting engineer.
	Engineering Technician 3	1	<ul style="list-style-type: none"> • Converts the raw data collected by the survey crew to base maps so that the engineers can begin the design with the base maps. Occasionally goes out into the field to fill in for sick or vacation leave in the survey crew.
	Engineering Technician 2 Maintenance and Repair Worker 2	1	<ul style="list-style-type: none"> • These three staff function as the survey crew. Use total station survey equipment.
	Engineering Technician 1	1	
	Engineer 2	1	<ul style="list-style-type: none"> • Supervises a Technical Services Coordinator, and designs and manages the construction of capital projects. Management of construction projects focused in particular on sidewalk capital improvement projects (\$30 million) and City Council infrastructure projects (\$3.2 million) at present. • Designing three capital improvement projects including Dickerson Pike (\$193,000), Lebanon Pike (\$130,000), and Beamon Park Road (unknown construction cost). Also is supervising the consultant re-design of the Rural Hill Road intersection improvement project (\$1.1 million) and working with the Engineer 1 on the signal design for this intersection. This project was designed approximately fifteen years ago, but “tabled” for lack of funding. • Allocates an estimated 25% of his time to the design of these four capital improvement projects and 75% of his time to the sidewalk capital improvement projects and the City Council initiated capital improvement projects. This includes responding to public complaints, providing data to other staff and the City Council regarding the status of capital improvement projects, etc.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
	Technical Services Coordinator Engineering Technician 3 Office Support Representative 3	1 3 1	<ul style="list-style-type: none"> • Almost all of the time of the Technical Services Coordinator and the three Engineering Technician 3's is allocated to construction inspection of the sidewalk capital improvement projects (\$15 million currently allocated to sidewalk construction contracts). • The Office Support Representative 3 provides clerical support for construction inspection including inputting sidewalk construction data into an Access database regarding handicap ramps to provide a report to the Finance Department. Forward approximately 10 to 25 reports to the Finance Department each week. Generates progress letters to the City Council regarding the status of Council initiated capital projects, and abatement letters to utilities regarding the existence of utility poles in Metro's right-of-way based upon information provided by Engineering Technician 3's.
	Engineer 1	1	<ul style="list-style-type: none"> • Project manager for capital improvement projects including the following: <ul style="list-style-type: none"> - <u>Traffic calming project</u> (\$500,000) project number? This project is on hold pending an evaluation of the public support for traffic calming devices in the five pilot neighborhoods. A public survey firm – Seganthaler – was retained to conduct the survey. The traffic calming project is meeting intensive requiring three meetings for each neighborhood. - <u>Pedestrian and bike path pilot project</u> (\$300,000) project number? Design is completed; getting ready to seek bids. The project includes bike paths, bike lanes, bike path signing and marking, bike-friendly catch basins, etc. • Allocates 50% of his time at the Civic Design Center as the representative for the Engineering Division. The Civic Design Center provides pre-application review for developers.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
	Engineer 1	1	<p>Design capital improvement projects. Currently working on the following projects:</p> <ul style="list-style-type: none"> • Bell Road/Smith Springs intersection (\$1,200,000) project number 94-R-3. Road widening for two intersections. Design is 80% complete. • Neelys Bend road extension (\$800,000) project number 99-R-6. Design is 100% complete. Right-of-way being acquired. • Whitland Avenue drainage improvements (\$250,000) project number 99-D-13. Construction is 33% complete. Two-month construction period. Tier 2 contract. • Ewing Creek house raising for flood mitigation (\$550,000) project number? Metro Housing Authority coordinating the work. The Engineer 1 obtained the cost estimates. • Ensworth cul de sac (\$10,000) project number? 0% design completed. Survey data being collected. Right-of-way being acquired. • Edmondson Pike (\$10,000) project number? Design completed. Construction has not yet begun.
	Engineer 1	1	<ul style="list-style-type: none"> • Construction project manager for capital improvement projects and plan checks commercial and industrial building permit submittals. • Currently closing out the construction of four capital improvement projects including Music Valley Drive, Larkin Springs, Douglas Avenue, and Dotson Chapel Road. These four projects are at final payment/adjustment stage. • Allocating an estimated 10% of her time to assisting another Engineer 1 in the construction management of Whitland Avenue drainage improvements. • Allocating an estimated 80% of her time to the sidewalk capital improvement program including the preparation of a sidewalk/bike path master plan by a consulting engineer (Bob Murphy – contract amount is \$500,000) and the administration of the contract with USI Infrastructure for the construction inspection of the sidewalk capital improvement project (contract is a not-to-exceed amount of \$1,500,000). • Allocating an estimated 10% of her time to plan check of commercial and industrial building permit submittals.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
	Technical Services Coordinator	1	<p>GIS Coordinator for the Engineering Division. Performs a number of functions including the following:</p> <ul style="list-style-type: none"> • Installs software for the staff of the Engineering Division and gets the software up and running. • Provides initial/brief tutorials. • Provides training in the use of ARC View. • Completes the more difficult GIS maps for staff of the Engineering Division. • Prepares databases for linkage to ARC Info. Recently prepared the bridges database and set up the procedures for data entry (the actual data was entered into the database by the CAD/GIS Analyst 1). Also recently prepared a database for capital improvement projects digitizing the geographic information and joining the Access database to ARC Info. • Keep AutoCAD 2002 up and running on the network. • Serve on the computer committee for the Public Works Department along with two other staff from the Engineering Division. Meet monthly to discuss information technology issues and approve/disapprove software purchases.
	CAD/GIS Analyst 1	1	<ul style="list-style-type: none"> • Allocates approximately 75% of his time providing computer aided design support for an Engineer 2. Provides little support to other engineers. Uses AutoCAD 2002 and Eaglepoint (to create profiles, quantity takeoffs, insert borders, etc.). Prepares profiles and cross sections for the Engineer 2. • Developing CAD standards for the Engineering Division. • The remaining 25% of his time is allocated to ARC View such as populating the bridge database.
Excavation, Encroachment, and Street Closure Permits	Technical Specialist 2	1	<ul style="list-style-type: none"> • Supervises the Engineering Technician 2, the two Office Support Specialist 3's, and the seven Engineering Technician 3's. • Completes the plan checks for commercial and industrial building permits for handicap ramps, curbs, sidewalks, and driveways and assure these improvements are built according to standard details.
	Engineering Technician 2	1	<ul style="list-style-type: none"> • This position is vacant, and has been for approximately a year. When filled, it was assigned to the office and assigned responsibility for completing the plan check of the smaller commercial and industrial building permits handicap ramps, curbs, sidewalks, driveways and assure these improvements are built according to standard details

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
	Office Support Specialist 3	2	<ul style="list-style-type: none"> Answer phones (approximately 105 phone calls per day), issue street closure, excavation, and encroachment permits. Take complaints from the public regarding excavation and street closure permits, and contact the contractor to resolve the problem.
	Engineering Technician 3	7	<ul style="list-style-type: none"> Inspect excavation cuts, both the backfill and the final, inspect encroachment permits, and inspect street closures for barricading and warning signs. Assigned to geographical areas.
Stormwater Services (Note: The NPDES function was transferred to the Water Department during the period of this study.)	Engineer 3	1	<ul style="list-style-type: none"> Supervises three staff including the Engineer 2 assigned to plat plan checking, the Engineer 2 assigned to Storm Water Discharge Enforcement, and the Technical Services Coordinator assigned to construction inspection.
	Technical Services Coordinator Engineering Technician 3	1 4	<ul style="list-style-type: none"> Inspect the construction of public improvements resulting from development including plats and commercial/industrial permits. This includes streets, sidewalks, drainage, curb and gutter, driveways in the right of way, storm drains, detention ponds, and grading. Also handle complaints received from the public regarding construction such as illegal dumping, debris and dirt on streets, erosion control measures, etc. The Technical Services Coordinator allocates approximately 50% of his time to construction inspection, and the remaining 50% to development of bond estimates for the improvements resulting from development.
	Engineer 2 Engineer 1 Engineer-In-Training	1 1 1	<ul style="list-style-type: none"> Plan check preliminary/final plats and construction plans.
	Engineer 1	1	<ul style="list-style-type: none"> Physically based at the Code Enforcement Department. Provides engineering review for building permits, primarily single lot development.
	Engineering Technician 3	1	<ul style="list-style-type: none"> Provides flood plain information to the public including whether parcels are/are not located within the flood plain.
	Engineer 2	1	<ul style="list-style-type: none"> Supervises the Storm Water Discharge Enforcement program including six staff including a Technical Services Coordinator, two Engineering Technician 3's, two Engineering Technician 2's and an Office Support Representative 3.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
	Engineering Technician 3 Engineering Technician 2	1 1	<ul style="list-style-type: none"> Field screening program designed to identify non-storm water discharges into the storm water collection system and identify their sources. An estimated 4,274 major outfalls have been evaluated over the past two years. Only 139 sites were found to have storm water flow. The major outfalls must be field screened once every two years. An “outfall” includes such items as outfalls from a piped storm water conveyance as well as ditches or other channels. These two staff collect storm water samples in the field. Use a small lab kit to test for pH, dissolved oxygen, TR chlorine, total copper, total phenol, detergents, ammonia, fluoride, temperature. Attempting to identify illegal discharges into the storm water system. Didn’t find that many illegal discharges; recommending a modification for the next five year permit to reduce the extent of sampling for the rural areas of Metro Nashville.
	Engineering Technician 3	1	<ul style="list-style-type: none"> Conducts the ambient stream monitoring program. Collects regular grab samples from established points in streams and assesses of the biology and stability of selected streams at eight locations.
	Technical Services Coordinator	1	<ul style="list-style-type: none"> Conduct industrial inspections of approximately 74 high-risk industrial facilities, as required by the five-year permit, to monitor and control pollutants in storm water runoff. The goal of the initial inspection is to determine if chemicals present at the industry are utilized, stored, moved, disposed of, etc. in a manner that can contribute to storm water pollution. Sampling of runoff will be conducted (foam, odor, stains, etc. visible at the outfall). Storm water monitoring is conducted booth via automatic sampling devices and manual sampling techniques. Maintains the databases including the complaint database, an up-to-date inventory of the storm water infrastructure.
	Engineering Technician 2	1	<ul style="list-style-type: none"> This position is vacant. The position, when filled, did work with the Engineering Technician 3 collecting ambient monitoring samples. The position, when filled, will maintain an inventory of the storm water devices in GIS (i.e., oil and water separators, detention ponds, etc.). The intent will be to make sure these devices are maintained.

Function	Staffing by Classification		Key Elements of Staffing and Scheduling
Intelligent Transportation System	Engineer 1	1	<ul style="list-style-type: none"> Project manager for the development of the intelligent transportation system (ITS) within Metro Nashville. The Engineering Division has obtained \$16,526,028 in grants from the federal government for the implementation of an Intelligent Transportation System. The local match for these grants amounts to \$1,368,991. This includes eleven separate capital improvement projects. The plan for deployment is (1) design and construct a new traffic operations center as the hub of the ITS; (2) update all traffic signal controller devices to digital technology; (3) update outdated traffic signal display and detector technology on key arterials; (4) install a fiber optic communications backbone for integration of the ITS; (5) install video surveillance on major arterials for monitoring traffic; (6) install vehicle system detection on major arterials for monitoring traffic conditions and collecting historical traffic data; (7) integrate the traffic signal, video surveillance, and vehicle detection systems into a unified arterial management system; and (8) integrate Metro Nashville's arterial management system with TDOT's regional transportation management center and Metro Nashville's emergency operations center.

4. SUMMARY OF OPERATIONS

In the section of the report, which follows, is provided a summary outline of key indicators of Public Works programs and services, staffing and operations in Nashville and Davidson County. In the table, which follows, is provided a summary of the programs and services provided by the Public Works Department. Key workload and service level indicators are also provided.

Function	Description of Services	Workload and Service Levels
Administration	<ul style="list-style-type: none"> • Communicates Departmental requirements and activities to City Administration, elected officials, and advisory boards • Establish goals/strategies for the Dept. and each division. • Directs special projects. • Conducts Department public information program 	<ul style="list-style-type: none"> • Hours of operation – 8:00 a.m. till 4:30 p.m. Mon. through Fri.
Contracts Management	<ul style="list-style-type: none"> • Maintains list of current contracts • Provides policy advice to Department • Prepares Council legislation 	<ul style="list-style-type: none"> • The Department currently has 314 open contracts and purchase orders • Total open value of contracts and purchase orders is \$13,288,986 • Works an 8:00 to 5:00 Monday through Friday schedule.

Function	Description of Services	Workload and Service Levels
Staff Services--Finance	<ul style="list-style-type: none"> • Develops and administers Department budget • Manage departmental records. • Receives and processes payment authorizations • Provides accounting and bookkeeping services for the Department. • Processes purchase requisitions for DPW purchases. • Provides computer network support • Collects and reports revenues from fees, contracts, and special zone programs 	<ul style="list-style-type: none"> • Maintenance call log indicates approximately 168 departmental facility repair orders since July 24, 2000 • Processes approximately 100 procurement card transactions per month • Supports approximately 140 personal computers, 5-6 plotters, 1 large print canner, 3 standard scanners, 20 printers, 7 NT network servers, 1 OS-2 server, 1 Novell network • Maintains Novell network because Engineering Division has not converted legacy applications from dBASE module. • Administrative Services staff generally work from 8:00 a.m. to 4:30 p.m.

Function	Description of Services	Workload and Service Levels
Staff Services--Human Resources	<ul style="list-style-type: none"> • Processes payroll for the employees of the Department. • Assesses training needs of Department employees, implements training programs in response to department needs, and maintains records of previous training by employee. • Assesses safety practices of Department employees and acquires or develops corrective actions. • Assists operating centers in the interpretation of departmental and Metro policies and procedures. • Assists operating centers in the typing, filing, faxing, phone answering and record-keeping related to operations. • Assesses Department compliance with State and federal employment law. • Coordinates administration of employee grievance system. • Coordinates employee recruitment and insures compliance with civil service requirements. • Administers Metro substance abuse program for Department. 	<ul style="list-style-type: none"> • Processes payroll twice per month. • Provides policy and procedure interpretation as requested.

Function	Description of Services	Workload and Service Levels
<p>Streets and Roads- Special Operations, East and West Centers</p>	<ul style="list-style-type: none"> • Conducts maintenance and repair of Metro streets, roads, guardrails, sidewalks, alleys, bridges, drains, and street lighting. • Paves roads with in-house crew. • Conducts maintenance and repair of Metro sidewalks. • Oversees contracts for the pavement of Metro streets. • Oversees the rating of Metro streets through contract with private vendor. Runs scenarios on cost of paving under multiple assumptions. Identifies streets for paving after scenario runs, as well as through communication with Metro Council. • Sweeps downtown district streets; oversees contracts for the sweeping of other streets. • Mills roads as necessary. • At the two remote centers in the east and west sections of Metro, maintain trees, mow rights of way, widen road shoulders, repair drainage problems, patch potholes, build and repair headwalls, clean vacant lots, pick up roadside litter, and other activities. • Coordinates the receipt and disbursal of inventory at warehouse. 	<ul style="list-style-type: none"> • Targeted service level is to respond to and complete action on all service calls within 30 days and potholes within 24 hours. • Maintains 2,154 center line miles of roadway (or, alternatively, 32,507,915 sq. yds.) • Repaved 110 center line miles in 2001, equating to 5.1% of total inventory. • East Center used 1,579 tons of asphalt mix in patching operations in 2001. (263 tons per crew member). • West Center used 2,437 tons of asphalt in patching operations in 2001. (406 tons per crew member). • East Center cleaned 93,052 ft. of ditch in 2001. • West Center cleaned 97,380 ft. of ditch in 2001. • East Center cleaned 13,456 ft. of pipe in 2001. • West Center cleaned 54,332 ft. of ditch in 2001. • East Center installed 1,251 ft. of pipe in 2001. • West Center installed 1,393 ft. of pipe in 2001. • Special Ops. Paving Crew poured 14,420 tons of asphalt in 2001. • Special Ops. Milling Crew milled 884,542 sq. yds. in 2001. • Special Ops. Sidewalk Crew repaired 22,098 sq. ft. of sidewalk in 2001. This crew also replaced 44,509 sq. ft. of

Function	Description of Services	Workload and Service Levels
		sidewalk in 2001. <ul style="list-style-type: none">• Downtown street sweeping crews swept 15,795 curb miles in 2001.• Streets in East and West Centers are swept by Sweeper Corp. of America (SCA), at \$26.96 per curb mile.

Function	Description of Services	Workload and Service Levels
Streets and Roads – Traffic Control	<ul style="list-style-type: none"> • Designs and oversees the installation of new and modified traffic signals. • Maintains and repairs all signalized intersections in Metro, by relamping, cleaning lenses, preventively maintaining electronics, etc. • Designs, fabricates, installs and repairs road signs. • Oversees the contract striping of streets. • Coordinates Tennessee One-Calls as necessary. • Places temporary traffic control devices for special events. 	<ul style="list-style-type: none"> • Responsible for the maintenance of approximately 800 traffic signals. • Maintains approximately 86,000 signs Metro-wide. • Ensures response to Tenn. One-calls within 72 hours of receipt. • Targeted service level of performing PM on signals once per year. Analysis of records indicates that none were preventively re-lamped in 2001. • Targeted service level of performing electronic PM on signals once per 2 years. • With 12 field traffic technician positions, the ratio of signalized intersections to technicians in approximately 67:1. • The Sign Shop manufactured 4,677 sign in 2001. Additionally, the Unit replaced 3,903 signs in 2001, or about 15.6 per working day. With 4 crew members, each working 200 days per year, this equates to approximately 4.8 signs replaced per crew member per day. • Oversight of the striping of 140 miles of 4” white and yellow lines, 40 miles of 6” lines, 4,266 feet of stop bars, 8,499 linear feet of 8” barrier line, 2,885 feet of 12” line, 4,287 feet of international crosswalk line, and other striping on Metro streets and parking lots.

Function	Description of Services	Workload and Service Levels
<p>Waste Management – Chipper Service Section</p>	<ul style="list-style-type: none"> • Assign routes to contractor crews. • 4 Supervisors monitor brush pick up by private crews. • Track complaints and requests for services on automated database. • 20 chipper trucks (at maximum service level) pick up and chip yard brush on demand. These trucks also ensure that each of approximately 137,000 Metro residences receives service 5 times annually through following regular routes after picking up “call in” brush requests. 	<ul style="list-style-type: none"> • Target service level = pick up brush on routes 5 times per year at each Metro residence. • Pick up brush on 20 routes; 17 by Queens, and 3 by Expert Services. • Queens collected 9,813 tons of brush in FY01. This equates to \$165.88 per ton, with an average of 48.1 tons collected per truck. • Expert Services collected 1,696 tons in FY01, equating to \$206.10 per ton. Expert Services averaged 62.8 tons per truck. • Metro crews collected 955 tons in FY01, averaging 19.9 tons per truck. • A total of 12,464 tons of brush were collected in Metro in FY01.

Function	Description of Services	Workload and Service Levels
<p>Parking</p>	<ul style="list-style-type: none"> • The City’s three garages and two surface lots are operated under private contract. The current terms of the contract are a base fee of \$20,000 per year plus 4% of the gross receipts over \$1,275,000. The City is currently considering whether to execute a six-month renewal option that can be exercised in March, 2002. • Under the terms of the garage, the private contractor provides staffing and basic janitorial services; the City is responsible for all other operational and maintenance expenses, covering those either through work assignments, city repair, contract services, or reimbursement to the contractor. • The Division’s financial staff receives the monthly payments from the contractor and is responsible for reviewing and auditing both the payments and the underlying payment basis; also receives payments for special zone allocations and meter bagging. • The Meter Section maintains the parking meters and is responsible for meter collection; typically collection is performed every four days in high volume areas and once a week in lower volume areas. • The Division receives, reviews, and makes recommendations to the Traffic and Parking Commission on all requests for designations of loading zones, valet parking zones, bus zones, taxi stands, residential parking restrictions. • Both the Police Department and the Parking Division issues parking tickets. • The Citation system is completely manual; the Department is interested in considering an automated system, but the Police want both departments to switch at the same time. • Parking meter enforcement is performed by six Corrections Officers assigned by the Sheriff; the officers are new persons who spend six months on this duty before being assigned to the detention center. 	<ul style="list-style-type: none"> • Over the period from Oct. 2000 to Sept 2001, net income for parking garages and lots was \$1,006,767 • Over the same period, meter revenue was \$910,445 and meter bag revenue was \$35,696. • The Division maintained 1,612 meters in November 2001, up from 1,511 for November 2000. • In November 2001, the Parking Meter Division conducted 163 prevention maintenance repairs, responded to 62 trouble calls, repaired 10 meter posts, painted 94 meter posts, and installed 19 signs • The meter enforcement division averages approximately 5,500 citations per month • Meter Repair and Collections personnel work on a 7:00 a.m. to 3:30 p.m., Monday through Friday schedule. • Corrections Officers work on a 7:30 to 4:00 Monday through Friday schedule, with 2 persons also working a 7:30 to 12:30 shift on Saturdays.

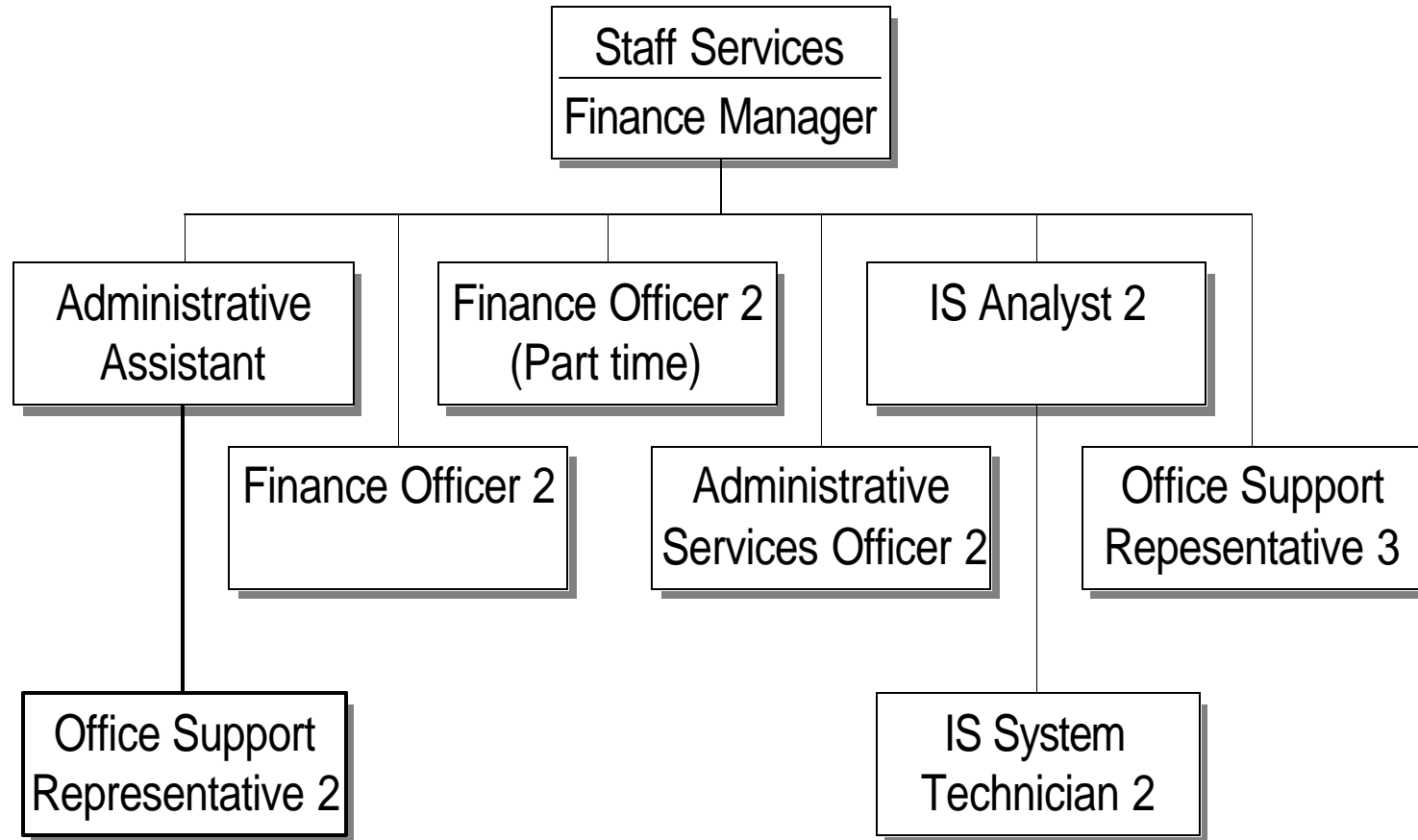
Function	Description of Services	Workload and Service Levels
Engineering Administration	<ul style="list-style-type: none"> • Communicates Division requirements and activities to the Mayor as well as to Council. • Establish goals/strategies for the Division and each section. 	
Traffic Engineering	<ul style="list-style-type: none"> • Conduct studies regarding installation/modification of traffic control devices in response to requests from the public (i.e., requests for stop signs, traffic signals, speed limit changes, four-way stops, etc.). • Review development submittals (subdivision plats, commercial and industrial building permits) referred by the Planning Department and Code Enforcement Department. Review the associated traffic impact studies, proposed mitigation measures, site layout, and attend Planning Commission meetings. • Design traffic signals for road widening or modifications to existing signals. • Conduct modification studies of traffic signals such as signal timing, loops, programming, etc. • Conduct traffic counts using eight new traffic counters. These are computer-based traffic counters. 	<ul style="list-style-type: none"> • Complete approximately 1,200 traffic studies annually with an approximate two to three week response time to these requests.
Capital Projects Management	<ul style="list-style-type: none"> • Manage the design and construction of capital improvement projects • Provide construction inspection of the sidewalk capital improvement projects to assure adherence to the plans, specifications, and estimates. • Provide design and construction staking survey services. Use total station survey equipment. • Plan check of commercial and industrial building permit submittals to assure public improvements adhere to standard details. • Provide street addresses and names for new development after the plat is recorded. Utilize the Land Information System to 	<ul style="list-style-type: none"> • A six year total of \$790.3 million of capital improvement projects are included within Public Works G.S.D. in the six year capital improvement budget and another \$250.0 million in Public Works U.S.D. in the six year capital improvement budget • The survey crew apparently provides a timely response to requests for survey, with a two-week turnaround time to such requests. Contract survey crews are seldom utilized.

Function	Description of Services	Workload and Service Levels
	<p>maintain the street name index.</p> <ul style="list-style-type: none"> • Microfilm plans including plat grading and drainage plans, and plat construction plans. • Maintain the Street and Alley index. Index of streets and alleys owned and maintained by Metro Nashville. Update with new streets and alleys resulting from development. • Maintain the E-911 database, inputting new addresses, on behalf of utilities, U.S. Post Office, and public safety services. 	
Excavation, Encroachment, and Street Closure Permits	<ul style="list-style-type: none"> • Issue street closure, excavation, and encroachment permits. • Inspect excavation cuts, both the backfill and the final, inspect encroachment permits, and inspect street closures for barricading and warning signs. • Completes the plan checks for commercial and industrial building permits for handicap ramps, curbs, sidewalks, and driveways and assure these improvements are built according to standard details. 	<ul style="list-style-type: none"> • This section issued 6,561 street closure permits, 974 excavation permits, and 9 encroachment permits in calendar year 2001.
Storm Water Services	<ul style="list-style-type: none"> • Inspect the construction of public improvements resulting from development including plats and commercial/industrial permits. This includes streets, sidewalks, drainage, curb and gutter, driveways in the right of way, storm drains, detention ponds, and grading. • Plan check preliminary/final plats and construction plans. • Provides engineering review for building permits. 	<ul style="list-style-type: none"> • There are approximately 130 active subdivisions and 240 active commercial/industrial building permits.
NPDES (Note: The NPDES function was transferred to the Water Department during the period of this study.)	<ul style="list-style-type: none"> • Improve the water quality of receiving streams in Metro Nashville. • Conduct a field screening program to identify non-storm water discharges into the storm water collection system and identify their sources. The major outfalls must be field screened once every two years. An "outfall" includes such items as outfalls from a piped storm water conveyance as well as ditches or other channels. These two staff collect storm water samples in the 	<ul style="list-style-type: none"> • Notices of Violation sent in calendar year 2000: 47 • Notices of Violation sent in calendar year 2000 for grading permits: 5 • Field screening program has evaluated an estimated 4,274 major outfalls over the past two years. Only 139 sites were found to have storm water flow.

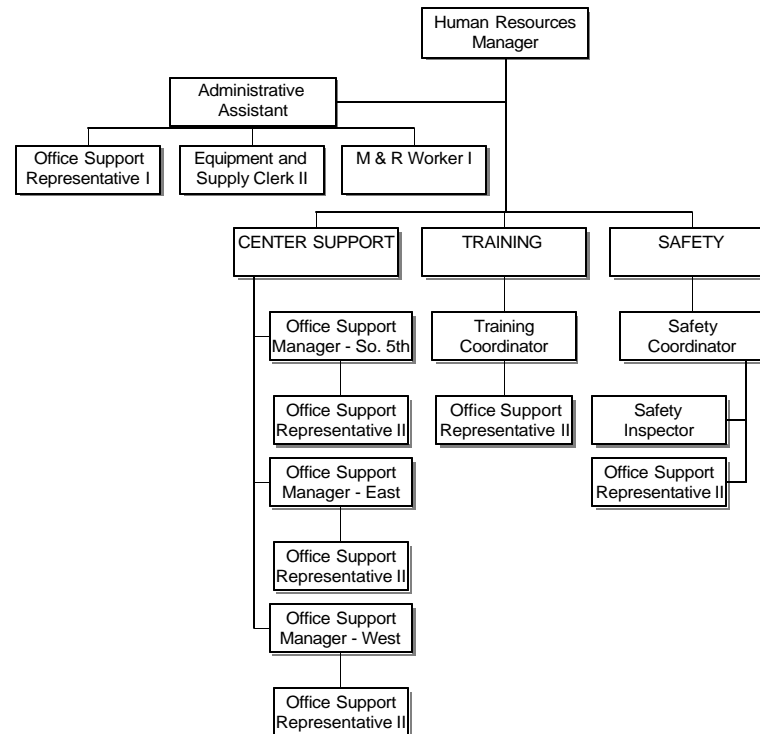
Function	Description of Services	Workload and Service Levels
	<p>field. Use a small lab kit to test for pH, dissolved oxygen, TR chlorine, total copper, total phenol, detergents, ammonia, fluoride, temperature. Attempting to identify illegal discharges into the storm water system. Didn't find that many illegal discharges; recommending a modification for the next five year permit to reduce the extent of sampling for the rural areas of Metro Nashville.</p> <ul style="list-style-type: none"> • Conduct an ambient stream monitoring program collecting regular grab samples from established points in streams and assessing the biology and stability of selected streams. Ambient monitoring focuses on specific locations where the sample is taken at the same time on the same day, every month. The intent is to build a baseline of data regarding storm water at these locations. • Conduct inspections of high-risk industrial facilities, as required by the five-year permit, to monitor and control pollutants in storm water runoff. The goal of the initial inspection is to determine if chemicals present at the industry are utilized, stored, moved, disposed of, etc. in a manner that can contribute to storm water pollution. Sampling of runoff will be conducted (foam, odor, stains, etc. visible at the outfall). Storm water monitoring is conducted both via automatic sampling devices and manual sampling techniques. 	<ul style="list-style-type: none"> • Ambient stream monitoring at eight locations. • Conduct inspections of approximately 74 high-risk industrial facilities.
Intelligent Transportation System		<ul style="list-style-type: none"> • The Engineering Division has obtained \$16,526,028 in grants from the federal government for the implementation of an Intelligent Transportation System. The local match for these grants amounts to \$1,368,991. This includes eleven separate capital improvement projects.

ORGANIZATION CHARTS

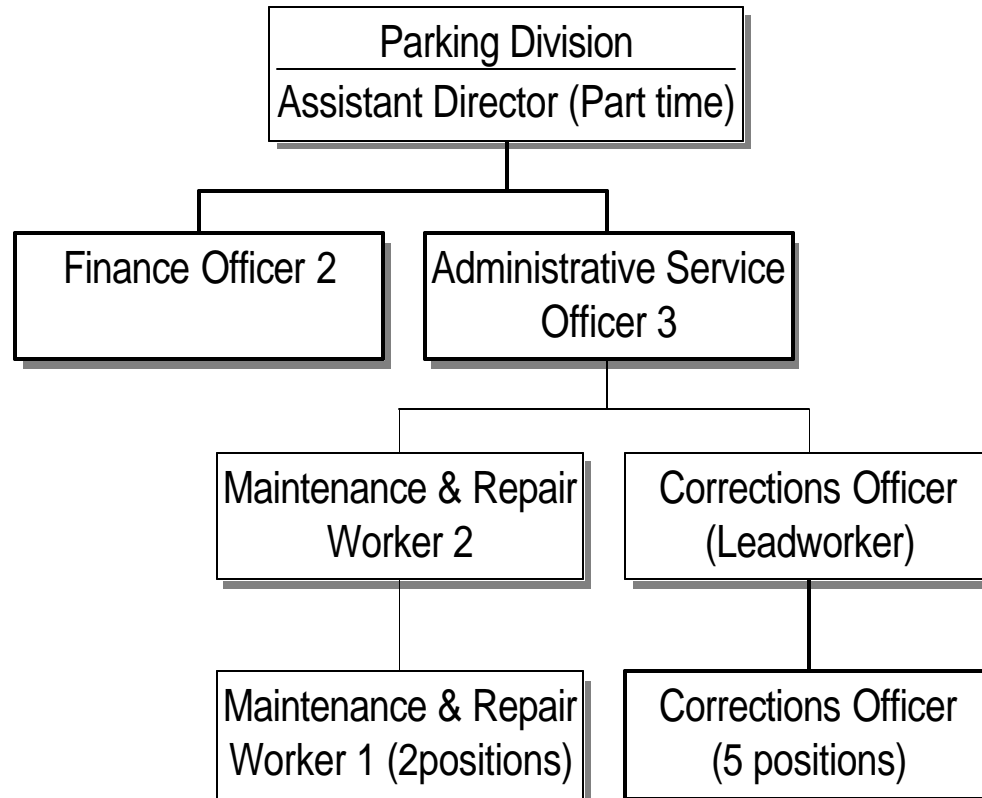
STAFF SERVICES: FINANCE



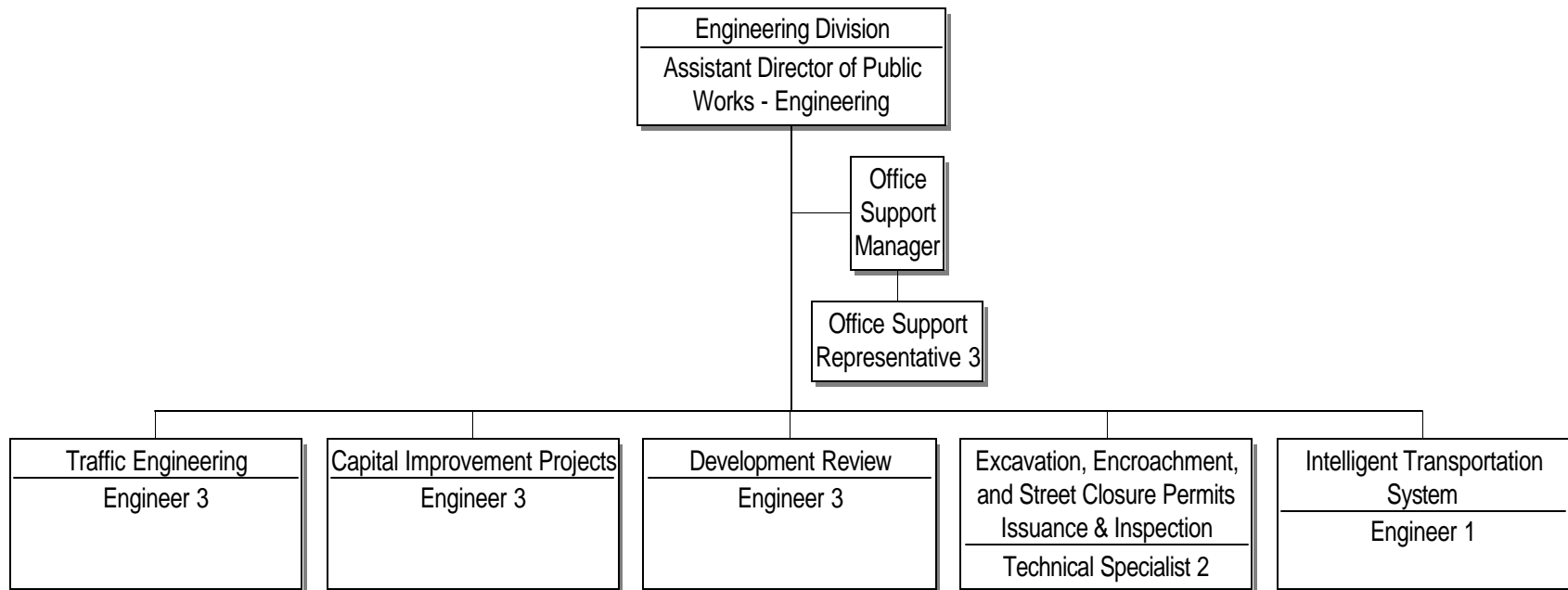
STAFF SERVICES: HUMAN RESOURCES



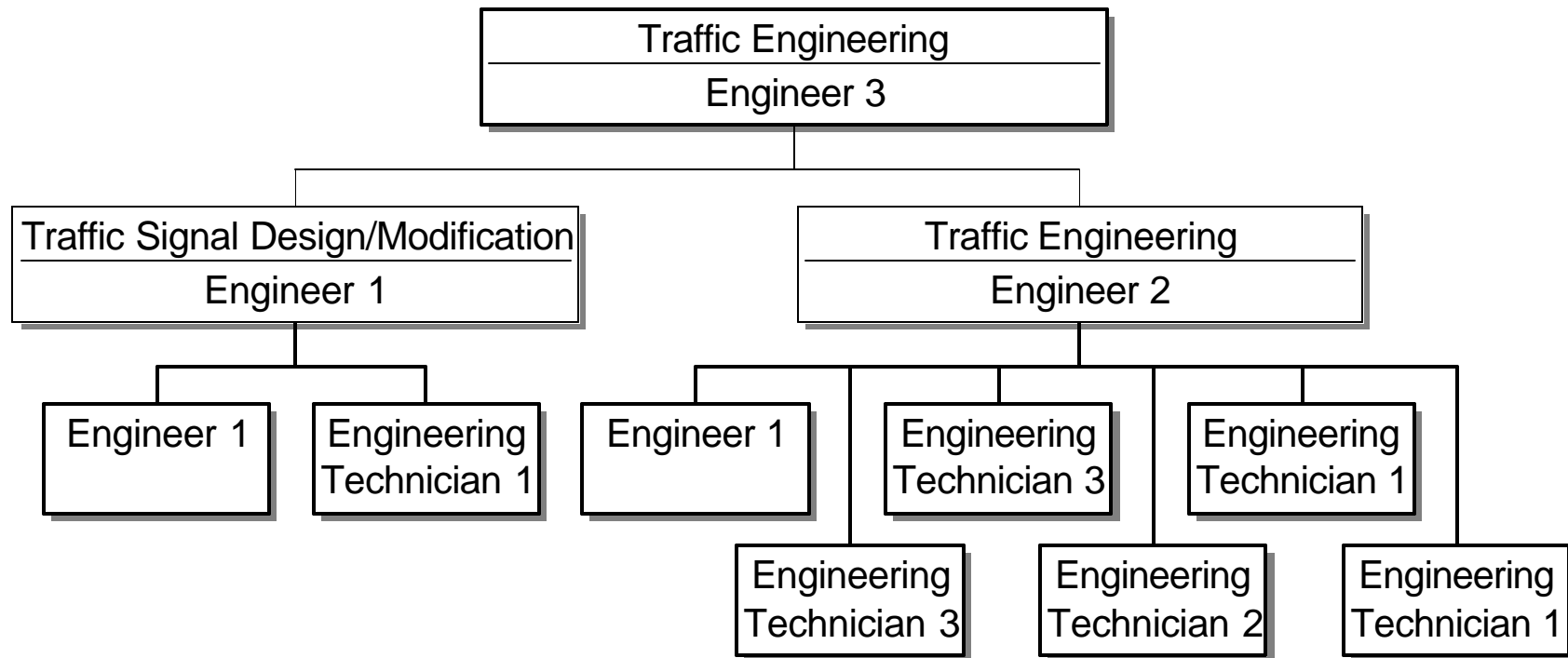
PARKING DIVISION



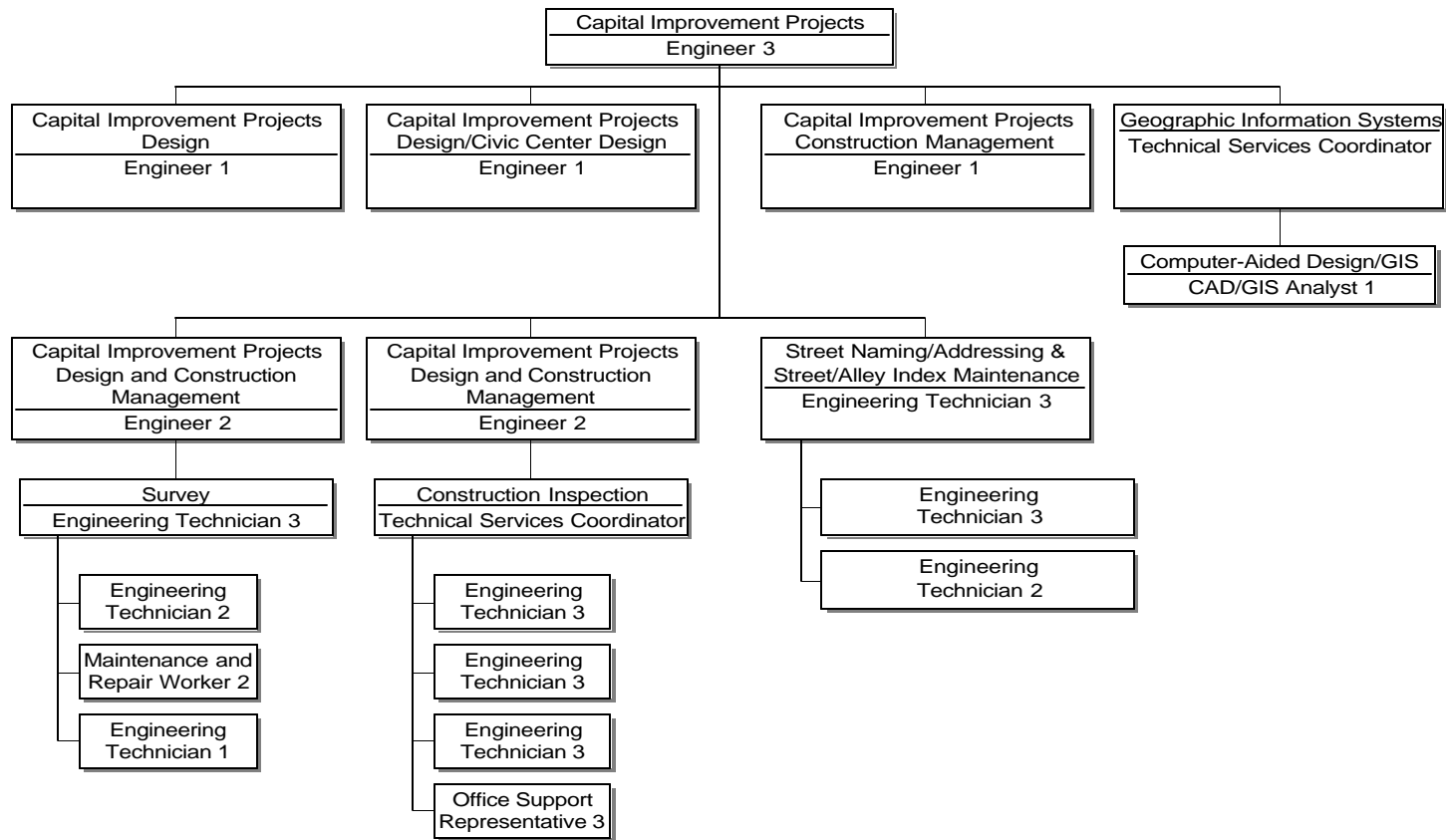
ENGINEERING DIVISION ADMINISTRATION



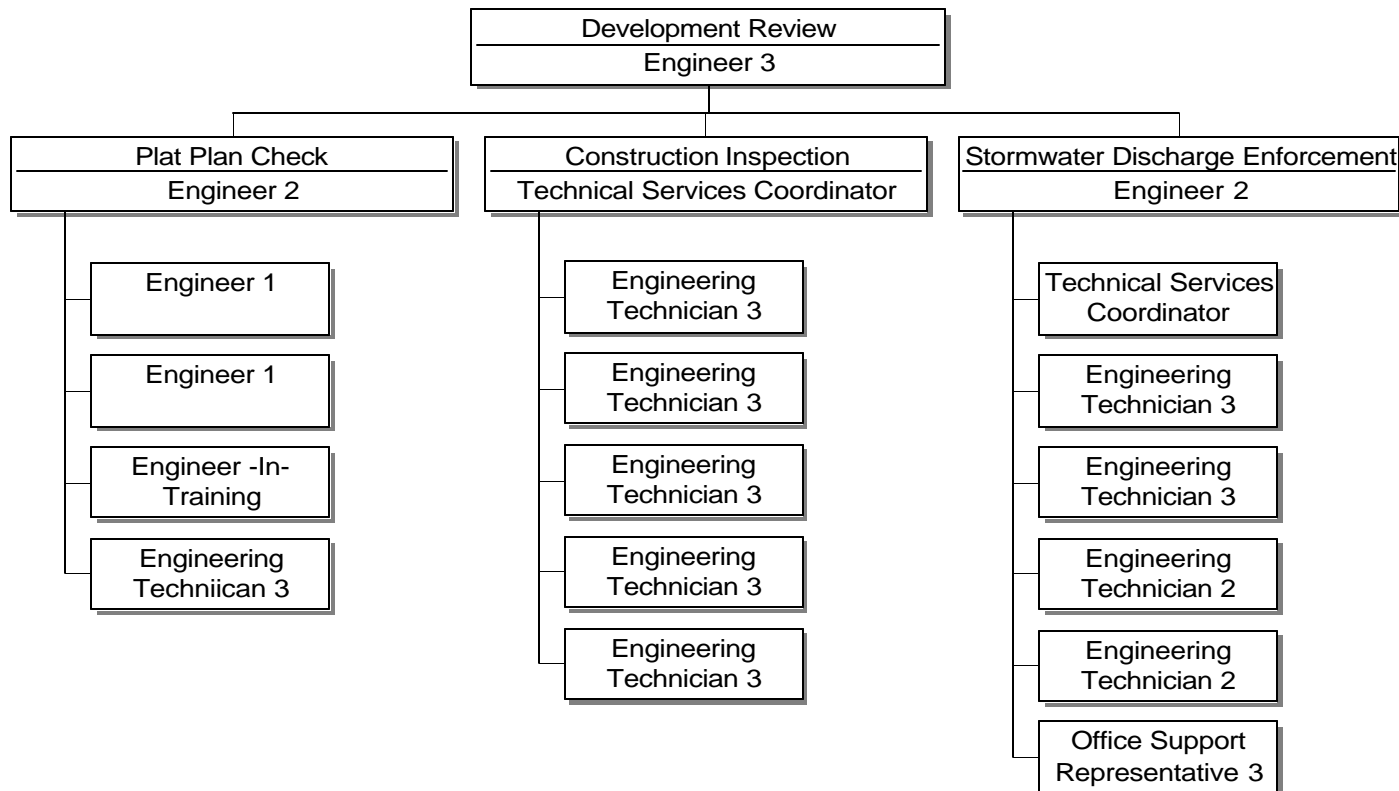
ENGINEERING DIVISION: TRAFFIC ENGINEERING



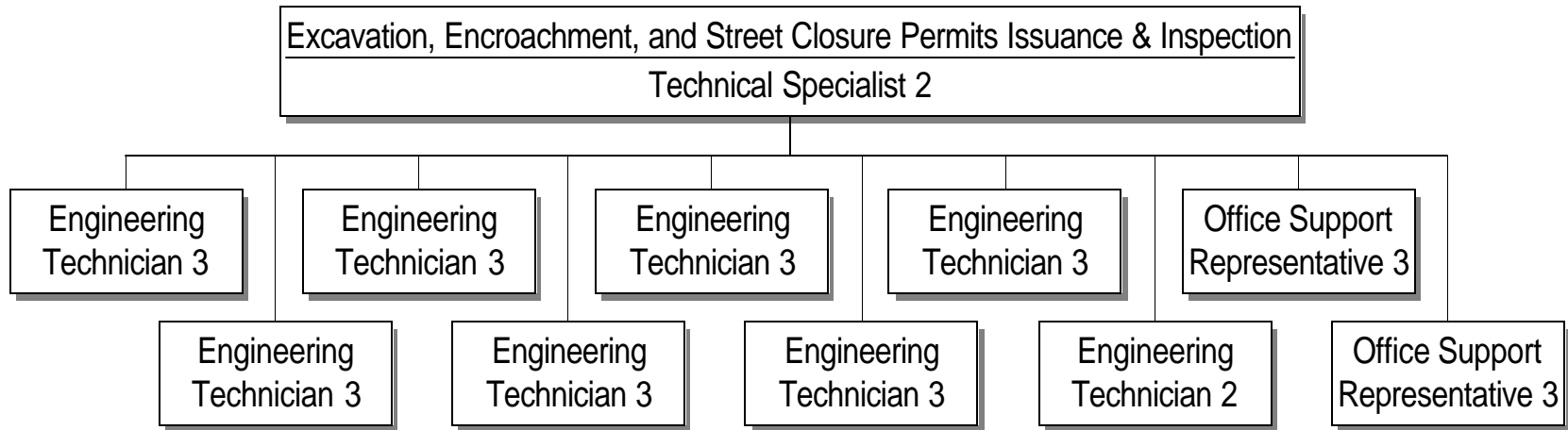
ENGINEERING DIVISION: CAPITAL PROJECTS MANAGEMENT



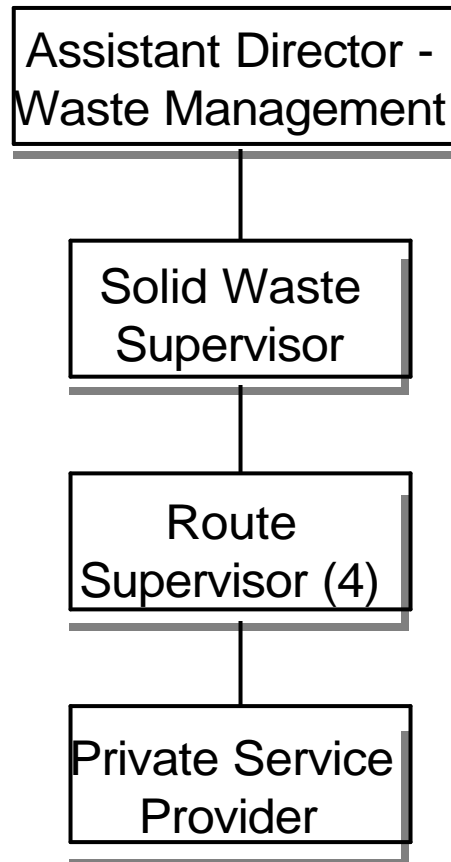
ENGINEERING DIVISION: DEVELOPMENT REVIEW



ENGINEERING DIVISION: EXCAVATION, ENCROACHMENT, AND STREET CLOSURE PERMITS



WASTE MANAGEMENT DIVISION: CHIPPER SERVICES



STREETS AND ROADS DIVISION

