

OUR CITY OF MADISON



Engineering Division Introduction

Jim Wolfe, City of Madison City Engineer

Vision and Mission



People - Places - Possibilities

CITY OF MADISON

Our Agency's Vision and Mission

Vision

- *City Vision - Our Madison: Inclusive, Innovative, & Thriving*

Mission

The mission of the City of Madison Engineering Division is to provide a multi-faceted combination of Public Works services to the residents and customers of Madison in a fair and consistent manner that allows for and encourages public input. The Engineering Division is responsible for the surveying, design, construction, mapping, GIS and maintenance of city facilities, streets, highways, sidewalks, bike path construction, bridges maintained by the City of Madison, stormwater facilities and sanitary sewers. The Division is responsible for all aspects of the Storm Utility, Sewer Utility and the Landfill Fee.

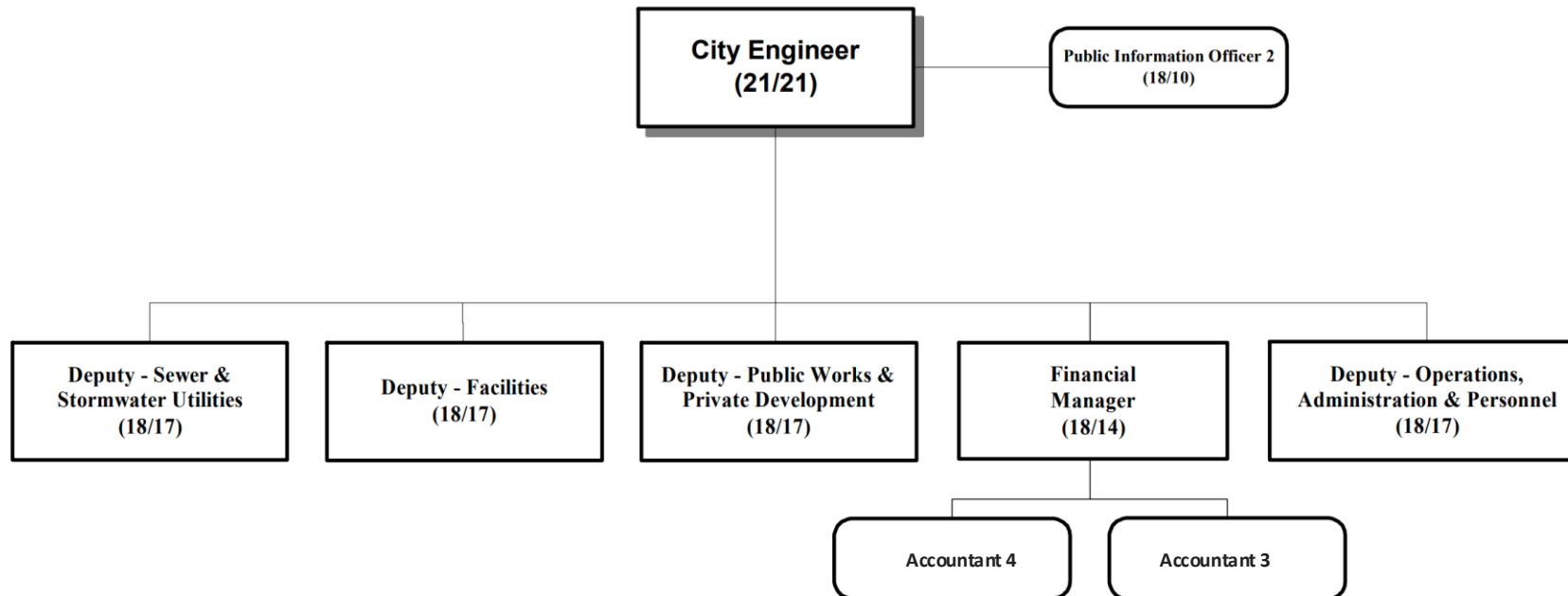
Structure, Services, and Staff



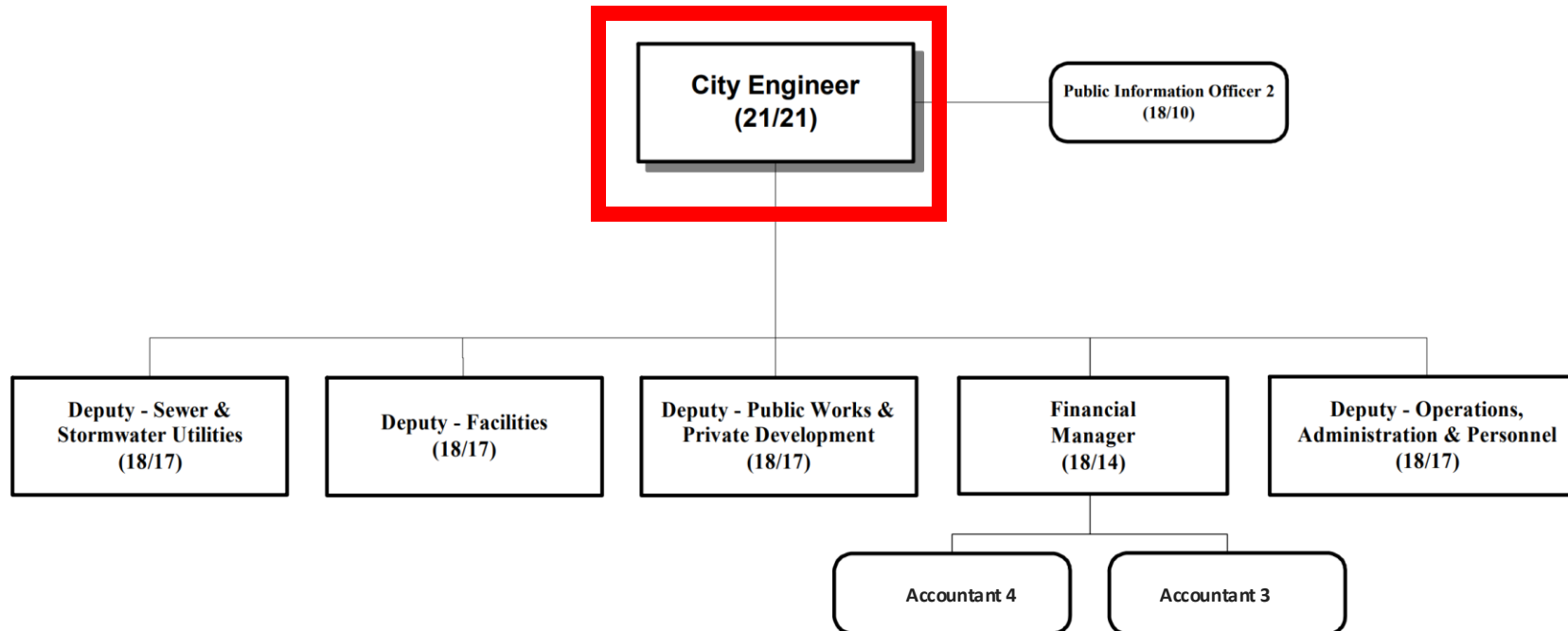
People - Places - Possibilities

CITY OF MADISON

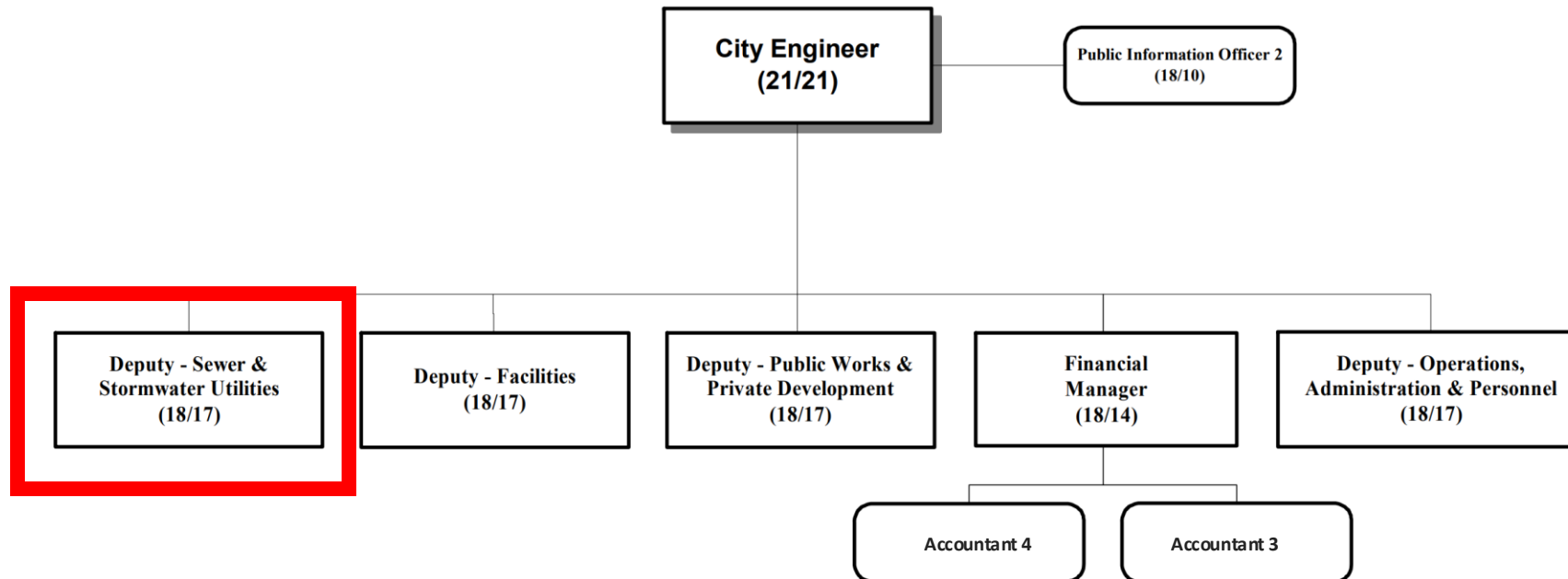
Structure: Overall



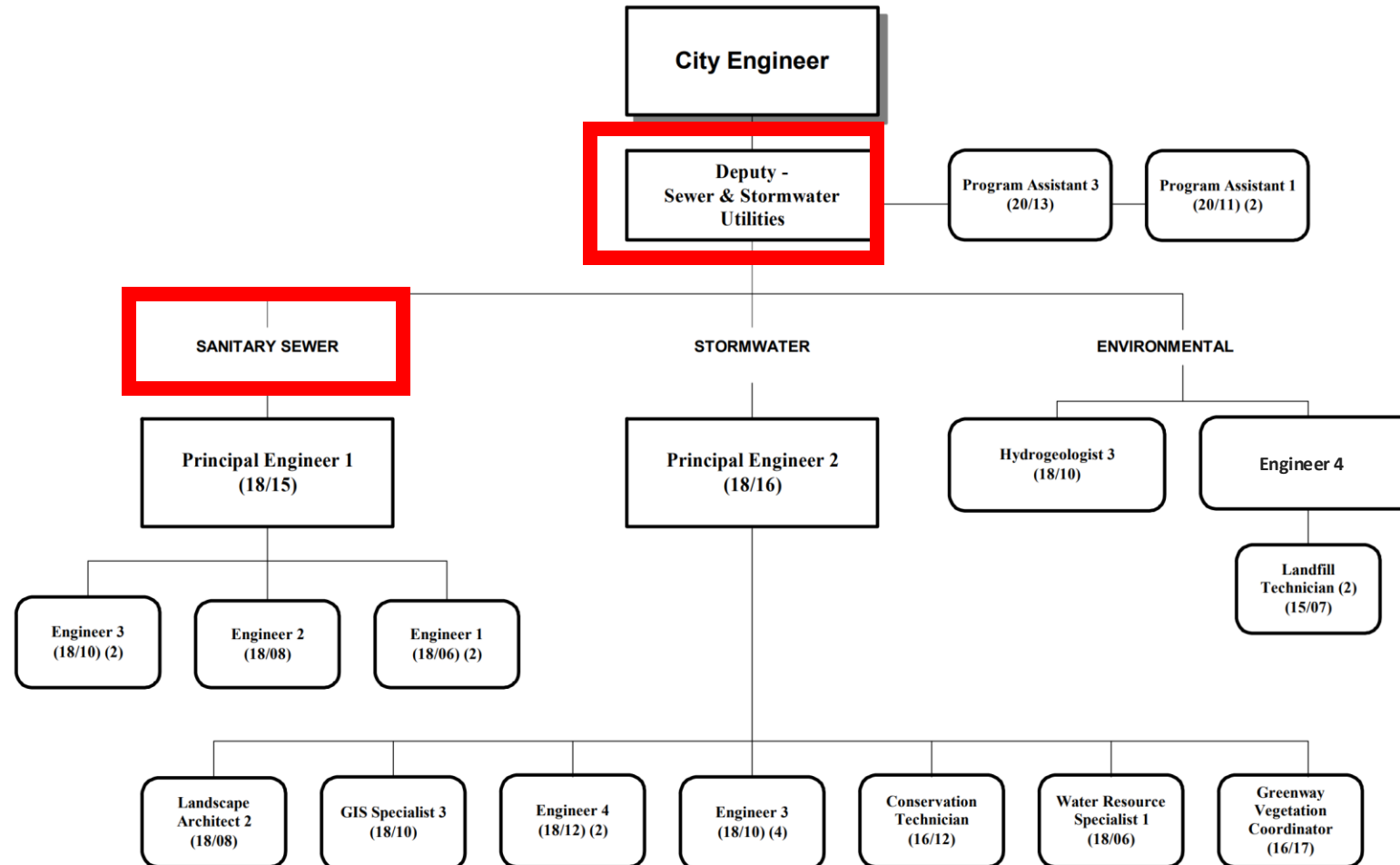
Structure: City Engineer



Structure: Sewer, Stormwater, Utilities



Structure: Sanitary Sewer



Services/Areas: Sanitary Sewer

- The mission of the Sanitary Sewer Utility Section is provide safe, reliable, efficient and cost-effective collection of wastewater. This section is responsible for the sanitary sewer system. These services and programs protect the safety and welfare of the public and natural environment.
- The sanitary sewer system is a series of pipes and pumping stations that take wastewater from homes and businesses and deliver it to the [Madison Metropolitan Sewage District](#) for treatment of the wastewater.

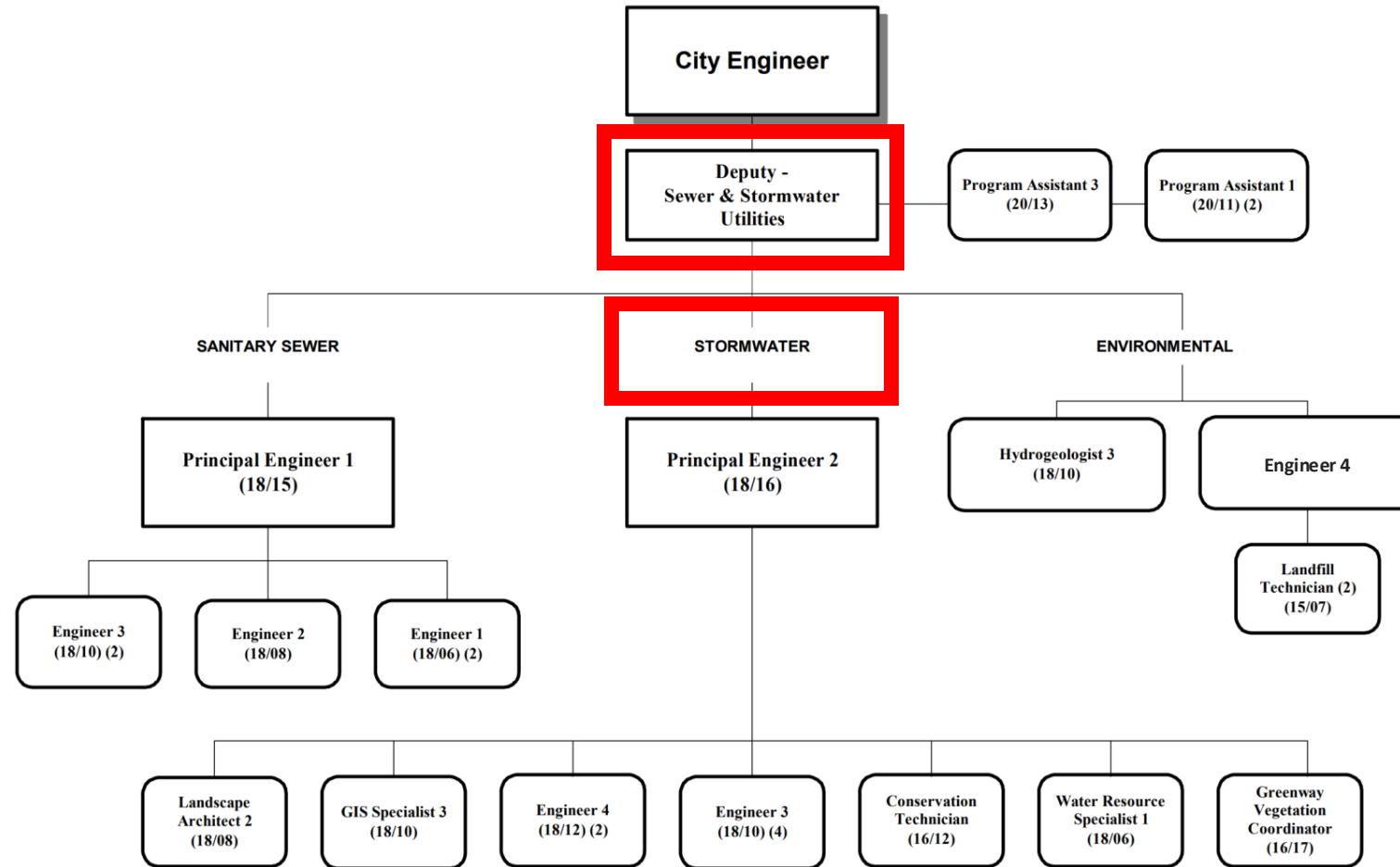
Services/Areas: Sanitary Sewer

- The Sanitary Sewer Utility directs the planning, design, construction and repair of public sanitary sewer facilities among the following:
 - Reviews all individual lot improvements for City's sanitary sewer capacity impacts
 - Replaces sewer facilities to handle the development with street reconstructions
 - Designs sewer size and lay out sewer mains for new subdivision development
 - The Sewer Utility assumes ownership and responsibility for maintenance and operation of sewers upon acceptance of the improvements by the Common Council.
 - Designs sanitary sewer improvements with street reconstruction projects
 - Evaluates sewer camera footage, data to prioritize which areas of the City are in greatest need for sewer improvements
 - Complete all Regulatory Reporting Requirements with City's CMOM (Capacity, Management, Operation and Maintenance) for the WDNR (Wisconsin Department of Natural Resources).
 - Identifies sources of clearwater (non-sanitary flow) entering City sewer

Key Staff: Sanitary Sewer

- *Greg Fries, Deputy City Engineer – Sewer, Stormwater, Utilities*
 - *Email: gfries@cityofmadison.com*
- *Mark Moder, Principal Engineer, Sanitary Sewer Design Section Manager*
 - *Email: mmoder@cityofmadison.com*

Structure: Stormwater



Services/Areas: Stormwater

- The mission of the Stormwater Utility Section is to manage stormwater services (drainage and water quality) to the public, while maintaining an equitable rate structure.
- The Stormwater Utility Section designs, reviews, constructs and maintains the City of Madison storm sewer system, which includes approximately 557 miles of pipe used for flood control and runoff water quality improvement.

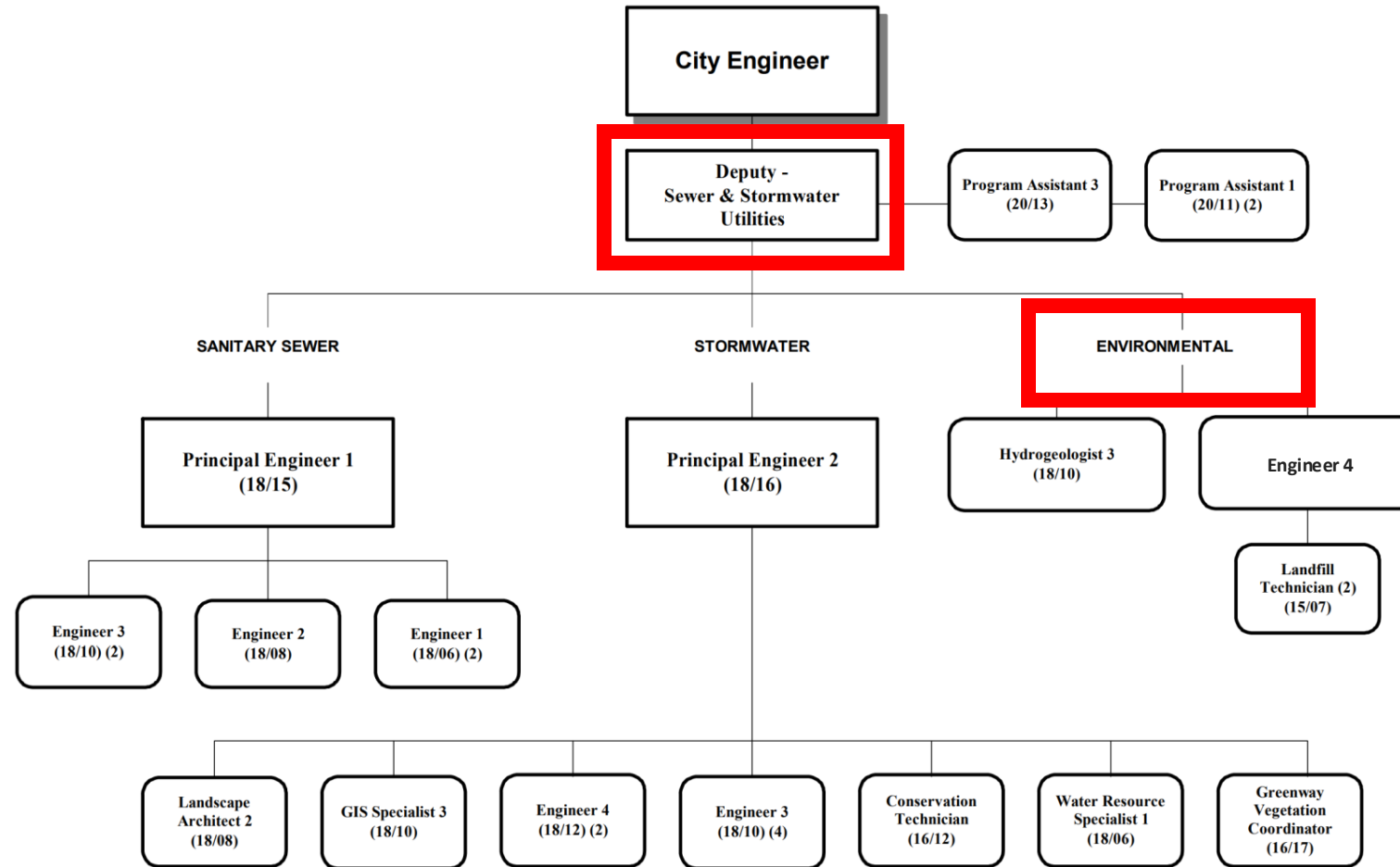
Services/Areas: Stormwater

- Specific parts of the system include:
 - Pipes, drains, greenways and inlets for stormwater collection
 - Ponds, rain gardens, greenways, and catch basins for water quality improvement
 - Flood control/modeling (View our [Watershed Study Flood Risk Map](#))
 - Maintenance of existing storm sewer system
 - Compliance with the City's WPDES stormwater discharge permit (WDNR/EPA)
 - Construction of ponds, greenways, shorelines and rain gardens
 - Street sweeping
 - Leaf collection and performance of leaf studies
 - [Erosion control permitting](#)
 - Neighborhood planning process, pertaining to stormwater and water quality
 - Private development review pertaining to stormwater water quality
 - Design of both new and replacement storm sewer infrastructure
 - Provides guidance on rain garden construction through [Roger Bannerman Rain Garden Program](#)
 - Leads City and County effort to [reduce salt use](#)
 - [Retrieving lost items and wildlife from drains](#)

Key Staff: Stormwater

- *Greg Fries, Deputy City Engineer – Sewer, Stormwater, Utilities*
 - Email: gfries@cityofmadison.com
- *Janet Schmidt, Principal Engineer, Stormwater Sewer Design Section Manager*
 - Email: jschmidt@cityofmadison.com

Structure: Environmental



Services/Areas: Environmental

- The mission of the Environmental Section is to provide for the sustainable management and remediation of contamination on City owned land and in the right of way. The goal is to protect human health and the environment by complying with State and Federal environmental cleanup laws.

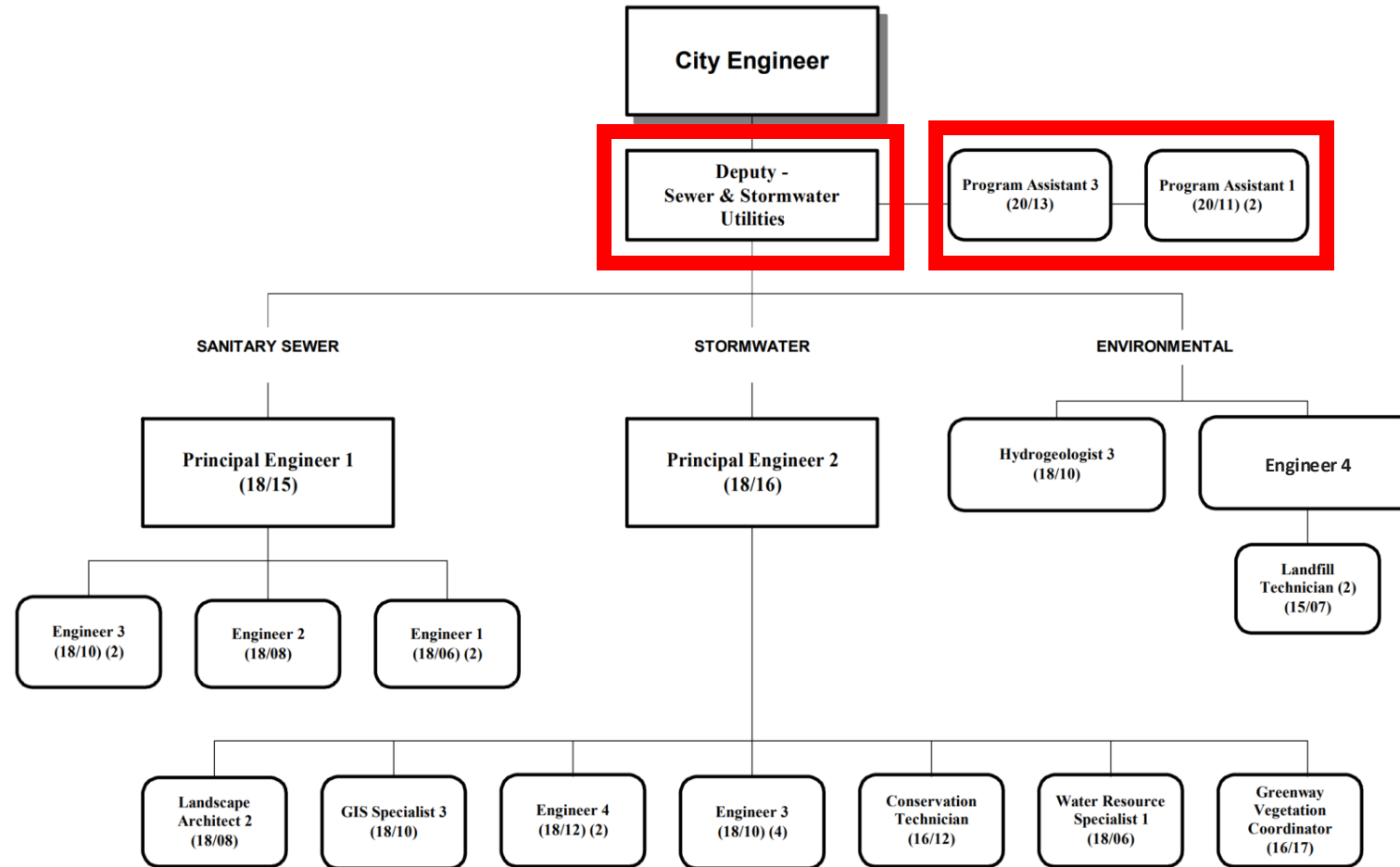
Services/Areas: Environmental

- Works with Engineering Operations to manage environmental monitoring of the City's five closed landfills: Sycamore, Demetral, Olin/Quann, Mineral Point and Greentree hills
- Conducts environmental screening of properties being dedicated to or purchased by the City. This is so the City knows what it's buying and the implications of buying contaminated property.

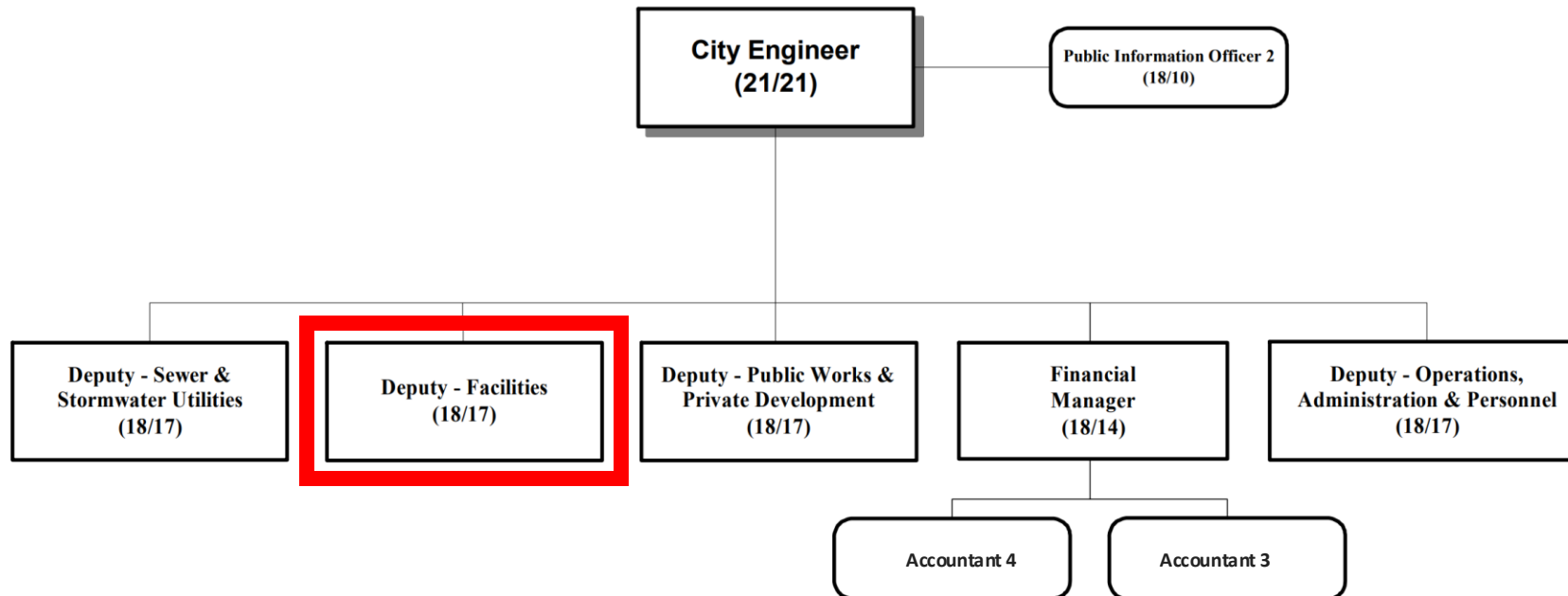
Key Staff: Environmental

- *Greg Fries, Deputy City Engineer – Sewer, Stormwater, Utilities*
 - *Email: gfries@cityofmadison.com*
- *Jack Brody, Landfill Engineer*
 - *Email: Jbrody@cityofmadison.com*

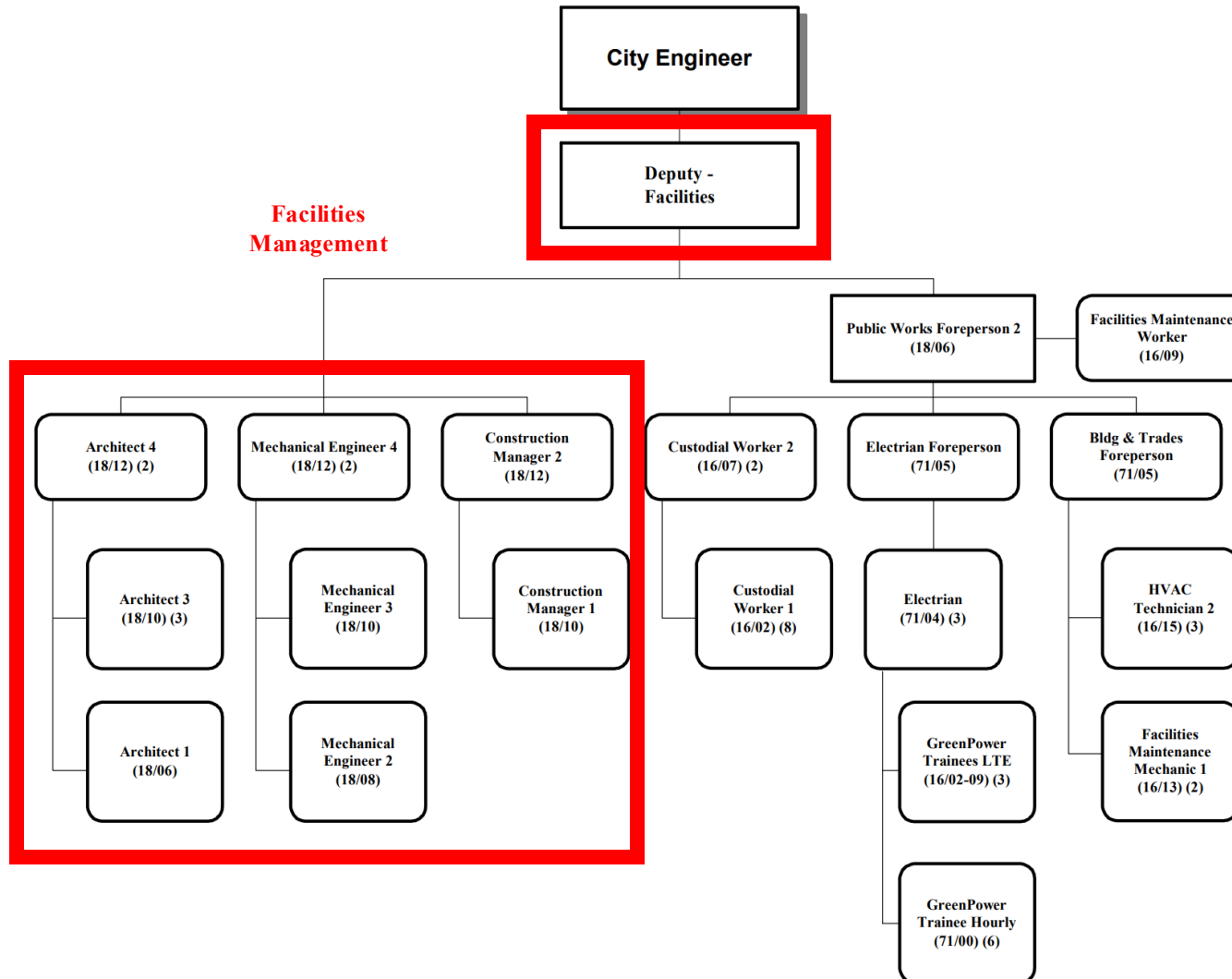
Structure: Downtown Administration



Structure: Facilities



Structure: Facilities Management



Services/Areas: Facilities Management

- The mission of the Facilities Management Section of the Engineering Division provides high quality design, project management, and building operation services to all agencies that are implementing a preventative maintenance, remodeling, or new construction project while utilizing a sustainable focus.

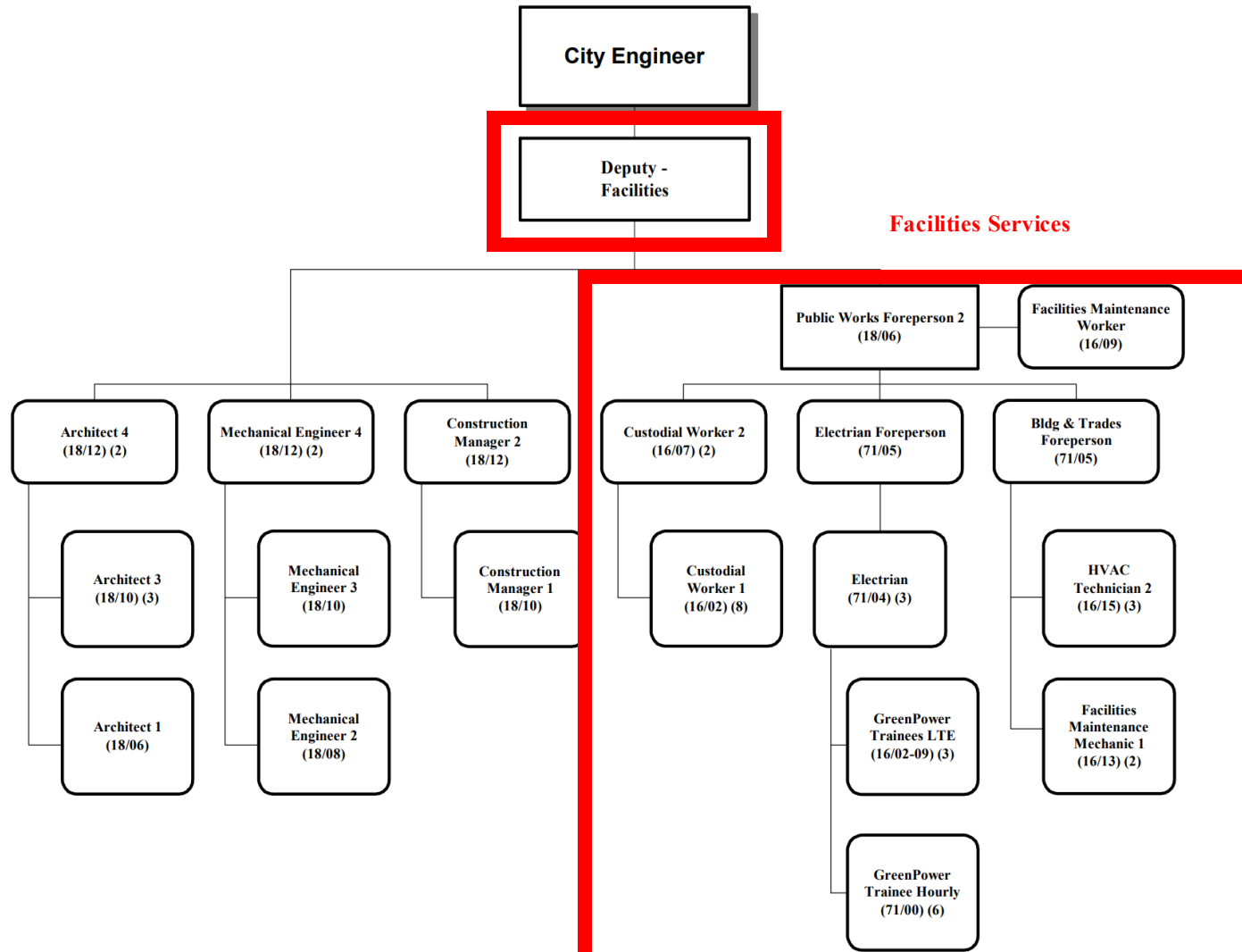
Services/Areas: Facilities Management

- The services provided by Facilities include:
 - Design and construction oversight of large technically complicated City facilities including projects like State St. Campus Parking Garage, Imagination Center at Reindahl Park, Madison Public Market, Door Creek Park Shelter, Tenney Beach Shelter, Bartillon Men's Shelter
 - In-house expertise in Architecture, Engineering, Historic Preservation, Construction Management, Office Environments, Interior Design, energy use, and similar facility-related disciplines
 - In-house small project design for office remodels, roofing projects, building demolitions, and historic preservation
 - Focus on in-house design and construction of energy improvement projects such as lighting retrofits, mechanical upgrades, solar photovoltaic installations, and similar efforts to both reduce the City's energy demand as well as supply energy on-site
 - Coordinates city efforts to implement projects that lower energy use, conserve water, use renewable sources of energy, and provide a good quality indoor air environment.
 - Administers the city's emergency warning siren program

Key Staff: Facilities

- *Bryan Cooper, Deputy City Engineer – Facilities*
 - *Email: bcooper@cityofmadison.com*
- *Amy Scanlon, Principal Architect*
 - *Email: ascanlon@cityofmadison.com*

Structure: Facilities Services



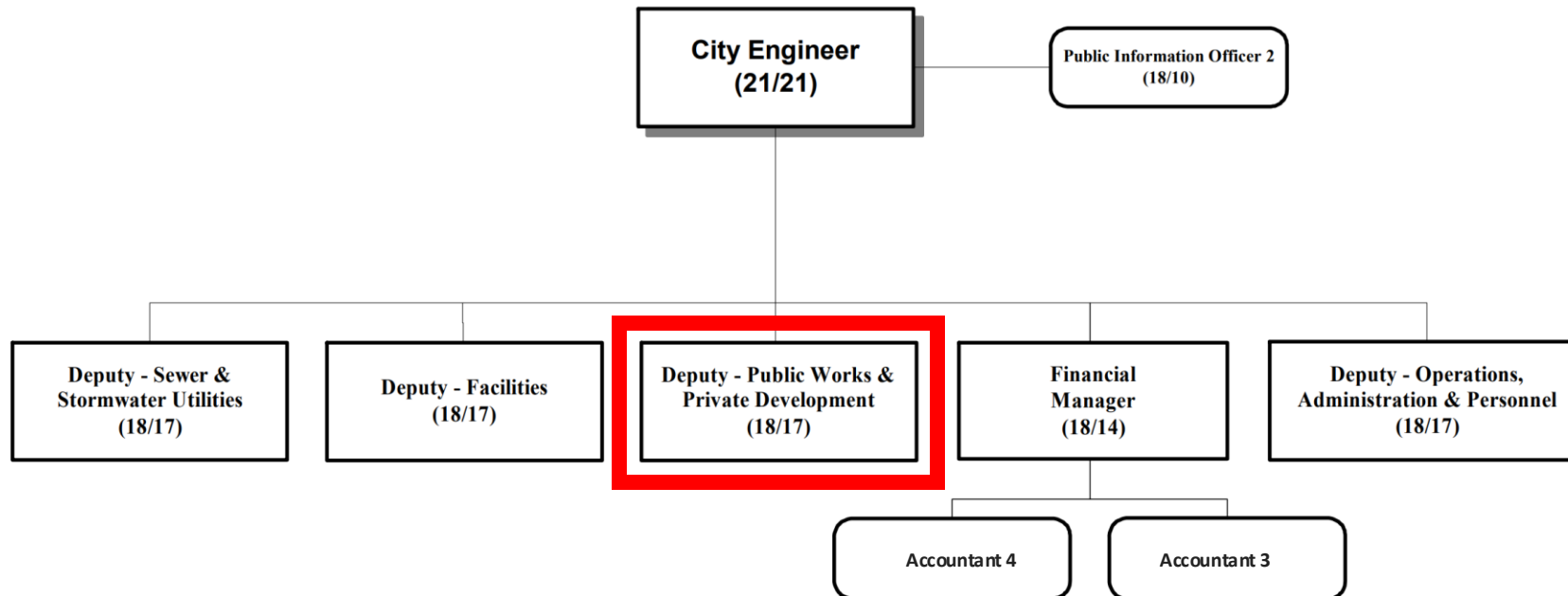
Services/Areas: Facilities Services

- The services provided by Facilities include:
 - Maintains city facilities with heavy focus on preventative maintenance work and custodial services
 - In-house small project design and construction of electrical, plumbing and HVAC systems for city facilities
 - GreenPower Program
 - Administers support and coordination for a variety of “odd job” agency needs. Recently, these have included COVID responses for Election Day and reopening preparations, public art storage and installations, assisting in preparation of temporary homeless shelters, and emergency flood response

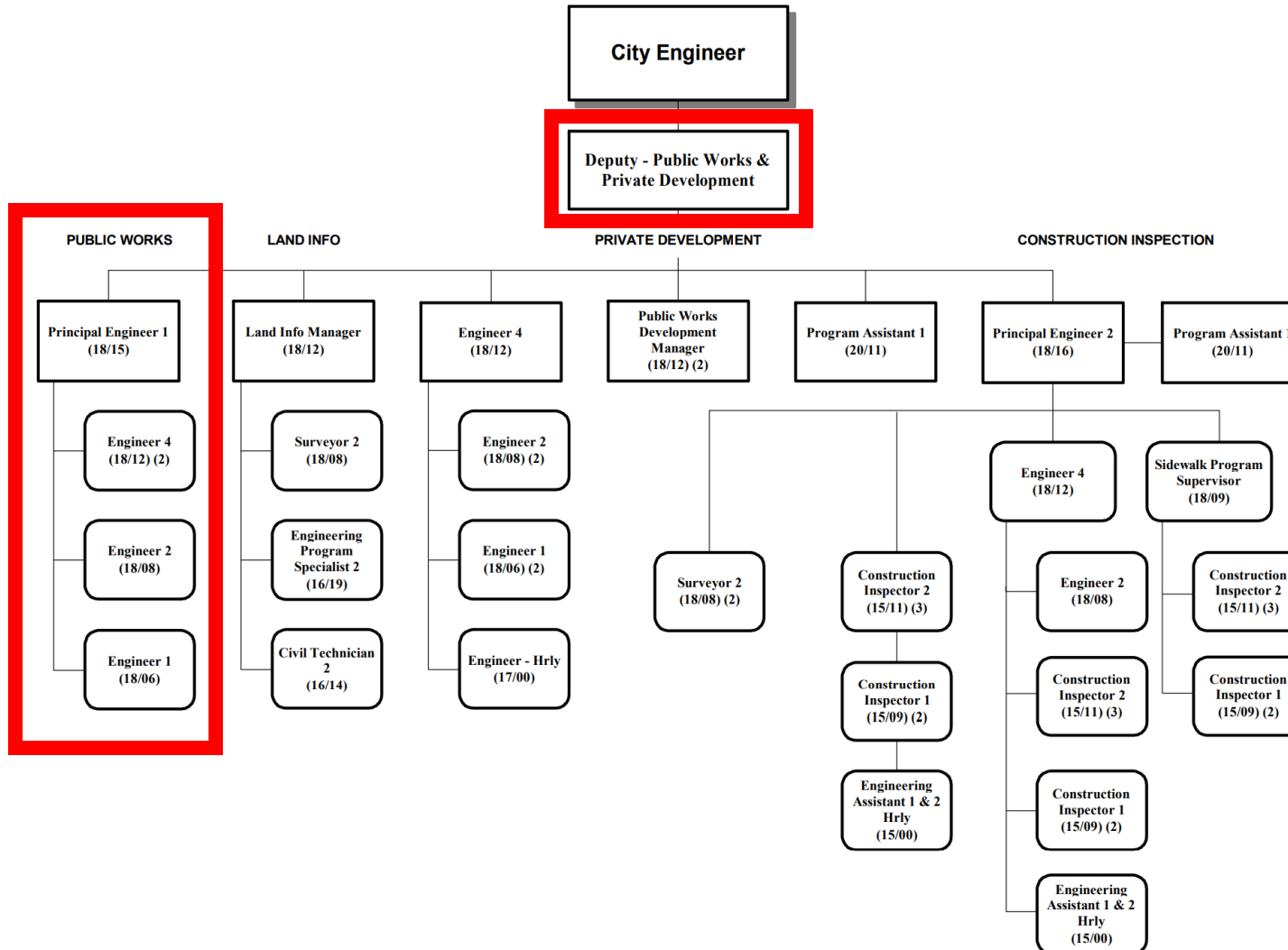
Key Staff: Facilities Services

- *Bryan Cooper, Deputy City Engineer – Facilities*
 - *Email: bcooper@cityofmadison.com*
- *Stephen King, Operations Supervisor Coordinator*
 - *Email: SRKing@cityofmadison.com*

Structure: Public Works and Private Development



Structure: Public Works (Street and Paths Design)



Services/Areas: Public Works (Streets and Paths Design)

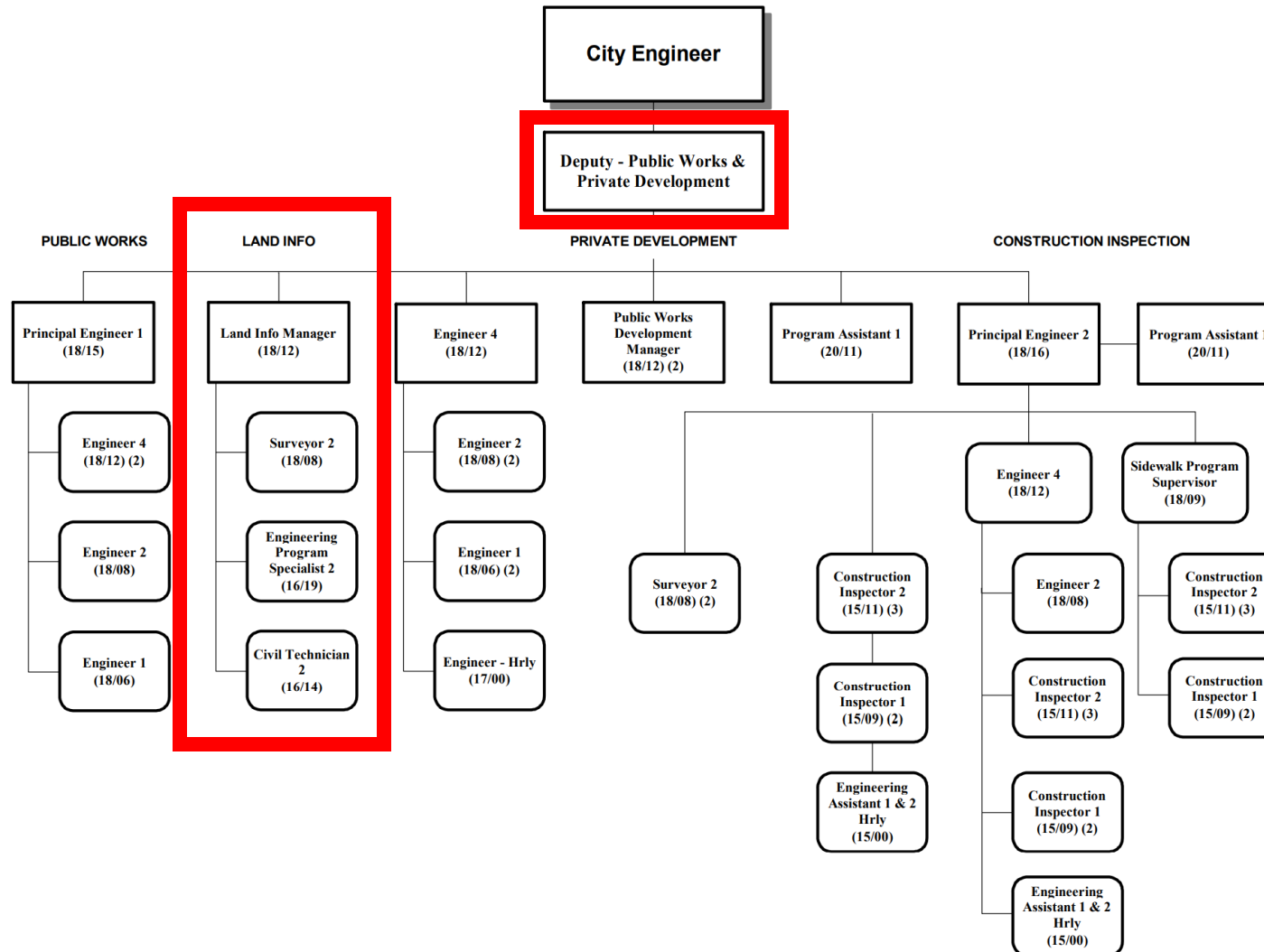
- The Engineering Division Public Works Streets and Paths Design Section designs all streets, bike paths and sidewalks in the City of Madison.
- The work of this section ensures continued safe and reliable transportation infrastructure. Our design section is different from the City's [Transportation Department](#) (which includes [Traffic Engineering](#), [Parking Utility](#), [Metro Transit](#)). This section of Engineering is also different than the [Streets Division](#), which is in charge of maintaining the City's street system, but we work closely with both.

Key Staff:

Public Works (Streets and Paths Design)

- *Chris Petykowski, Deputy City Engineer – Public Works and Private Development*
 - Email: cpetykowski@cityofmadison.com
- *Andy Zwiieg, Principal Engineer Streets and Paths Design Section Manager*
 - Email: azwieg@cityofmadison.com

Structure: Land Information



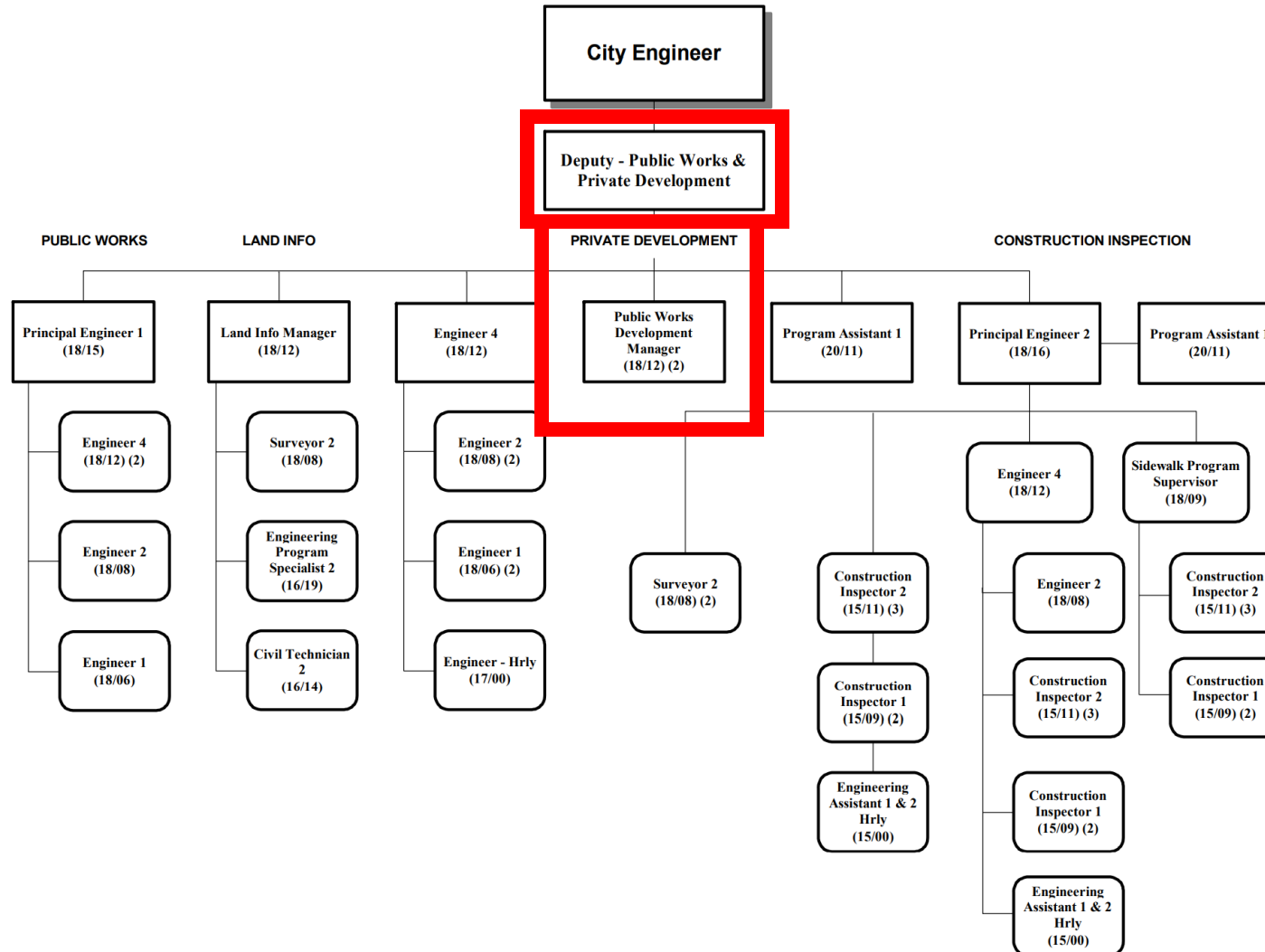
Services/Areas: Land Information

- Land Information reviews land record title and City of Madison records in conjunction with plans for new subdivisions, land divisions, conditional use permits, site plans, applications for building permits or any new development or redevelopment project proposed within the City of Madison.
- Land Information also reviews and coordinates public and City of Madison records in conjunction with annexations/attachments/detachments to or from the corporate boundary, acquisitions, dedication or disposal of publicly owned lands within the City, eminent domain proceedings for public improvement projects, vacation of public right of ways required for redevelopment projects, release of or creation of public easements for public facilities and the general coordination of land rights of the City of Madison.
- Maintains the City's Official Base Map. Land Information also coordinates and/or prepares legal descriptions, provides mapping, and surveying services necessary for and of the above land record services required to support City of Madison Engineering and other City Agencies involved in the maintenance, acquisition or disposal of City of Madison real estate.

Key Staff: Land Information

- *Chris Petykowski, Deputy City Engineer – Public Works and Private Development*
 - *Email: cpetykowski@cityofmadison.com*
- *Jeff Quamme, Land Information Section Manager*
 - *Email: jquamme@cityofmadison.com*

Structure: Private Development



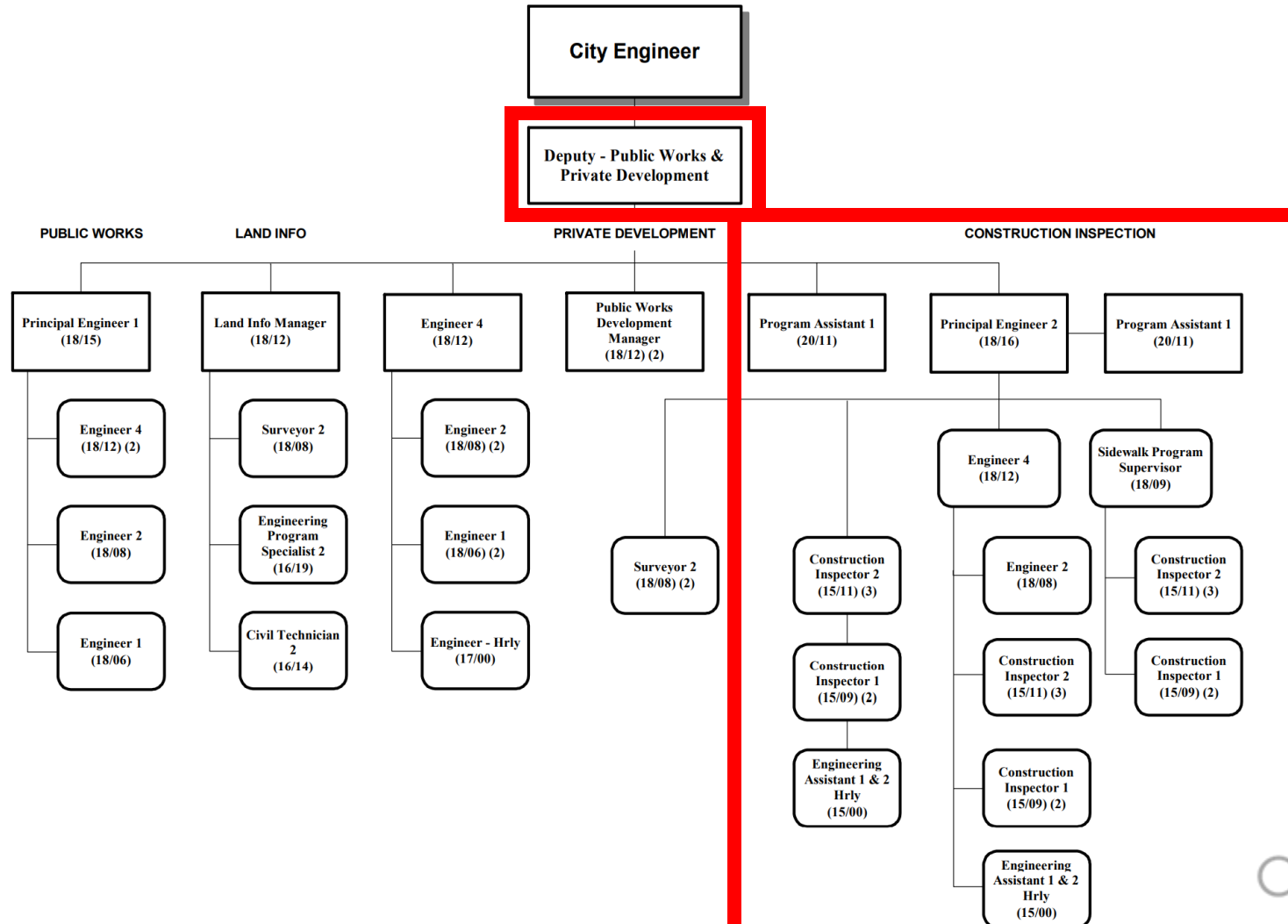
Services/Areas: Private Development

- Private development works closely with the [City of Madison Development Services Center](#) to review and/or design all public streets, bike paths, sidewalk, stormwater, and sanitary infrastructure associated with new and/or redevelopment.
- Private Development works with Engineering's Land Records section to review and maintain public title and City of Madison records and the associated official mapping in conjunction with new and existing developments.
- Develops and administers Developer Agreements, when required

Key Staff: Private Development

- *Chris Petykowski, Deputy City Engineer – Public Works and Private Development*
 - *Email: cpetykowski@cityofmadison.com*
- *Fadi El Musa Gonzalez – Principal Engineer*
 - *Email: FElMusaGonzalez@cityofmadison.com*

Structure: Construction Inspection



Services/Areas: Construction Inspection

- The Construction Inspection Section provides an on-site City of Madison representative for Public Works construction projects. This person makes sure the contractor follows contract requirements for the job and responds to resident concerns on the site.

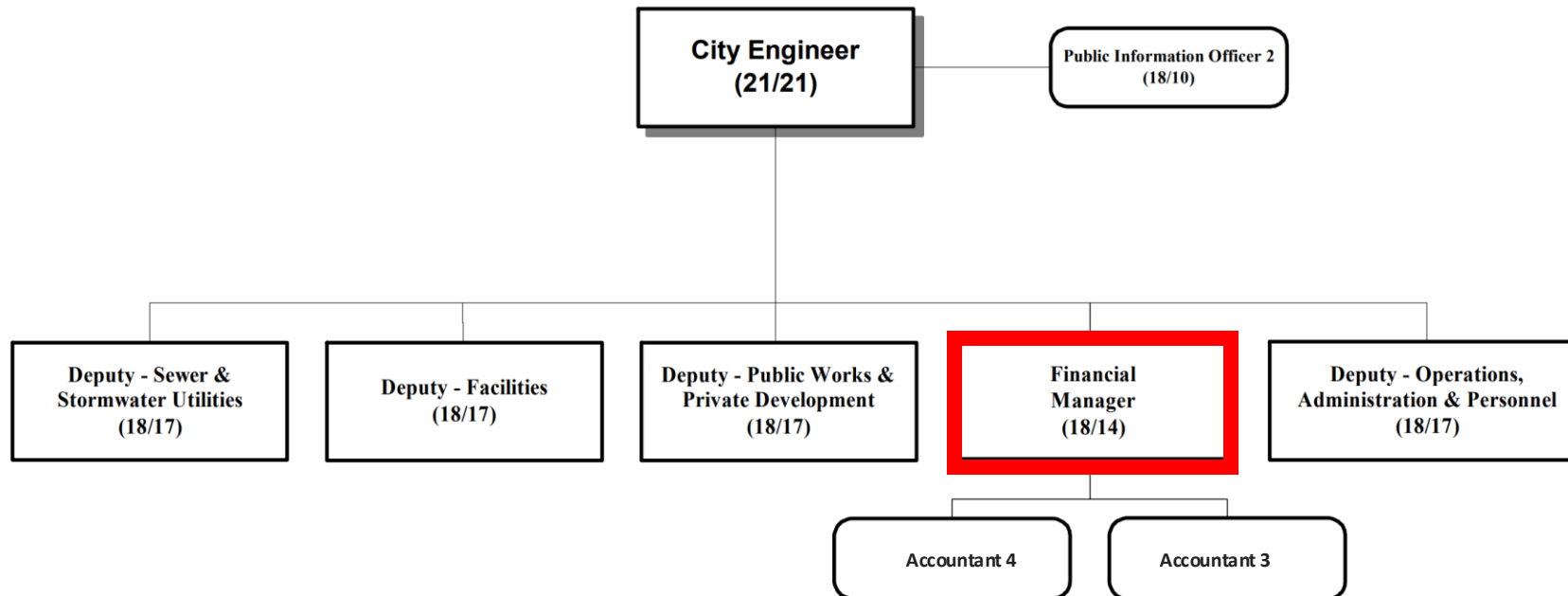
Services/Areas: Construction Inspection

- Monitors, inspects contractor work on City public works construction
- Staff responds to questions, complaints from residents impacted by construction projects
- Surveys layout for new, proposed construction projects
- Completes as-built records of construction for mapping/records
- Inspects all work on new private construction in the public Right of Way (new areas of development, redevelopment projects that affect sidewalk or streets)
- Manages the annual Citywide sidewalk program
- Manages City Resurfacing Program
- Abides by standard specifications for public works construction: recycles 90 percent of all concrete, including pavement, curb and gutter and sidewalk, and asphalt pavement

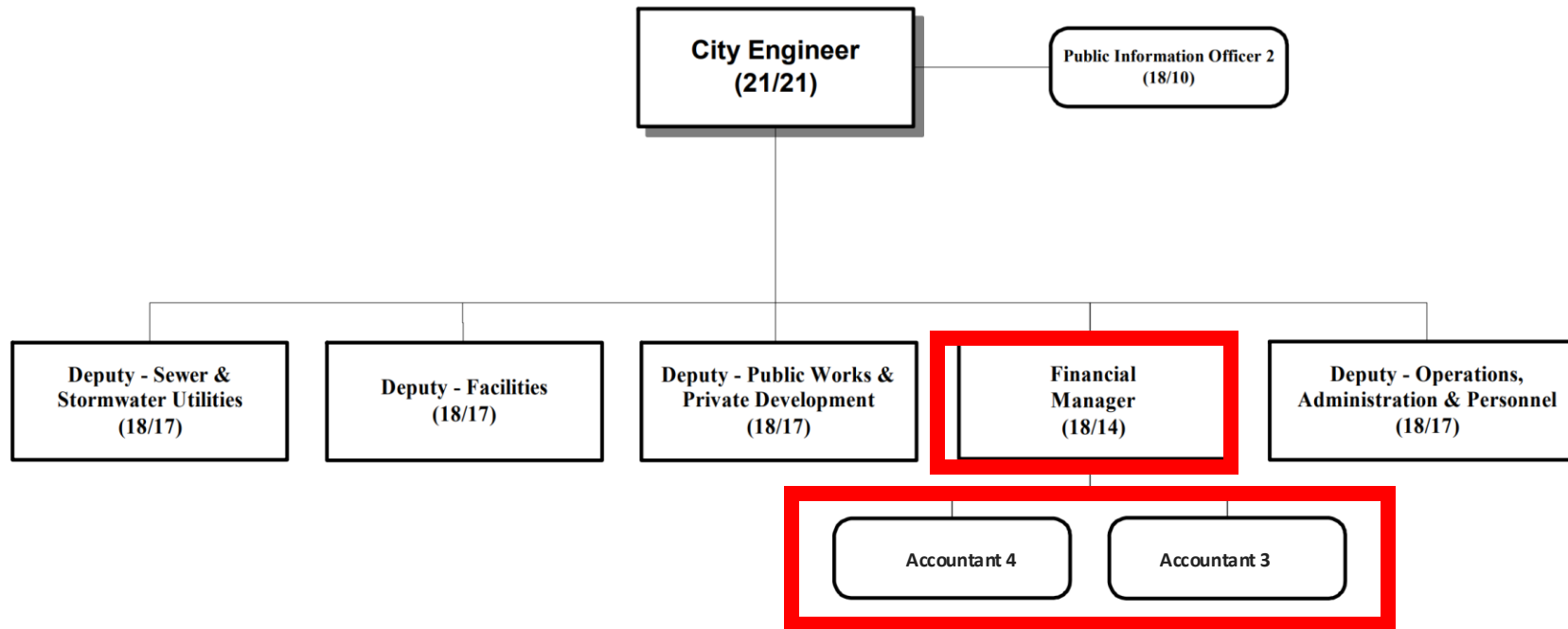
Key Staff: Construction Inspection

- *Chris Petykowski, Deputy City Engineer – Public Works and Private Development*
 - Email: cpetykowski@cityofmadison.com
- *Kyle Frank, Principal Engineer, Construction Inspection Section Manager*
 - Email: kfrank@cityofmadison.com

Structure: Finance



Structure: Finance



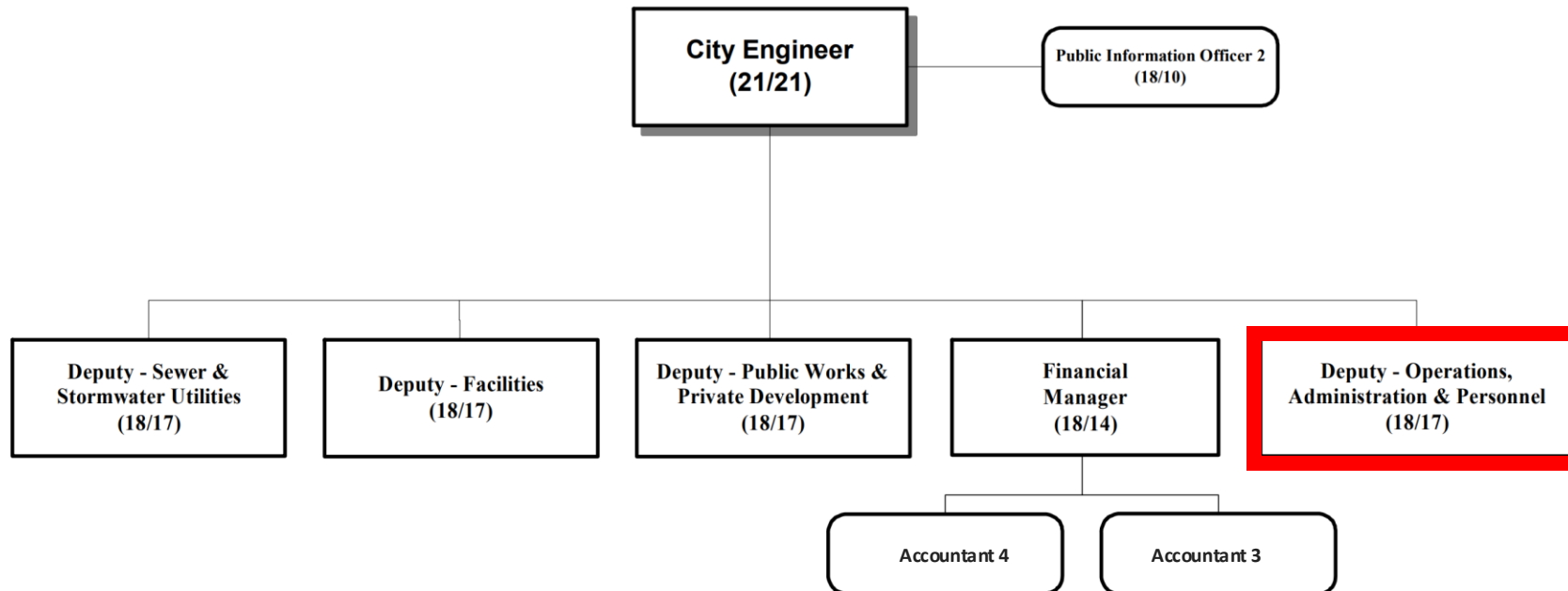
Services/Areas: Finance

- The Engineering Division is responsible for the creation of six Capital Budgets annually. This means the Division requests funds for six different sections based on projects the city needs.
- Engineering Division Operating Budget has 9 different services broken out
- See Budget Presentation for a full detailed breakdown.

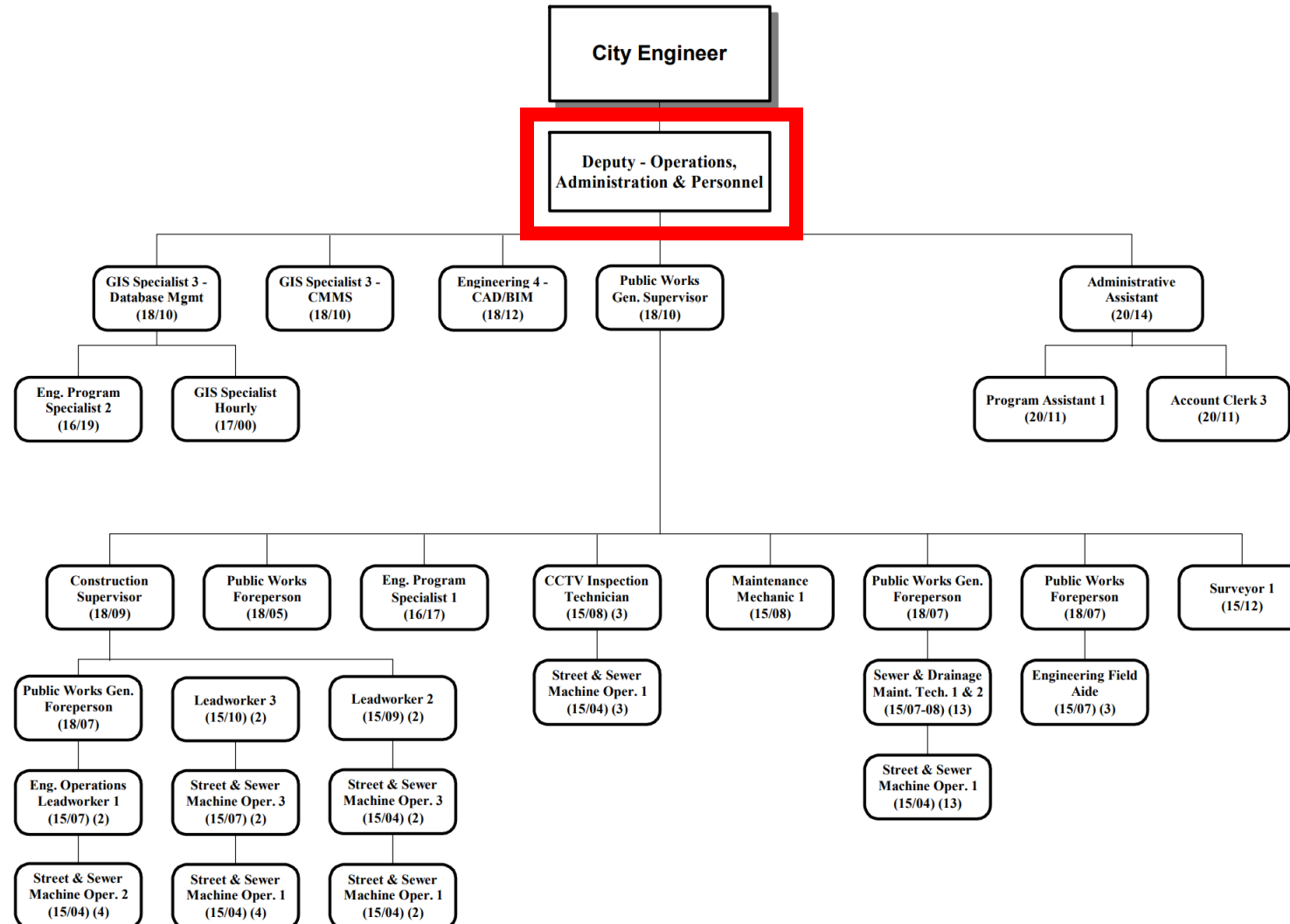
Key Staff: Finance

- *Steve Danner-Rivers, Finance Manager*
 - *Email: sdannerrivers@cityofmadison.com*

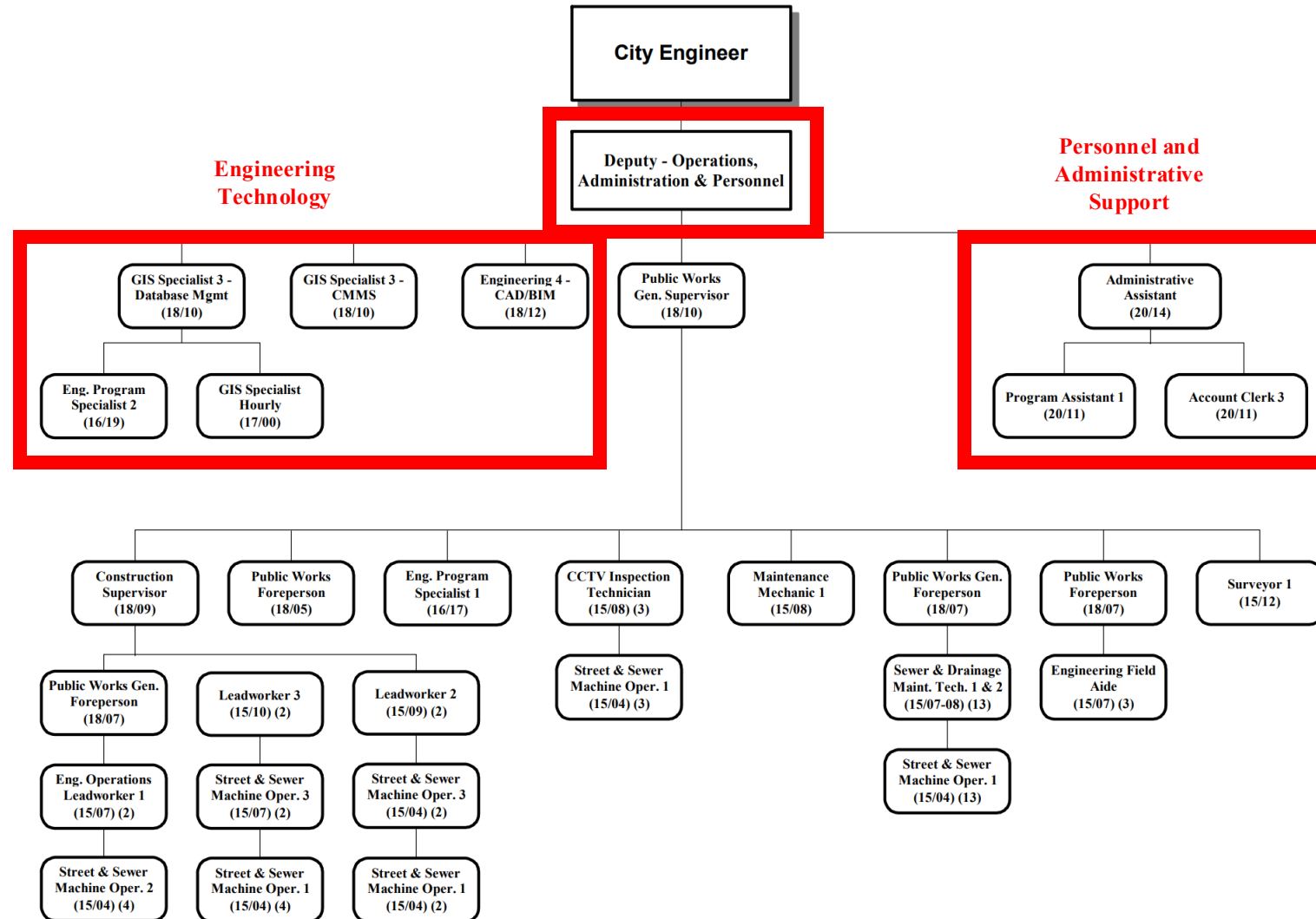
Structure: Operations, Administration, Personnel



Structure: Operations, Technology, & Personnel



Structure: Administration & Personnel



Services/Areas: Technology & Personnel

- Engineering Technology

- Manages the division's specialized technology services.
- GIS - Manages GIS services for Engineering assets (streets/paths, sanitary and storm sewer, landfill and facilities). Develops solutions to automate processes to increase efficiency and eliminate redundancies
- CAD/CBIM - Manages Engineering's CAD environment for design. Implementing Autodesk Construction Cloud – single unified solution to align projects through the planning-design-construction life-cycle of a project.
- CMMS - Manages Engineering's Cityworks environment. Cityworks is a GIS-centric computerized maintenance management system that includes a paperless work order system for field staff.
- Other - Process improvement and workflow development. Specialized technology (eg CCTV inspection software, SewerAI, etc.). Serves as Engineering's liaison with IT. Coordinates projects with other Public Works agencies.

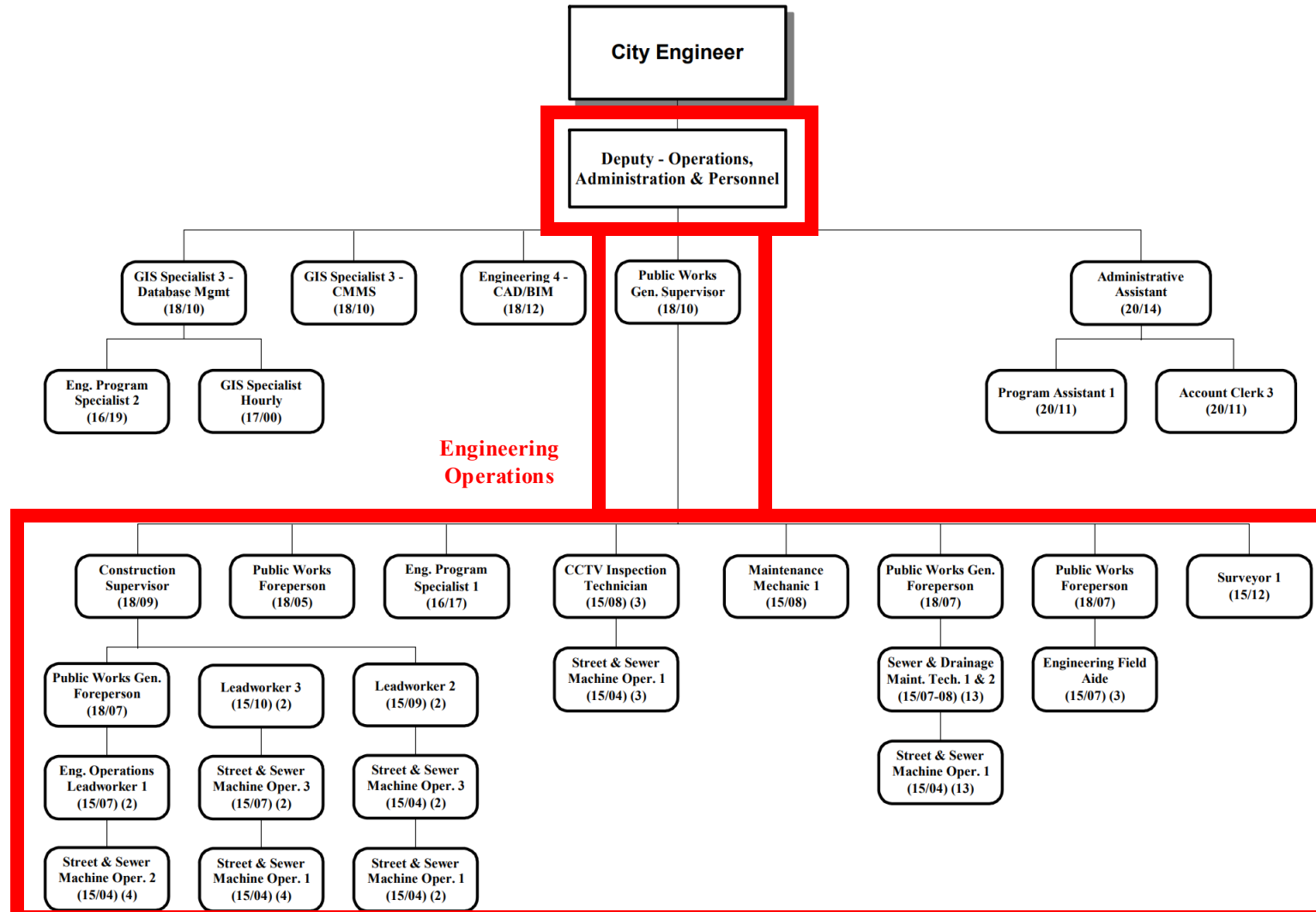
- Personnel & Administrative Support

- Hiring
- Onboarding
- Labor Relations
- Payroll/Kronos
- FMLA, Workers Comp
- Safety
- Customer Service
- Procurement – equipment, vehicles, safety and work supplies,
- Permitting

Key Staff: Technology & Personnel

- *Kathy Cryan, Deputy Division Manager – Operations, Administration, Personnel*
 - Email: kcryan@cityofmadison.com
- *Candice Kasperzak, Engineering Technology Section Manager*
 - Email: ckasperzak@cityofmadison.com
- *Danielle Dixon, HR Coordinator*
 - Email: ddixon@cityofmadison.com

Structure: Operations



Services/Areas: Operations

- Sanitary Sewer
 - Scheduled preventive maintenance (PM) cleaning – every main in the system is cleaned a minimum of once every 3 years; mains with a history of conditions that could cause a back up (eg roots, grease) are cleaned more frequently to prevent back ups.
 - CCTV inspection – every main is internally inspected one every 10 years. This data is used to identify needed repairs, adjust PM cleaning schedules, and identify candidates for reconstruction or trenchless rehab.
 - Condition Assessment and Rating – Defects are coded in specialized software which then calculates a rating score. This information is used to assist in prioritizing reconstruction and trenchless rehab projects.
 - Repairs – Open-Cut and Trenchless, casting replacements to eliminate I&I
 - Emergency response - sewer back ups, overflows, odors, etc.
 - Utility locating and marking

Services/Areas: Operations

- Stormwater Utility
 - Storm line cleaning
 - CCTV inspection
 - In-house construction of smaller scale drainage improvement projects
 - Greenway and pond property mowing
 - Utility locating and marking
 - Pond depth surveys
 - Dry weather inspections
 - Plugged Inlets – debris, snow/ice
 - Flood response
 - [Retrieving lost items and wildlife from drains](#)

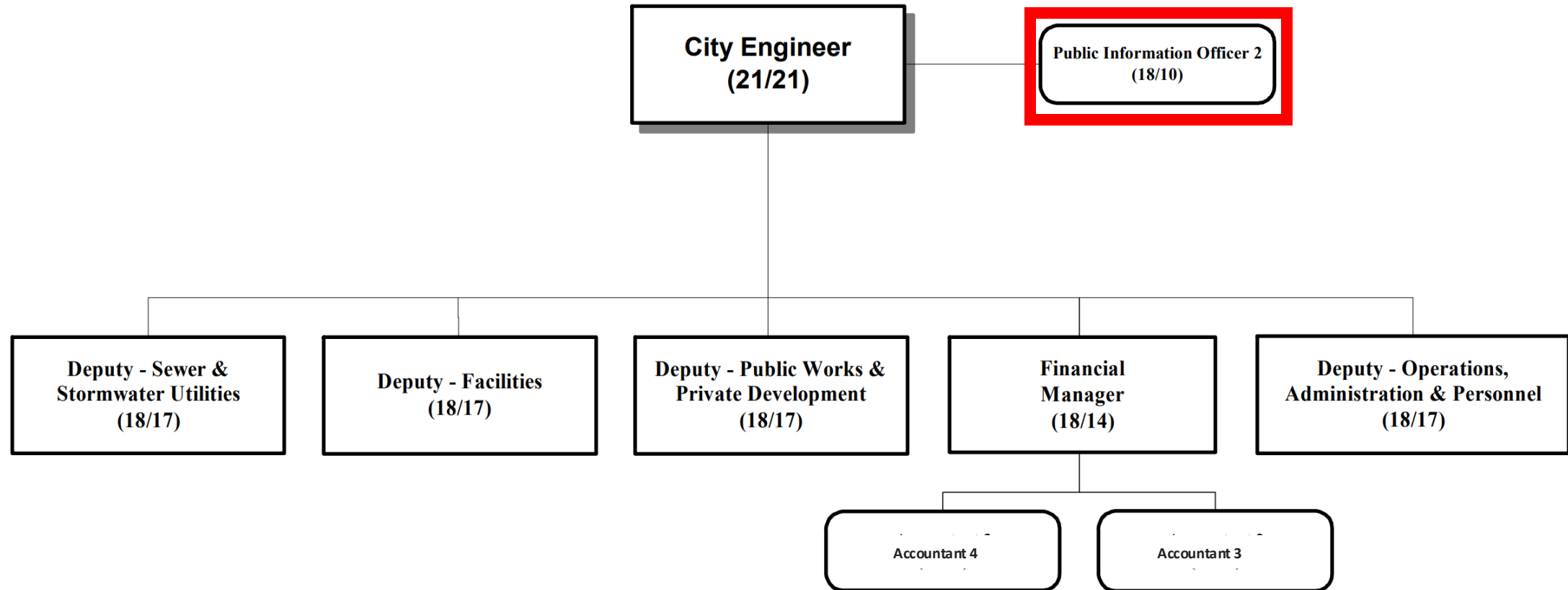
Services/Areas: Operations

- Other
 - Snow removal
 - Bike paths (shared with Parks)
 - Sidewalks and bus stops (shared with Streets & Parks)
 - General Plow (supplement Streets equipment and personnel)
 - Building demolitions
 - Underground construction for GreenPower program.
 - Madison Infrastructure Training – Engineering (MI-TE) Program – concrete (sidewalk, bus stops, drive aprons), asphalt patching, utility casting replacement to reduce I&I
 - Surveys – as-builts and special requests

Key Staff: Operations

- *Kathy Cryan, Deputy Division Manager – Operations, Administration, Personnel*
 - Email: kcryan@cityofmadison.com
- *Ryan Schmidt, Operations Supervisor*
 - Email: rschmidt@cityofmadison.com

Structure: Division Communications



Services/Areas: Division Communications

- Division external communications
- Division internal communications
- Media Relations, (Media Interviews, Requests)
- Public Engagement
- Citywide communications support and onboarding
- Website development, management, creation with IT
- Video editing/production
- Podcast hosting/development with IT Media: Everyday Engineering
- Works across all sections of Engineering

Key Staff: Division Communications

- *Hannah Mohelnitzky, Engineering Division Public Information Officer*
 - *Email: hmohelnitzky@cityofmadison.com*

Common Citywide Collaborations



Common Citywide Collaborations

Staff in our agency most often collaborate with these agencies across TeamCity:

Agency	Topic(s)
Assessor's Office	Work on a limited basis. Our land information section works closely with assessors to create addresses for new parcels.
Attorney's Office	Work closely with Engineering-assigned Assistant City Attorney Doran Viste. Doran advises on matters almost constantly and provides guidance on contracts, resolutions and other matters.
Parks Division	Engineering Sewer Section meets monthly to discuss overlap issues, coordination on projects and communication. Engineering Operations Section works with Parks on snow removal, mowing, medians, emergency response, special projects and initiatives.

Common Citywide Collaborations

Staff in our agency most often collaborate with these agencies across TeamCity:

Agency	Topic(s)
Planning, Community Economic Development Department	Engineering Streets Design and Sewer Design sections work with the Planning Division specifically on updating neighborhood plans and on new developments to make sure what is planned is ultimately serviceable by utilities, etc.
Streets Division	The Engineering Stormwater Utility works with the Streets Division commonly on issues where we have common interests: leaf collection, salt and sand use issues and street sweeping. Operations works with Streets Division on: snow removal, mowing, medians, emergency response, special projects and initiatives.

Common Citywide Collaborations

Staff in our agency most often collaborate with these agencies across TeamCity:

Agency	Topic(s)
Transportation Department	Engineering Streets Design and Private Development Sections works very closely with Transportation Department and Traffic Engineering Division on new and redevelopment as well as on prioritizing and designing street projects.
Metro Transit	Our Streets Design Section works with Metro on street reconstruction projects and new developments to accommodate Metro's needs.
Water Utility	Both the Sewer and Streets Design Sections coordinate street and utility projects with Water Utility.

**For Engineering Facilities Sections, collaboration involves nearly every agency regularly.*

Boards, Committees, Commissions

Board, Committee, Commission	Key Staff Attends/Presents	Staffs
Board of Public Works	Jim Wolfe, Chris Petykowski, Janet Schmidt, Mark Moder, Bryan Cooper	Jim Wolfe, Heidi Fleegel, Johanna Johnson
Transportation Commission	Andy Zwiag, Fadi El Musa, Project Managers	
Plan Commission	Chris Petykowski, Greg Fries, Janet Schmidt, Bryan Cooper	
Street Use Staff Commission	Kyle Frank	

Boards, Committees, Commissions

Board, Committee, Commission	Key Staff Attends/Presents	Staffs
Urban Design	Bryan Cooper, Facilities Project Managers	
Finance Committee	Kathy Cryan, Greg Fries, Janet Schmidt, Chris Petykowski, Bryan Cooper, Jim Wolfe	
Landmarks Commission	Bryan Cooper, Facilities Project Managers	
Parks Commission	Janet Schmidt, Greg Fries, Chris Petykowski	

Agency Resources



Engineering's Key Links

- Agency Website(s):
 - External website: <https://www.cityofmadison.com/engineering>
 - Developer, Contractor Homepage: <https://www.cityofmadison.com/engineering/developers-contractors>
 - Public Works External Home Website: <https://www.cityofmadison.com/public-works>
 - Open Contracts: <https://www.cityofmadison.com/business/pw/contracts/bidResults.cfm>
 - City's Flooding Website: <https://www.cityofmadison.com/flooding>
 - Engineering Projects Page: <https://www.cityofmadison.com/engineering/projects>

Engineering's Key Links

- Key Report(s):
 - [Board of Public Works Annual Report](#)
 - [Municipal Storm Sewer System annual report to DNR](#)
 - [Sanitary Sewer System annual report to DNR](#)

Engineering's Key Links

- [Wisconsin State Statutes](#)

- Sanitary – Wisconsin Administrative Code NR 110, MGO Chapter 35, RES-21-00668
- Storm – Wisconsin Administrative Codes NR 103, NR 116, NR 216, NR 151, NR 347, NR 528 and Chapter 30 State Statutes, MGO 37, RES-22-00073, RES-22-00045

Engineering's Key Links

- [Madison General Ordinances](#)

- **3.08 – CITY ENGINEER**

- **9.20 - LICENSING OF CONCRETE LAYERS, ASPHALT PAVERS, LANDSCAPE PAVERS, MUDJACKERS, SEWER DRAIN CLEANERS, SEWER CCTV INSPECTORS, AND PRIVATE SNOW REMOVAL EQUIPMENT OPERATORS.**

- **CHAPTER 10 - STREETS, ALLEYS, SIDEWALKS AND GUTTERS**

- 10.02 - GRADES.
- 10.03 - DAMAGE TO SIDEWALK, CURB AND GUTTER, AND DRIVEWAY APPROACH TO BE REPAIRED.
- 10.05 - OCCUPANCY OF RIGHTS-OF-WAY.
- 10.053 - WIRELESS TELECOMMUNICATIONS FACILITIES IN THE RIGHT-OF-WAY.
- 10.06 - SPECIFICATIONS FOR CONSTRUCTION OF SIDEWALKS—WIDTH OF WALKS.
- 10.07 - GRADE FOR SIDEWALKS—LOCATION.
- 10.08 - CONSTRUCTION OF DRIVEWAY APPROACHES AND PARKING FACILITIES.
- 10.09 - CONSTRUCTION, RECONSTRUCTION AND REPAIR OF SIDEWALKS, TERRACES, CURBS AND GUTTERS.
- 10.15 - CURB CUTS AND DRIVEWAY APPROACHES.

- 10.23 - OBSTRUCTION OF STREETS AND SIDEWALKS.

- 10.25 - PLANTINGS IN THE TERRACES.

- 10.34 - STREET NUMBERS.

- 10.38 - CONSTRUCTION OF HEATED CONCRETE SIDEWALK.

- **CHAPTER 18 - PLUMBING CODE**

- **CHAPTER 19 - ELECTRICAL CODE**

- **CHAPTER 20 - IMPACT FEE ORDINANCE**

- **23.21 - PRUNING OR REMOVING TREES IN PUBLIC HIGHWAYS OR PUBLIC PLACES.**

- **24.08 - NOISE CONTROL REGULATION.**

- **CHAPTER 29 - BUILDING CODE**

- **CHAPTER 30 - HEATING, VENTILATING AND AIR CONDITIONING CODE**

- **33.07 - BOARD OF PUBLIC WORKS.**

- **CHAPTER 35 - THE PUBLIC SEWERAGE SYSTEM**

- **CHAPTER 37 - THE PUBLIC STORMWATER SYSTEM INCLUDING EROSION CONTROL**

Engineering's Key Links

- Council Resolutions
 - All Public Works projects require Council approval and authorization to bid
 - BPW approves street assessment rates each year
 - Guided by a wide range of policies adopted by the Council

Engineering's Acronyms

Common acronyms used by our agency include:

PIM

- Public Information Meeting

BPW

- Board of Public Works

TIP Map

- Transportation Improvement Plan Map

CMOM

- Capacity, Management, Operation, and Maintenance Program

CMAR

- Capacity Maintenance Annual Report

MI-TE

- Madison Infrastructure Training Engineering Program

MAMSWaP

- Madison Area Municipal Stormwater Partnership

Engineering's Acronyms

Common acronyms used by our agency include:

UDC

- Urban Design Commission

CSM

- Certified Survey Map

PD/SD/DD/CD

- PreDesign/Schematic Design/Design Development/Construction Documents

SHPO

- State Historic Preservation Office (aka Wisconsin Historical Society)

Cx

- Commissioning and/or Commissioning Consultant

CO

- Change Order

Engineering's Acronyms

Common acronyms used by our agency include:

PO

- Purchase Order

CCB

- City-County Building

MMB

- Madison Municipal Building

WisDOT

- Wisconsin Department of Transportation

WDNR

- Wisconsin Department of Natural Resources

SWM

- Stormwater Management

Engineering's Acronyms

Common acronyms used by our agency include:

CFS

- Cubic Feet Per Second – a term used in stormwater to measure rates of flow. For perspective 1CFS = 1 GPM

GPM

- Gallons Per Minute – a term used in sanitary sewer flow to measure rates of flow. For perspective a normal garden hose puts out about 10 GPM. It would take about 45 garden hoses to make 1 CFS and a large 48" pipe (very common in stormwater) will carry about 60 CFS or 2700 garden hoses

TSS

- Total Suspended Solids a term used in both storm and sanitary sewer referring to the amount of material suspended in the water column that will eventually settle out to the bottom in quiescent conditions.

COD

- Chemical Oxygen Demand

Engineering's Acronyms

Common acronyms used by our agency include:

BOD

- Biological Oxygen Demand – COD and BOD are both terms used in sanitary sewer referring to how much oxygen will be used from the water column based on the strength of the waste as it is broken down. In a sewer treatment plant, air is often added to prevent the water from becoming anoxic (0 MGL oxygen)

MGL

- Milligrams per liter – also known as PPM parts per million - a reference of how much of a substance is carried (normally in water) – normally this is in reference to a contaminant as testing technology has improved we now measure in

UGL

- Micrograms per liter – also known as PPB or parts per billion

NGL

- NGL – nanograms per liter – also known as PPT or parts per trillion

Engineering's Acronyms

Common acronyms used by our agency include:

PPM, PPB and PPT

- Are very difficult concepts to think about – but for contaminants like PFAS it is important. PFAS have a limit in drinking water of 20 PPT - this can be visualized as 20 drops of water in an Olympic sized swimming pool or 20 SECONDS out of 32,000 YEARS

PFAS

- Polyfluoroalkyl substances – these is a group of chemicals used most commonly In waterproofing and firefighting – we now know them to be cancer causing at extremely low levels.

AHI

- Wisconsin Architecture and History Inventory

ARI

- Archaeological Report Inventory

Engineering's Acronyms

Common acronyms used by our agency include:

ASI

- Archeological Sites Inventory

BPC

- Board of Park Commissioners

CARPC

- Capital Area Regional Planning Commission

FEMA

- Federal Emergency Management Agency

NR

- National Register of Historic Places

USACE

- United States Army Corps of Engineers

Engineering's Acronyms

Common acronyms used by our agency include:

WHS

- Wisconsin Historical Society

A/E

- Architect/Engineer

GC

- General Contractor

FFE

- Furniture, Fixtures and Equipment

SF

- Square Foot

LF

- Linear Foot

Engineering's Acronyms

Common acronyms used by our agency include:

PD

- Pre-Design

SD

- Schematic Design

DD

- Design Development

CD

- Construction Documents

CA

- Construction Administration

WA

- Warranty

Engineering's Acronyms

Common acronyms used by our agency include:

DGI

- Distributed green infrastructure – from a stormwater perspective – a term to describe treating water where it lands via methods such as rain gardens, green roofs, pervious pavement. This type of infrastructure is generally higher cost both to construct and requires higher levels of ongoing maintenance compared to “gray” infrastructure.

ROM

- Rough Order of Magnitude

MEP

- Mechanical, Electrical, and Plumbing

RFI

- Request for Information

Engineering's Acronyms

Common acronyms used by our agency include:

T&M

- Time and Material

ROW

- Right of way: boundary line where private property meets public roadway

BOW

- Back of walk: private property side of the sidewalk

FOW

- Front of walk: curb side of the sidewalk

SAS

- Sewer Access Structure: for storm or sanitary to access the sewer mains for maintenance

TC

- Transportation Commission

Engineering's Acronyms

Common acronyms used by our agency include:

RRFB

- Rectangle Rapid Flashing Beacon, used for pedestrian crossing a street

BMP

- Best Management Practice

EC

- Erosion Control

SSO

- Sanitary Sewer Overflow

I&I

- Inflow and Infiltration (clean water that gets into the sanitary sewer)

BWV

- Backwater Valve

Engineering's Acronyms

Common acronyms used by our agency include:

BVC

- Best Value Contracting

COI

- Certificate of Insurance

POA

- Power of Attorney

WFP

- Work Force Profile

SBE

- Small Business Enterprise

DBE

- Disadvantaged Business Enterprise

DB

- Davis-Bacon (rates)

OUR CITY OF MADISON



Let's Connect!

Jim Wolfe, City of Madison City Engineer

Jwolfe@cityofmadison.com

608-266-4099

CITY OF MADISON