

# Contents

<b>Chapter 18 Development Services.....</b>	<b>18-1</b>
<b>18.1 Key Terms.....</b>	<b>18-1</b>
18.1.1 Abbreviations .....	18-1
<b>18.2 General Information .....</b>	<b>18-2</b>
18.2.1 Authority.....	18-2
18.2.2 Organization .....	18-3
<b>18.3 Types of Plan Review .....</b>	<b>18-3</b>
18.3.1 Private Development Projects.....	18-4
<b>18.4 SDCI Permits.....</b>	<b>18-5</b>
18.4.1 Preliminary Assessment.....	18-5
18.4.2 Master Use Permit Review .....	18-5
18.4.3 Building Permit Review .....	18-6
18.4.4 Preliminary Assessment Review.....	18-6
18.4.5 Side Sewer Permit.....	18-7
18.4.6 Side Sewer Connections to DWW Main Infrastructure .....	18-7
18.4.7 Side Sewer Permit for Temporary Discharge.....	18-8
18.4.8 DWW Determination Meetings .....	18-9
18.4.9 Latecomer Agreement.....	18-9
<b>18.5 Water Availability Review .....</b>	<b>18-9</b>
18.5.1 Water Availability Certificate (WAC).....	18-9
18.5.2 WAC Determination Meetings .....	18-10
18.5.3 Latecomer Agreements.....	18-10
18.5.4 Build-over Review and/or Re-route Process .....	18-10
<b>18.6 SDOT Right-of-Way Permits .....</b>	<b>18-12</b>
18.6.1 Street Improvement Permit (SIP) .....	18-12
18.6.2 Utility Major Permits.....	18-13
18.6.3 Shoring and Excavation Review.....	18-13
18.6.4 Stormwater Code (SWC) Compliance.....	18-14
<b>18.7 Other Reviews and Permits.....</b>	<b>18-15</b>
18.7.1 Major Interagency Projects.....	18-15
18.7.2 Water Main Extension Contracts.....	18-16
18.7.3 Plan Review and Approval of Water Main Extension Projects .....	18-16
18.7.4 Water Service Installation Plans.....	18-17
<b>18.8 Survey Requirements and Monuments .....</b>	<b>18-17</b>
<b>18.9 Solid Waste.....</b>	<b>18-18</b>
<b>18.10 Plan Review Roles and Responsibilities .....</b>	<b>18-18</b>
18.10.1 Coordination.....	18-20
<b>18.11 Resources .....</b>	<b>18-22</b>
18.11.1 Codes and Authority.....	18-22
18.11.2 Director’s Rules .....	18-22
18.11.3 Client Assistance Memos.....	18-23
18.11.4 Mapping.....	18-25

## Appendices

## Chapter 18 Development Services

- Appendix 18A – Plan Reviewers Checklist
- Appendix 18B – Temporary Discharges
- Appendix 18C – 2016 ROW Flow Chart
- Appendix 18D – ROW Stormwater Code Flow Charts
- Appendix 18E – Stormwater Treatment Flow Chart
- Appendix 18F – Trail & Sidewalk On-Site List Flow Chart
- Appendix 18G – DWW Utility Protection Notes

### List of Figures

Figure 18-1 Development Permit Boundaries for Plan Review .....	18-5
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### List of Tables

Table 18-1 SPU Sections Involved with Plan Review.....	18-3
Table 18-2 Information Included in the Preliminary Assessment Tool (PAT) .....	18-6
Table 18-3 SPU DSO Plan Review Chart .....	18-18
Table 18-4 Plan Review Roles and Responsibilities .....	18-19
Table 18-5 Plan Review Coordination and Conditional Reviewers .....	18-20
Table 18-6 Relevant Codes and Authority for Plan Review Staff.....	18-22
Table 18-7 Relevant Director’s Rules for Plan Review Staff.....	18-22
Table 18-8 Relevant Client Assistance Memos for Plan Review Staff .....	18-23
Table 18-9 Plan Review Timesheet Codes.....	18-23
Table 18-10 Technology Tools for Plan Review Staff .....	18-24
Table 18-11 Resources for Plan Review Staff.....	18-25

# Chapter 18 DEVELOPMENT SERVICES

This chapter of the Design Standards and Guidelines (DSG) describes the plan review function at Seattle Public Utilities (SPU) Development Services Office (DSO). Plan review at the DSO covers a wide range of activities related to the review of plans for private development, government agencies and city capital improvement program (CIP) projects. The primary purpose for this chapter is to act as a resource for plan reviewers within DSO and engineers from other SPU departments.

## 18.1 KEY TERMS

The abbreviations and definitions given here follow either common American usage or regulatory guidance.

### 18.1.1 Abbreviations

Abbreviation	Term
CCTV	Closed Circuit Television
CIP	Capital Improvement Program
CMD	Construction Management Division
COS	City of Seattle
DG	Design Guidance
DR	Director's Rule
DSO	Development Services Office
DSS	Development Service System
DWW	Drainage and Waste Water
ECA	Environmentally Critical Area
ETSD	Engineering and Technical Services Division
FOMS	Field Operations Mapping System
GIS	Geographic Information System
GSI	Green Stormwater Infrastructure
HRIS	Human Resources Information System
HWT	Hansen Web Tools
IT	Information Technology
KC	King County
KPI	Key Performance Indicator
LOB	Line of Business
MH	Maintenance Hole
MOA	Memorandum of Agreement
MUP	Master Use Permit
PAR	Preliminary Assessment Report

Abbreviation	Term
PAT	Preliminary Assessment Tool
PDEB	Project Delivery and Engineering Branch
PMD	Project Management Division
PRD	Plan Review Database
PSS	Planning and System Support
RPS	Real Property Services
RSSC	Registered Side Sewer Contractor
SDCI	Seattle Department of Construction and Inspections
SDOT	Seattle Department of Transportation
SIP	Street Improvement Permit
SMC	Seattle Municipal Code
SMT	Seattle Municipal Tower
SPU	Seattle Public Utilities
WPPM	Water Planning and Program Management
WAA	Water Availability Approval
WAC	Water Availability Certificate
WAI	Water Availability Inquiry
WOSM	Water Operations and System Maintenance

## 18.2 GENERAL INFORMATION

This section describes the authority for and general organization of the plan review function within SPU.

### 18.2.1 Authority

For the review of projects plans, SPU relies on authority granted by the Seattle Municipal Code (SMC) and various Directors' Rules (DR). SPU has a memorandum of agreement (MOA) with the Seattle Department of Construction and Inspections (SDCI) and the Seattle Department of Transportation (SDOT) granting those departments authority to review projects on behalf of SPU through development permits and public works contracts. SPU documents roles, responsibilities and financial agreements with SDOT and SDCI through MOAs.

The sections of the SMC, which authorize SPU's role in plan review, are described in SPU client assistance memos (CAM). These CAMs are shown in Table 18-8.

The SPU plan reviewer staff review plans to ensure that the SMC requirements for Drainage and Wastewater and Water Lines of Business (LOB) are satisfied in project design. SPU reviews plans to ensure:

- Protection of SPU's infrastructure from adverse construction impacts.
- Preservation of ability to make future improvements.
- Assurance that projects by private developers, other City of Seattle departments, and other agencies comply with the Stormwater code requirements and design standards.

## 18.2.2 Organization

SPU collaborates with other city departments and government agencies to protect City of Seattle public infrastructure. The DSO relies on SDCI, SDOT, or other municipalities or agencies to identify and refer to SPU projects that could affect SPU facilities. SPU interests include protecting and managing the capacity and operability of its infrastructure. SDCI and SDOT (via MOAs) act on SPU's behalf to protect SPU interests on private property and in the ROW.

Other SPU departments are also involved and coordinate with DSO to protect SPU property, infrastructure, and related interests. Refer to Table 18-1. The DSO plan coordinator routes plans to these other groups if specific triggers are attained or specific questions arise. Additionally, these SPU groups receive plans to review from other City of Seattle departments.

**Table 18-1**  
**SPU Sections Involved with Plan Review**

Organization	Involvement
SPU Development Services Office (DSO)	Reviews all water, drainage, and wastewater projects, utility and street improvement permits for technical standards and code compliance. Provides guidance for SPU capital improvement projects regarding compliance with the Stormwater Code. Approves new water main extensions, designs and manages water main extension projects, issues water availability certificates, manages approval and sale of water service connections, reviews drawings for water services, and manages installation of water service connection up to the first billing cycle.
SPU Engineering and Technical Services Division (ETSD)	Designs projects per SPU and City of Seattle technical standards and codes. Reviews plans for major interagency projects for compliance with SPU and City of Seattle technical standards and codes.
SPU Construction Management Division (CMD)	Reviews plans to assure compliance with city standards, constructability and manages inspection of projects during construction.
SPU Materials Lab	Reviews plans to assure compliance with city construction product or standard specification.
SPU Real Property	Reviews plans that affect SPU property or easements to protect interests. Obtains easements and /or consent decrees when SPU facilities are on private property. Coordinates right of way issues with jurisdictions in which SPU facilities are located. Coordinates the review and approval of street vacations with SDOT.
SPU Customer Service Division	Acts as main liaison between SPU ratepayers and the other SPU divisions. The division also manages billing and responds to complaints and request for information.
SPU Solid Waste Division	Reviews plans to assure that new construction allows for safe access to solid waste containers by property owners, the public and waste disposal employees and vehicles.
SPU Survey	Reviews plans for work in the ROW to protect City right-of-way and survey monuments. SPU Survey may also conduct or review surveys for SPU or other City projects.

## 18.3 TYPES OF PLAN REVIEW

The SPU DSO performs four types of plan review: Private Development, SPU CIP projects, other city departments CIP projects, and Franchise Utility projects. The degree of SPU involvement may vary depending on type of permit and project details.

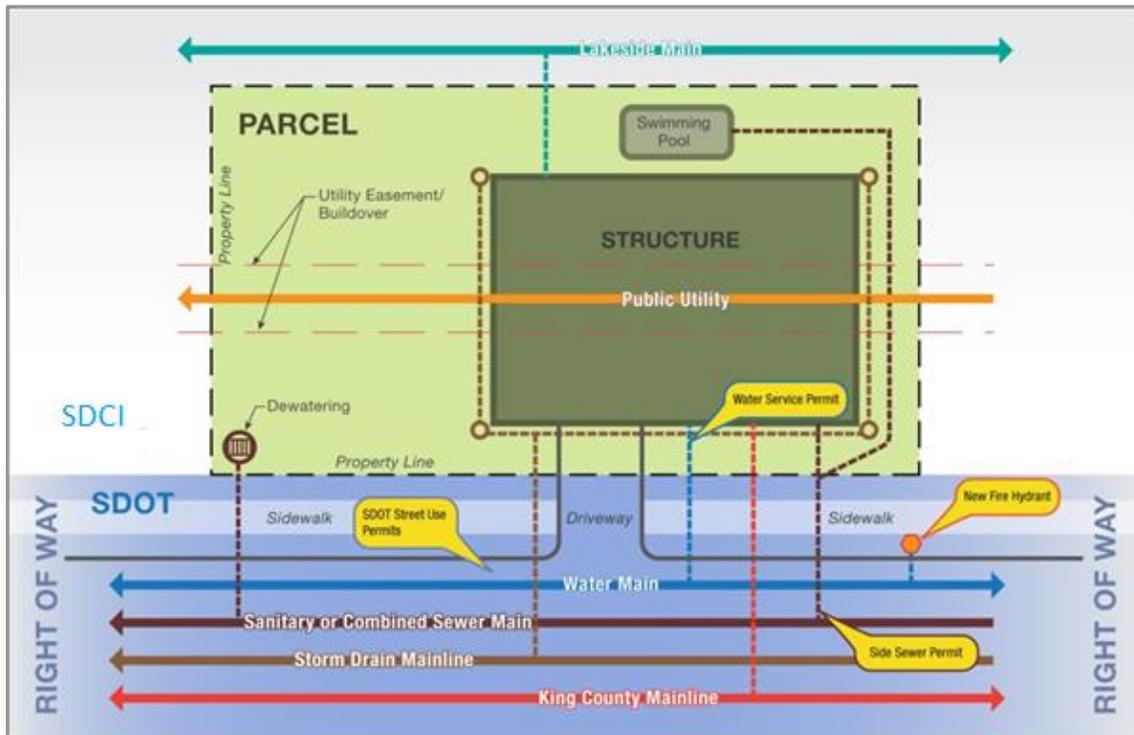
### 18.3.1 Private Development Projects

Private development refers to projects, which, are constructed by private parties and modify, build, or affect public water, Stormwater, wastewater, or solid waste systems. The SMC regulates private development and requires development permits for most private development. Examples of private development include a new commercial building, subdivision of property, or redevelopment of a block.

City of Seattle development permitting is organized into two primary categories: Private Property and Right-of-Way (refer to Figure 18-1).

- **Private Property.** This development or redevelopment is for a private property owned by either a private party or a public agency. SDCI manages permitting for all work within a parcel through the Master Use and Construction permits. The plans are reviewed, approved, and inspected through the SDCI permit process. Staff in SDCI, SCL, SDOT perform preliminary information about requirements for private development on private property, and any associated improvements in the ROW, through the SDCI-managed Preliminary Application Report (PAR) process, see below.
- **Right-of-Way (ROW).** The development or redevelopment is within the public ROW. SDOT manages ROW permitting through its Street Improvement Permit (SIP) process. The review for Infrastructure impacts is managed by SDOT; however, SPU DSO staff have an active role in the design guidance and formal review (30%, 60%, and 90 %) design permit phases, as well as preliminary design guidance. As shown on Figure 18-1, some permits may cross boundaries. For example, a side sewer permit (a type of construction permit) is issued by SDCI, although part of the permitted work occurs in the ROW. Similarly, permitting issues may cross boundaries because drainage or wastewater discharges from developed parcels can affect adjacent wetlands or SPU infrastructure.

**Figure 18-1**  
**Development Permit Boundaries for Plan Review**



## 18.4 SDCI PERMITS

### 18.4.1 Preliminary Assessment

SDCI administers Preliminary Assessment Process, (PAR), which provides private developer applicants, city departments, public agencies, and local governments with a general set of requirements for their project. The PAR review is prior to the Master Use Permit (MUP) application intake (or building permit application. The PAR report is used to inform developers of requirements that could affect their project. Each city department is required to input information into an electronic tool called the Preliminary Assessment Tool (PAT).

### 18.4.2 Master Use Permit Review

A Master Use Permit (MUP) is a land use permit that integrates the process, procedures, and review of all non-appealable and appealable land use decisions made by SDCI. This permit is issued before the detailed architectural and engineering plans are developed and submitted with the building permit application. SDCI staff review development proposals for compliance with land-use regulations and SMC. SPU plan reviewers can attend SDCI pre-submittal conferences for MUPs by requesting invitation to the meeting through the PAT or the applicant can request SPU attendance.

### 18.4.3 Building Permit Review

SDCI issues *building permits*, which are required for most construction in Seattle. SDCI staff (land use planners, plans examiners, geotechnical engineers, and drainage review staff) review private development proposals for compliance with land use, building, Environmentally Critical Areas (ECA), grading, side sewer, and Stormwater codes.

DSO plan reviewers have no direct role in the review of building permits. Their most common role is reviewing and commenting on PARs through SDCI permit process, consulting with SDCI on atypical or complex projects (pursuant to MOA No. 16-124-A Attachment D – Triggers for SDCI Drainage Review and Side Sewer Review Coordination with SPU), and issuing WACs.

### 18.4.4 Preliminary Assessment Review

DSO plan reviewers follow these steps to review *preliminary assessments*:

1. Access PAT through [Hansen Web Tools](#) or Accela after mid-2017.
2. If a PAR(s) has been completed for a project, the project number is shown in red on the right hand side of the screen. Be sure to check the requirements for the previous project before proceeding with the current PAR.
3. Once the SPU review is completed, select “Complete” button to route the project to SDCI Permit staff. SDCI staff will post the completed PAR online and email a copy to the applicant.
4. Use the “Route Back” button as necessary when information in a previous queue requires to be revised. Occasionally, it may be best to contact the reviewer outside of the PAT via email or telephone. If an initial SDCI build-over or main extension requirement is overturned by SPU, then the SPU reviewer must enter a comment in the internal comment field and route the project back to the SDCI drainage review queue.
5. For the Notes & Other Requirements sections, enter “Notes” in the type field for internal comments, which are not to be shared with the public. Enter “Requirement” in the type field for comments directed externally for the applicant.

**Table 18-2**  
**Information Included in the Preliminary Assessment Tool (PAT)**

Utility	Information to be provided in the Preliminary Assessment Tool
Water	The PAT automatically triggers a WAC review. Information provided by a WAC consists of - Location of standard water main, size and # of existing water services, service pressure, and whether the new water main or upgrade of existing main is required.
Drainage and Wastewater (DWW)	<p>Verify the following information input by SDCI Drainage:</p> <ul style="list-style-type: none"> <li>• Locations of existing public infrastructure (sanitary sewer, storm drain, or combined sewer) and pipe sizes.</li> <li>• Waive or concur if a main extension is required.</li> <li>• Review whether SDCI has stipulated build-over and confirm if the requirement is valid.</li> <li>• Other additional areas of investigation: <ul style="list-style-type: none"> <li>○ If more than one possible connection point, the reviewer may suggest preferred pipe and location of connection.</li> <li>○ Potential capacity issues.</li> </ul> </li> </ul>

#### 18.4.4.1 Preliminary Assessment Performance Measures

The SPU service level agreement is to complete the Preliminary Assessment review within 48 hours of receipt from SDOT. If route backs are required, then an additional 48-hour window may be allowed once the project enters SPU's queue a second time.

### 18.4.5 Side Sewer Permit

SDCI issues [side sewer permits](#), which include all the work associated with the installation of both sanitary, drainage, and groundwater point of discharge. For new construction projects, these permits are processed after the building permit has been approved and construction is underway. Side sewer permits for repairs or additions/alteration unrelated to new construction may be issued independently of a building permit. If work is proposed in the ROW, the side sewer permit must be issued to a [Registered Side Sewer Contractor \(RSSC\)](#). Anyone can apply for a side sewer permit if work is solely on private property.

SPU has an [MOA](#) with SDCI to review side sewer permit applications on SPU's behalf, and to inspect the permitted work. As-built (record drawings) are collected by the SDCI inspector, scanned, and sent to SPU's GIS team for inclusion in GIS. SPU is not typically involved in the side sewer permitting process. SPU reviews and confirms the point of discharge during the preliminary assessment. SDCI consults with SPU in situations where SPU expertise is required. SPU has created a trigger list to provide guidance to SDCI on what issues require coordination with SPU. This triggers list is part of the SDCI-SPU MOA No. 16-124-A Attachment D – Triggers for SDCI Drainage Review and Side Sewer Review Coordination with SPU).

### 18.4.6 Side Sewer Connections to DWW Main Infrastructure

Side sewer permits include the connections made to SPU-owned main infrastructure. SPU crews typically perform the core tap to the main. The side sewer from the SPU-owned tee or wye at the main is installed by an RSSC and inspected by SDCI site inspectors. SDCI drainage reviewers approve standard core tap connections, but coordinates with SPU for any non-standard connections. For more information, refer to [Core Tap Procedures for Storm and Sewer Mains](#).

In addition, requests will come to the DSO from SPU's core tap crew when they are in the field and encounter unexpected conditions or a non-standard core tap, which may not be approved.

#### 18.4.6.1 Non-Standard Connections

##### A. General

Non-standard connections are subject to additional review by SPU and should not be approved by SDCI or SPU field staff. SPU acknowledges that this can be inconvenient and urges all permit holders to do advance planning, including potholing, when the service lateral may be in conflict with other utilities. In addition, SPU assumes that lateral pipe is laid starting downstream at the tee. Upstream pipe laid out of sequence is not a reason to allow a non-standard connection.

Note that a non-standard connection may result in additional requirements or conditions for permitting the upstream lateral pipe.

## B. After Excavation Requests

Requests for a non-standard connection made after excavation is evaluated by following the non-standard connections process described below and, if approved, an amended side sewer permit is issued. Contractors in this situation should:

1. Take all necessary measurements and plate the excavation to allow traffic restoration.
2. Cancel any scheduled core tap.
3. Notify SDCI and SDOT inspectors of the delay.
4. Draw a plan, profile, and details for the proposed solution.
5. Submit drawings to SDCI, requesting an amended permit, following the non-standard connections process.

## C. Non-Standard Connections Process

The permit holder must submit plan, profile, and details to describe the proposed non-standard connection to the SDCI Drainage and Sewer Review Desk: (206) 684-5362 or [sidesewerinfo@seattle.gov](mailto:sidesewerinfo@seattle.gov). A short narrative explaining the reasoning for the request may also be helpful, but is not required. SDCI will coordinate with SPU for approval or disapproval of the request. Assume five business days for review. If the request for a non-standard connection is approved, SDCI issues a side sewer permit, or an amended side sewer permit, documenting the allowable connection. The permit holder can then proceed to scheduling.

### 18.4.7 Side Sewer Permit for Temporary Discharge

SDCI also issues *side sewer permits for temporary discharge* (SSPTD) for temporary construction dewatering. Refer to SDCI [TIP 506](#). The review for this permit occurs during building permit review, as part of review for Stormwater Code Compliance. The review of the SSPTD includes:

- Confirmation that the temporary dewatering is discharged to the approved point of discharge (PSD, PSS, or PS.)
- Review of the temporary dewatering plan.
- Ensuring that the proposed point of discharge is allowed (i.e. the connection is to private infrastructure on private property and to the appropriate system).
- Review that proposed discharge rate is within SPU's guidelines.
- Coordination with King County Industrial Waste Section (KCIW) for their discharge authorization if discharge is connected to the sanitary or combined sewer systems.

SDCI consults with SPU DSO when the established criteria cannot be met. The DSO plan reviewer must balance SPU's infrastructure needs with the project needs. For guidance, see [Appendix 18B](#). If the proposed discharge rates are higher than the standard maximum rate allowed, the DSO plan reviewer determines if risks to the infrastructure are within an acceptable range.

When these sorts of temporary discharges are proposed to the sanitary or combined sewer system, the project requires approval from KCIW. In these cases, the SPU plan reviewer communicates the allowed discharge flow rate and any other SPU conditions to the project contact and the KCIW staff, in order to have SPU conditions written into the KCIW permit.

Once SPU and KCIW are satisfied, the SPU plan reviewer informs the project contact and the SDCI drainage reviewer that the SSPTD can be issued.

### 18.4.8 DWW Determination Meetings

An applicant can request a determination review of a DWW main extension by submitting a [Drainage & Wastewater Main Extension Determination Review Request](#) to [spu\\_dso@seattle.gov](mailto:spu_dso@seattle.gov). The requests follow a process pursuant to and described in Director's Rule (DR) ENG-430.1 and ENG-430.2.

### 18.4.9 Latecomer Agreement

A *latecomer agreement* provides developers an opportunity to recover a portion of the costs of installing the new utility facilities. This means that a neighboring property that benefits from the utility installation by connecting to it will have to pay its portion of the installation costs of the utility. This neighboring property is a benefitting parcel. In this way, the *first-in* developer does not subsidize these benefitting parcels, which connect to the utility in the next 20 years.

The latecomer agreement is a means to be more equitable to the first-in developer and includes an equitable cost structure for any benefitting parcel that connects to the new utility improvements. While at first it may seem that this is an extra cost to the benefitting parcel, it is a cost sharing mechanism to build the utility infrastructure to which the parcel connects—and the latecomer payment may be affordable than building the infrastructure from scratch.

In 2013, Washington State Legislature passed a law requiring all municipalities to offer utility latecomer agreements to developments that were required to install utility facilities as a condition of development. The City's authority to administer latecomer agreements comes from the [Revised Code of Washington](#), the [Seattle Municipal Code](#), and is detailed in the [Director's Rule](#).

## 18.5 WATER AVAILABILITY REVIEW

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### 18.5.1 Water Availability Certificate (WAC)

DSO confirms if there is adequate domestic water flow and pressure for a new development by approving a *water availability certificate (WAC)*. The WAC reviewer performs analysis and applies SPU water policy in determining the need for any water system improvements. The WAC reviewer estimates fire flow in determining requirements, but this is subject to confirmation by the Seattle Fire Department. Under most circumstances, the DSO WAC project lead completes these certificates within seven calendar days. The WAC staff apply the policies and procedures outlined in DSO-WS-04 Policy and DSO-WS-04 Procedure.

#### 18.5.1.1 Water availability requests for projects inside the City of Seattle

For projects within the City of Seattle, a WAC is typically triggered during the Preliminary Assessment process at SDCI. However, a developer can request a WAC at any time by completing a [Request for a Water Availability Certificate \(WAC\)](#) and submitting it to

[SPUwateravailability@seattle.gov](mailto:SPUwateravailability@seattle.gov). SDCI requires an approved WAC, as indicated by an approved water review in Hansen Web Tools, before they will issue a building permit for new development.

### 18.5.1.2 Water availability requests for projects outside the City of Seattle

WACs are also required for areas within SPU's service delivery area but outside of the City of Seattle limits. These areas include Shoreline, Burien, Lake Forest Park, Mercer Island, Renton, Tukwila, and unincorporated King County. Since these areas do not get building permits through SDCI's building permit process, they must request a WAC directly from the DSO via email, mail, or in person.

## 18.5.2 WAC Determination Meetings

An applicant can request a determination review of a water main extension by submitting a [water main extension determination review request](#) to [SPUwateravailability@seattle.gov](mailto:SPUwateravailability@seattle.gov). The requests follow a process pursuant to ENG-430.1 and ENG-430.2.

## 18.5.3 Latecomer Agreements

Latecomer agreements are also applicable to water main extensions. Please see above section 18.4.9 for more information.

## 18.5.4 Build-over Review and/or Re-route Process

SPU may allow a developer to construct a permanent structure over or adjacent to an existing combined, sanitary, or storm main located on private property, or re-route the main, subject to site specific engineering and maintenance requirements. If any or all of the requirements is not be met, SPU reserves the right to reject the proposed build-over. An applicant is not entitled to a build-over or re-route, whether or not the criteria allowing approval of a build-over and/or re-route are met.

Real Property Services (RPS) works with the DSO plan reviewer to determine that the city's rights and facilities are adequately protected. The developer must agree to pay the administrative costs plus excess future costs due to the project's construction. For detailed information on build-over review and/or the reroute process, refer to [Tip 507](#) and the RPS/DSO flow chart for the DWW public main build-over and/or re-route process.

*Note: Build-overs are approved only for drainage or wastewater mains. Build-overs should not be approved for water mains.*

### 18.5.4.1 Build-over Process

Refer to [Tip 507](#) and the RPS/DSO flow chart for the DWW public main *build-over* and/or *re-route* process.

### 18.5.4.2 Build-over Review

SPU build-over review may involve a variety of steps and requirements as follows:

1. Re-routing the sewer around the proposed building in lieu of a build-over is the preferred option. This option only works if there is enough grade to maintain flows and if there will be additional access granted for change in direction vertically and horizontally. This will require any existing easement to be relinquished and a new easement (requiring council action) to be recorded prior to permit issuance. If there is no existing easement, new easement should be provided.
2. Replacing the pipe within the same easement may be proposed. Relinquishing an existing easement and getting a new and wider standard easement is easier to get council approval.
3. A public utility easement is issued for the utility main within private property. The Seattle City Council must approve any easement legislation required prior to issuing the permit for construction.
4. If required, a casing pipe is installed around the sewer/storm main (carrier pipe) and, that the inside diameter of the casing pipe must be larger than the outside diameter of the bell of the carrier pipe. The casing pipe should be approximately twice the size of the carrier pipe diameter to allow for construction tolerances.
5. The minimum thickness of the steel casing pipe should be ¼ inch. External loading may require thicker and stronger casing, such as with larger buildings or railroad crossings, which should be reviewed by a structural engineer. For simple spread footings, casing should extend at least 5 feet beyond the edge of building foundation 1:1 influence line. For pile foundations, casings may extend to less than 5 feet if needed. Steel casing pipe is preferred, although ductile iron pipe (DIP) may be used in certain circumstances.
6. The carrier pipe must be DIP class 50 minimum restrained joint within the casing pipe. The carrier pipe must match or exceed existing capacity of the original design. For sewers, the velocity flowing full within the pipe should be at least 3 ft. /sec, if possible. In instances where planning determines that upsizing a pipe is needed for either increased sewer loads or drainage basin conveyance, it is best to accomplish this during the build-over, if possible. If not, consider at increasing the casing size to accommodate the future carrier pipe size.
7. Private side sewer connections are not allowed within the casing pipe. Re-route existing connections, preferably downstream of the casing. In instances where there needs to be a side sewer connection through the casing pipe, use of a saddle MH is required.
8. That the casing pipe inside diameter is larger than the outside diameter of the bell of the sewer/storm main. The proposed pipe must be sized to convey the design flows for the entire basin under full build-out for the corresponding zoning.
9. Casing spacers should be used to maintain line and grade of pipe and to prevent floatation. Use stainless steel spacers for longevity. Place at bell ends with 9 feet of maximum spacing.
10. An unobstructed 10 x 20 foot-minimum access area located on both sides of the building is preferred. If that is not feasible, SPU may allow one access area for future trenchless maintenance or repair. Larger diameter pipes may require larger access areas and easement widths.

11. A removable end cap or a 1-foot-deep concrete plug is included in order to seal the space between the casing pipe and the carrier pipe.
12. Additional manholes may be required, as necessary, to improve access. This decision should be made in consultation with the Drainage and Wastewater (DWW) System Maintenance staff.
13. Final as built plans should be filed in the SPU Records Vault.

## 18.6 SDOT RIGHT-OF-WAY PERMITS

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SDOT issues *street use permits*, which regulate the use of the public ROW, including construction of projects. Types of street use permits or activities that may affect SPU infrastructure include street improvement permits, utility permits, shoring and excavation review, and street tree permits.

### 18.6.1 Street Improvement Permit (SIP)

*Street improvement permits* are submitted to SDOT for installation of major improvements such as street paving, curbs, and sidewalks. Usually, this permit is common to parcel based development. SPU infrastructure is generally located within the ROW and SIP projects are more likely to affect the infrastructure and to trigger the Stormwater code thresholds. SDOT issues SIP for work as required by the Seattle land use code or the Right of Way Improvement Manual. Sometimes, the work permitted by the SIP could be due to a city department CIP, another agency or a voluntary project. DSO reviews a SIP when Water or DWW infrastructure that SPU will own are constructed, when existing infrastructure is impacted, or if the project must meet any performance standards of the Stormwater code.

The SIP process starts at the design guidance phase (0-30% design), and moves to the formal review phase at 90% design and through project construction. The design guidance (DG) phase usually consists of meetings with the project proponent. During the DG meeting staff, from the relevant city departments respond to questions from the design team or provide other information. During the formal review process, paper or electronic plans are submitted to SDOT and SDOT distributes the plans to other city departments, including SPU.

The SIP plans are reviewed for:

1. Compliance with the Stormwater Code Flow Control.
2. Protection of SPU infrastructure. Review is done to identify immediate and long-term risks from construction and operation of the proposed projects. The risks could be due to proximity of proposed construction to SPU infrastructure, parallel deep excavations and excavations over or under water mains or DWW pipes, construction methods, concrete pavement removal over, or adjacent to cast iron water mains, soil nails, sheet piles, and tie-backs intersecting DWW or water pipes and vibration and settlement of pipes due to construction activities.
3. Compliance with City of Seattle standards for SPU utility construction or approval of non-standard construction.
4. Drainage collection and conveyance and conformance with CAM 1180.

The listed impacts could require mitigation by the project owner, in the form of utility protection plans, monitoring of construction by SPU staff, and vibration and settlement monitoring. The review engineer should refer to the resources listed below in order to review the plans uniformly and efficiently and to establish the level of protection:

1. The Plan Review Checklist – DSG [Appendix 18A](#)
2. Settlement Monitoring for Cast Iron Pipes – DSG [Appendix 5B](#)
3. Settlement Monitoring for Ductile Iron Pipes – DSG [Appendix 5C](#)
4. Vibration Monitoring – [DSG Chapter 5, Water Infrastructure](#), section 5.10.1.2
5. [CAM 1180](#) - Design Guidelines for Public Storm Drain Facilities
6. [Drainage CB and Inlet Notes](#)
7. [SPU Mainline Conveyance and Detention Notes](#)
8. [Proprietary Stormwater Treatment Notes](#)
9. [Rain Garden Notes](#)
10. [Infiltrating Bioretention Notes](#)
11. [Water Service Notes for Street Improvement Plans](#)
12. [Water Main Notes for Street Improvement Plans](#)

## 18.6.2 Utility Major Permits

SDOT issues *utility major permits (UMP)* for the installation of underground utility mains, overhead wires, and services in the public ROW. They include public utilities such as electric power, water, sewer, and drainage mains; franchise utilities such as communications, gas, and steam; and privately owned facilities such as oil pipelines. UMPs are reviewed to protect SPU infrastructure. Review is done to identify short and long-term risks from construction of proposed projects, as described in the section above. The risks could be due to proximity of proposed construction to SPU water and DWW infrastructure, deep excavations, construction methods, concrete pavement removal over or adjacent to cast iron water mains, soil nails and tiebacks intersecting DWW or water pipes, and vibration and settlement of SPU pipes due to the listed impacts. For details, refer to the resources listed under 18.6.1 (numbered list directly above).

This permit is one that SPU both reviews as an approver and requests from SDOT as an applicant. Many SPU projects need to obtain this permit. See [DSG Chapter 2, Design for Permitting and Environmental Review](#).

SDOT distributes the UMP applications to SPU and other stakeholders. After logging the project into the Plan Review Database and distribution to a DSO engineer, the DSO engineer reviews the plan to check for impacts to SPU infrastructure. Comments are transmitted to SDOT, using a standard SDOT SIP Comment form. Simple projects usually require one review, while complex projects may require several reviews. Refer to [DSG Chapter 2, Design for Permitting and Environmental Review](#).

## 18.6.3 Shoring and Excavation Review

Shoring is a means of supporting the earth in a trench or vertical cut for construction or other activity. There are many types of shoring techniques for earth reinforcement or support.

The shoring review is one of the review functions for SDCI. In order to become more customer friendly, SDCI and SDOT combined the shoring review as part of the building permit review process, to allow for a one-stop permit. The shoring review begins at SDCI. At the point of intake, the intake reviewer assigns all necessary review locations for a particular project. *Street use shoring* review is initiated for any proposed excavation that would be greater than 3 feet deep immediately adjacent to any given public right-of-way.

SPU may review the shoring plans if the construction is likely to impact SPU utilities, but typically, SDOT represents SPU in this review function. Projects that have deep excavations, soil nails, and tiebacks and sheet piles may trigger settlement monitoring for water mains and also pre and post CCTV for sewer and drainage pipes. Applicants must complete and submit the *Request to Enter a Maintenance Hole* form before conducting any drilling, grouting, or concrete construction that may affect SPU pipes.

SPU has established a protocol for accessing DWW pipes for the purpose of CCTV and cleaning. The protocol is described in Notes attached as [Appendix 18D](#). The notes should be included in the drawings for projects that have soil nails or tieback systems passing over or under DWW pipes.

### 18.6.4 Stormwater Code (SWC) Compliance

Property owners are responsible for properly conveying all stormwater, groundwater, and wastewater to an approved discharge location. Detention, treatment, or on-site stormwater management requirements may be imposed.

In the City of Seattle, all proposed development is checked for its impact to the existing drainage and wastewater infrastructure. A master use, building, or street use permit will not be issued until all concerns regarding drainage and wastewater have been addressed. Infrastructure improvements may be required as a condition of the permit when existing infrastructure is unavailable or inappropriate.

DSO engineers use the stormwater code (SWC) to review for stormwater code compliance for public and private development or redevelopment projects. There are 13 minimum requirements for all projects, (SMC 22.805.020). Of these, a reviewer most often encounters requirements to maintain natural drainage patterns, amend soils, implement GSI, protect wetlands, ensure capacity, and comply with the side sewer code. Two additional minimum requirements (flow control and water quality) vary depending on project type and where the site ultimately drains. For assistance in interpreting the SWC, refer to [Appendix 18C – ROW Stormwater Code Flow Chart](#).

Additional system requirements may be identified. Drainage and wastewater thresholds for improvements and extensions within the City of Seattle are triggered by code (often a lack of available main in abutting ROW). If there is no sewer or combined main or if the sewer or stormwater drainage main may be under capacity for the improvements, the DSO plan reviewer may need to coordinate with LOB and to determine the following:

1. Possible downstream hydraulic constraints
2. Point of discharge (POD)
3. Evaluation of service alternatives
4. Determination of benefit of new or upgraded main to SPU

The code and other extensive explanatory materials are in the [2016 Stormwater Manual](#), Volume 1-4 and associated appendices.

#### 18.6.4.1 On-site Stormwater Management

On-site stormwater management using on-site stormwater management BMPs are required under the 2016 Stormwater Code. BMPs limit the negative impacts of stormwater runoff by requiring the implementation of plants, trees, and soils to clean runoff and manage stormwater flows. Bioretention, permeable pavement, and allowable trees and vegetation allow soils to absorb water, slowing flows and filtering out many contaminants. On-site stormwater management can be achieved by either using the (1) on-site performance standard or (2) on-site lists. On-site stormwater management is required for the following thresholds and project types:

1. All roadway projects (SMC 22.805.060) or trail and sidewalk projects (SMC 22.805.040):
  - a.  $\geq 2,000$  sf new and replaced impervious surface, or
  - b.  $\geq 7,000$  sf total land disturbing activity
2. All parcels based projects (SMC 22.805.050) or single-family residential projects (SMC 22.805.030):
  - a.  $\geq 1,500$  sf new and replaced impervious surface or  $\geq 7,000$  sf total land disturbing activity, **or**
  - b. For a project on a lot most recently created, adjusted, altered, or otherwise amended by a plat recorded with the King County Recorder on or after January 1, 2016, either  $\geq 750$  sf new plus replaced hard surface or  $\geq 7,000$  sf land disturbing activity

For more information, refer to the [Appendix 18C, Seattle Stormwater Code Flowchart](#) for projects in the ROW.

## 18.7 OTHER REVIEWS AND PERMITS

DSO engineers also review plans for other city department CIP projects. For these projects, other city departments are the developers. As with the SPU CIP projects, these reviews have many similarities to private development plan reviews. If development or redevelopment is on private property, then the SDCI MUP and building permit process is applied. If in the ROW, the plans are submitted to SDOT and then routed to DSO. Examples of other city projects include: the construction of a new fire station or a new school with the related infrastructure, a new street with storm or sewer mains, or other DWW infrastructure, bio-retention cells for stormwater code compliance; or a new facility by a city department on its property that has full frontage improvements including new water, sewer, and storm main extension. In particular, SDOT street reconstruction projects can have impacts on SPU infrastructure, especially drainage facilities.

### 18.7.1 Major Interagency Projects

The SPU DSO receives plans for projects from other city departments, government agencies when SPU infrastructure is impacted. These types of projects are categorized as *major*

*interagency projects.* Major interagency projects (MIP) are reviewed and managed by the Project Delivery and Engineering Branch (PDEB) in the Project Management division. DSO role is to transmit documents to the reviewers, provide advice regarding SWC compliance, and manage the sale and installation of water services.

## 18.7.2 Water Main Extension Contracts

During the WAC review, after reviewing a building permit application or short plat application, DSO staff may determine that a building or parcel is not adequately served by drinking water infrastructure. SPU may issue water availability certificate listing the water system improvements to be made by the developer. Usually, the improvements consist of constructing a standard water main or upgrading a sub-standard main. In order to construct the main, the applicant is required to submit an executed property owner contract and payment of fees specified in the contract to SPU. The contract is prepared by SPU. The cost of designing and constructing the main is borne by the applicant. The applicant or developer hires a contractor to construct and commission the water main. After the main is constructed, tested, and approved by SPU, the applicant donates the water main to the city. For the complete process, refer to [Install Water Mains](#).

## 18.7.3 Plan Review and Approval of Water Main Extension Projects

The process of constructing a water main extension project follows the listed steps:

1. After obtaining an approved WAC, the applicant enters into a Water Main extension contract with SPU and pays all associated fees, hires a licensed civil engineer to design the water main or other water improvement to be installed and owned by SPU.
2. The plans are submitted to SDOT as a SIP application. If the project does not have a SIP component, the plans are submitted as a UMP application.
3. SDOT submits the plans to DSO and other city departments for review. The DSO engineer combines review of the street improvement construction, which impacts SPU infrastructure with the review of the water main.
4. The water main is reviewed to assure compliance with SPU Design Standards. The plans may require several reviews before the final approval.
5. After approval, the Mylar is signed, SDOT issues a permit, and the applicant hires a contractor to construct the project.
6. Construction of the project is inspected by an SPU engineer and an SDOT street use inspector.

For detailed information, refer to the [DSO Website](#), under Water Service.

To review a water main design, the engineer should check the listed items:

1. WAC – To match the designed project with the WAC requirements for location, water main size, material, and length.
2. Standard notes – The notes may be revised to suit project-specific requirements. Refer to 18.6.1.

3. Pipe material – Usually DIP, CL 52, or Mechanical Joint. Restrained joint pipe is required when the pipe slope exceeds 15 degrees; pipe is located in liquefiable soil or in a potential slide area.
4. Valves – As shown or described in the City of Seattle (COS) Standard Plans and located at margins of street intersections where mains intersect a perpendicular extension of the curb or property line.
5. Water services – Existing water services are shown on the plans with comments stating if they will be retained or retired. Size and location of new water services is shown on the plans.
6. Easements – When required for new mains, hydrants or water services, easements should be shown on the plans and described.
7. Cathodic protection – The DSO reviewer consults the Cathodic Protection (CP) group, under ETSD, Engineering System support. The group recommends the appropriate CP for the pipe.
8. COS Standard Plans to confirm that the submitted engineering exhibits include the standard location, for the main, a plan and profile, details for standard cover, connection, and blocking details.

Complete guidelines for designing Water mains are described in the [DSG Chapter 5, Water Infrastructure](#).

### 18.7.4 Water Service Installation Plans

After obtaining an approved WAC, an applicant is required to complete and submit a water service application and agreement form, pay for the cost of the water services and submit plans. For small water services (two inch or less), an applicant submits a sketch showing the desired location of the water service.

For 4-inch and larger water services, an applicant submits a well-prepared, scaled drawings as described in [CAM 1202](#). For complete details, refer to [DSG Chapter 17, Water Services](#).

The DSO engineer reviews the plans to confirm that the site has adequate space for the trench and a meter vault and there are no utility conflicts. If the plan meets standards, it is approved and transmitted to Water Operations and System Maintenance (WOSM) for construction. If the submitted information is not adequate, the application is returned to the owner for revisions.

## 18.8 SURVEY REQUIREMENTS AND MONUMENTS

The City of Seattle survey and monument requirements are described in [CAM 1401](#) – Survey Requirements and [CAM 1402](#) Survey Monument Protection. CAM 1401 describes when a survey is required and general information regarding survey. CAM 1402 describes how to locate and identify a survey monument, the developer’s responsibility in verifying and protecting monuments, and how a developer gets approval to disturb a monument. See the [CAM website](#) for details.

SDOT Street Use has an agreement with SPU ESTD, which allows ESTD to review the SIP for survey compliance on behalf of Street Use. The plans are submitted directly to the Land Survey Technical Resources group, under ETSD. Through this review, street alignments, rights of way, and horizontal and vertical survey control data for projects are reviewed and verified. Usually, the review checks and verifies the listed survey data:

- Vertical datum
- Horizontal datum
- Review the control for right of way alignments
- Right of way width along project frontage

The survey plan reviewer uses city survey records, city quarter section (engineering) maps, city ordinance records, county records, superior court cause documents, state and county survey control databases, and occasionally field verification to confirm that the submitted plan or base map is a reasonable representation and interpretation of survey control.

The survey reviewer may also be asked to review new plats, short plats and lot boundary adjustments submitted to SDOT. In the case of new plats, geometry, ROW, and control of re-aligned streets are checked, and ties to control outside of the plat are reviewed.

## 18.9 SOLID WASTE

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The SPU Solid Waste Division reviews building permit plans for larger multi-family, commercial and industrial projects to assure the following:

- Garbage trucks have sufficient access to dumpsters.
- Sufficient space is available for solid waste dumpsters.
- Dumpsters can be safely moved from their storage location to the pickup location.

## 18.10 PLAN REVIEW ROLES AND RESPONSIBILITIES

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Plan review at SPU is performed by a team as shown in Table 18-3.

**Table 18-3**  
**SPU DSO Plan Review Chart**

Position Description	Responsibilities
DSO Service Delivery Manager	Manages DSO Plan Review section, assures KPIs are met, coordinates with other SPU and city departments, and assists to resolve complex issues.
Plan Review Supervisor	Assigns projects for review to engineers, tracks progress, and does QC; helps to resolve complex issues.
Plan Review Coordinator	Organizes and distributes plans for review, compiles comments and transmittals, and provides general support; tracks and reports performance measure data.
Primary Reviewer	Engineering plan review and project management; reviews projects for adherence to SPU DSG, city standards, SMC, and relevant DRs.

Position Description	Responsibilities
Conditional Reviewer	Supports primary reviewer by performing specialized reviews, as necessary for adherence to SPU DSG, city standards, SMC, and relevant DRs.

Other City of Seattle departments and groups within SPU share responsibilities for plan review.

Table 18-4 shows an overview of the role of city departments and SPU groups in plan review.

**Table 18-4**  
**Plan Review Roles and Responsibilities**

Organization	Group	Role	Responsibilities
SDCI	Multiple	Issue permits	<ul style="list-style-type: none"> <li>Issues MUP, building, grading, and side sewer permits.</li> <li>Review to ensure compliance with stormwater and side sewer codes.</li> <li>Review to protect SPU interests when issuing permits.</li> <li>Involve SPU as needed or agreed in the permitting process.</li> </ul>
SCL	Plan Review Team	Review	<ul style="list-style-type: none"> <li>Similar to SPU.</li> <li>Review plans as needed to assure SCL infrastructure is protected.</li> </ul>
SDOT	Street Use Operations	Issue permits; Review	<ul style="list-style-type: none"> <li>Administers the Street Use process.</li> <li>Protect SPU interests when issuing permits.</li> <li>Protect SDOT interests when reviewing plans.</li> <li>Involve SPU as needed or agreed in permitting process.</li> </ul>
SPU	DSO	Review WACs, Review SIPs and UMP, Manage Water main extension projects, provide Technical expertise for DWW projects Authorize new water service, Manage installation of water services	<ul style="list-style-type: none"> <li>Assure WAC is issued before accepting new water service applications; plan review to verify SWC compliance and protection of SPU infrastructure.</li> <li>Accept plans from developers for water service review.</li> </ul>
SPU	DWW or Water LOB	Conditional Review	<ul style="list-style-type: none"> <li>Review plans as agreed with SPU PMD for projects with complex policy issues.</li> </ul>
SPU	Solid Waste	Conditional Review	<ul style="list-style-type: none"> <li>Review building permit plans to assure safe access to dumpsters for residents and garbage trucks.</li> </ul>
SPU	Survey	Conditional Review	<ul style="list-style-type: none"> <li>Assure plans reviewed meet city survey standards.</li> <li>Assure planned projects meet city ROW monumentation and future grade requirements.</li> </ul>
SPU	Materials Lab	Conditional Review	<ul style="list-style-type: none"> <li>Assure appropriate products and materials are used in construction projects involving SPU infrastructure.</li> </ul>
SPU	Real Property Services	Conditional Review	<ul style="list-style-type: none"> <li>Assure SPU and city property are protected</li> <li>Assure easements and other legal documents protect City property and interests.</li> </ul>
SPU	WOSM	Conditional Review	<ul style="list-style-type: none"> <li>Assure proposed projects do not negatively impact Operations' ability to operate or maintain SPU infrastructure.</li> <li>Verifies that proposed projects are constructible.</li> </ul>

Organization	Group	Role	Responsibilities
King County	Dept. of Natural Resources (Wastewater Treatment Division)	Review	<ul style="list-style-type: none"> <li>Protect King County wastewater interests</li> <li>Review plans for wastewater concerns as requested by SPU; Industrial Waste, Construction, and Real Property are sections where coordination takes place.</li> </ul>

## 18.10.1 Coordination

Coordination with other branches, divisions, and departments is critical to successful projects. Table 18-5 lists examples of when coordination is needed with other SPU groups and SDCI. The list is not exhaustive.

**Table 18-5**  
**Plan Review Coordination and Conditional Reviewers**

Department/Branch	Issues for Coordination
DWW and WOSM	<ul style="list-style-type: none"> <li>Provide support for accessing SPU infrastructure</li> <li>Safety platforms for deep maintenance holes</li> <li>Inside drop vs. outside drop for MHs</li> <li>Access to public facilities in difficult to reach locations</li> <li>Confirm access locations in drive aisles, roads, &amp; private property with SPU facilities</li> <li>Bend required in-lines</li> <li>Backwater valves</li> <li>Pipe slopes less than or greater than allowable standards</li> <li>Project with limited overhead or horizontal clearance due to trees, overhead utilities, underground utilities, walls, etc.</li> <li>Utility infrastructure to be decommissioned</li> <li>Other unique issue creating non-standard installation</li> <li>Non-standard location or complex/non-standard work by crews</li> <li>Connections &amp; maintenance of water quality facilities such as storm filters or wet vaults</li> <li>Utility conflicts</li> <li>Proposed trees over/near mainline</li> <li>Opportunistic replacement of plastic or galvanized water services</li> </ul>
Real Property Services	<ul style="list-style-type: none"> <li>RPS initiates review for projects requiring an easement or build-over agreement</li> <li>SPU coordinates with RPS easement issues with a build-over</li> <li>RPS coordinates with outside jurisdictions and SPU facility's needs</li> </ul>
Materials Lab	<ul style="list-style-type: none"> <li>Point load on pipes due to proposed adjacent improvements</li> <li>Use of epoxy for water proofing utilidor</li> <li>Casing pipe inspections</li> <li>Pipe bedding/support</li> <li>Trenchless installations</li> <li>Mix designs for porous pavements and structural inspections</li> <li>Review of non-standard products or materials</li> <li>Soil compaction tests</li> </ul>
Water and DWW LOB	<ul style="list-style-type: none"> <li>SPU ETSD, DSO, and the LOB have a Roles and Responsibilities RACI table that outlines areas the two branches share responsibilities for projects.</li> </ul>
Construction Management	<ul style="list-style-type: none"> <li>Casting surveys</li> <li>Constructability review</li> </ul>

Department/Branch	Issues for Coordination
SDCI	<ul style="list-style-type: none"> <li>• Inspection services</li> <li>• SPU DSO and SDCI are revising MOA NO. 16-124-A that outlines areas of coordination; this MOA includes a triggers list that shows SDCI site reviewers what types of project issues require coordination with PMED plan reviews. Coordination includes: <ul style="list-style-type: none"> <li>○ Interpretation of the Stormwater code for on-site drainage review</li> <li>○ Side sewer permitting</li> <li>○ Main extension requirements</li> <li>○ Temporary construction discharge</li> <li>○ Build-over or relocation inspections permitted by SDCI</li> <li>○ Projects that may have significant impacts on SPU system capacity.</li> </ul> </li> </ul>
Customer Service	<ul style="list-style-type: none"> <li>• Managing Customer Billing Services</li> <li>• Resource Conservation</li> <li>• Managing and resolving Key Customer Service issues</li> <li>• Cross Connection Control</li> <li>• Sewer sub-meters</li> </ul>
Solid Waste	<ul style="list-style-type: none"> <li>• Review for truck access to large waste containers.</li> </ul>
Survey	<ul style="list-style-type: none"> <li>• Professional survey issues that are elevated by the Developer</li> </ul>

## 18.11 RESOURCES

This section contains information available to SPU plan reviewers.

### 18.11.1 Codes and Authority

Table 18-6 describes relevant codes and authority that DSO staff relies on to perform plan review.

**Table 18-6**  
**Relevant Codes and Authority for Plan Review Staff**

Code	Authority
<a href="#">Side Sewer Code (2010)</a> <a href="#">SMC Chapter 21.16</a>	Regulates construction/use of service drains and side sewers in Seattle.
<a href="#">Stormwater Code(2016)</a> <a href="#">SMC Chapter 22.800</a>	Regulates stormwater, flow control, water quality, temporarily during construction, and permanently after construction.
<a href="#">Water Code (2007)</a> <a href="#">SMC Chapter 21.04</a>	Regulates current and future water demands, ensures high quality drinking water, and establishes rates for purveyors and customers.
<a href="#">King County Code</a> KCC Title 28	Regulations for the disposal of industrial waste into the sewerage system and establishment of fees and rules.

### 18.11.2 Director's Rules

Table 18-7 describes relevant Director's Rules (DR) for plan review staff. Director's Rules are administratively approved and signed by city department directors. They are legally binding rules that clarify how SMC will be implemented and enforced. Most DRs related to plan review are joint SDCI and SPU Director's Rules, and can be located in Table 18-7 or on SDCI's web site.

**Table 18-7**  
**Relevant Director's Rules for Plan Review Staff**

DR Number	Description
<a href="#">2011-004</a>	Requirements for Design and Construction of Side Sewers (Drainage and Wastewater Discharges)
<a href="#">2011-005</a>	Side Sewer Code Enforcement
2016 City of Seattle Stormwater Manual	
Vol. 1	Project Minimum Requirements
Vol. 2	Construction Stormwater Control
Vol. 3	Project Stormwater Control
Vol. 4	Source Control
Vol. 5	Enforcement
Appendix A	
DWW-420.I	Yesler Terrace Allowable Stormwater, Groundwater, and Sewer Release Rates to the Combined Sewer System and Infiltration Zones
DWW-430.I	Flow Control Requirements for Projects in Identified Public Combined Sewer Basins

### 18.11.2.1 Memoranda of Agreement and Understanding

*Memoranda of agreement* and *memoranda of understanding* are binding documents between a minimum of two parties. Often two or more departments or branches/divisions within a department will have a MOA or MOU. There is an [Agreements Library](#) located on PDEB SharePoint site.

### 18.11.3 Client Assistance Memos

Table 18-8 describes relevant *client assistance memos* (CAM) for plan review staff. CAMs are general in nature and aid the public in applying regulations.

**Table 18-8**  
**Relevant Client Assistance Memos for Plan Review Staff**

Client Assistance Memo	Description
SDCI Tips	
<a href="#">TIP 502</a>	Grading Regulations in Seattle
<a href="#">TIP 503</a>	Side Sewer Permits in Seattle
<a href="#">TIP 504</a>	Side Sewer As-Built Plan Requirements
<a href="#">TIP 506</a>	Side Sewer Permits for Temporary Dewatering on Construction Sites
<a href="#">TIP 507</a>	Build-over and/or Re-route Review and Approval Process
<a href="#">Tip 520</a>	Rainwater Harvesting for Beneficial Use - Green Building CAM
SPU CAMS	
<a href="#">CAM 1101</a>	Drainage and Wastewater: Regulation of Development
<a href="#">CAM 1102</a>	Sewer Sub-meter Program
<a href="#">CAM 1180</a>	Design Guidelines for Public Storm Drain Facilities
<a href="#">CAM 1201</a>	Water Availability Certificate
<a href="#">CAM 1202</a>	Water Service Application
<a href="#">CAM 1301</a>	Solid Waste: Information for Developers
<a href="#">CAM 1302</a>	Building Material Salvage and Recycling
<a href="#">CAM 1401</a>	SPU Survey Requirements
<a href="#">CAM 1402</a>	Survey <a href="#">Monument Protection</a>
SDOT CAMS	
<a href="#">CAM 2200</a>	SDOT Street Improvement Permitting (SIP) Process
<a href="#">CAM 2201</a>	90% Complete Street Improvement Plan Requirements
<a href="#">CAM 2213</a>	60% Street Improvement Plan (SIP) Approval Process
<a href="#">CAM 2214</a>	90% Street Improvement Plan (SIP) Intake Appointment and 90% Complete SIP Acceptance Processes

#### 18.11.3.1 DSO Billing Codes

DSO staff use the listed activity codes to track their time.

**Table 18-9**  
**Plan Review Timesheet Codes**

Activity Code	Title
N437100	General Support
N437001	SDCI Engineering Support

Activity Code	Title
N437002	Other Plan Review
N437003	Water Availability Certificate
N437004	Latecomer Agreements
N437006	DSO Water Services
N437008	DSO Appeals/Clarifications
N437009	DSO Dewatering
SDOT Projects	
Projects billed to SDOT are charged to one of three activity codes:	
NS09029	Design Guidance
NS09030	Plan Review
NS09031	Inspection

When completing a timesheet, the plan reviewer enters the permit number in the Doc # field and a brief description of work performed in the Comment box on the HRIS timesheet. After each pay period, SPU Finance sends a report that includes this information, and the primary reviewer reviews to ensure that all charges are appropriate before approving. SPU Finance then sends the approved billing to SDOT for processing.

Refer to the plan review billing process map. SPU internal CIP projects with an assigned SPU project manager have activity codes that start with a **C** (e.g. C305501).

Currently, projects originated from SDCI are billed to N480305 SDCI Engineering Support.

### 18.11.3.2 Technology

The city uses a variety of software to manage and track plan review. To access these systems, the SPU plan reviewer should contact the appropriate IT department (Table 18-10).

**Table 18-10  
Technology Tools for Plan Review Staff**

Software Name	Description	Owner
ArcMap	Viewing, SPU and city utilities and infrastructure, creating maps, organizing data during plan review, project design, and processing of WACs.	City IT
UtiliView	Viewing, SPU and city utilities and infrastructure, creating maps during plan review, project design, and processing of WACs.	City IT
Hansen Web Tools (HWT)	HWT provides a web-based view of SDCI's Hansen permitting application data, and other permitting application data (e.g.: GIS, EDMS.). HWT also provides additional functionality supporting interdepartmental permitting. This tool allows the reviewer to view project information and details from other city reviewers. Access to this system must be requested from SDCI.	SDCI
Preliminary Assessment Tool (PAT)	PAT is an application within HWT that supports determination of code requirements. It is used by SDCI Land Use, SDCI Site Team, SCL, SDOT and SPU. Access must be requested from SDCI. PAT is used in the preliminary application process by Review Staff to provide early guidance and code requirements for all new private parcel development projects.	SDCI
Plan Review Database (PRD)	PRD is an MS Access database used to track plans, archive comments & decisions for projects reviewed by SPU PDEB. It is used for SDOT Street Use Permit plan review, for other departments. CIP plan review, and for	SPU

Software Name	Description	Owner
	other reviews that occurs in the Plan Review Section. Write access is requested from the Plan Review Supervisor, who then contacts the SPU IT service desk.	
Field Operations Mapping System (FOMS)	<a href="#">FOMS</a> is a tool to graphically see Maximo work orders, O&M truck locations, and work order status and expeditiously gain O&M information. O&M truck locations are real time locations using GPS to locate them.	
Virtual Vault	Virtual Vault is a desktop tool to access to SPU infrastructure as-built information.	
Maximo	<a href="#">Maximo</a> is a desktop tool that enables access to O&M crew scheduling, work activities, and costs	
WAC Tracker	Web application for creating and managing water application certificates.	SPU
DSS	Development services system (DSS) is used to track DSO projects and sales of new development services.	SPU

### 18.11.3.3 DSO Library and File Storage

The SPU Library is located on SMT 45<sup>th</sup> floor. The library contains copies of industry standards to which SPU subscribes. It also contains engineering textbooks, city standards, and other technical engineering publications.

Physical copies of plans received by SDOT are stored in the PRD portion of central files on SMT 27<sup>th</sup> floor while plan review is in progress. At regular intervals, completed projects are packaged and sent for off-site archiving.

## 18.11.4 Mapping

Table 18-11 lists resources SPU plan reviewers and developers use to obtain property information.

**Table 18-11**  
**Resources for Plan Review Staff**

Resource Name	Description (if applicable)	Link/Location (if applicable)
<b>General</b>		
SDCI <a href="#">Tip 233</a>	Sources for Property Information	<a href="#">Tip 233</a>
City GIS (Public)	Public Information	<a href="#">City GIS</a>
DSO Research Map	External map to research existing Seattle water, drainage, and sewer infrastructure for new property purchases or development.	<a href="#">DSO Research Map</a>
City GIS (Internal Use)	Internal Access Information	ArcView & UtiliView
Microfilm Library	Public Information	Seattle Map Counter Public Resource Center, SMT 20th Floor
City of Seattle Vault	<ul style="list-style-type: none"> <li>400 Scale Water Maps and limited record water system drawings (as-built)</li> <li>Limited wastewater and stormwater record drawings (as-built)</li> <li>Sewer Cards (also available on-line)</li> <li>Reviewers have access to more accurate detailed information from the internal SPU on-line system</li> </ul>	<a href="#">Virtual Vault</a> 700 Fifth Avenue SMT 47th Floor Seattle, WA 98104 (206) 684-5132 Hours: 8:00 AM to 4:30 PM, M-F

Resource Name	Description (if applicable)	Link/Location (if applicable)
<a href="#">Tip 107</a> SDCI Public Records	The Tip includes brief descriptions of records maintained by SDCI along with locations and hours of operations, copy fees, and documents exempt from public disclosure	<a href="#">Tip107</a>
Plat Maps	Official document that portrays subdivision boundaries, easements, restrictions, and legal descriptions	KC Dept. of Records & Elections
<b>Water</b>		
Water System Map Book	Public Information	Seattle Map Counter Public Resource Center, SMT 20th Floor
SPU DSO	Public Information, Water and DWW information	Water Service Project Leads (206-684-3333), 700 5 <sup>th</sup> Avenue, 27 <sup>th</sup> Floor Seattle, WA 98124-4018
<b>Drainage and Wastewater</b>		
Sewer Cards	Historic mapping information (updated until 2001)	Find Side Sewer Card and Maps City of Seattle Vault, SMT 47 <sup>th</sup> Floor Sewer and Drainage counter at SDCI
SPU Engineer's Maps		See <a href="#">base maps</a>
Sewer & Drainage Infrastructure Map Sheets		Seattle Map Counter Public Resource Center, SMT 22th floor

If plan reviewer notes a discrepancy on GIS maps or sewer cards, verify using the mapping resources listed above, and then once confirmed that a correction is needed, complete a GIS Change Request form to correct discrepancies. [The map corrections forms for water and DWW data are located online.](#)