

Development Services Guidance

Construction Plans Coordination

About this Guidance Document

This document provides details and related responsibilities for plans and reports customarily used for developer mitigation projects on state highways. Use this document in conjunction with [Design Manual](#) Chapter 1130, particularly Section 1130.10(6) Construction Plans, Specifications, and Reports.

This guidance is for WSDOT Development Services staff and Developers. Developers in this sense is also meant to include developers' consultants, local agencies, tribes, or other entities proposing land use development and with whom WSDOT is engaging for mitigation project construction on the State Transportation System.

Guidance documents like this are not part of the WSDOT Design Manual but are intended to supplement it and provide more "how-to" information. WSDOT will update this document through informed Region practices.

Region Plans Review Process

Once mitigation has been determined, the developer/consultant submits required plans and specifications to Region Development Services Staff for WSDOT review and concurrence or approval. Staff determine which support offices are appropriate and route the plans to them for review and approval.

The Development Services Engineer acts as the project engineer in the review and approval of development plans by coordinating, screening, and consolidating the review comments. Very few first draft developer plan sets can be approved. When the initial reviews are complete, the Development Services Engineer compiles comments and returns the plans to the developer and/or consultant for revisions.

When all of the review comments have been addressed and plan revisions made, the Development Services staff will obtain the necessary approvals/signatures for the plans.

Agreements

[Design Manual](#) Chapter 1130 explains and links to various WSDOT agreement forms used in mitigation projects on the State Transportation System.

A typical Developer Agreement includes a set of engineering plans and specifications prepared by the developer, such as intersection/channelization plans, signal/illumination plans, and other plans described below. WSDOT reviews the plans and specifications, and upon concurrence or

approval, assembles the agreement. Cities, regardless of their population, have jurisdiction and approval authority for work within the incorporated city limits pertaining to traffic control plans except for the following three exceptions:

1. The traffic control plan involves signal work at a signal owned or maintained by WSDOT.
2. Traffic control on a city road will have an impact on the operation of the following MAJOR freeways or highways: I-5, I-82, I-90, I-205, I-405, I-605, I-705, I-182.
3. The traffic control plan is for an area that is classified as limited access.

When the engineering/construction plans and specifications are reviewed and approved, the Developer Services staff adds them to the agreement along with a right of way plan and any other required exhibits, completing the agreement package.

Construction Plans Preparation

The construction plans for a developer agreement are like those that are required for a WSDOT state contract for highway improvements. As such, the same design criteria and materials certifications are required. However, it is important to remember how the materials are obtained are typically not scrutinized by the Department. For example, proprietary justification is not required on a Developer financed project.

Here are some helpful points to consider when coordinating plans with developers and consultants:

- Developer projects are often not as complex as WSDOT projects.
- Use judgment in matching the level of plan complexity and review to the level of detail warranted by a developer project to ensure compliance with WSDOT specifications without placing an undue burden on developers.
- Whereas WSDOT plans preparation conventions may require separate plan sheets as provided in the *Plans Preparation Manual*, a developer's consultant may combine several "plans" on a single sheet.
- Clarity of construction details and specifications is more important in a developer agreement than strict adherence to plans that include preparation conventions.
- Plan sheet scales are at the discretion of Region.
- Consider the [Plans Preparation Manual](#) a guide to be used as needed. The PPM contains example plans such as those listed below.
- Consult the WSDOT [Standard Plans](#) as a resource in plans preparation.

Types of Construction Plans

The plan descriptions below are brief descriptions of plan types that may be required by a developer project. Not all the plan types will be required for every developer agreement. Neither is the list below a comprehensive list of plan types that may be needed. WSDOT Development Services staff exercise discretion in determining what the appropriate plan

requirements are to ensure compliance with WSDOT specifications without placing an undue burden on developers.

Regions should use their Plan Review Checklist to ensure appropriate plans are included in developer agreements. Regions should also provide developers with example plans as needed to support the developer.

Site Plan

A site plan is often included to show the topographic layout of a project and such features as the earthwork “footprint,” structures on site, landscaping, or any other important features that do not normally fall into the plan categories below.

Roadway Sections

When roadway widening is required, a roadway section must be included in the set of plans. A roadway section is a cross section, showing the depths and types of materials to be used and their relative locations in the roadway prism.

- The roadway section also provides cross slope criteria and the typical ditch depth.
- More than one roadway section may be required if the project is complex.
- Typically, new construction must match existing pavement depths.
- The existing pavement section and recommended surfacing depths are obtained from the Region Materials Engineer.
- When widening is required, saw cutting or planing is usually required to leave a smooth, clean construction joint.

The Region Materials Engineer must concur with roadway sections.

Intersection Plans

Design Manual Chapter 1130 Development Services discusses plans for approval (PFA) which often involve intersections with state highways. The PFA will show the type of intersection control. Consult chapters in Design Manual Division 13 for policy and guidance on intersection control evaluation, intersection types and layouts, including traffic signals, roundabouts, and alternative intersection types.

The following section provides guidance for the Traffic Signal construction plan.

Traffic Signal Plan and Permit

Consult *Design Manual* Chapter 1330 for policy and guidance on traffic signals. This includes traffic signal warrants and responsibility of these facilities based on incorporated city population, highway access control type, and other factors.

In cases where an incorporated city will own, operate, and maintain the signal, the signal permit and plan reviews will be processed by the city; given our expertise, WSDOT may be asked to assist in the review.

Signal plans are required whenever there is a new signal installation or a modification to an existing signal system. Developer agreements that include signal work may be complex because of the technical details that are required. Signal design is so closely related to the intersection layout and ADA-compliant features that the plans are often developed concurrently.

Before signal design review begins on a new system, a WSDOT Signal Permit must be obtained. The developer completes WSDOT [Form 242-014](#).

- The developer completes the permit package and submits it to the Region Development Services office.
- It is then forwarded to the Region Traffic Office for analysis.
- Final approval of a signal permit must come from the Region Administrator, or as the permit form indicates, a WSDOT designee.
- Once a signal permit number has been assigned and the plan for approval is approved, review of the signal design may begin.

A signal plan is a plan view of the intersection which includes, but is not limited to, the location of signal controller and service cabinets, all mast arms, signal heads, detection loops, emergency vehicle detection, phase diagram, signal display detail, wiring schedule, breaker schedule, wiring termination diagram, input file and display panel layout, signal standard detail chart, foundation depths with supporting soils report (see Geotechnical Report below), and construction notes as required. Written signal technical specifications are also required.

Note: Consult [Design Manual Chapter 1510](#) for WSDOT ADA design policy and criteria.

Traffic Signal Responsibilities and ownership

For a new signal installation, it is the developer's responsibility to coordinate and bear the expense of power and telephone connection and to acquire any service agreements through the Region Utilities Office.

- Consult [Design Manual](#) Section 1130.10(6) Construction Plans, Specifications, and Reports for details about Utility hookups and responsibilities.
- The developer may be required to pay the ongoing utility bills for the signal. If so, this should be clearly stated in the Developer Agreement as an on-going obligation.
- Usually, WSDOT will assume full maintenance responsibility for signals after construction unless the signal system is owned, operated and maintained by a city.
- In cases where WSDOT assumes the maintenance, the developer establishes an account in the developer's name on a temporary basis during construction.
- The account will be transferred to WSDOT after final inspection and approval. WSDOT will only accept metered service. All signal poles, junction boxes, electrical service cabinets, are expected to be located within state highway right-of-way.
 - For traffic signals owned, operated, and maintained by WSDOT, in accordance with [RCW 47.24.020](#), traffic signal controllers and cabinets must be tested and configured at the WSDOT Headquarters Materials Lab and/or Regional Signal Shop (testing

locations are dependent on the WSDOT region responsible for the installation location). This process typically takes 3-6 weeks.

Illumination Plan and Responsibilities

Basic illumination is typically required at signalized intersections and/or channelized intersections. Refer to *Design Manual* Chapter 1140 and consult with Region Traffic Office for requirements. Illumination for new channelized intersections must be operational before the intersection is open to the public.

- An illumination plan will show the location of light standards, mounting height, size, and type of all luminaries, wiring details, size and type of service, source of power, and foundation information.
- For a simple project, the illumination plan may be combined with other details on a sheet, but not on the intersection plan. Many projects will require a separate illumination plan sheet.
- Illumination systems and associated services agreements on a non-limited access state highway within an incorporated city or town, regardless of the population is the responsibility of the city or town involved, including the service agreement. Exceptions may include illumination mounted on a signal pole. However, at a city's request, WSDOT will review and comment on illumination systems.
- It is the developer's responsibility to inform the city or town involved that it will be responsible for the maintenance and payment of electric bills upon completion of the illumination system.
- The developer is required to maintain existing illumination during construction of new systems, as per the *Standard Specifications* Section 8-20.3(1). This may require temporary connections and/or systems to keep the facilities operational.
- WSDOT must inspect any new service prior to hook-up.
- It is the developer's responsibility to contact the appropriate utility for hook-up before final inspection by WSDOT.

Utility Service Connections

Permanent utility service connections will require a utility service agreement.

- A service agreement is between the Developer and the utility company.
- WSDOT is not responsible for obtaining this agreement.
- Utility service connections and any associated facilities that require water, electric power, telephone service, such as signal and illumination systems, will be the Developer's responsibility to coordinate.
- The Developer shall establish the new service account in his/her name, with WSDOT listed as the permanent owner, and pay the initial service connection costs and fees.
- After final inspection, acceptance by WSDOT, and upon project completion, the account can be transferred to either WSDOT or the appropriate city or town.

- The Developer will be responsible for the cost and transferring of any accounts to WSDOT and/or to the applicable city or town.

Utility Plan and Responsibilities

Note: Some of this information is also addressed in *Design Manual* Chapter 1130 in section 1130.10(6).

Each Developer project is required to include a Utility Plan that details all the existing utilities and the proposed utility relocations within the project limits.

It is the Developer's responsibility to ensure the Utility Plan and relocation strategies comply with WSDOT *Utilities Manual* and the *Utilities Accommodation Policy*.

- The Utility Plan and proposed utility relocations must be concurred with by the Region Utility Engineer prior to execution of the Developer Agreement.
- Existing utility information is available from the owners of the utility facilities and from WSDOT records.
- Developer is responsible to request the one-call service, determine the actual location of all utilities and do the survey of field data.
- In some cases, it may be necessary to physically locate buried utilities to confirm their exact location. One method is to dig test holes, commonly called potholing, for those buried utilities that cannot be visually confirmed, to determine the exact depth.
- The Developer identifies all utility conflicts associated with the project, and works with the owners of the affected utilities to establish relocation strategies during the design phase and in advance of the project construction schedule.

The Utility plan must include, but is not limited to, the following:

- Highway alignment and right-of-way limits.
- Proposed roadway configuration, as shown on the channelization plan, including final location of all driveways and intersecting roads, illumination, guardrail and drainage.
- Locations of all existing utility facilities and appurtenances, such as lines, poles, cabinets, vaults, valves, and hydrants.

The Utility relocation plan will be shown on the Utility Plan and will need to include, but not limited to, the following:

- Details of utilities to be de-activated, removed, or relocated.
- Verification of design Control Zone, see Utility Object Relocation Record (UORR) in *Utilities Manual*.
- Distance from the utility feature to the proposed outside edge of the traveled lane (fog line).
- Minimum vertical clearance of overhead utilities (measured over the roadway).

- Depth of underground utilities.
- Other applicable information, such as pipe size, voltage, size of telecommunication lines, etc.

It is WSDOT's policy that underground utilities be located near the r/w right of way boundary and outside the roadway prism with the exception of utility crossings.

- All above ground utility facilities must comply with the Utility Control Zone Guidelines in the WSDOT *Utilities Manual*. For all necessary relocations of utilities within the WSDOT right of way, a Utility Accommodation Application (Franchise/Permit) must accompany the utility plan. The utility owner will need to obtain an approved Franchise/Permit for the relocations prior to starting their utility work.

In general, the Developer will be responsible for utility relocation costs where the roadway improvements are for the benefit of the Developer, such as driveways, deceleration and acceleration tapers, auxiliary lanes and turning lanes associated with access to the development.

Hydraulic Report and Stormwater Site Plan

Consult *Design Manual* Chapter 1130 section 1130.10(6) for guidance on:

- Hydraulic reports.
- Stormwater site plan.
- References and links to WSDOT manuals.
- Note: Stormwater for managed access highways inside corporate limits is per city.

Pavement Markings (Striping Plan)

A pavement marking plan shows the type, size, and location of the pavement markings. It is required if there are any striping changes and/or additions.

- Pavement markings are based on the approved plan for approval (PFA) and may sometimes be included on the intersection plan if they do not unduly complicate it.
- The type of pavement markings should be designated in the Developer Agreement using the standard terminology listed in Section 8-22 of the *Standard Specifications*.
- For delineation design consult *Design Manual* Chapter 1030.
- See the *Standard Plans* Section M.

Signing Plan

A signing plan is required if signs are added, removed, or relocated because of the proposed roadway improvement. Most projects do not require a separate signing plan. The signing details can be added to another plan sheet, provided that the plan sheets are legible and titled accordingly.

If only a few signs are needed, it is acceptable to call out the sign type, size, and mounting requirements with a note adjacent to the sign location on the sheet. If multiple signs are required, this information should be noted in a sign schedule table.

The size, lettering style and spacing, graphics and materials for signs are specified in the [Sign Fabrication Manual](#).

Right of Way Plan

Note: the following guidance is supplemental to [Design Manual](#) Chapter 1130, Section 1130.10(6).

WSDOT can request right of way be conveyed from a developer to mitigate developer traffic impacts to state highway based upon engineering plans, rather than approved right of way plans. The needed right of way must have a nexus to the direct impacts and be proportional to these impacts. Consult [Chapter 47.14 RCW](#) and [Chapter 468-100 WAC](#) for more detailed information.

The acquisition of needed right-of-way must be completed before the Developer Agreement is executed.

- A right of way plan shall be submitted showing stations and offsets of the proposed right of way area (fee or easement area).
- Coordinate with the Region Right of Way Manager.
- Right of Way and easement stationing need to be tied to WSDOT Right of Way station.
- The Region Real Estate Services section will prepare the deed and/or easement that transfers title and/or property rights to the state.
- Right-of-way revisions must be shown on the Channelization (Intersection) Plan and the Utility Plan pending formal revision of the Right of Way plan.

Traffic Control Plans

Traffic Control Plans (TCPs) prepared according to the *Manual on Uniform Traffic Control Devices (MUTCD)* are required for every project within WSDOT right of way. The Region Traffic office should review and concur or approve the TCP plans. No construction requiring Traffic Control may begin without WSDOT concurrence or approval of the Traffic Control plans.

Including TCPs in the construction plans is recommended and can save time; however, they are typically made the responsibility of the contractor.

- Traffic control plans provide a detailed description of traffic operations during construction of the project.
- The plans must fully address the safety of construction workers and the traveling public while limiting disruption of normal highway operations.
- The working hours for the traffic control plan will be determined during the review of the TCPs.
- They must cover the entire area affected by the construction project, from the advance warning signs, through the work zone, to the termination area.
- A separate plan is required for each work area and stage of construction that impacts the highway.

- The length of the traffic control zone depends on highway speeds, lane configurations, intersections, traffic signals and topographic constraints.

Spill Prevention Control and Countermeasure (SPCC)

A Spill Prevention Control and Countermeasure (SPCC) plan may be required for a Developer Agreement in order to minimize the potential for environmental harm.

Because the SPCC plan is usually prepared by the contractor hired to construct the highway improvement, WSDOT will allow review of the SPCC plan to occur after execution of the Developer Agreement, but prior to a pre-construction meeting.

Additional considerations

Geotechnical Report

A Geotechnical report may be required if the project involves any of the following:

- Bridges with cuts and fills greater than 3 feet deep
- Retaining walls
- Signals and light standards
- Sign bridges and cantilever signs
- Culverts larger than 3 feet in diameter
- Soft or otherwise unstable soils

WSDOT Headquarters Materials Laboratory approval of a Geotechnical report is required for the following:

- All Bridges
- Retaining walls higher than 10 feet
- Rock Walls higher than 5 feet
- Gabion walls higher than 6 feet
- Culverts larger than 3 feet in diameter
- Cuts and fills greater than 10 feet deep
- Fills, structures and culverts on soft soils

The Geotechnical report must be prepared by a licensed geotechnical engineer and typically includes a brief geologic history of the area, a description of the subsurface materials, drill logs, a discussion of the bearing capacity of the soils, and foundation recommendations. The Region Materials Engineer must concur or approve the Geotechnical report findings.

Allow extra time in the review and approval schedule if the project requires Materials Laboratory review. Examples of Geotechnical Reports are available upon request.

Survey monumentation

Any survey monument disturbed by a developer project must be restored to its original condition at developer's expense. *Design Manual* Chapter 410 describes the policies, procedures, and methods for the proper identification, documentation, and preservation of survey monuments. *Highway Survey Manual* Chapter 16 provides the methods and rules for implementation of these policies. All monuments impacted by a developer project will be documented as outlined in these manuals. Any monument impacted by paving, regardless of the amount of time the monument may be covered, will be documented by an Application for Permit to Remove or Destroy a Survey Monument.

As-Built Construction Plans

Upon completion, the Developer shall supply WSDOT with As-Built Construction Plans for the work done inside WSDOT right of way. *Design Manual* sections 1130.13 Construction Oversight and 1130.15 Documentation discuss need for As-builts and links to resources, including:

WSDOT Construction Manual Chapter 10:

<https://wsdot.wa.gov/publications/manuals/fulltext/M41-01/Chapter10.pdf>

Download As-built cover sheet (Form # 722-025) here:

<https://www.wsdot.wa.gov/publications/fulltext/forms/722-025.pdf>