

1.0 Introduction

1.1 Foreword

The *Contract Plans Development (CPD) Guide* presents the policies, procedures, methods, and standards for developing and preparing final Contract Plans. It also provides the standards used in the preparation of these plans using Computer Aided Design (CAD) in MicroStation™. Department staff, consultants, and outside agency personnel should use the *CPD Guide* to prepare contract plans.

ODOT staff and consulting engineer staff working on ODOT projects must perform road design services and contract plan production using MicroStation™ and InRoads™ and provide all deliverables in a form suitable to these programs.

Consulting engineer staff working on federal aid projects for local governments are encouraged to follow the direction in this guide as closely as possible. Other CAD formats may be required as a part of a contract with a local government.

The *CPD Guide*, as presented here, consists of two volumes: Volume 1 contains general information and instructions and Volume 2 presents many examples of drawings.

Updating this manual is a continuing process and revisions are issued as required. Questions or suggestions for modifications should be addressed to:

David Joe Polly, Senior Standards Engineer
ODOT, Road Engineering
355 Capitol St. NE
Room 222
Salem, OR 97310
(503) 986-3738

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The Oregon Department of Transportation (ODOT) and its consultants rely on Computer Aided Design (CAD) systems to produce their contract plans. The CAD system is an integral part of the process as projects move from project development to final contract plans to construction. CAD files are often shared and transferred between Region Project Development, Region Technical Centers, Road Design Unit, Region Construction, and consultants. Consistency and uniformity of CAD files, contract plans, and other products can greatly enhance productivity and quality. This can only be achieved through standardization of the process and products.

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The *CPD Guide* provides up-to-date guidelines in one set of documents so that more exacting and uniform contract plans can be prepared by ODOT staff, outside consultants, and other jurisdictions.

The *CPD Guide* gives an overview of contract plan preparation using MicroStation™ in English units. MicroStation™ is ODOT's sole CAD platform and is the only system covered within the *CPD Guide*. As the intent of this guide is to provide policies and procedures to prepare ODOT contract plans, it is assumed that the user is already trained in the use of MicroStation™.

For maximum clarity, this document has been laid out in a tabbed format which follows the general structure of contract plans. Within each contract plan section, a generic structure has been set up, any or all of which are as follows:

- **Control** — explains ODOT's intended chain of command for producing that particular portion of the contract plans, and specifies who is responsible for which tasks and who is to give final approval.
- **Development** — defines the process for developing that particular portion of the contract plans. This includes a step-by-step procedure (with graphics) for the creation of plan sheets, and covers attachment and treatment of reference files, placement of cells, placement of required items, and other topics.
- **Coordination With Specifications and Special Provisions** — calls out related section numbers within the *Standard Specifications for Highway Construction*, 2002.
- **Check List** — is the last page(s) in each of the contract plans sections. It will be the final resource for the designer or drafter to verify that all of the items required to be on the plan sheets have been included.

Contract plans, specifications, and estimates (PS&E) are the final documents required for the advertisement of a project. The PS&E package is submitted to ODOT for review prior to bid advertisement and award of the construction contract. Because the plans and special provisions must set forth the work in a clear and concise manner to avoid misinterpretation, it is important to follow the guidelines set forth in the *CPD Guide*.

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Some of the components of the *CPD Guide* are available to ODOT staff and to the general public, to aid in the preparation of contract plans. These files can be accessed via the Internet at:

Internal ODOT staff: http://scdata3/odot_space/...

External: <ftp://ftp.odot.state.or.us/isb/appeng/Microstation/Version8/>

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Bridge Drafting & Design Manual

Hydraulics Manual Volume 2, Erosion and Sediment Control, ODOT.

English Highway Design Manual, ODOT, 2003.

Standard Details for Design and Construction, ODOT, Road Engineering.

Standard Drawings for Design and Construction, English, 2002

Standard Specifications for Highway Construction, ODOT, 2002.

Traffic Line Manual, ODOT.

Traffic Signal Design Manual, ODOT, Traffic Engineering Section, Signal Design Unit.