

CITY OF NANAIMO

**MANUAL OF ENGINEERING
STANDARDS & SPECIFICATIONS**



November 2009

ENGINEERING STANDARDS & SPECIFICATIONS INTRODUCTION

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(REVISED NOVEMBER 2009)

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ENGINEERING STANDARDS & SPECIFICATIONS

INTRODUCTION

INTRODUCTION

- .1 This Manual of Engineering Standards and Specifications has been compiled to reflect the design requirements, material specifications, and installation requirements for Municipal Works constructed in the City of Nanaimo. For a list of acceptable products for installation within the City of Nanaimo, refer to the City of Nanaimo Approved Products List.
- .2 This Manual is intended for use by City Engineering and Public Works Department employees ; Consulting Engineers working for the City of Nanaimo; private developers and others doing work in the City.
- .3 The Manual is divided into fourteen (14) sections.
 - (a) Section 1 covers General Drafting Requirements and provides standards for design drawings, as-built drawings, certification of installed works and design in statutory rights-of-way , etc. **(REVISED NOVEMBER 2009)**
 - (b) Section 2 covers the General Conditions which normally form a part of all City contracts, followed by General Construction Requirements covered in Section 3.
 - (c) Trench excavation, bedding and backfill are dealt with in Section 4 as it applies to the installation of underground utilities such as water, sanitary sewer and storm sewer lines, and private utilities installed within statutory and road rights-of-way.
 - (d) Sections 5, 6, 7, 8, 9 and 10 deal with standards for water, sanitary sewer, storm sewer, curb and gutter, streets and roadway lighting and traffic signals.
 - (e) Sections 11 and 12 deal with information on requirements for reinforced and plain concrete works as well as asphaltic concrete paving.
 - (f) Section 13 deals with concrete pavers, for use in road rights-of-way.
 - (g) Section 14 covers standards for Landscaping in City streets, including required maintenance.
- .4 The sections on water, sanitary sewer, storm sewer, curb and gutter, streets and roadway lighting and traffic signals are divided into three basic parts under the following sub-headings:
 - (a) Design Criteria
 - (b) Specifications
 - (c) Installation
- .5 Individually these sub-headings have a numbering sequence common to each section. Each sub-section or sub-heading has a block of numbers reserved and applied to it.
- .6 The numbers which have been reserved for each sub-section and which would be preceded by the applicable section number are as follows:

| | |
|-----------------|------------|
| Design Criteria | .00 to .19 |
| Specifications | .20 to .39 |
| Installation | .40 to .69 |
- .7 With this method of numbering, the numbering sequence is not continuous from sub-section to sub-section. Some sub-sections do not use all the numbers allotted to them.

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APPLICATION OF THE STANDARDS

- .1 The Manual of Engineering Standards and Specifications shall apply to City of Nanaimo capital projects, works within statutory and road rights-of-way and works taken over by the City of Nanaimo related to private development (i.e., subdivision, etc.). There are sections of the Manual which are not applicable to all the various users. However, contracts, designs and construction of works within the scope of the manual shall comply with the intent of the Manual and adhere to the Design, Specification and Installation Requirements.
- .2 For the definition of terms used within the Manual please refer to Section 2.01 – Drawings, Specifications and Related Data, Article 1 – Definition of Terms.
- .3 For the list of products acceptable for the design within the scope of the Manual, please refer to the city of Nanaimo Approved Products List.
 - (a) The Approved Product List does not imply automatic approval as a product substitution for a contract specified product. Product substitution is subject to the Design Engineer's approval.
- .4 For a list of specifications and other references by the Manual, please refer to Section 3.01A - Reference.
- .5 No departure from the requirements of the Manual shall be permitted without the prior approval of the City Engineer.
- .6 Where the users of this Manual have any doubt as to the meaning or interpretation of any part of the Manual, they are advised to contact the Engineering Services Division for clarification.
- .7 Where "approval" is requested by the Manual, it shall mean approval by the City Engineer unless otherwise stated. For "approval", all requests shall be submitted by a Professional Engineer complete with any supporting documentation to the City Engineer.
- .8 For proposed works not covered by the requirements of the Manual, supplementary specifications, product information or other supporting documentation shall be submitted by a Professional Engineer for approval.

REQUESTS FOR CHANGES TO THE STANDARDS

- .1 Suggestions for changes to the Manual of Engineering Standards and Specifications are welcomed and should be directed to the Engineering Services Division using the standard form included in Appendix A of this document.
- .2 Requests for change should include the number of the section and clause for which a change is requested; suggested new wording and an explanation of the reason for the requested change.
- .3 Changes which are made will be implemented at the discretion of the Engineering Services Division.

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AMENDMENTS TO STANDARDS

- .1 The Manual of Engineering Standards and Specifications will be reviewed approximately every year and amendments issued accordingly.
- .2 Amendments will be issued based on the current list of copy holders. It shall be the responsibility of copy holders to ensure they have all the amendments that are issued.
- .3 For the use of the copy holder, an Amendment Record Sheet has been included at the back of the Manual.

CROSS-REFERENCES BETWEEN SECTIONS

- .1 A cross-reference between the various sections in this Manual has been included in Appendix B. To be included in a future revision.
- .2 It is anticipated this cross-reference will assist in preparing contracts, ensuring all sectional cross-references are contained in the contract documents.