

CHAPTER I - GENERAL CONSTRUCTION REQUIREMENTS

1.00 General Requirements

A. General

The purpose of these standards is to set standards for the construction of public improvements to serve new and future developments. No such work shall commence prior to City approval of the construction plans. Designs submitted shall be stamped by a registered Professional Engineer licensed to practice in the State of Washington.

B. Standards

All work and materials shall be in accordance with this document and the latest edition of the City of Stevenson Engineering Standards For Public Works which shall be cited routinely in the text as the "Standards". The Standards are in three volumes, the third of which comprises this document. Volume 1 addresses engineering and planning issues. Volume 3 addresses erosion control. This volume (Volume 2) includes standard details and standard drawings which shall be considered part of the engineering plans approved by the City.

C. Standard Specifications

All work and materials shall be in accordance with this document and the latest edition of the APWA/WSDOT Standard Specifications for Road, Bridge, and Municipal Construction, hereafter referred to as Standard Specifications. Where conflicts exist the more stringent specification shall apply as approved by the City.

D. Applicability

These Standards shall govern all new construction and upgrading of facilities both in the right-of-way and on-site for: transportation-related facilities; storm drainage facilities and stream channel improvements; sewer and water improvements; and park, recreation, open-space facilities used by the public, and land alteration activities constructed within public right-of-way. Land alteration activities are those activities which are commonly referred to as clearing (the act of vegetation removal from the land surface by mechanical or chemical means - often referred to as land clearing), grubbing (the act of root vegetation removal from beneath the surface of the earth - usually in association with

clearing), excavation (the mechanical removal of earth material), filling (deposition of earth material placed by artificial means), grading (excavation or filling or combination thereof), compaction (densification of earth material by artificial means), stockpiling (temporary deposition of earth material placed by artificial means), and stabilizing (counteracting the actions of gravity, wind or water).

E. Contractor=s Requirements for Possession of Standards.

At all times during construction of public improvements, the Contractor shall be required to have in his possession, at the job site, a copy of Volume 2 and 3 of the City=s Engineering Standards, and also a copy of the Standard Specifications.

1.01 Abbreviations and Definitions

Abbreviations and definitions shall be as listed in Chapter 1 of Volume 1 of the "City of Stevenson Engineering Standards for Public Works Construction", herein after referred to as the Design Standards.

1.02 Preconstruction Conference

Upon completion of the design and approval by the City, a pre-construction letter of requirements will be sent to the owner noting requirements to be completed prior to construction. Upon completion of the pre-construction requirements and 48 hours notice, a pre-construction meeting will be held with the City at which time construction inspection will be scheduled. No public works construction work shall commence prior to the pre-construction meeting. After completion of construction and submittal of required documents and fees, final acceptance will be given by the City.

1.03 Seasonal Limits

Land alteration operations shall be limited by the seasonal limitations specified.

- A. When public works construction or land alteration activities are interrupted by heavy rain, operations shall not be resumed until the City determines that erosion control facilities are adequately.
- B. Special erosion control requirements are required during wet weather months. See Volume 3 of these Standards for requirements.

- C. Public works construction or land alteration activities near sensitive areas, including slopes over 5%, wetlands, flood plains, or riparian corridors shall be subject to limitations imposed by the City. Permits from other agencies in addition to the City may be required by law for such work. It is the responsibility of the project sponsor to obtain such permits prior to beginning work and to see that all applicable regulations are complied with at all times during the course of the work.
- D. Work shall be stopped and the site shall be secured from erosion at any time when weather conditions change or the threat of heavy rain makes erosion problems likely.

1.04 100-Year Flood Plain

Encroachments, including fills, new construction, substantial improvements, and other development within the regulatory floodway that would result in any increase in flood levels during the occurrence of the "100-year" flood discharge shall be prohibited.

1.05 Environmental Protection During Construction

A. General Policy and Requirements

1. It is the policy of the City of Stevenson to require temporary and permanent measures for all construction projects to lessen the adverse effects of construction on the environment.

The Contractor shall properly install, operate, and maintain both temporary and permanent works as provided in this section or in an approved plan, to protect the environment during the term of the project.

The City may, in addition, require that a construction project be scheduled so as to minimize erosion or other environmental harm.

Nothing in this section shall relieve any person from the obligation to comply with the regulations or permits of any federal, state, or other local authority.

2. For all projects, the prohibitions and regulations of this section shall apply. The City may temporarily suspend the work or require additional protection measures if it appears, based upon observed conditions of the project, that the approved plan is insufficient to prevent environmental harm, and that such suspension or additional

measures will prevent or minimize such harm.

B. Air Pollution Control

1. Dust. Dust shall be minimized to the extent practicable, utilizing all measures necessary, including, but not limited to:
 - a. Sprinkling haul and access roads and other exposed dust producing areas with water. Obtaining water from a hydrant will require specific authorization from the applicable water jurisdiction.
 - b. Applying DOE approved dust palliatives on access and haul roads.
 - c. Establishing temporary vegetative cover.
 - d. Placing wood chips or other effective mulches on vehicle and pedestrian use areas.
 - e. Maintaining the proper moisture condition on all fill surfaces.
 - f. Pre-wetting cut and borrow area surfaces.
 - g. Use of covered haul equipment.
2. Fumes, Smoke, and Odors
 - a. Tires, oils, paints, asphalts, coated metals, or other such materials will not be permitted in combustible waste piles, and will not be burned at the construction site.
 - b. Open burning shall not be permitted unless approved by the Southwest Washington Air Pollution Control Authority and the City Fire Marshal's Office.
 - c. Open burning shall not be permitted within 1,000 feet of a structure or within 250 feet of the drip line of any standing timber or flammable growth.

- d. Open burning shall not be permitted during a local air inversion or other climatic conditions that may result in a smoke pall hanging over a built-up area or community.
- e. Open burning shall not be permitted when climatic and moisture conditions are contributing to high danger of forest or range fires as determined by city, state, or federal authorities.
- f. All open burning shall be constantly attended by a crew with a supply of fire-fighting tools and equipment. The number and size of fires shall be limited such that the burning crew can adequately control them.

C. Erosion Control

All construction work shall be completed in accordance with Volume 3 of these Standards - The City of Stevenson Technical Compliance Manual. All construction standards must meet or exceed these requirements for the installation and maintenance of erosion control devices.

1.06 Clearing and Grading on Environmentally Sensitive Lands

Clearing and Grading shall be prohibited in sensitive areas including slopes in excess of 25%, wetlands, or flood plains.

1.07 Preservation of Existing Vegetation

- A. As far as is practicable, the natural vegetation shall be protected and left in place. Work areas shall be carefully located and marked to reduce potential damage. Trees shall not be used as anchors for stabilizing working equipment.
- B. All excavations and fills in the proximity of trees and shrubs shall be kept outside the dripline of said trees and shrubs.
- C. During clearing operations, trees shall not be permitted to fall outside the work area. In areas designated for selective cutting or clearing, care in falling and removing trees and brush shall be taken to avoid injuring trees and shrubs to be left in place.

1.08 Vegetation Restoration

- A. Vegetation shall be restored on those areas of the site disturbed by the land alteration activity which are not covered by permanent impervious surface improvements (e.g. buildings, parking lots, etc.) at the earliest possible time consistent with appropriate planting times. The soil shall be stabilized prior to vegetation restoration since vegetation alone cannot provide an effective erosion control cover and prevent soil slippage on a soil that is not stable due to its texture, structure, water movement or excessive slope.
- B. In no case will the period between the land alteration operation and final and complete restorative, or permanent erosion control, vegetation planting for a given project or project phase be longer than one year. Said planting shall restore the vegetation on site to a condition equal to or better than the precleared condition to the maximum extent possible. Temporary erosion and sedimentation control measures shall be maintained in full operating condition for all areas to be restored until said restoration is complete and the site fully stabilized.

1.09 Maintaining Surface Water Quality

- A. Construction between stream banks shall be kept to a minimum.
- B. Pollutants such as fuels, lubricants, bitumens, raw sewage, and other harmful materials shall not be discharged into or near rivers, streams, or impoundments. Sterilizing water from water line construction activities shall not be directly discharged into the public storm drainage system.
- C. The use of water from a stream or impoundment shall not result in altering the temperature of the water body enough to affect aquatic life.

1.10 Fish and Wildlife Habitat Preservation

- A. The construction shall be done in a manner to minimize the adverse effects on wildlife and fishery resources.
- B. The requirements of local, state, and federal agencies charged with wildlife and fish protection shall be adhered to by the entire construction work force.

1.11 Stream and Creek Crossings

- A. The Contractor shall comply with all provisions of the permits required by the Washington State Departments of Wildlife and Fisheries and the U.S. Army Corps of Engineers.
- B. Before any work may be performed in any stream, the method of operation and the schedule of such work shall be approved in writing by the Engineer. Work within major streams shall be scheduled to take place as specified in the applicable permits for such work, and once started, shall be completed without interruption of the work. Mechanized equipment shall enter streams only when necessary and only within the immediate work area.

1.12 Control of Noise Levels

Construction noise shall be minimized by the use of proper engine mufflers, protective sound reducing enclosures, and other sound barriers. Construction activities producing excessive noise that cannot be reduced by mechanical means shall be restricted to locations where their sound impact is reduced to a minimum at the edge of the work area.

- 1. No person shall cause or permit noise to intrude into the property of another person which noise exceeds the maximum permissible noise levels set forth below in this section.
- 2. (a) The noise limitations established are as set forth in the following table after any applicable adjustments provided for herein are applied.

EDNA OF NOISE SOURCE	EDNA OF RECEIVING PROPERTY		
	Class A	Class B	Class C
CLASS A	55 dBA	57 dBA	60 dBA
CLASS B	57	60	65
CLASS C	60	65	70

- (b) Between the hours of 10:00 p.m. and 7:00 a.m. the noise limitations of the foregoing table shall be reduced by 10dBA for receiving property within Class A EDNAs.
- (c) At any hour of the day or night the applicable noise limitations in (a) and (b) above may be exceeded for any receiving property by no more than:
 - (i) 5 dBA for a total of 15 minutes in any one-hour period; or
 - (ii) 10 dBA for a total of 5 minutes in any one-hour period; or
 - (iii) 15 dBA for a total of 1.5 minutes in any one-hour period.

1.13 Historical and Archaeological Areas

When burial sites, buried camp areas, village sites, and other distinctive archaeological or historical items are uncovered, or other items suspected of being of historical or archaeological significance are encountered, the Contractor shall report the matter to the City and the state liaison officer. Construction operations shall be stopped until the appropriate authorities can examine the area and give clearance to proceed with the work.

Under the Natural Historical Preservation Act, state liaison officers shall be notified when historical or archaeological items are unearthed.

The Washington Criminal Code prohibits disinterment of a corpse without permission of the appropriate authorities.

1.14 Use of Pesticides

- A. The use of pesticides including insecticides, herbicides, defoliants, soil sterilants, and so forth, must strictly adhere to federal, state, county, and local restrictions. Time, area, method, and rate of application must be approved by all relevant authorities and their requirements followed.
- B. All materials delivered to the job site shall be covered and protected from the weather. None of the materials shall be exposed during storage. Waste material, rinsing fluids, and other such material shall be disposed of in such a manner that pollution of groundwater, surface water, or the air does not occur. In no case shall toxic materials be dumped into drainageways.
- C. All personnel shall stay out of sprayed areas for the prescribed time. All such areas should be fenced, appropriately signed, or otherwise protected to restrict entry.

1.15 Inspection

A. General Requirements

- 1. Work performed within the public right-of-way, or as described in these standards, whether by or for a private developer, by City forces, or by a City contractor, shall be

done to the satisfaction of the City and in accordance with the Standard Specifications, any approved plans and these Standards. Unless otherwise approved, any revision to construction plans must be approved by the City before being implemented.

2. The City shall have authority to enforce the Standards as well as other referenced or pertinent specifications. The City will appoint project engineers, assistants and inspectors as necessary to inspect the work and they will exercise such authority as the Engineer may delegate.
3. It is the responsibility of the developer, contractor or their agents to have an approved set of plans, permits, Standard Specifications, and Volume 2 and 3 of the City's Standards on the job site wherever work is being accomplished.
4. It is the responsibility of the developer, contractor, or their agents to notify the City in advance of the commencement of any authorized work. A preconstruction conference and/or field review shall be required before the commencement of any work on significant projects.
5. Failure to comply with the provisions of these standards may result in stop work orders, removal of work accomplished, or other penalties as established by ordinance.

B. Substitution of Materials

It is not the intent of these Standards to exclude other equipment or materials of equal value, quality, or merit. Whenever a product is designated, or manufacturer's name, brand, or item designation is given or described, it shall be understood that the words "or approved equal" follows such name, designation, or description, whether in fact they do so or not. Determination of quality in reference to the project design requirement will be made by the City Engineer. A contractor shall not use an "equal" product without prior written approval of the City Engineer.

C. City Inspector's Activities

Inspecting services provided by the City shall include:

1. Monitoring both work progress and performance testing results.

2. The performance of administrative and coordination activities as required to support the processing and completion of the project.
3. The issuance of a stop work order by notice to the contractor to stop the work. The City's Project Inspector, at the discretion of the City Engineer, may post a stop work order.
4. Maintaining a completion file containing the following:
 - a. The original of the project completion certification;
 - b. A complete copy of the log book initialed by the engineer's inspector;
 - c. The results of material tests, compaction tests, and soil analysis as detailed in the log book.
5. Inform the City Engineer of all proposed plan changes, material changes, stop work orders, or errors or omissions in the approved plans or specifications as soon as practical. Any revision to approved plans must be under the direction of the Engineer. It shall be at the discretion of the City's Project Inspector as to whether the revision is significant enough to warrant review by the City Engineer. If so, the developer's engineer shall submit five (5) copies of the proposed revision; no work affected by the revision shall be done until approval by the City Engineer.

1.16 Contractor's Responsibility for Scheduling

A. Sequence of Operations

The Contractor shall plan construction work and execute his operations with a minimum of interference with the operation of the existing public facilities. It may be necessary to do certain parts of the construction work outside normal working hours in order to avoid undesirable conditions, and it shall be the obligation of the Contractor to do this work at such times. This scheduling, however, is subject to the City's approval and does not relieve the contractor from making work available for inspection.

The Contractor shall notify the City at least 48 hours (two full working days) prior to any City Inspection. Connections between existing work and new work shall not be made

until necessary inspection and tests have been completed on the new work and it is found to conform in all respects to the requirements of the plans and specifications.

B. Step Inspections

The following items of work shall be inspected by City forces.

1. For street or sidewalk work, subgrade shall be inspected by the City (and tested by the Contractor) prior to placement of crushed surfacing.
2. Crushed surfacing shall be inspected by the City (and tested by the Contractor) prior to placement of paving, curb, or sidewalks.
3. Pavement, curbs, and sidewalk. Notify the City prior to the placement of any paving, curbs, or sidewalk.
4. Compaction of bedding and backfill of utility trenches.
5. Compaction of bedding within public right-of-way and slope easement.

Other items of inspection notification are included under the various items of work outlined in these Standards.

C. Progress of Construction

Construction shall proceed in a systematic manner that will result in a minimum of inconvenience to the public.

In the case of a pipe-laying job for sanitary sewer, storm drainage, and water improvements the trenching equipment at no time shall be greater than 10 feet ahead of the pipe-laying crew, unless given permission by the City Engineer. The trench shall be backfilled so that no section of the trench or pipe is left open longer than 24 hours. Trenches located in a right-of-way or public street shall be completely backfilled or plated before the contractor leaves the site each day.

1.17 Contractor's Requirement for Testing

A. General

Testing shall be performed by a certified independent testing lab hired by the developer or developer's contractor with the results being supplied to the City Engineer. The developer or contractor shall pay the cost of all testing as outlined herein.

Test locations shall be selected randomly by City representatives. Minimum testing requirements outlined herein are for tests that meet the requirements of the City's standards or construction specifications. For each test result less than minimum requirements, additional testing will be completed by the Contractor at no cost to the City.

The testing is not intended to relieve the contractor from any liability. It is intended to provide the inspector with general information regarding quality control.

The Engineer, or his designated representative, shall require additional testing not outlined herein. The Contractor, or Developer, shall pay the cost of all tests which fail to meet the requirements as specified.

See Sections 2 through 5 for specific requirements.

B. Asphalt Testing

1. Compaction of all lifts of asphalt shall be an average of ninety-two percent (92%) of maximum density as determined by WSDOT Test Method 705. Number of tests required for each lift:
 - a. For public streets, provide one test per every 5,000 square feet of surface area.
 - b. For surface restoration of utility trenches provide one test per every 200 feet of trench as measured along the trench centerline.

C. Subgrade and Crushed Surfacing Testing

1. Compaction testing as specified in the Standard Specifications. Number of tests required:
 - a. For streets and sidewalks, provide one test of the subgrade and one test of the

crushed surfacing for every 5,000 square feet of surface area of pavement, curb, and sidewalk.

D. Bedding and Backfill for Utility Trenches

1. Compaction testing as specified in the Standard Specifications. Number of tests required for all utility trenches (water, sanitary sewer, storm sewer):
 - a. Provide one test at bottom of trench excavation prior to placement of pipe or bedding for every 500 feet of trench.
 - b. Provide one test at top of bedding for every 500 feet of trench.
 - c. Provide one test for each lift of backfill for every 500 feet of trench.

E. Embankment

1. Compaction testing as specified in the Standard Specifications. Number of tests required for all embankment:
 - a. For embankment under pavement, curb, or sidewalk, provide one test for every 20 cubic yards of fill material placed, or for every 5,000 square feet of pavement or sidewalk whichever is less.
 - b. For embankment outside the limits of pavement, curb, or sidewalk, provide one test for every 40 cubic yards of fill material placed.

1.18 Safety Requirements

The contractor is responsible for observing the safety of the work and of all persons and property coming into contact with the work. The contractor shall conduct his work in such a manner as to comply with all the requirements prescribed by OSHA. Traffic control in work zones shall conform to the MUTCD. At the City's discretion, a traffic control plan shall be submitted and approved prior to construction.

The City Project Inspector's role is not one of supervision or safety management, but is one of observation only. Nothing contained in this section or elsewhere in this book shall be interpreted to obligate the City to act in any situation, nor shift the owner's responsibility for safety compliance to

the City. No responsibility for the safety of the work or for construction means, methods, techniques, sequences, or procedures shall attach to the City by virtue of its action or inaction under this section.

1.19 Preservation, Restoration, and Cleanup

A. Site Restoration and Cleanup

The Contractor shall keep the premises clean and orderly at all times during the work and leave the project free of rubbish or excess materials of any kind upon completion of the work. During construction, the Contractor shall stockpile excavated materials so as to do the least damage to adjacent lawns, grassed areas, gardens, shrubbery, trees, or fences, regardless of the ownership of these areas. All excavated materials shall be removed from these areas, and these surfaces shall be left in a condition equivalent to their original condition and free from all rocks, gravel, boulders, or other foreign material. Stockpiling of construction materials shall not be allowed on existing sidewalks or the driving surface of existing streets.

All existing storm systems shall be cleaned and flushed, and original drainage restored. Sediment, rock, and other debris shall be collected and disposed of in a proper manner. In no case shall debris be flushed down a storm or sanitary sewer for disposal. All damaged irrigation and house drainage pipe, drain tiles, sewer lateral, and culverts shall be repaired expeditiously.

All areas disturbed by the Contractor's operations inside dedicated rights-of-way or easements shall be restored to original condition. Areas outside of the easements or rights-of-way which are disturbed by the Contractor's operations shall be graded and reseeded in a method acceptable to the property owner. The Contractor shall obtain a written release from such property owners for any claims of injury or property damage prior to final acceptance of the work by the City.

B. Street Cleanup

The Contractor shall clean all spilled dirt, gravel, or other foreign material caused by the construction operations from all streets and roads at the conclusion of each day's operation. Cleaning shall be by grader and front-end loader, supplemented by power brushing, and hand labor, unless otherwise approved by the City. The contractor shall follow the City's erosion control procedures.

As soon as practical after completion of all paving and gravel shoulder resurfacing, the Contractor shall remove all dirt, mud, rock, gravel, and other foreign material from the paved surface and storm drainage system.

C. Protection of Property

The Contractor shall exercise all due care in protecting property along the route of the improvement. This protection shall include, but not be limited to, trees, yards, fences, drainage lines, mail boxes, driveways, shrubs, and lawns. If any of the above have been disturbed, they shall be restored to as near their original condition as possible.

1.20 Railroad Crossings

A. General

Crossings of railroad rights-of-way shall be done in a manner which conforms with the requirements of the railroad having jurisdiction. If any bonds and/or certificates of insurance protection are required, they shall be furnished by the Contractor or Owner to the railroad company with the City as an additionally-named insured.

B. Permits or Easements

Crossing agreements, permits, and/or easements for such crossings will be obtained by the applicant and all the terms of such permits or easements shall be met by the Owner and Contractor.

1.21 Penalties

Failure to comply with these standards will be cause for withholding or withdrawing approval of plans or plats, forfeiture of bond, withholding Temporary and/or Final Certificate of Occupancy, and/or other penalties as provided by law.