

GENERAL SPECIAL PROVISIONS

DIVISION 1 GENERAL REQUIREMENTS

1-00 GENERAL

The City of Longview has adopted these Standard Plans and Specifications (hereinafter referred to as "City Standards") to establish standards for design and construction of public improvements. These City Standards shall apply for the design and construction of all new and upgraded facilities in City right-of-way or on City-owned parcels, or in the case of development projects, will become a City right-of-way or parcel upon acceptance of the final plat or development. Facilities governed by these City Standards include, but are not limited to: Streets, sidewalks, and other transportation-related facilities, storm drainage, water, and sewer facilities, and includes City facilities serving customers outside of the City limits.

The City has adopted the latest edition of Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction and its APWA Supplement (hereinafter referred to as "Standard Specifications"). These City Standards supplement the Standard Specifications. The City Engineer may revise these City Standards to incorporate new technology, apply new City policy, or to account for unsatisfactory service or operating experience.

These City Standards are intended to represent the minimum design standards for City facilities. Compliance with these City Standards does not relieve the designer or contractor of their responsibility to apply sound professional judgment to protect the health, safety, and welfare of the public, and to provide quality, durable facilities that operate properly and reliably. Since these are the required minimum standards, special site conditions may require a higher level of protection or quality than would normally be obtained by application of these City Standards. The City Engineer may require project specific modifications to the applicable standards, or may require a project specific design.

All designs for public improvements shall be supervised and stamped by a registered Professional Engineer licensed by the State of Washington. Construction of public improvements shall not commence prior to approval of the project plans and specifications by the City Engineer nor prior to payment of all associated fees including obtaining the appropriate, required permits.

All plans shall be on Washington South Datum.



General Special Provisions

SECTION: 1-00	CITY ENGINEER APPROVAL: Longview: C.B.
DATE: JAN 2017	

1-01 DEFINITIONS AND TERMS

Section 1-01.3; Definitions

The following new definition is added to this section:

City

The City of Longview, Washington.

The definition for **Engineer** is replaced with the following:

Engineer or City Engineer

The City Engineer having authority specified by state law or City ordinance. For improvements constructed by private contract, shall mean the City Engineer for purposes of approval of changes to, and final acceptance of, the facilities that are or will become public facilities.

1-05 CONTROL OF WORK

Section 1-05.12; Final Acceptance

Paragraph 3 is replaced with the following:

If within one year after the date of acceptance or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any work is found to be defective, the Contractor shall promptly, without cost to the Owner and in accordance with the Owner's written instructions, either correct such defective work, or, if it has been rejected by the Owner, remove it from the site and replace it with non-defective work. If the Contractor does not promptly comply with the terms of such instruction, or in an emergency where delay would cause serious risk of loss or damage, the City may have the defective work corrected or the rejected work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by the Permittee.



General Special Provisions

SECTION:
1-01 and 1-05

DATE: **JAN 2017**

CITY ENGINEER APPROVAL:
Longview: **C.B.**

STREET SPECIAL PROVISIONS

GENERAL REQUIREMENTS

The contractor shall determine the type of equipment and method to use to achieve required compaction. The contractor shall arrange for a Geotechnical engineer to perform or have performed all required tests and certify soil and all required compaction tests. The City of Longview shall receive copies of all Geotechnical inspection and test reports within one week after completion. Earth compaction shall be consistent with standard specifications Section 2-03.3(14)C method C. Tests shall also include all asphalt & concrete incorporated into the project.

Material in soft spots within the roadway shall be removed to the depth required to provide a firm foundation and shall be thoroughly compacted to a relative density of 95% of optimum. The maximum allowable rock size is 4 inches. Work shall be consistent with the standard specifications Section 2-06.

All pavement patches shall be 2 inches plus existing in depth or as directed by the City of Longview.

All pavement shall be double cut & shall be full depth sawcut & replaced per the limits as marked by the City of Longview after construction.

All roads shall be constructed per City of Longview standards.

5-05 CEMENT CONCRETE PAVEMENT

The class of concrete to be used shall be as noted in the plans and these specifications. The numerical class of concrete defines the specified minimum compressive strength in accordance with AASHTO T 22 at the stated design age.

The Contractor shall provide submittals for concrete mix design in accordance with Section 5-05.3(1) of the Standard Specifications. Submittals for concrete mix design shall be on the applicable form provided by the City. (See attached form at end of these specifications)

For pavement patch or driveway pavement where the total bid item quantity is less than 200 square yards, the Contractor may substitute the following mix design in lieu of providing the normally required flexural and compressive strength results.

All cement concrete pavement shall be a minimum of 4000 PSI commercial except 4" sidewalk which shall be a minimum of 3000 PSI commercial mix.



Street Special Provisions

SECTION:
5-05

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

**Standard Table
of
Concrete Mixes for Pavements**

Design Age	Pavement Thickness Increase Over Standard Section	Proportions: Amounts In Pounds Per Cubic Yard				Flexural Design Strength
		Portland Cement Type	Cement Factor	Aggregates Fine	Aggregates Coarse AASHTO 467	
14-day	0.00'	I or II	565	1230	2060	650
10-day	0.04'	I or II	565	1230	2060	590
7-day	0.00'	I or II	625	1145	2060	650
	0.08	I or II	565	1230	2060	540
	0.04'	I or II	625	1145	2060	590
5-day	0.00'	I or II	750	975	2060	650
	0.00'	III	565	1230	2060	650
	0.08'	I or II	655	1100	2060	540
4-day	0.08'	III	565	1230	2060	540
	0.08'	I or II	750	975	2060	540
3-day	0.08'	III	655	1100	2060	540
	0.12'	I or II	750	975	2060	500
	0.12'	III	655	1100	2060	500

Gradation for fine aggregates shall be per Sec. 9-03.1(2)B of the Standard Specifications.

Aggregate weights are based upon bulk specific gravities of 2.67. The mix design may be adjusted by the Engineer as deemed necessary for different bulk specific gravities of aggregates.

Air-entrained concrete shall be used.

Generally concrete shall be compacted by means of a vibrating screed. Small or irregular areas require machine vibration where directed by the Engineer.

The type of vibrating screed which the Contractor proposes to use, whether roller or beam, shall be subject to approval by the Engineer. Upon request by the Engineer, a test section of pavement shall be placed for the purpose of demonstrating the capabilities of the screed to satisfactorily compact and strike off the concrete to the established grade and section.

Concrete shall be uniformly distributed between the forms and it shall then be compacted and screeded to the level of the top of the forms by means of the vibrating screed. Supplemental compaction by hand spading or mechanical vibration of the concrete adjacent to the forms will be required if the concrete cannot otherwise be adequately compacted.



Street Special Provisions

SECTION: 5-05	CITY ENGINEER APPROVAL:
DATE: JAN 2017	Longview: C.B.

The vibrating screed shall be operated over the freshly placed concrete in successive passes only a sufficient number of times to obtain maximum compaction. Over-vibration of the concrete, resulting in an excess of mortar at the surface of the pavement, will not be permitted.

After the final passage of the vibrating screed, the surface of the concrete shall be at the established pavement grade and cross section and shall be sufficiently smooth as to require only a very moderate amount of hand finishing for smoothness to meet the approval of the Engineer.

Hand methods of compaction are restricted to alleys and confined areas as determined by the Engineer. The concrete shall be spread evenly with shovels and spaded along the forms with a perforated spade after which it shall be struck off with a metal shod tamping rod. The rod shall be cut to the exact crown of the roadway and be fitted with handles at each end and be of such depth or trussed to be rigid. The strike-off rod shall be operated with a combined tamping, crosswise and sawing action to produce a smooth surface free from depressions or inequalities. A small amount of mortar must be kept ahead of and extending substantially along the entire length of the rod. Excessive swinging of the rod will not be permitted.

The concrete shall be struck off again with a “second strike rod” operated in the same manner as the first rod and following not closer than 20 feet behind the first. The second strike rod may be eliminated on alley pavements having the “V” section of the center. The second rod may also be eliminated on small pours of pavement of substandard width, unless use of the rod is required by the Engineer.

Section 5-05.3(2); Consistency

This section is supplemented with the following:

The consistency of the concrete shall be evaluated by one of the following test methods: Method of Test for Slump of Portland Cement Concrete, ASTM Designation C 143, WSDOT Test Method No. 804A or the Method of Test for Ball Penetration in Portland Cement Concrete, ASTM Designation C 360.

The slump of the concrete when placed by machine methods shall not exceed 2 inches. When hand methods are used, the slump shall not exceed 3-1/2 inches.



Street Special Provisions

SECTION: 5-05	CITY ENGINEER APPROVAL: Longview: C.B.
DATE: JAN 2017	

Section 5-05.3(6); Subgrade

This section is supplemented with the following:

After the forms have been securely set to grade and alignment, the subgrade between the forms shall be brought to true cross section by dragging a subgrade template as many times as may be necessary to secure a true subgrade.

Where thickened edges for pavements are required, such as shown on the standard plans, the subgrade shall be excavated and shaped to provide for the section shown.

Wherever possible, vehicles shall be kept off the finished subgrade. If vehicles must travel on the subgrade ahead of the paving, a power drag shall be carried immediately ahead of placing the concrete. Irregularities in the subgrade caused by trucks during the placement of concrete shall be smoothed out and compacted immediately ahead of placing the concrete.

No concrete shall be placed until the subgrade is approved by the Engineer. The subgrade as finally completed and approved shall be maintained by the Contractor at an optimum moisture content by wetting with water until the concrete is actually placed.

Section 5-05.3(7); Placing, Spreading, and Compacting Concrete

This section is supplemented with the following:

The concrete shall be placed upon the prepared subgrade between the forms to the required depth and cross section in a continuous operation between construction or expansion joints.

The concrete shall be thoroughly consolidated against and along all forms or adjoining pavements by such means as will prevent gravel pockets along the edges of the finished pavement. Any gravel pockets found after removing the forms shall be repaired.

When integral curb is being constructed with the pavement, fresh concrete for the integral curb shall be placed at such time as will enable the top section of the curb to be consolidated, finished, and bonded to the pavement slab while the concrete is plastic.

Where curb is not being placed integral with the pavement slab, reinforcing steel dowels shall be placed in the base section for the curb per the standard drawing.

	Street Special Provisions	
	SECTION: 5-05	CITY ENGINEER APPROVAL: Longview: C.B.
	DATE: JAN 2017	

Prior to placing concrete around manholes, catch basins, gate chambers, etc., a temporary cover fitting below the rim of the ring casting shall be provided to prevent the concrete from flowing into them.

Section 5-05.3(7)B; Stationary Side Form Construction

Paragraph 1 is replaced with the following:

Side form sections shall be straight, free from warps, bends, indentations, or other defects. Defective forms shall be removed from the work. Forms may be of wood, metal, or any other material at the option of the Contractor, provided the forms are constructed to result in the specified thickness, cross section, grade, and alignment as shown in the plans.

Section 5-05.3(7)B is supplemented with the following:

Forms shall be adequately supported to prevent deflection or movement and to result in concrete conforming with the plans and specifications. The top of the form shall not vertically deviate more than 1/8 inch in 10 feet and the alignment of forms shall be within 1/4 inch in 10 feet. Form tolerance does not relieve contractor to build ramps, sidewalks, and other pedestrian pathways to meet current ADA Standards.

When forms are removed before the expiration of the curing period, the edges of the concrete shall be protected with moist earth or sprayed with curing compound.

Section 5-05.3(8)A; Contraction Joints

This section is supplemented with the following:

Generally contraction joints shall be constructed using pre-molded asphalt-impregnated felt or paper conforming to Sec. 9.04.1(1). Pre-molded joint filler shall be 1/4 pavement depth for all thicknesses of pavement unless specified elsewhere in the construction plans.

Contraction joints may be sawed pending approval by the Engineer. Sawn contraction joints shall be minimum 1/4 pavement depth for all thicknesses of pavement unless specified elsewhere in the construction plans.

	Street Special Provisions	
	SECTION: 5-05	CITY ENGINEER APPROVAL: Longview: C.B.
	DATE: JAN 2017	

Expansion Joints

Expansion joints shall be installed at locations shown on the construction plans or where directed by the Engineer. Joint material shall be pre-molded, bituminous material conforming to AASHTO designation 213, 3/4 inch thickness. Joints shall extend full width of the pavement from one inch below the subgrade to flush with the finished pavement.

The filler material shall be held accurately in place during the placing and finishing of the concrete by a bulkhead, a holder, a metal cap or any other approved method. The joint must be at right angles to the paved surface and the holder must be in place long enough to prevent sagging of the material.

Expansion joints shall extend continuously through all curbs. Special care shall be taken to preserve alignment perpendicular to the pavement in the curb section.

Payment for joint material and placement shall be considered incidental to the bid item for "Cement Concrete Pavement"

Section 5-05.3(11); Finishing

The third paragraph is amended as follows: after edging, the pavement shall be given a uniform gritty texture by brushing the pavement transversely with a fiber or wire brush of a type approved by the Engineer.

Curing 5-05.3(13)

Section 5-05.3(13)A; Curing Compound

This section is supplemented with the following:

White pigmentation curing compound is NOT ALLOWED. Clear curing compound shall be used.

Prior to beginning of each day's pour, the Contractor shall provide the Engineer with calculations showing that Contractor has enough curing compound on site to provide the minimum coverage of one gallon to not more than 150 square feet.

Section 5-05.3(13)B; White Polyethylene Sheeting

This section is supplemented with the following:

White polyethylene sheeting shall not be allowed as a curing method but may be used to protect the finished surface from the weather.



Street Special Provisions

SECTION:
5-05

DATE: **JAN 2017**

CITY ENGINEER APPROVAL:

Longview: **C.B.**

Section 5-05.3(15); Concrete Pavement Construction in Adjacent Lanes

This section is replaced with the following:

Concrete pavement may be placed in a single lane, full width, or multiple lanes between longitudinal joints. Placement patterns shall be subject to traffic control requirements through the project. Pour patterns shall be approved by the Engineer.

Concrete shall not be placed in an adjacent lane sooner than 48 hours after finishing of the first lane. Whenever possible as allowed by the Engineer, the mixer shall be operated on the subgrade or on the shoulder adjacent to the lane being paved.

If the Engineer shall deem conditions to be such as to justify the operation of a mixer and trucks upon newly paved concrete because of lack of space elsewhere, he may give permission to do so, but only under the following restrictions:

1. The concrete in the new lane shall have attained a compressive strength of 3,000 pounds per square inch prior to opening to traffic.
2. Any accumulation of concrete, sand gravel, or other debris deposited on the new pavement shall be completely removed.
3. The Contractor shall replace at his own expense any panels on the new pavement that are cracked, broken, vandalized, or damaged.

A protective ramp shall be constructed at the pavement edge where vehicles may be driven on and off the pavement. The forms shall be left on the outside edge of the first lane at all turnouts until the pavement is opened to traffic.

When tie bars are specified, they shall be placed before the concrete is struck off during the last pass with the strike-off screed whether hand or machine operated. The tie bars shall be protected from traffic by bending down and back against the side form. Prior to placing the adjacent lane, the tie bars shall be straightened.

The Engineer may require a metal strip 3 inches wide by 1/8 inch thick and at least 5 feet in length be placed on the completed pavement lane near to the common joint with the adjacent lane to be paved, and the concrete placed in the adjacent lane shall be struck off from the plate, whether by machine or hand placement.

	Street Special Provisions	
	SECTION: 5-05	CITY ENGINEER APPROVAL: Longview: C.B.
	DATE: JAN 2017	

All roadways, shoulders, and subgrade in use by the Contractor shall be kept adequately dampened to prevent dust upon the freshly placed concrete.

Section 5-05.3(17); Opening to Traffic

This section is supplemented with the following:

Streets with curbs shall not be opened or disturbed until the curb has cured for at least 72 hours. If the curb has not attained the above-mentioned 3,000 pound strength for the pavement, the Contractor shall place curb protection, such as form lumber, 2 feet away from the curb on the pavement and place standard barricades and maintain them to the satisfaction of the Engineer. Such curb protection shall remain in place as long as may be necessary for protection of the curb.

Section 5-05.4; Measurement

This section is replaced with the following:

Measurement for cement concrete pavement is computed per square yard complete in-place.

Section 5-05.5; Payment

This section is replaced with the following:

Payment for Cement Concrete Pavement shall be at the unit contract price per square yard complete in place. The unit contract price shall be full compensation for furnishing all labor, tools, equipment, materials and also construction, curing, and protecting the cement concrete pavement, alley returns and driveways.

Construction of thickened edges and placing of longitudinal and transverse construction joints and alley return transition curbing shall be considered incidental to the cement concrete pavement and no additional payment shall be made.

Reinforcing steel shown on the standard plans and required for the construction of pavement, curbs, curb and gutter, driveways, catch basins, curb inlets, and manholes shall be considered as incidental to the construction and all costs thereof shall be included in other items of work and no further payment will be allowed.



Street Special Provisions

SECTION:
5-05
DATE: **JAN 2017**

CITY ENGINEER APPROVAL:
Longview: **C.B.**

STORM SPECIAL PROVISIONS

GENERAL REQUIREMENTS

DIVISION 7 DRAINAGE STRUCTURES & STORM SEWERS

7-04 STORM SEWERS

Construction Requirements 7-04.3

Section 7-04.3(1); Cleaning and Testing

This section is supplemented with the following:

Testing and Television inspection shall be performed after completion of the top coarse of rock and prior to paving.

Deflection Test for Thermoplastic Pipe

The requirements of Section 7-17.3(2)G shall apply to storm sewers. Costs shall be incidental to placement of the storm sewer.

Television Inspection

The requirements of Section 7-17.3(2)H shall apply to storm sewers. Costs shall be incidental to placement of the storm sewer.

7-07 CLEANING EXISTING DRAINAGE STRUCTURES

Section 7-07.3; Construction Requirements

This section is supplemented with the following:

All material collected as a result of cleaning existing drainage structures shall be disposed of at an approved landfill or by other methods as approved by the Engineer. Cleaning/Decant liquids shall not be discharged back into municipal stormwater system unless specific conditions have been met and approved by stormwater division.

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

Section 7 - 08.3(2)B; Pipe Laying – General

Paragraph 3 is replaced with the following:

Pipe shall be laid to a true line and grade at the invert of the pipe and the Contractor shall exercise care in matching pipe joints for concentricity and compatibility. In no case shall two pipes be joined together with ends having the maximum manufacturer's tolerance. The invert line may vary from the true line and grade provided such variance does not exceed the following requirements:



Storm Drain Special Provisions

SECTION:
7-04, 7-07, 7-08

DATE: **JAN 2017**

CITY ENGINEER APPROVAL:

Longview: **C.B.**

- No flat or reverse grades are created.
- Invert elevations at junctions (manholes, catch basins, cleanouts) are within 0.03 feet of plan elevations.
- No bellies of greater than 0.03 feet in depth are created in the line between junctions. Checking of the invert elevation of the pipe may be made by calculations from measurements on the top of the pipe.

DIVISION 9 MATERIALS

9-05 DRAINAGE STRUCTURES, CULVERTS, AND CONDUITS

Section 9-05.7(1); Plain Concrete Storm Sewer Pipe

This section is replaced with the following:

Plain concrete storm sewer pipe shall conform to the requirements of AASHTO M 86, Class 3.

Section 9-05.20; Corrugated Polyethylene Storm Sewer Pipe

This section is supplemented with the following:

Section 9-05.23; HDPE Pipe

This additional section shall include the following:

Material

High Density Polyethylene (HDPE) profile wall pipe shall be manufactured in accordance with ASTM F 894. The pipe resin shall be made of HDPE plastic compound having a cell classification of 335444C or higher in accordance with ASTM D 3350. Clean rework Material generated by the manufacturer's production may be used so long as the pipe produced meets all the requirements of this section.

Pipe and Fittings

Ring Stiffness Class (RSC) per ASTM F 894 for the pipe and fittings shall be shown on the contract drawings. Pipe and fittings shall be manufactured by the continuous winding of an extruded or closed profile onto suitably sized mandrels with no external welding between the individual profiles.

Joining

Pipe joining shall be effected by compressing a gasket between a bell and a spigot, which are integrally wound onto the pipe wall with no external weld or fusion. The gasket shall be contained in a machine groove on the pipe spigot except



Storm Drain Special Provisions

SECTION: 9-05	CITY ENGINEER APPROVAL: Longview: C.B.
DATE: JAN 2017	

for pipe used to connect to HDPE manholes, fittings, and structures. Pipe connecting to HDPE manholes, fittings, and structures shall have a smooth surface suitable for gasket sealing. Ends of closed profile pipe shall be factory sealed, to prevent leakage through the profile channel. Field cutting of closed-profile pipe (except solid wall pipe) shall not be permitted.

Alternatively, the HDPE pipes shall be assembled by an extrusion-weld process. Providing a watertight joint. Technicians certified by the manufacturer, using equipment approved by the pipe manufacturer, shall perform the welding. The high-density, polyethylene welding rod shall be compatible HDPE of cell class 345434, as defined by ASTM D3350.

Pipe Inside Diameter

The average inside diameter shall be true to the specified pipe diameter and within the tolerances given in table 1 of ASTM F 894. Except for mandrel breakout lines running in the direction of flow and mold marks, the inner wall of the pipe shall be smooth and have no visible circumferential weld seams, so as to provide a typical Manning N factor of .010 for clean water. Per ASTM F 894, slight line and mold marks are permissible provided that they do not result in variation of the inside diameter of more than 1/8 in. from that obtained on adjacent unaffected portions of the surface.

Minimum Wall Thickness

The combined thickness of the inner and outer walls of closed profile wall pipe shall be equal to at least the minimum waterway wall thickness specified in Table 1 or F 894 for open profile pipe. For direct buried pipe, the minimum bell thickness for both open and closed profile pipes shall equal the minimum bell thickness specified in Table 1 or F 894 for open profile pipe.

Pipe Length

The standard laying length for pipe up through 72” diameter shall be 20 feet ± 2” and the standard laying length for pipes greater than 72” diameter shall be 19 feet ± 2”.

	Storm Drain Special Provisions	
	SECTION: 9-05	CITY ENGINEER APPROVAL: Longview: C.B.
	DATE: JAN 2017	

WATER SPECIAL PROVISIONS

GENERAL REQUIREMENTS

1-11 GENERAL CONSTRUCTION REQUIREMENTS

All water system work and materials shall comply with the City of Longview specifications, latest edition of WSDOT specifications for road, bridge, and municipal construction, and the Washington State Division Administrative Rules Chapter 333, in that order.

CDF requirements

Plans & Specs on Washington South Datum

Electronic as-builts in latest version of CAD

On all utilities, service lines shall be perpendicular to main

All abandonment of services shall be capped at the main

Shop drawings are required on all city facilities prior to construction

All nuts and bolts shall be torqued to manufacturer's specifications in the presence of city inspector

2-07 WATERING

Section 2-07.4; Measurement

This section is replaced with the following:

Water shall be measured by meters installed by the City Water Department. If the Contractor chooses to obtain water from a fire hydrant, the Contractor shall make arrangements with the City Water Department for a hydrant meter to be installed, and shall pay all applicable fees. City may limit flow rate – contractor to submit flow requirements to be approved by City.

The Contractor may use only specific hydrants designated by the Water Department and in strict accordance with its requirements. The following hydrant(s) will be approved by the city.

The Contractor shall secure written permission from and comply with all requirements of the Water Department before obtaining water from fire hydrants. The Contractor shall make application for hydrant use a minimum of 2 weeks prior to obtaining water. The Contractor shall provide the Engineer with written permission from the City Water Department prior to being allowed access to the hydrant.

The Contractor is not to operate the hydrant. Violation of these requirements will result in fines. The Contractor shall be liable for damages due to malfunctioning or damaged fire hydrants as a result of its actions or negligence.



Water Special Provisions

SECTION:
1-11, 2-07

DATE: JAN 2017

CITY ENGINEER APPROVAL:

Longview: C.B.

7-09 WATER MAINS
Section 7-09.2; Materials

Paragraph 1 is replaced with the following:

Materials shall meet the following sections:

Pipe	9-30.1
Ductile Iron Pipe (Restrained Joint)	9-30.1(1)
Fittings	9-30.2
Ductile Iron Pipe	9-30.2(1)
Restrained Joints	9-30.2(6)
Bolted Sleeve-Type Couplings for Plain End Pipe	9-30.2(7)
Valves	9-30.3
Gate Valves (3 inches to 10 inches)	9-30.3(1)
Butterfly Valves (12 inches and greater)	9-30.3(3)
Valve Boxes	9-30.3(4)
Valve Marker Posts	9-30.3(5)
Valve Stem Extension	9-30.3(6)
Combination Air Release Valves	9-30.3(7)
Tapping Sleeve and Valve Assembly	9-30.3(8)
Hydrants (All bolts and nuts to be stainless steel with Anti-seize Compound)	9-30.5
Service Connections (2 inches and Smaller)	9-30.6

All Ductile Iron Pipe, fittings and appurtenances shall have restrained joints by the use of Mega-Lugs, Romac Grip Rings, Field-Lock gaskets, or approved equal.

Bolts and nuts for flanged pipe and fittings shall conform in size and length with ANSI/AWWA C115/A21.15. All bolts and nuts shall be made from COR-TEN steel in accordance with ANSI/AWWA C111/A21.11.

Concrete thrust blocks are to be constructed at Tees, Bends, Fire hydrants, Blow-offs, and where indicated on the plans and standards details. The minimum bearing surface against undisturbed soil is shown on the detail sheet. Thrust blocks shall be allowed to cure 14 days before pipeline pressure testing. Fittings shall be wrapped with a poly plastic as a bond breaker.

Note: The City reserves the right for any or all salvage rights to any existing materials removed including but not limited to fire hydrants, crosses, tees, gate valves or pipe.

It shall be determined by the City as to what materials will be salvaged.

Any material requested for salvage will be delivered by the contractor to the City's Water/Sewer operation center located in Longview. All costs associated with delivery or removal and disposal shall be borne by the contractor.



Water Special Provisions

SECTION: 7-09	CITY ENGINEER APPROVAL: Longview: C.B.
DATE: JAN 2017	

7-09 WATER MAINS

Construction Requirements

Section 7-09.3(5); Grade and Alignment

This section is supplemented with the following:

All water line pipe shall have minimum of 36 inches of cover over the top of pipe.

A minimum horizontal separation of 10 feet between sanitary sewers and any existing potable water lines, and a minimum vertical separation of 18 inches between the bottom of the water line and the crown of the sewer, shall be maintained. The distance shall be measured edge to edge. Sewer line should be lower than water line and installed in separate trenches or as approved by City Engineer.

Section 7-09.3(9);Bedding the Pipe

Sentence 1 is replaced with the following:

Bedding material shall be crushed surfacing top course.

7-09.3(12) GENERAL PIPE INSTALLATION

Section 7-09. ; Construction Requirements

This section is supplemented with the following:

Trace Wire

Trace wire shall be installed on all watermains except 2” and smaller service lines. The wire shall be attached to the lines at 15 foot intervals and shall be brought to the surface at all junctions and termini using methods approved by the Engineer. Trace wire material for water lines shall be 12 Gauge, soft drawn, insulated, and shall be blue in color. If lay length on facilities other than mains is longer then 6 feet, tracer wire is required.

Splices shall be made with a kit containing a “T” shaped open cell centering device and a plastic bag of urethane and hardener which is mixed at the time of installation or heat shrinkable insulating tubing. Heat shrinking insulating tubing shall consist of a mastic lined heavy wall polyolefin cable sleeve. The resin used with the “T” shaped open cell centering device shall be a quick curing flexible compound with an approximate set-up time of 4 minutes at 72° F. Also, a pre-filled, direct bury, safety wire connector can be used.

A continuity test shall be performed on tracer wire with inspector present prior to paving roadway.

The curb shall be stamped at each location where the water service line crosses it with a "W" in a manner approved by the City Engineer.



Water Special Provisions

SECTION:
7-09

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Connections 7-09.3(19)

Section 7-09.3(19)A; Connections to Existing Mains

Paragraphs 1, 4, 5, and 6 are replaced with the following:

- 1 Connection to the water system shall be inspected by the Public Works Department. 48 hours (2 working days) notice for inspection.
- 1 Utility permits must be applied and paid for prior to any connections being made to the water system.
- 1 Submittals and shop drawings must be approved before the shut down is scheduled.
- 1 Connections to the existing water main shall not be made without first making the necessary arrangements with the City Water/Sewer Department in advance. Work shall not be started until the existing main has been potholed to determine the materials, equipment, and labor necessary to properly complete the work. All the materials to properly complete the work shall be assembled on the site before work is started. Torque tighten all bolts that will not be included in the pressure test.
- 4 When work is once started on a connection, it shall proceed continuously without interruption, and as rapidly as possible until completed. No shutoff of mains will be permitted overnight, over weekends, on Mondays or Fridays, or on holidays. The Water/Sewer Superintendent must be notified a minimum of 48 hours prior to any shutoff and must give approval prior to the shutoff taking place.
- 5 If the connection to the existing system involves turning off the water, the Contractor shall be responsible for written notification of the residents affected by the shutoff a minimum of 48 hours prior to the shutoff with a city approved notice. The Water/Sewer Superintendent will advise which property owners are to be notified.
- 6 Connections must be performed between 8:00 a.m. and 4:00 p.m. Tuesday through Thursdays unless other arrangements have been made with the Water/Sewer Superintendent. Any overtime cost by city staff will be incurred by the contractor.

All waterlines and services shall be abandoned at the main and provide a one foot separation from the water main. Flushing and/or connections may be required to be performed at night (per City of Longview) during non-peak flows as determined by the water/sewer superintendent.

	Water Special Provisions	
	SECTION: 7-09	CITY ENGINEER APPROVAL: Longview: C.B.
	DATE: JAN 2017	

Section 7-09.3(21); Concrete Thrust Blocking

This section is supplemented with the following:

All forms for concrete and deformed rebar thrust blocking must be approved by the City Engineer prior to pouring the concrete.

Section 7-09.3(23); Hydrostatic Pressure Test

Paragraphs 1, 4, 5 and 6 are replaced with the following:

- 1 All water mains and appurtenances shall be tested in sections of convenient length under a hydrostatic pressure equal to 1.5 times that under which they will operate or 200 psi whichever is greater. All pumps, gauges, plugs, saddles, corporation stops, miscellaneous hose and piping, and measuring equipment necessary for performing the test shall be furnished and operated by the Contractor. The Engineering Department must be notified a minimum of 48 hours prior to testing and must be present when tests are performed.
- 4 The mains shall be filled with water and allowed to stand under pressure a sufficient length of time to allow the escape of air and allow the lining of the pipe to absorb water. The Contractor shall be responsible for providing the water necessary to fill the pipelines for testing purposes.
- 5 The test shall be accomplished by pumping the main up to the required pressure, stopping the pump for 2 hours, and then pumping the main up to the test pressure again. During the test, the section being tested shall be observed to detect any visible leakage. A clean container shall be used for holding water for pumping up pressure on the main being tested. This makeup water shall be sterilized by the addition of chlorine to a concentration of 50 mg/l. In accordance with AWWA Standards.

Disinfection of Water Mains 7-09.3(24)

Section 7-09.3(24)A; Flushing & 7-09.3(24)E; Liquid Chlorine

Replace with the following:

The City of Longview shall perform one time at no expense to the contractor: Flushing, chlorination, de-chlorination and a bacteria sample. the contractor shall be responsible for all T&M costs for additional labor, materials & testing costs if the first test provides a failing bacteria sample test. The contractor shall be responsible for all costs associated with sampling.

	Water Special Provisions	
	SECTION: 7-09	CITY ENGINEER APPROVAL: Longview: C.B.
	DATE: JAN 2017	

All water system flushing, including fire lines, shall be scheduled through the Public Works Department who will in turn schedule the Water Department to be present to record water used and to operate City valves. No one other than City Water Department personnel to operate valves. All valves to remain accessible during all phases of work.

Prior to energizing the water system, a bacteriological water sample shall be taken by the City of Longview Water Department inspector, submitted to an accredited testing lab, and returned to the Department indicating no hazards exist.

Contractor to provide sampling station point in accordance with Standard Plan W-660.

Section 7-09.3(24)D; Dry Calcium Hypochlorite

This section is deleted in its entirety.

7-12 VALVES FOR WATER MAINS

Construction Requirements 7-12.3

Section 7-12.3(1); Installation of Valve Marker Post

This section is replaced with the following:

Gate valves, sized 3" thru 10", shall conform to the latest revision of American Water Works Association (AWWA) Standard C509 or C515 for resilient seated gate valves. The manufacture name, model, and year of manufacture are to be cast on each valve.

Valve ends are to be ANSI class 125 flanged, mechanical joint by flanged, or mechanical joint as shown on the plans. Buried service valves shall open left and have a 2" operating nut.

All internal parts shall be accessible without removing the body from the line. The one-piece wedge shall be completely encapsulated with resilient material. The resilient sealing material shall be permanently bonded to the wedge with a rubber tearing bond meeting ASTM D429.

Non-rising stems (NRS) shall be cast bronze with integral collars in compliance with AWWA C509 and C515. The NRS stem shall have two O-ring seals above the thrust collar and one below. The two top O-rings are to be field replaceable (in the full open position) without removing the valve from service. There shall be low friction thrust bearings above and below the stem collar. The stem nut shall be independent of the wedge and of solid bronze.

	Water Special Provisions	
	SECTION: 7-09, 7-12	CITY ENGINEER APPROVAL: Longview: C.B.
	DATE: JAN 2017	

Outside screw and yoke (OS&Y) valves shall have a bronze stem attached to the disc assembly. An adjustable follower gland shall be incorporated to compress braided packing to provide stem sealing.

The waterway in the seat area shall be smooth, unobstructed, and free of cavities. The iron body and bonnet shall be fully coated, both interior and exterior, with a fusion bonded heat cured thermo setting material meeting all the application and performance requirements of A.W.W.A. C550.

Each valve shall be hydrostatically shell tested to twice the rated pressure, and seat tested to 250 psi as per the requirements of AWWA C509 and C515, "Production Testing".

Where required, a valve marker post shall be furnished and installed with each valve. Valve marker posts shall be placed at the edge of the right - of-way opposite the valve and be set with a minimum of 48" of the post exposed above grade. The post shall have a blue reflective "water valve" decal placed within 3" of the top of the post. The post shall be carsonite. The post shall face on coming traffic at 4 feet away from the valve.

A concrete collar shall be poured around valve boxes that are to grade. A two headed arrow stamp will be used to stamp the concrete collar to show direction of flow for the water main.

All operators for Butterfly Valves shall be on centerline of street side of the main.

The contractor shall not operate any City valve. The City must be contacted to turn all City valves for all phases of construction.

7-14 HYDRANTS

Construction Requirements 7-14.3

Section 7-14.3(6); Hydrant Extensions

This section is supplemented with the following:

Hydrant extensions will not be allowed for newly constructed hydrants. The large port on the hydrant shall face the road or as directed by the engineer.

7-15 SERVICE CONNECTIONS

Section 7-15.3; Construction Requirements

Paragraph 1 is replaced with the following:

All service connections to water mains shall be made using saddles as specified and be of the size and type suitable for use with the pipe being installed. Service pipelines shall be installed perpendicular to the main, unless otherwise shown in the plans.

	Water Special Provisions	
	SECTION: 7-14, 7-15	CITY ENGINEER APPROVAL: Longview: C.B.
	DATE: JAN 2017	

Water meter services shall not conflict with electric/gas services, required 4' horizontal and 12" vertical separation from other utilities.

No meters installed without fee's being paid in full.

Meters larger than 1" will be supplied by the contractor.

- a. Must be delivered to the Water Department shop for accuracy testing at least one week prior to installation date.
- b. Must be installed by the contractor.

All backflow devices must be tested and certified by a stated certified tester prior to the water services being activated.

9-30 WATER DISTRIBUTION MATERIALS

Pipe Section 9-30.1

Section 9 -30.1(1); Ductile Iron Pipe

Item 1 is replaced with the following:

Ductile iron pipe shall be centrifugally cast and meet the requirements of AWWA C151. Ductile iron pipe shall have a cement-mortar lining meeting the requirements of AWWA C104. Ductile iron pipe to be joined using bolted flanged joints shall be Standard Thickness Class 53. All other ductile iron pipe shall be Standard Thickness Class 52 or the thickness class as shown in the Plans.

Valves Section 9-30.3

Section 9-30.3(1); Gate Valves (3 Inches to 10 Inches)

This section is replaced with the following:

Gate valves shall meet the requirements of AWWA C509 or C515 for resilient seated gate valves.

9-30.3(3); Butterfly Valves

This section is replaced with the following:

Butterfly valves 12" and larger shall meet class 350 & shall be suitable for direct burial. Operators shall be per 9-30.3(3).

Section 9-30.3(5); Valve Marker Posts

This section is replaced with the following:

Posts shall be Carsonite utility markers or equal and shall be of a color approved by the Engineer. Post shall face on-coming traffic.



Water Special Provisions

SECTION:
9-30

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Section 9-30.5; Hydrants

This section is supplemented with the following:

Hydrants shall be Mueller Centurion, Kennedy K81D Guardian, or Waterous Pacer 90 with 16 inch top section.
Large port on hydrant shall face roadway.

Section 9-30.5(2); Hydrant Dimensions

Paragraph 2, last sentence is replaced with the following:

The hydrant shall be factory painted with two coats of yellow paint.

Section 9-30.5(3); Hydrant Extensions

This section is supplemented with the following:

No hydrant extensions are allowed on new fire hydrant installations.

**Water Service Connections (2 Inches and Smaller) Section 9-30.6
Service Pipes Section 9-30.6(3)A; Copper Tubing**

This section is supplemented with the following:

Water service pipes shall be a minimum of 1” in diameter for 1” meters and smaller.
Water service pipes shall be a minimum of 2" in diameter for 1 ½" & 2" meters.
Water pipes shall be a minimum of 4" in diameter for larger than 2" to 4" services.

Section 9-30.6(3)B; Polyethylene Tubing

The second sentence is replaced with the following:

Tubing shall be high molecular mass with a 250 PSI rating.

The last two sentences are deleted.



Water Special Provisions

SECTION:
9-30
DATE: **JAN 2017**

CITY ENGINEER APPROVAL:
Longview: **C.B.**

SANITARY SEWER SPECIAL PROVISIONS

GENERAL REQUIREMENTS

7-17 SANITARY SEWERS

Section 7-17.2; Materials

This section is replaced with the following:

Pipe used for sanitary sewers may be:

Rigid

Concrete
Ductile Iron (Epoxy lined)

Thermoplastic

PVC (Polyvinyl Chloride)

Lining Material – The material used for lining the pipe and fitting shall have a successful history of protecting pipe lines in sewer service. The material shall be a high build multi-component amine cured novalac epoxy lining. At least 20% of the volume of the material shall contain ceramic quartz pigment.

All sanitary sewer pipes shall have flexible gasketed joints unless otherwise specified. It is not intended that materials listed are to be considered equal or generally interchangeable for all applications. The Engineer shall determine from the materials listed those suitable for the project, and shall so specify in the specifications or the Plans. Materials shall meet the requirements of the following sections

Reinforced Concrete Storm Sewer Pipe	9-05.7(2)
Solid Wall PVC Sanitary Sewer Pipe	9-05.12(1)
Profile Wall PVC Sanitary Sewer Pipe	9-05.12(2)
Ductile Iron Sewer Pipe	9-05.13
HDPE Pipe	9-05.23

All pipes shall be clearly marked with type, class, and thickness. Lettering shall be legible and permanent under normal conditions of handling and storage.



Sanitary Sewer Special Provisions

SECTION:
7-17

DATE: JAN 2017

CITY ENGINEER APPROVAL:

Longview: C.B.

EROSION CONTROL GENERAL NOTES

STORM WATER RUNOFF CONTROL GUIDELINES LONGVIEW URBAN AREA 2004 GENERAL REQUIREMENTS

The contractor shall provide protection to adjoining property from excavation and fill activities and from sediment due to runoff by compliance with the approved erosion control plan.

Sec. 17.80.096.030 - Recommended standard notes for erosion control plans:

Approval of this erosion/sedimentation control (ESC) plan does not constitute an approval of permanent road or drainage design (e.g. size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).

The implementation of these ESC plans and the construction, maintenance, replacement, and upgrading of these ESC facilities is the responsibility of the applicant/contractor until all construction is completed and approved and vegetation/landscaping is established.

The boundaries of the clearing limits shown on this plan shall be clearly flagged in the field prior to construction. During the construction period, no disturbance beyond the flagged clearing limits shall be permitted. The flagging shall be maintained by the applicant/contractor for the duration of construction.

The ESC facilities shown on this plan must be constructed in conjunction with all clearing and grading activities, and in such a manner as to ensure that sediment and sediment laden water do not enter the drainage system, roadways, or violate applicable water standards.

The ESC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ESC facilities shall be upgraded as needed for unexpected storm events and to ensure that sediment and sediment-laden water do not leave the site.

The ESC facilities shall be inspected daily by the applicant/contractor and maintained as necessary to ensure their continued functioning.

The contractor shall inspect and maintain inactive site ESC facilities a minimum of once a month or within the 48 hours following a storm event.



Erosion Control General Notes

SECTION:
17.80.096.030

DATE: **JAN 2017**

CITY ENGINEER APPROVAL:

Longview: **C.B.**

At no time shall more than one foot of sediment be allowed to accumulate within a trapped catch basin. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment-laden water into the downstream system.

Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to insure that all paved areas are kept clean for the duration of the project.

Sec. 17.80.096.040 - Standard Notes for Sediment Fences:

The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6 - inch overlap, and both ends securely fastened to the post.

The filter fabric fence shall be installed to follow the contours where feasible. The fence posts shall be spaced a maximum of 8 feet apart and driven securely into the ground a minimum of 24 inches.

When standard strength filter fabric is used, a wire support fence shall be fastened securely to the upslope side of the posts using heavy-duty wire staples at least 1 inch long, tie wire or hog rings. The wire shall extend into the trench a minimum of 4 inches and shall not extend more than 36 inches above the original ground surface.

The standard strength filter fabric shall be stapled or wired to the fence, and 12 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

When extra-strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of the above standard note for standard strength filter fabric applying.

Sediment fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

Sediment fences shall be inspected by applicant/contractor immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

	Erosion Control General Notes	
	SECTION: 17.80.096.030	CITY ENGINEER APPROVAL: Longview: C.B.
	DATE: JAN 2017	