

City of Longview Submittal Procedures 2016

A transmittal form shall accompany each material or shop drawing submittal. The contractor or developer shall use the RAM (Request for Approval of Materials) form for all material submittals. All submittals shall include the requested use for each material being submitted on such as water main, water service, sewer main, sewer service, etc. It is requested that the complete set of submittals be received during the first submittal for the project.

For public improvements within private developments submit first to the developer and the engineer of record for their review and approval prior to submitting to the City Public Works Department.

For private improvements within private developments submit first to the developer and the engineer of record for their review and approval prior to submitting to the City Community Development Department.

Submittals containing items not relevant to the public portion of the project and incomplete submittals will be returned "rejected" and will need to be corrected and the complete packet re-submitted including all of the pertinent information required. It is the responsibility of the developer and/or contractor to obtain all the required submittal information relevant to each material to be incorporated into the public portion of the project inclusive of each material needed to complete all of the specified/required work.

No materials shall be incorporated into any project without prior approval from the developer, engineer of record, and the City as applicable. Any materials used without approval will be considered rejected until the proper submittals and approvals are granted. Any and all costs associated with the installation, removal, and reinstallation of such work and materials will be the responsibility of the developer and/or contractor. No shut downs or connections to City facilities will be allowed and no systems shall be placed into service until all materials are approved or replaced with approved materials and inspected and accepted by the City as complete, tested, operational, safe for the public, and motorists and have full unrestricted use.

As-Built drawings shall be submitted for review and approval within 20 working days after project completion. If as-builts are not completed, correct and submitted within the 20 working days utility service may be suspended to the subject project until such time as-builts are complete. The final as-builts shall include one complete set of milars, one complete set on electronic version (CAD compatible) and three complete hard copy sets.

Submit all submittals with the required RAM form(s) and transmittal letter to 1525 Broadway, PO Box 128, Longview WA. 98632-7080 Attn: Construction Manager.



SUBMITTAL PROCEDURES (1 OF 28)

STANDARD PLAN:
PN - 010

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Kelso:

City Review Process:

City office staff will date stamp the submitted information and route the packets to the Construction Manager. In the absence of the Construction Manager, office staff will check with the City Engineer or Project Engineer for routing instructions. In all cases a copy of the submittal shall be routed to the Construction Manager.

The Construction Manager will route the packet to the City Project Engineer for approvals/comments. The Engineer will review the submittal logs weekly to remind staff of anything not returned in the established time frames.

A transmittal letter shall be prepared by the Project Engineer including actions needed for the developer and/or contractor, the submittals packet, comments, approvals and/or rejections. The Project Engineer will date and return the information to the project contact listed in the submittal transmittal letter. An approved copy of the material submittals shall be provided to the Construction Manager, one copy filed in the project file and a copy provided to any other affected department head.

Once the contractor receives the approved material submittals, materials can be ordered. After inspection is scheduled and the materials have been inspected work can be scheduled and started.

Call 360.442.5200 to schedule inspections. Twenty four hours minimum advance notice is required prior to starting any work including pot holing or anything that may involve traffic flow restrictions or street, lane, path or sidewalk, etc. closures.

The City will do everything possible to expedite the review process provided that the above procedures are followed and dependent on the complexity and size of the review. Failure to complete reviews within the timeframes included in this procedure does not change any liability of the developer and/or contractor to follow the process and to be liable for any and all delay and expenses due to the submittal approval process.

Review Time

Original submittals: Allow 10 to 20 days for review comments and/or approvals. The City will try to return review comments quicker but please plan for the full review time.

Re-submittals: Allow 5 to 10 days for review comments and/or approvals.

It is recommended that the City (project engineer) be contacted during design and/or submittal preparation to assist and provide direction with any questions or special requirements. This will save time in the material review process.



SUBMITTAL PROCEDURES (2 OF 28)

STANDARD PLAN:
PN - 011

CITY ENGINEER APPROVAL:
C.B.

DATE: **JAN 2017**

Longview:
Kelso:

Material and Shop Drawing Transmittal Form

Complete and Check all appropriate lines

Project Name and Address _____

Contact Name _____ Phone _____

Type of Submittal: Materials
 Shop Drawing

YES / NO Developer & Engineer of Record have reviewed & approved these submittals

4 # of Copies for City Use

___ Additional Copies Submitted (to be returned for developer and/or contractor use)

PORTION OF WORK SUBMITTED

Division 1 - General Requirements:

- Temporary Traffic Control
- Other _____

Division 2 - Earthwork:

- Roadway Excavation and Embankment
- Structure Excavation
- Construction Geosynthetic
- Other _____

Division 4 - Bases:

- Gravel Base
- Ballast and Crushed Surfacing
- Asphalt Treated Base
- Other _____

Division 5 - Surface Treatments and Pavements:

- Cement Concrete Pavement Rehabilitation
- Bituminous Surface Treatment
- Hot Mix Asphalt
- Cement Concrete Pavement
- Other _____

Division 6 - Structures:

- Structures
- Walls
- Other _____



SUBMITTAL PROCEDURES (3 OF 28)

STANDARD PLAN:
PN - 012

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

DATE: **JAN 2017**

Kelso:

Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains and Conduits:

- Drains
- Culverts
- Storm Sewers
- Manholes, Inlets, Catch Basins, and Drywells
- Water Mains
- Valves for Water Mains
- Hydrants
- Service Connections
- Sanitary Sewers
- Side Sewers
- Sewer Cleanouts
- Other _____

Division 8 - Miscellaneous Construction:

- Erosion Control and Water Pollution Control
- Roadside Restoration
- Irrigation Systems
- Curbs, Gutters, and Spillways
- Cement Concrete Driveway Entrances
- Precast Traffic Curb and Block Traffic Curb
- Raised Pavement Markers
- Guide Posts
- Guardrail
- Chain Link Fence and Wire Fence
- Monument Cases
- Cement Concrete Sidewalks
- Riprap
- Mailbox Support
- Illumination, Traffic Signal Systems, and Electrical
- Permanent Signing
- Pavement Marking
- Temporary Pavement Markings
- Rock and Gravity Block Wall and Gabion Cribbing
- Other _____

NOTE: A separate RAM form is required for each portion of work.

	SUBMITTAL PROCEDURES (4 OF 28)	
	STANDARD PLAN: PN - 013	CITY ENGINEER APPROVAL: Longview: C.B.
	DATE: JAN 2017	Kelso:

Material and Shop Drawing Transmittal Form

Complete and Check all appropriate lines

Project Name and Address 1" Water Service 0000 Test Lane

Contact Name Test Test Phone 000.000.000

Type of Submittal: Materials
 Shop Drawing

YES / NO Developer & Engineer of Record have reviewed & approved these submittals

4 # of Copies for City Use

1 Additional Copies Submitted (to be returned for developer and/or contractor use)

PORTION OF WORK SUBMITTED

Division 1 - General Requirements:

- Temporary Traffic Control For Alley Closure
- Other Sidewalk Closure

Division 2 - Earthwork:

- Roadway Excavation and Embankment
- Structure Excavation
- Construction Geosynthetic
- Other

Division 4 - Bases:

- Gravel Base For Bedding and Trench Backfill
- Ballast and Crushed Surfacing
- Asphalt Treated Base
- Other

Division 5 - Surface Treatments and Pavements:

- Cement Concrete Pavement Rehabilitation
- Bituminous Surface Treatment
- Hot Mix Asphalt For Trench Patch
- Cement Concrete Pavement
- Other Cement Concrete for Alley Repairs

Division 6 - Structures:

- Structures
- Walls
- Other



SUBMITTAL PROCEDURES (5 OF 28)

STANDARD PLAN:
PN - 014

DATE: **JAN 2017**

CITY ENGINEER APPROVAL:

Longview: **C.B.**

Kelso:

Division 7 - Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains and Conduits:

- Drains
- Culverts
- Storm Sewers
- Manholes, Inlets, Catch Basins, and Drywells
- Water Mains
- Valves for Water Mains
- Hydrants
- Service Connections 1" Water Service Materials
- Sanitary Sewers
- Side Sewers
- Sewer Cleanouts
- Other Shop Drawing for 4" Fire Service

Division 8 - Miscellaneous Construction:

- Erosion Control and Water Pollution Control
- Roadside Restoration
- Irrigation Systems
- Curbs, Gutters, and Spillways
- Cement Concrete Driveway Entrances
- Precast Traffic Curb and Block Traffic Curb
- Raised Pavement Markers
- Guide Posts
- Guardrail
- Chain Link Fence and Wire Fence
- Monument Cases
- Cement Concrete Sidewalks
- Riprap
- Mailbox Support
- Illumination, Traffic Signal Systems, and Electrical
- Permanent Signing
- Pavement Marking
- Temporary Pavement Markings
- Rock and Gravity Block Wall and Gabion Cribbing
- Other _____

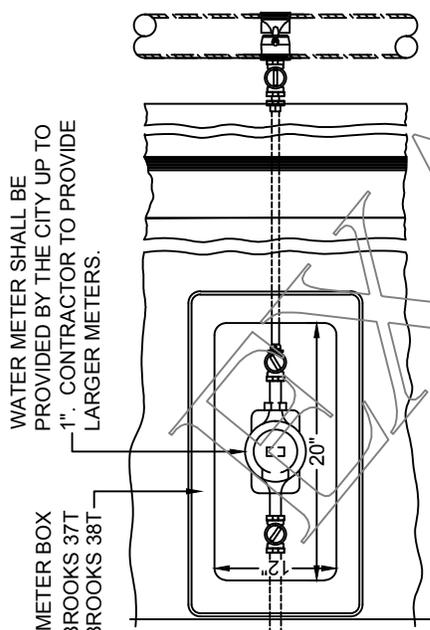
NOTE: A separate RAM form is required for each portion of work.



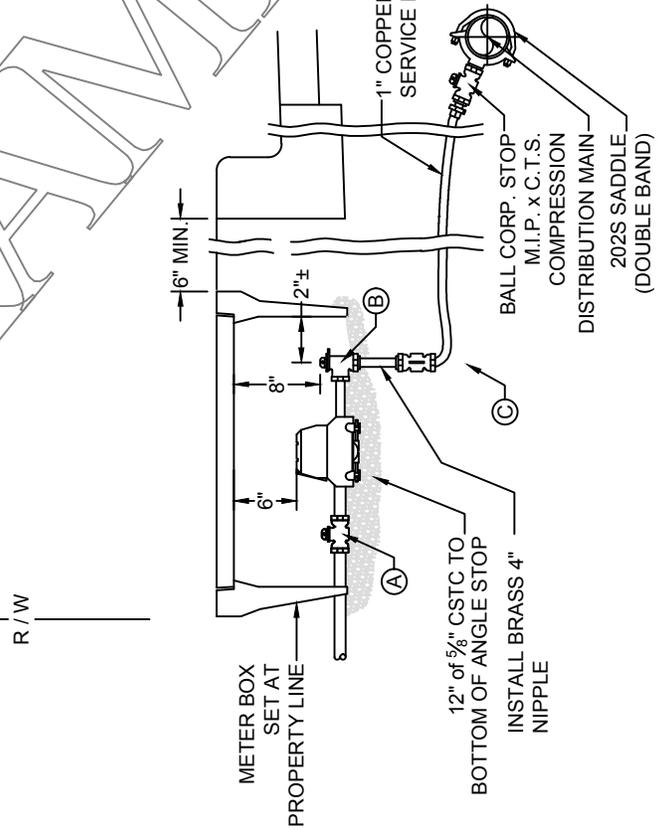
SUBMITTAL PROCEDURES (6 OF 28)

STANDARD PLAN: PN - 015	CITY ENGINEER APPROVAL:
DATE: JAN 2017	Longview: C.B.
	Kelso:

METER TO BE PLUMB AND SET ON A HORIZONTAL PLANE
 METER TO BE CENTERED EACH WAY INSIDE METER BOX



WATER METER SHALL BE PROVIDED BY THE CITY UP TO 1" CONTRACTOR TO PROVIDE LARGER METERS.
 3/4" METER: BROOKS 37T
 1" METER: BROOKS 38T



NOTES:

- CLEARANCES:
 MIN. 5' FROM EDGE OF DRIVEWAY - NO METERS IN DRIVEWAY SECTION
 MIN. 10' FROM TREES
 MIN. 5' FROM OTHER UTILITIES, EXCEPT SEWER @ 10'
 MIN. DEPTH AT RIGHT OF WAY IS 36"
 MIN. DEPTH ON CUSTOMER SIDE IS 18"
- CTS = COMPRESSION ALL BRASS & COPPER - NO GALVANIZED OR PLASTIC.
- THE SERVICE LINE SHALL BE CONTINUOUS WITHOUT COUPLINGS BETWEEN THE CORPORATION STOP AND CURB STOP VALVE UNLESS APPROVED BY THE ENGINEER.
- NO DIRECT TAPS ALLOWED.
- METER LOCATION TO BE DETERMINED BY THE CITY.
- SADDLES SHALL BE DOUBLE BAND DUCTILE IRON, BRONZE, STAINLESS STEEL, OR BAND-TYPE WITH I.P. STANDARD TAPPING.
- BALL CORPORATION STOPS FOR USE WITH SADDLES SHALL BE OF BRONZE ALLOY WITH INLET I.P. STANDARD THREAD AND COMPRESSION OUTLET COMPATIBLE WITH CONNECTION PIPING, WITH NO ADAPTERS.
- SERVICE PIPE SHALL BE A MINIMUM OF 1" TYPE K COPPER TUBING.
- COMPRESSION COUPLING FOR USE IN CONNECTING PLAIN END WATER SERVICE PIPES SHALL BE APPLICABLE FOR THE TYPE OF PIPE BEING COUPLED. COMPRESSION COUPLINGS SHALL HAVE ARMORED GASKETS WHEN DIS-SIMILAR METAL PIPES ARE BEING JOINED.
- WATER METERS SHALL NOT BE PLACED IN SIDEWALK.
- CORPORATION STOPS AND COUPLINGS SHALL BE OF THE FOLLOWING MANUFACTURER BRANDS AND BE COMPRESSION DESIGN:
 MUELLER
 McDONALD
 FORD
- METER BOX LIDS SHALL BE TOUCH READ APPLICATION WITH PLUG IN-KNOCK-OUT.

VALVE	3/4" METER	1" METER
A	3/4" BALL VALVE - FEMALE I.P. x METER	1" BALL VALVE - FEMALE I.P. x METER
B	1" x 3/4" ANGLE BALL VALVE STOP IP x METER	1" ANGLE BALL VALVE STOP IP x METER
C	1" BALL VALVE - F.I.P. x CTS COMPRESSION WITH LOCKING OPERATING NUT. (NO ADAPTERS ALLOWED) BALL VALVE TO BE INSTALLED AT 90° TO ANGLE STOP	

PN - 016 SUBMITTAL PROCEDURES (7 of 28)



WATER SERVICE CONNECTION

STANDARD PLAN:
W - 010
 DATE: **JAN 2017**

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



Request for Approval of Material

Contract Example	FA Number NA	SR NA	Date 1/1/2008
Section Project name/address 000 Test Lane 1" water service submittal		County Cowlitz	
Contractor XXXX Construction		Subcontractor YYYY Construction	

For assistance in completing, see instructions and Example

For WSDOT Use Only
RAM #

Bid Item No.	Material or Manufacturer's Product/Type	Name and Location of Fabricator, Manufacturer or Pit Number	Specification Reference	PE Appr'l Code	Hdqr. Appr'l Code	File No.
1	1" Ball Corp. Valve	Mueller Co.	W. Svc.			
2	1" ball Curb Stop Valve	Ford Co.	W. Svc.			
3	1" Angle Ball Valve	Ford Co.	W. Svc.			
4	1" Type K Copper Tube	Mueller Co.	W. Svc.			
5	1" Straight Ball valve	Mcdonald Co.	W. Svc.			
6	1" Meter Box	Brooks Products	W. Svc.			
7	Diamond Plate Reader Meter Box Lid	Brooks Products	W. Svc.			
8	Crushed Surfacing Top Course	Storebrand	W. Svc.			
9	8" X 1" Iron Service Saddle	Ford Co.	W. Svc.			
10	Cement Concrete Mix Design # 1466	Glacier Northwest	W. Svc.			

EXAMPLE

Project Engineer	Date	State Materials Engineer	Date
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Approval Action Codes for use by Project Engineer and State Materials Laboratory

1. Conditionally Approved: Acceptance based upon 'Satisfactory' Test Report for samples of materials to be incorporated into project.
2. Conditionally Approved: Submit Mfg. Cert. of Compliance for 'Approval' prior to use of material.
3. Conditionally Approved: Submit Catalog Cuts for 'Approval' prior to use of material.
4. Conditionally Approved: Submit Shop Drawings for 'Approval' prior to fabrication of material.
5. Conditionally Approved: Only 'Approved for Shipment' or 'WSDOT Inspected' material *shall* be used.
6. Conditionally Approved: Submit Materials Certificate of Origin to Project Engineer.
7. Approval Pending: Request Transmitted to State Materials Laboratory for Approval Action.
8. Source Approved:
9. Approval Withheld: Submit samples for preliminary evaluation.
10. Approval Withheld:
- 11.

Remarks:

Project Engineer Distribution

- Contractor Region Materials
 Region Operations Engineer State Materials Lab

State Materials Engineer Distribution

- General File Signing Inspection
 Fabrication Inspection Other _____

DOT Form 350-071 EF
Revised 8/04



SUBMITTAL PROCEDURES (8 OF 28)

STANDARD PLAN:
PN - 017

CITY ENGINEER APPROVAL:
C.B.

DATE: JAN 2017

Longview:
Kelso:



Contract Example	FA Number NA	SR NA	Date 1-1-2008
Section Project Name/address 0000 Test Lane 1" water service submittal		County Cowlitz	
Contractor XXXX Construction		Subcontractor YYYY Construction	

For assistance in completing, see instructions and Example	For WSDOT Use Only
	RAM #

Bid Item No.	Material or Manufacturer's Product/Type	Name and Location of Fabricator, Manufacturer or Pit Number	Specification Reference	PE Appr'l Code	Hdqtr. Appr'l Code	File No.
11	Brass Pipe Nipples	Smith-Cooper International	W. Svc.			
12	Alley Closure Plan	City of Longview	W. Svc.			
13	Sidewalk Detour Plan	City of Longview	W. Svc.			
14	4" fire Line (Shop Drawing)	Project Engineer	W. Svc.			
15	Asphalt (Temp Pavement Patch)	Lakeside	W. Svc.			
EXAMPLE						

Project Engineer	Date	State Materials Engineer	Date
------------------	------	--------------------------	------

Approval Action Codes for use by Project Engineer and State Materials Laboratory

- Conditionally Approved: Acceptance based upon 'Satisfactory' Test Report for samples of materials to be incorporated into project.
- Conditionally Approved: Submit Mfg. Cert. of Compliance for 'Approval' prior to use of material.
- Conditionally Approved: Submit Catalog Cuts for 'Approval' prior to use of material.
- Conditionally Approved: Submit Shop Drawings for 'Approval' prior to fabrication of material.
- Conditionally Approved: Only 'Approved for Shipment' or 'WSDOT Inspected' material shall be used.
- Conditionally Approved: Submit Materials Certificate of Origin to Project Engineer.
- Approval Pending: Request Transmitted to State Materials Laboratory for Approval Action.
- Source Approved:
- Approval Withheld: Submit samples for preliminary evaluation.
- Approval Withheld:
-

Remarks:

Project Engineer Distribution		State Materials Engineer Distribution	
<input type="checkbox"/> Contractor	<input type="checkbox"/> Region Materials	<input type="checkbox"/> General File	<input type="checkbox"/> Signing Inspection
<input type="checkbox"/> Region Operations Engineer	<input type="checkbox"/> State Materials Lab	<input type="checkbox"/> Fabrication Inspection	<input type="checkbox"/> Other _____

DOT Form 350-071 EF
Revised 8/04



SUBMITTAL PROCEDURES (9 OF 28)	
STANDARD PLAN: PN - 018	CITY ENGINEER APPROVAL: Longview: C.B.
DATE: JAN 2017	Kelso:

5.4

Mueller Co.

3/4" - 2" MUELLER® 300™ BALL CORPORATION VALVES

REV. 4-01



B-25008

MUELLER® 300™ Ball Corporation Valve
 Inlet: AWWA taper (MUELLER "CC") thread
 Outlet: MUELLER® 110° Conductive Compression Connection for CTS O.D.* tubing

3/4"	3/4" x 1"	1"	1-1/2"	1-1/2" x 2"	2"
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B-25028

MUELLER® 300™ Ball Corporation Valve
 Inlet: AWWA I.P. thread
 Outlet: MUELLER® 110° Conductive Compression Connection for CTS O.D. tubing

3/4"	3/4" x 1"	1"	1-1/2"	1-1/2" x 2"	2"
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B-25009

MUELLER 300 Ball Corporation Valve
 Inlet: AWWA taper (MUELLER "CC") thread
 Outlet: MUELLER® 110° Compression Connection for IPS PE* pipe

3/4"	3/4" x 1"	1"
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B-25029

MUELLER 300 Ball Corporation Valve
 Inlet: AWWA I.P. thread
 Outlet: MUELLER 110° Compression Connection for IPS PE* pipe

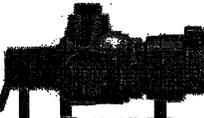
3/4"	3/4" x 1"	1"
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E-25009

MUELLER 300 Ball Corporation Valve
 Inlet: AWWA taper (MUELLER "CC") thread
 Outlet: MUELLER Pack Joint for IPS PE** pipe
*110° size only may also be used on PVC

3/4"***	1"	1-1/2"	2"
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E-25029

MUELLER 300 Ball Corporation Valve
 Inlet: AWWA I.P. thread
 Outlet: MUELLER Pack Joint for IPS PE** pipe
*110° size only may also be used on PVC

3/4"***	1"	1-1/2"	2"
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V-25056

MUELLER 300 Ball Corporation Valve
 Inlet: AWWA taper (MUELLER "CC") thread
 Outlet: MUELLER Pack Joint for IPS PVC pipe

1"	1-1/2"	2"
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V-25058

MUELLER 300 Ball Corporation Valve
 Inlet: AWWA I.P. thread
 Outlet: MUELLER Pack Joint for IPS PVC pipe

1"	1-1/2"	2"
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P-25008

MUELLER 300 Ball Corporation Valve
 Inlet: AWWA taper (MUELLER "CC") thread
 Outlet: MUELLER Pack Joint Connection for CTS O.D. * tubing

3/4"	3/4" x 1"	1"	1-1/2"	1-1/2" x 2"	2"
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P-25028

MUELLER 300 Ball Corporation Valve
 Inlet: AWWA I.P. thread
 Outlet: MUELLER Pack Joint Connection for CTS O.D.* tubing
*See charts on pages 5.10-5.13 for tubing and pipe

3/4"	3/4" x 1"	1"	1-1/2"	1-1/2" x 2"	2"
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that may be used with these connections.

NOTE: Sizes shown above represent nominal size of inlet and outlet connections. When two sizes are given, the first is size of inlet and the second is size of outlet.

MUELLER Corporation Valves are manufactured and tested in accordance with ANSI/AWWA C800.



SUBMITTAL PROCEDURES (10 OF 28)

STANDARD PLAN:
PN - 019

CITY ENGINEER APPROVAL:
C.B.

DATE: **JAN 2017**

Longview:
 Kelso:

Curb Stops

Regular Pattern Ball Valves - 300 PSIG Water



SIZES AVAILABLE

Size	INLET	BALL	OUTLET	FLARE x FNPT		T CTS Comp x FNPT		3Q PEP Comp x FNPT		Q CTS Comp x FNPT	
				FLATHEAD	LOCKWING	FLATHEAD	LOCKWING	FLATHEAD	LOCKWING	FLATHEAD	LOCKWING
3/4" x 5/8" x 3/4"	3/4"	5/8"	3/4"	•	•	•	•	•	•	•	•
3/4" x 3/4" x 1"	3/4"	3/4"	1"	•	•	•	•	•	•	•	•
1" x 3/4" x 3/4"	1"	3/4"	3/4"	•	•	•	•	•	•	•	•
1"	1"	1"	1"	•	•	•	•	•	•	•	•
1 1/2" x 1" x 1 1/2"	1 1/2"	1"	1 1/2"	•	•	•	•	•	•	•	•
2"	2"	2"	2"	•	•	•	•	•	•	•	•



SIZES AVAILABLE

Size	INLET	BALL	OUTLET	22 CTS Comp x FNPT		33 PEP Comp x FNPT		44 PVC Comp x FNPT		55 IP Comp x FNPT	
				FLATHEAD	LOCKWING	FLATHEAD	LOCKWING	FLATHEAD	LOCKWING	FLATHEAD	LOCKWING
3/4"	3/4"	3/4"	3/4"	•	•	•	•	•	•	•	•
3/4" x 1" x 1"	3/4"	1"	1"	•	•	•	•	•	•	•	•
1" x 3/4" x 3/4"	1"	3/4"	3/4"	•	•	•	•	•	•	•	•
1"	1"	1"	1"	•	•	•	•	•	•	•	•
1 1/2" x 1" x 1 1/2"	1 1/2"	1"	1 1/2"	•	•	•	•	•	•	•	•
1 1/2" x 1 1/2" x 1 1/2"	1 1/2"	1 1/2"	1 1/2"	•	•	•	•	•	•	•	•
2"	2"	2"	2"	•	•	•	•	•	•	•	•

For Ball Valves with -

- 360° degree rotation of operating head, replace third digit in model number with a "1". Example: 6100 becomes 6110.
- Tag for "Reclaimed Water" change model number by adding "RWT" to end of model number. Example: 6100-22 3/4" becomes 6100-22RWT 3/4"
- Double Lockwing for locking in open and closed position, add W to model # i.e. 6100W - 6100WW
- Factory assembled handles, contact factory (see page 26 for handle options)
- C-903 connections, replace "Q" in model number with "K". Available in 3/4" & 1" sizes only.
- Anode, Tracer Wire or Thaw wire connection add "A" to flared, "T" or "Q" connections. Example 6100 3/4" becomes 6100A 3/4", 6100T 3/4" becomes 6100TA 3/4" or 6100Q 3/4" becomes 6100QA 3/4".
- Cross type connection, contact factory.
- Special end-to-end lengths. Contact factory.
- British Standard Pipe threads, contact factory.

*Insert stiffeners are required on all flexible plastic connections ("T", "3Q", "Q", "22, & "33) See page 26.



SUBMITTAL PROCEDURES (11 OF 28)

STANDARD PLAN:
PN - 020

DATE: JAN 2017

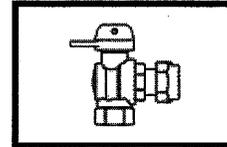
CITY ENGINEER APPROVAL:

Longview: C.B.

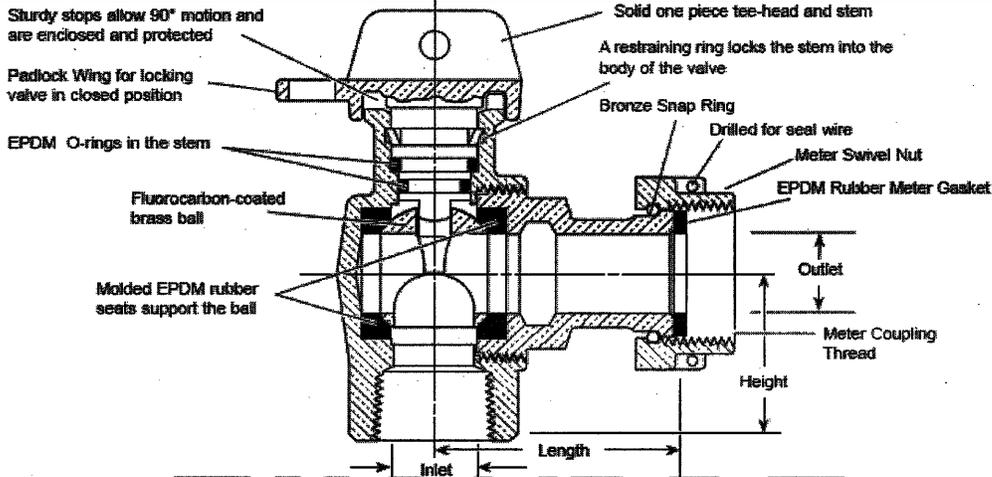
Kelso:

SUBMITTAL INFORMATION

Angle Ball Meter Valves - (BA13-xxxW style)



FEMALE IRON PIPE THREAD INLET BY METER SWIVEL NUT OUTLET



VALVE SIZE	SERVICE LINE SIZE	METER SIZE	LENGTH	HEIGHT	APPROX. WT. LBS.	PART NUMBER	SUBMITTED ITEM(S)
3/4"	3/4"	5/8"	2-1/4"	1-5/8"	1.9	▼ BA13-331W	
3/4"	3/4"	5/8"x3/4" & 3/4"	2-1/4"	1-5/8"	2.0	▼ BA13-332W	
3/4" dbl. locking	3/4"	5/8"x3/4" & 3/4"	2-1/4"	1-5/8"	2.1	▼ BA13-332WW	
3/4"	3/4"	1"	2"	1-5/8"	2.2	▼ BA13-334W	
3/4"	1"	5/8"	2-1/4"	1-7/8"	2.3	▼ BA13-341W	
3/4"	1"	5/8"x3/4" & 3/4"	2-1/4"	1-7/8"	2.3	▼ BA13-342W	
3/4"	1"	1"	2"	1-7/8"	2.4	▼ BA13-344W	
1"	1"	1"	2-11/16"	1-7/8"	3.1	▼▼ BA13-444W	
1" dbl. locking	1"	1"	2-11/16"	1-7/8"	3.2	▼▼ BA13-444WW	

▼ UL Classified to ANSISNSF Standard 61.

▼▼ Add "-K" to end of catalog number for item to be UL classified to ANSISNSF Standard 61.

FEATURES

- All brass conforms to AWWA Standard C800 (ASTM B-62 and ASTM B-584, UNS NO C83600 - 85-5-5-5)
- Ends are integral or secured with adhesive to prevent unintentional disassembly.
- Hole for attaching handle is provided in the tee head.
- 300 PSI working pressure.
- Padlock Wing for locking valve in closed position.
- WW valves can be locked in either the open or closed position.

Note: Recommended for inlet side shut-off.

Optional full 360° tee-head rotation. Add "R" to end of part number.

The Ford Meter Box Company considers the information in this submittal form to be correct at the time of publication. Item and option availability, including specifications, are subject to change without notice. Please verify that your product information is current.



The Ford Meter Box Company, Inc.
 P.O. Box 443, Wabash, Indiana U.S.A. 46992-0443
 Phone: 260-563-3171 / Fax: 800-826-3487
 Overseas Fax: 260-563-0167
<http://www.fordmeterbox.com>

07/12/05

Submitted By:



SUBMITTAL PROCEDURES (12 OF 28)

STANDARD PLAN:
PN - 021

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Kelso:

REFERENCE INFORMATION*

COPPER TUBE

Size		Type K		Type L/ACR		Type M		DWV	
NOM	O.D.	HARD	COILS	HARD	COILS	HARD	COILS	HARD	
STANDARD LENGTHS		20' Lengths	60' thru 1-1/2 100' thru 1-1/4 40' and 60'-2" only	20' Lengths	60' thru 1-1/2 100' thru 1-1/4 40' - 2" only	20' Lengths	Consult	20' Lengths	
NOM	O.D.	WALL	WGT/FT	WALL	WGT/FT	WALL	WGT/FT	WALL	WGT/FT
1/4"	3/8"	0.035	0.145	0.030	0.126	0.025	0.106	—	—
3/8"	1/2"	0.049	0.269	0.035	0.198	0.025	0.145	—	—
1/2"	5/8"	0.049	0.344	0.040	0.285	0.028	0.204	—	—
5/8"	3/4"	0.049	0.418	0.042	0.362	0.030	0.263	—	—
3/4"	7/8"	0.065	0.641	0.045	0.465	0.032	0.328	—	—
1"	1-1/8"	0.065	0.839	0.050	0.655	0.035	0.465	—	—
1-1/4"	1-3/8"	0.065	1.04	0.055	0.884	0.042	0.682	0.040	0.650
1-1/2"	1-5/8"	0.072	1.36	0.060	1.14	0.049	0.940	0.042	0.809
2"	2-1/8"	0.083	2.06	0.070	1.75	0.058	1.46	0.042	1.07
2-1/2"	2-5/8"	0.095	2.93	0.080	2.48	0.065	2.03	—	—
3"	3-1/8"	0.109	4.00	0.090	3.33	0.072	2.68	0.045	1.69
3-1/2"	3-5/8"	0.120	5.12	0.100	4.29	0.083	3.58	—	—
4"	4-1/8"	0.134	6.51	0.110	5.38	0.095	4.66	0.058	2.87
5"	5-1/8"	0.150	8.67	0.125	7.61	0.109	6.66	0.072	4.43
6"	6-1/8"	0.162	13.50	0.140	12.20	0.125	8.92	0.083	6.10
8"	8-1/8"	0.211	25.80	0.180	23.80	0.170	16.46	—	—

EXAMPLE

REFRIGERATION SERVICE TUBE

O.D. Size	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1-1/8"	1-3/8"	1-5/8"
WALL THICKNESS	0.030	0.030	0.030	0.032	0.032	0.032	0.035	0.035	0.045	0.050	0.055	0.060
WEIGHT PER FOOT	0.0347	0.0575	0.0804	0.109	0.134	0.182	0.251	0.305	0.455	0.655	0.884	1.14
WEIGHT PER COIL*	1.74	2.88	4.02	5.45	6.70	9.10	12.55	15.25	22.75	32.75	44.20	57.00
COIL DIAMETER	14-3/4"	14-3/4"	14-3/4"	16-1/2"	16-1/2"	20"	22"	25"	27-1/2"	34-1/2"	39-1/2"	42"
COILS PER MASTER	10	10	10	10	10	5	5	3	3	—	—	—
WEIGHT PER MASTER	17.4	28.80	40.20	54.50	67.00	45.50	62.75	45.75	22.75	32.75	44.20	57.00

*STANDARD 50 FT. COIL - 100 FT COILS ALSO AVAILABLE AS STANDARD STOCK ITEM

TEMPERATURE CONTROL TUBE

PACKED 2000 FT PER WOOD BOX

O.D.	WALL	WGT/FT	O.D.	WALL	WGT/FT
1/4"	0.025	0.0685	1/4"	0.032	0.0849

PLASTIC COATED COPPER TUBE

Polyethylene coating made from low density LDPE resin and is extruded at 0.025" minimum wall.

*REFERENCE WALL THICKNESS, WEIGHTS, AND WGT/FT ARE NOMINAL.



SUBMITTAL PROCEDURES (13 OF 28)

STANDARD PLAN:
PN - 022

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Kelso:

Meter Valves

■ Straight Valves • Ball Style 300 PSI

For 5/8, 5/8 x 3/4, 3/4, or 1 Meters
(For Straight Valves for
1 1/2 or 2 meters, see page 20)

ORDER METER VALVES BY
MODEL NUMBER AND VALVE SIZE



MODEL NUMBER 6101M Flathead 6101MW Lockwing 6107MW Lockwing 6100M Flathead 6100MW Lockwing

Valve Size	CONNECTION	SIZE	METER SIZE	NEW	NEW	NEW	NEW
1/2" x 5/8" x 5/8"	1/2"	5/8"	5/8"	•	•	•	•
3/4" x 5/8" x 5/8"	3/4"	5/8"	5/8"	•	NEW	•	•
3/4" x 3/4" x 5/8"	3/4"	3/4"	5/8"	•	NEW	•	NEW
1 x 3/4" x 5/8"	1"	3/4"	5/8"	•	NEW	•	NEW
3/4" x 5/8" x 3/4"	3/4"	5/8"	5/8x3/4 or 3/4	•	NEW	•	•
3/4"	3/4"	3/4"	5/8x3/4 or 3/4	•	•	•	•
1 x 3/4" x 3/4"	1"	3/4"	5/8x3/4 or 3/4	•	•	•	•
1 x 3/4" x 1"	1"	3/4"	1	•	•	•	•
1"	1"	1"	1	•	•	•	•
1 1/4" x 1" x 1"	1 1/4"	1"	1	•	NEW	•	•



MODEL NUMBER 6100MT Flathead 6100MQ Flathead 6100M-22 Flathead 6100MWT Lockwing 6100MWQ Lockwing 6100MW-22 Lockwing

Valve Size	CONNECTION	SIZE	METER SIZE	NEW	NEW	NEW	NEW
3/4" x 5/8" x 5/8"	3/4"	5/8"	5/8"	•	•	•	•
3/4" x 3/4" x 5/8"	3/4"	3/4"	5/8"	•	NEW	•	NEW
1 x 3/4" x 5/8"	1"	3/4"	5/8"	•	NEW	•	NEW
3/4" x 5/8" x 3/4"	3/4"	5/8"	5/8x3/4 or 3/4	•	NEW	•	•
3/4"	3/4"	3/4"	5/8x3/4 or 3/4	•	•	•	•
1 x 3/4" x 3/4"	1"	3/4"	5/8x3/4 or 3/4	•	NEW	•	•
1 x 3/4" x 1"	1"	3/4"	1	•	•	•	•
1"	1"	1"	1	•	•	•	•
1 1/4" x 1" x 1"	1 1/4"	1"	1	•	•	•	•



MODEL NUMBER 6100M-30 Flathead 6100M-33 Flathead 6100MW-30 Lockwing 6100MW-33 Lockwing

Valve Size	CONNECTION	SIZE	METER SIZE	NEW	NEW	NEW	NEW
3/4" x 3/4" x 5/8"	3/4"	3/4"	5/8"	•	•	•	NEW
3/4" x 5/8" x 3/4"	3/4"	5/8"	5/8x3/4 or 3/4	•	•	•	•
3/4"	3/4"	3/4"	5/8x3/4 or 3/4	•	•	•	•
1"	1"	1"	1	•	•	•	NEW

- *Insert stiffeners are required on all flexible plastic connections, see page 6.
- For C903 connection, replace "Q" in model number with "K". 3/4" and 1" only.
- To lock valves in open or closed position, add "WW" to end of model number i.e., (4604B = 4604WWB)
- Less check ball valves available (360° turn). Contact factory.
- For special lengths, Contact factory.
- EPDM rubber washers are supplied standard. Leather gaskets sold separately.
- Meter nuts less saddle standard on all but FNPT connection valves. To order swivel nuts with saddle, contact factory.
- Swivel nuts have internal straight threads per AWWA C700 and come standard with a wire seal hole.
- For reclaimed water, at end of Model Number add RWP (pin stamped), or RWT (tag). Contact factory.
- 6120 or 6120B handles are optional-see page 16.

16 A.Y. McDONALD MFG. CO. • P.O. BOX 508 • DUBUQUE, IA 52004-0508 • TOLL FREE 800-292-2737 • FAX 800-832-9296
sales@aymcdonald.com • www.aymcdonald.com 508

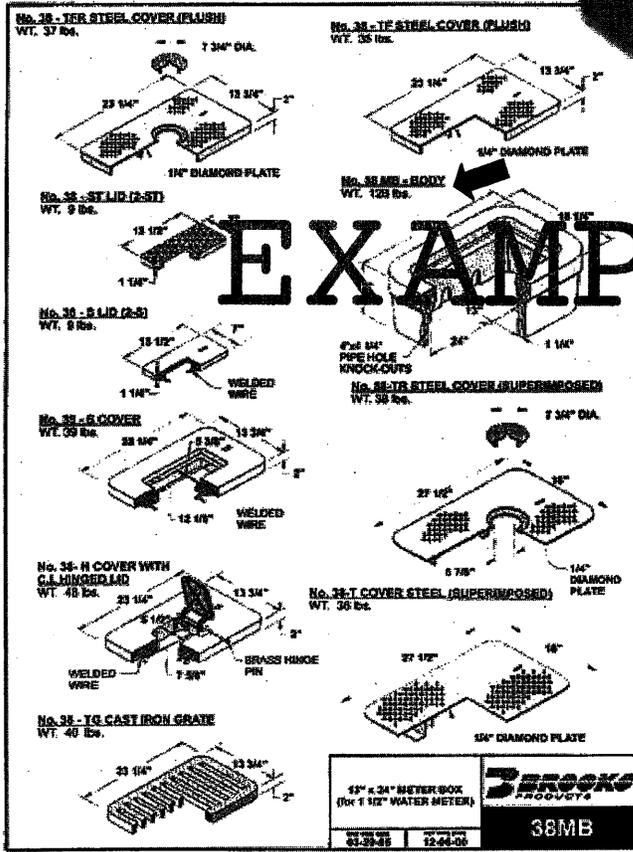
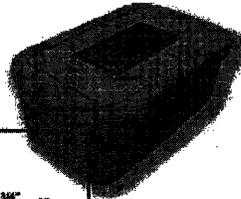


SUBMITTAL PROCEDURES (14 OF 28)	
STANDARD PLAN: PN - 023	CITY ENGINEER APPROVAL: Longview: C.B.
DATE: JAN 2017	Kelso:



Meter Boxes / Valve Boxes / Sectional Vaults / Pull Boxes / Catch Basins / Miscellaneous

#38 Meter Box
13" x 24" I.D.
18-1/4" x 27-1/2" O.D.
For 1 1/2" Meter



EXAMPLE

38 MB Series	Weight
*BODY	130#
**1 PC CONCRETE-COVER	52
**S COVER	42
**H COVER	54
C.I. #2 LID	11
C.I. GRATE	45
STEEL COV-SUPER	41
STEEL COV-FLUSH	43
STEEL TR COV-SUPER	47
STEEL TR COV-FLUSH	45
STEEL T&R COV-SUPER	47
STEEL T&R COV-FLUSH	45
12" TOP	130
12" BOTTOM	130
12" MIDDLE	130
*16 Per Pallet	
**40 Per Pallet	

#4
#11
#36
#37
#38
#40
#65
#66
#67
#68
#69

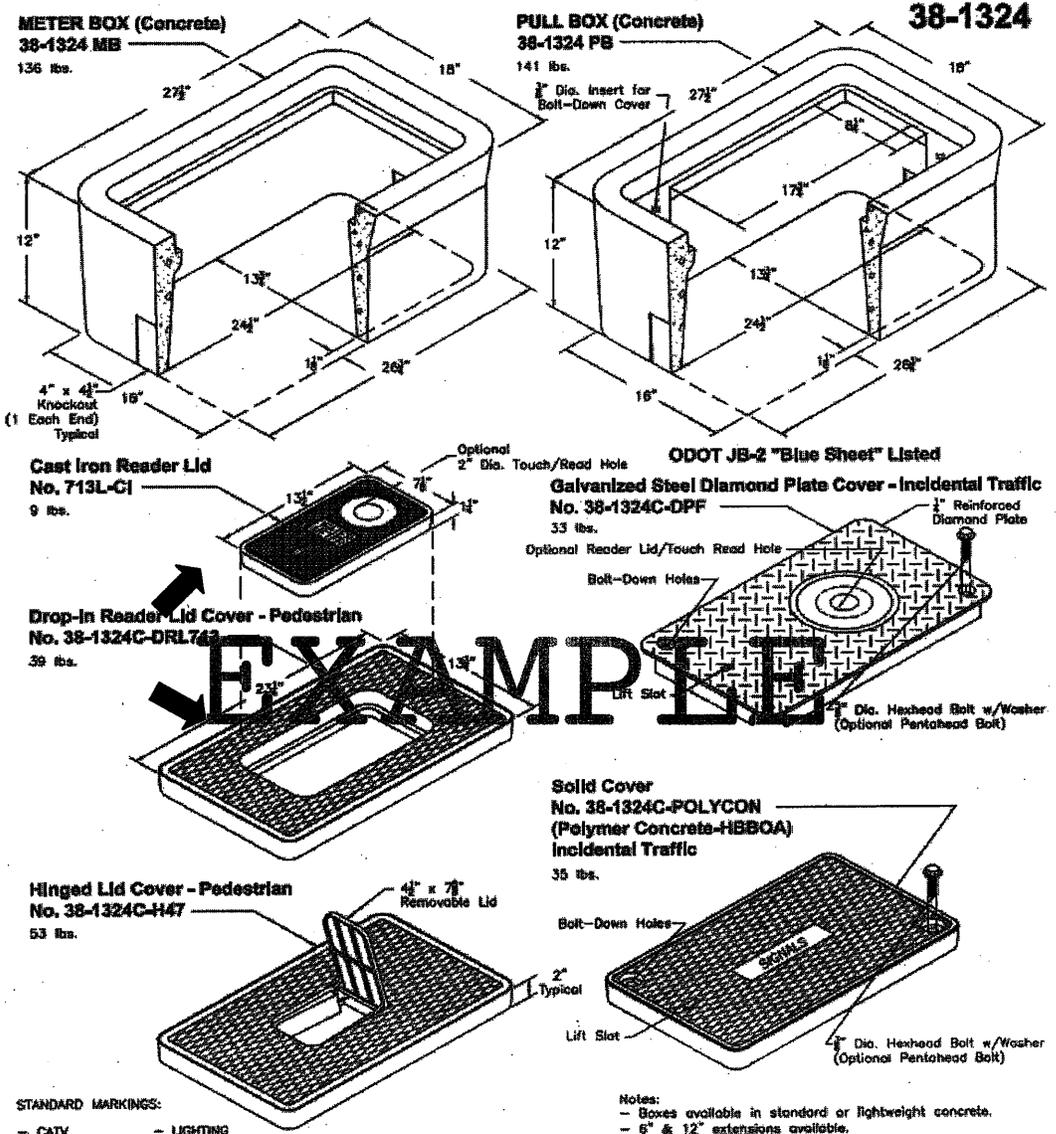
Home

Next



SUBMITTAL PROCEDURES (15 OF 28)

STANDARD PLAN: PN - 024	CITY ENGINEER APPROVAL:
DATE: JAN 2017	Longview: C.B.
	Kelso:



- STANDARD MARKINGS:
- CATV
 - CITY WATER
 - COMM
 - ELECTRIC
 - GROUND
 - LIGHTING
 - SEWER
 - SIGNALS
 - WATER METER

- Notes:
- Boxes available in standard or lightweight concrete.
 - 6" & 12" extensions available.
 - NonSlip covers available.
 - Optional cover markings available.
 - Pedestrian Loading: 300 psf.
 - Incidental Traffic Loading: Suitable for H-20 Loading in off street locations where not subjected to high density traffic.

SCALE: 1" = 1'-0"

 a division of Christy Concrete Products Inc. PO Box 323, Wilsonville, Oregon 97070-0323 Tel: (800) 609-6160 Fax: (503) 682-7865	38-1324	38-1324
	File Name: 036LWM38-1324	13 x 24
	Issue Date: 2006	METER BOX / PULL BOX
	www.christyconcrete.com	



SUBMITTAL PROCEDURES (16 OF 28)

STANDARD PLAN:
PN - 025

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Kelso:

FROM : JL STOREDAHL

FAX NO. : 3604254068

May. 21 2007 11:22AM P1

MAY-21-2007 MON 11:22 AM COWLITZ CO PUBLIC WORKS

FAX NO. 3606380845

P. 02

COWLITZ COUNTY
Department of Public Works

passed

SIEVE ANALYSIS

Project: _____ Material Type: TOP COURSE
 Contract No: _____ 2006 WSDOT Standard Spec 9-03.9(3)
 Contractor: _____ Sample No: #1
 Date Sampled: 5-19-07 By: BRAD
 Date Tested: 5-19-07 By: BRAD
 Material Source (Supplier, Pit, etc): Storredahl Coal Creek Pit #N148
 Material Utilization (Top Course, Drain Rock, etc.): Top course

Weight of Sample + Container: 6968.9

Weight of Container: 3510

Weight of Sample: 3458.9

U.S. Sieve No.	Wt. of Sample + Sieve	Wt. of Sieve	Weight Ret.	Comp. Wt. Passing	Percent Ret.	Percent Passing	Spec. Percent Passing
3/4"						100%	100%
5/8"				6612.3			
1/2"	745.5	657.6	87.9	6524.4		99	80-100
#4	3205.3	464.7	2840.6	3683.9		56	46-66
#40	3407.9	654.4	2753.5	980.3		14	8-24
#200	1300.8	668.7	632.1	278.2		4.5	10.0 max
PAN	652.5	359.3	298.2				

Remarks: Sample taken by pit sample
SF: #1 $6.4/7.5 \times 100 = 45\%$
#2 $3.2/7.5 \times 100 = 42\%$
Average: $(45+42)/2 = 43.5\%$
Fracture 100%

8



SUBMITTAL PROCEDURES (17 OF 28)

STANDARD PLAN:
PN - 026

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Kelso:



WSDOT MATERIALS LAB

01/03/2008

Aggregate Source Approval Report

Owner: Aggregate Source: QS-N-148
Leasee: Known as: Coal Creek Quarry
Located in: UNKNOWN Section 9,16, T8N R3W County: Cowlitz

Remarks:

Pit Run Materials:

Prior to incorporating any of the following into a job, Gradation and Sand Equivalent tests shall be performed to determine if the material does in fact meet specification for the intended use:

- Backfill for Rock Wall, Bedding Material for Thermoplastic Pipe, Gravel Backfill for Drains and Drywells, Gravel Backfill for Walls, Select or Common Borrow, Backfill for Sand Drains, Blending Sand, Gravel Backfill for Foundation Class B, Gravel Borrow, Bedding Material for Rigid Pipe, Foundation Material for Class A, B or C, Gravel Backfill for Pipe Zone Bedding, Sand Drainage Blanket

No Preliminary Tests are required to be performed by the State Materials Lab

Gravel Base: Test Date: Expiration Date:
Drainage: R Value: Small Pressure:

Contact the Regional Materials Office to request PRELIMINARY SAMPLES be acquired. Evaluation and approval of this site as a source of GRAVEL BASE is required prior to use.

Mineral Agg. and Surfacing:

Absorption: 1.64, Deg: 89, Apparent Sp. G.: 2.842, LA: 24, Bulk Sp. G. (SSD): 2.76, Bulk Sp. G.: 2.715, Test Date: 08/31/2006, Expiration Date: 08/31/2011

Currently approved as a source of aggregate for:

- ATB, BST Crushed Screenings, Crushed Surfacing Top Course, HMA Wearing Course, Ballast, Crushed Surfacing Base Course, Maintenance Rock, BST Crushed Cover Stone, Crushed Surfacing Key Stone, HMA Other Courses, Shoulder Ballast

Acceptance tests need to be performed as necessary.

Portland Cement Concrete Aggregates: Test Date: Expiration Date:
ASR - 14 Day, ASR - One Year, CCA Absorption: CCA Sp.G:
FCA Absorption: FCA Organics: FCA Sp. G: LA:
Mortar Strength: Petrographic Analysis:

Contact the Regional Materials Office to request PRELIMINARY SAMPLES be acquired. Evaluation and approval of this site as a source of AGGREGATES for PCC is required prior to use.

Riprap and Quarry Spalls: Test Date: 08/31/2006 Expiration Date: 08/31/2007
Absorption: 1.64 Apparent Sp. G.: 2.842 Bulk Sp. G. (SSD): 2.76 Bulk Sp. G.: 2.715
Deg: 89 LA: 24

Contact the Regional Materials Office to request PRELIMINARY SAMPLES be acquired. Evaluation and approval of this site as a source of RIP RAP AND QUARRY SPALLS is required prior to use. Aggregate Source Approval System

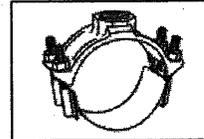


SUBMITTAL PROCEDURES (18 OF 28)

Table with 2 columns: STANDARD PLAN: PN - 027, CITY ENGINEER APPROVAL: Longview: C.B., DATE: JAN 2017, Kelso:

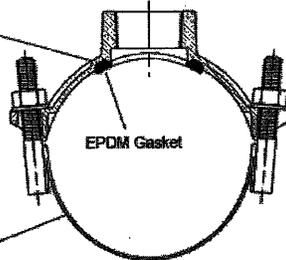
SUBMITTAL INFORMATION

Iron Service Saddles - (FS202-xxx-xxx style)



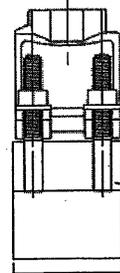
FS202 DOUBLE BAND IRON SERVICE SADDLES

Finish: Black E-coating



EPDM Gasket

Stainless steel band



Coated stainless steel nuts and washers

Stainless steel bolts



NOM. PIPE SIZE	O.D. RANGE	APPROX. Wt. LBS.	CATALOG NUMBER	✓ SUBMITTED ITEM(S)
2"	**2.35 - 2.50	2.8	▼ FS202-250-Tap	
2-1/2"	**2.75 - 2.90	2.8	▼ FS202-280-Tap	
3"	**3.46 - 3.80	4.8	▼ FS202-380-Tap	
	**3.80 - 4.25	5.5	▼ FS202-425-Tap	
	**4.26 - 4.73	5.4	▼ FS202-473-Tap	
4"	***4.50 - 4.80	5.4	▼ FS202-480-Tap	
	4.74 - 5.26	5.4	▼ FS202-526-Tap	
	5.94 - 6.69	6.5	▼ FS202-669-Tap	
6"	6.63 - 6.90	6.5	▼ FS202-690-Tap	
	6.84 - 7.60	6.8	▼ FS202-760-Tap	
	7.93 - 8.71	7.9	▼ FS202-871-Tap	
8"	***8.63 - 9.05	7.4	▼ FS202-905-Tap	
	8.99 - 9.79	8.5	▼ FS202-979-Tap	
	10.00 - 10.75	10.4	▼ FS202-1075-Tap	
10"	10.75 - 11.10	11.5	▼ FS202-1110-Tap	
	11.10 - 12.12	11.5	▼ FS202-1212-Tap	
	12.00 - 12.75	12.5	▼ FS202-1275-Tap	
12"	***12.75 - 13.20	12.5	▼ FS202-1320-Tap	
	13.20 - 14.38	12.5	▼ FS202-1438-Tap	
14"	15.30 - 16.25	16.0	▼ FS202-1625-Tap	
	16.30 - 17.25	16.5	▼ FS202-1725-Tap	
16"	17.40 - 18.40	17.0	▼ FS202-1840-Tap	
	18.50 - 19.25	17.3	▼ FS202-1925-Tap	
18"	19.50 - 20.50	20.8	▼ FS202-2050-Tap	
20"	21.20 - 22.20	21.3	▼ FS202-2220-Tap	
	22.50 - 23.50	24.0	▼ FS202-2350-Tap	
24"	23.60 - 24.80	24.5	▼ FS202-2480-Tap	
	25.60 - 26.50	31.7	▼ FS202-2650-Tap	
30"	31.74 - 32.74	42.0	▼ FS202-3274-Tap	

3-1/4" (3/4" and 1" taps)
4" (1-1/4" and 2" taps)
5" (1/4" and 3/8" saddles, all tap sizes)

* Saddles for this pipe range are available with 3/4" and 1" taps only.

** Saddles with this pipe range are not available with 2" CC or 2-1/2" IP taps.

*** These saddles with 1-1/2" through 2" taps fit the top end of the listed range only.

**** This saddle with 2" CC (CC7) or 2-1/2" IP (IP8) fits 9.05 O.D. only.

OUTLET TAP CODE

CC (AWWA) THREAD		
THREAD	CODE NUMBER	✓ SUBMITTED ITEM(S)
3/4" CC	CC3	
1" CC	CC4	
1-1/4" CC	CC5	
1-1/2" CC	CC6	
2" CC	CC7	
IP THREAD		
THREAD	CODE NUMBER	✓ SUBMITTED ITEM(S)
3/4" IP	IP3	
1" IP	IP4	
1-1/4" IP	IP5	
1-1/2" IP	IP6	
2" IP	IP7	
2-1/2" IP	IP8	

▼ UL Classified to ANSI/NSF Standard 61.

FEATURES

- Body made of high strength ductile iron per ASTM A536
- Double Wide Band and 5/8" UNC threaded bolts of 18-8 type 304 stainless steel. 1/2" bolts are furnished on saddles 3" and smaller.
- Gasket is EPDM rubber, ASTM-D2000
- Finish on saddle body is black E-coating.

The Ford Meter Box Company considers the information in this submittal form to be correct at the time of publication. Item and option availability, including specifications, are subject to change without notice. Please verify that your product information is current.



The Ford Meter Box Company, Inc.
P.O. Box 443, Wabash, Indiana U.S.A. 46992-0443
Phone: 260-563-3171 / Fax: 800-826-3487
Overseas Fax: 260-563-0167
<http://www.fordmeterbox.com>

11/29/07

Submitted By:

SUBMITTAL PROCEDURES (19 OF 28)

STANDARD PLAN:
PN - 028

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Kelso:

10

GLACIER NORTHWEST BACKUP DATA

DATE	MIX#	TICKET	PLANT	TESTER	TRUCK#	CONC AIR		SLUMP	3 DAY	7 DAY	28 DAY	AIR %
						TEMP	TEMP					
10/16/08	1466	381547	16	TAYLOR	63	75	81	5			5087	5.5
08/11/06	1466	853721	58	STRAUB	239	82		5.75		4760	5507	0
08/08/06	1466	853834	58	STRAUB	236	77		5.5		4850	5773	4.2
10/21/05	1466	718509	15	THRALL	223	72	54	5			8236	4.1
10/20/05	1466	718430	15	WILLIAMS	130	72	52	2		5760	6967	4.4
09/29/05	1466	717965-2	16	BRAACKEN		70	52	4.5			6147	5.5
09/29/05	1466	717973-2	16	BRAACKEN	63	70	52	5			6410	6.2
06/07/05	1466	665295	16	PARKIN	128	68	50	3.6		4050	5280	6.3
04/27/05	1466	664624	18	VICK	59	70	48	4.6		4910	5970	4.8
04/26/05	1466	665830-2	19	JACKSON	220	69		5.5		4660	5855	6.4
04/26/05	1466	665824	19	GOUTHRO	274	72	55	5	4060	5350	6283	5.5
03/30/05	1466	667488	15		223					5110	6360	0
10/15/04	1466	361547	16	TAYLOR	63	75	81	5			5245	5.5
09/24/04	1466	583298	19	JENSEN	277	81	81	6.6	2987	4977	5727	6.1
09/24/04	1466	583311	19	JENSEN	128	81	79	6	3960	5827	6773	3.6
12/08/03	1466	7087	12	HALL		68	52	4.45		5076	6343	5.4
07/22/03	1466	431612	15	BARNETT	79	73	70	6		4830	6077	5.6
07/21/03	1466	431547-2	15	LOR	42	64	75	4.5	3840	4500	5420	5.5
07/21/03	1466	431548	15	BARNETT	42	77	75	5.5	3810	4910	5725	5.3
06/13/03	1466	386811	58	BETHNUM	52	79	72	3.6		5930	7230	5.2
10/15/02	1466	361547	16	TAYLOR	63	75	81	5			5468	4.9
10/10/02	1466	361334	16	ANTLEY	65	76	61	7.25			5074	5.2
10/10/02	1466	361334	16	ANTLEY	65	66	66	6			5876	4.7
10/10/02	1466	361334	16	ANTLEY	67	61	66	6			5228	4.4
10/09/02	1466	361297	16	KASTEL		73	54	5			5491	4.8
10/09/02	1466	361307	16	KASTEL		72	54	4.49			5816	4.1
10/09/02	1466	361323	16	KASTEL		73	63	5.75			5819	4.6
10/09/02	1466	361334	16	KASTEL		75	64	5.47			5538	4.8
10/09/02	1466	361334	16	KASTEL		75	64	5	4018		5862	5.2
10/01/02	1466	351095	16	TAYLOR	65	73	50	5			5773	5.5

F _o =	5000	MAX	4050	5930	7230
1.34 * STD DEV =	714	MIN	2987	4050	6074
(2.33 * STD DEV) - 500 =	742	AVE	3767	4999	5878
		STD DEV	365	527	533
		# of TEST	7	15	30
		C of V	10	11	9

10



SUBMITTAL PROCEDURES (20 OF 28)

STANDARD PLAN: PN - 029	CITY ENGINEER APPROVAL: Longview: C.B.
DATE: JAN 2017	Kelso:

SMITH-COOPER[®] INTERNATIONAL

☎ (323) 890-4455 (800) 766-0076 📠 FAX (323) 890-4456

Red Brass Nipples meet the following specifications: ASTM B697, ASTM B43, ANSI/ASME B1.20.1

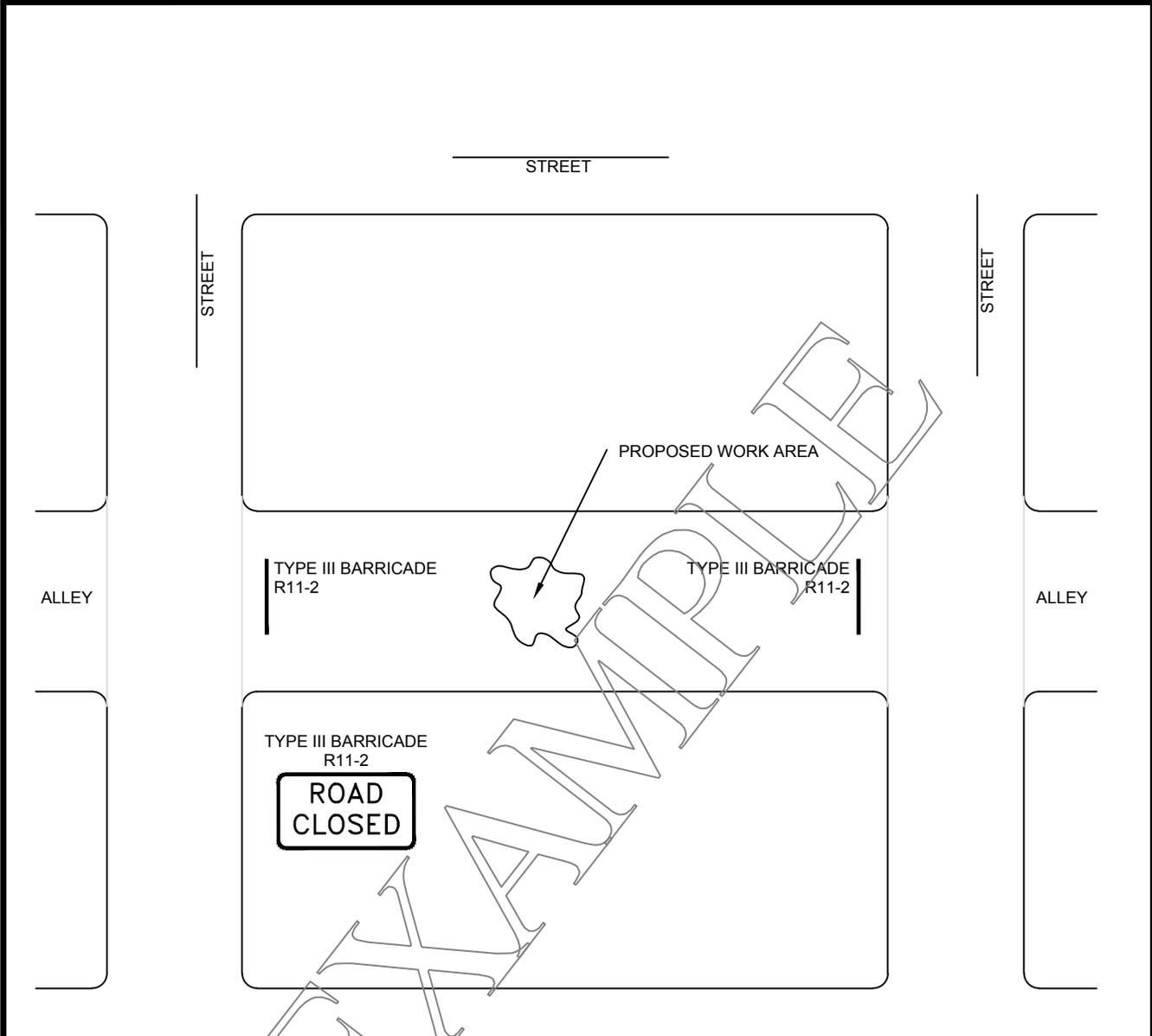
DIAMETER IN INCHES		BRASS PIPE NIPPLES																
		LENGTH IN INCHES																
QTY	LENGTH BT. CLOSE	CLO.	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"	7"	8"	9"	10"	11"	12"
		1/2"	3/4"	10.89	12.26	13.21	14.85	16.15	17.45	19.60	22.16	23.99	25.91	27.77	29.92	36.36	44.73	48.95
25/400	25/400			25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/200	25/200	25/200
1/4"	7/8"	12.73	14.73	16.67	18.06	21.30	23.07	27.12	28.44	32.08	34.78	39.12	44.62	48.87	54.31	59.65	65.00	70.43
		25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/200	25/200	25/200	25/200	25/200	25/200
3/8"	1"	13.19	15.61	18.06	20.55	25.14	27.13	32.27	34.37	37.70	40.88	44.32	52.81	60.38	71.57	71.88	79.46	85.19
		25/400	25/400	25/400	25/400	25/400	25/400	25/400	25/300	25/300	25/300	25/300	25/150	25/150	25/100	25/100	25/100	25/100
1/2"	1-1/8"	17.59	20.36	23.01	26.45	33.40	38.12	47.00	50.23	55.56	59.60	63.60	73.59	82.58	91.54	101.31	110.84	120.54
		25/400	25/400	25/300	25/300	25/300	25/200	25/200	25/200	25/200	25/200	25/200	25/100	25/100	25/100	25/100	25/100	25/100
3/4"	1-3/8"	25.35	27.03	31.02	35.02	44.00	47.00	55.00	58.00	63.00	66.00	71.00	81.00	85.00	97.00	110.00	131.00	155.00
		25/400	25/400	25/300	25/300	25/200	25/200	25/150	25/150	25/100	25/100	25/100	25/75	25/75	25/50	25/50	25/50	25/50
1"	1-1/2"	37.38		46.11	53.81	61.96	71.73	80.69	88.98	99.50	108.99	118.84	128.79	158.43	176.78	196.09	211.67	233.85
		25/200		25/200	25/150	25/100	25/100	25/100	25/75	25/75	25/75	25/75	25/50	25/50	25/50	25/50	20/40	20/40
1-1/4"	1-5/8"	56.41		64.42	72.85	86.21	100.88	115.55	125.73	138.66	151.66	165.65	185.43	221.39	262.54	273.77	313.39	327.46
		25/150		25/100	25/100	25/50	25/50	25/50	25/50	25/50	25/50	15/30	15/30	15/30	15/30	15/30	15/30	15/30
1-1/2"	1-3/4"	73.34		78.02	94.55	108.65	124.76	141.53	159.03	175.95	192.51	208.09	244.39	277.61	310.79	343.95	377.17	410.59
		25/100		25/100	25/75	25/50	25/50	50	40	40	40	40	35	25	25	15	15	15
2"	2"	111.68		120.69	139.19	160.21	182.08	203.00	225.09	246.99	268.91	314.45	358.58	399.85	444.11	479.88	529.69	
		25/50		25/50	50	25	25	25	25	25	25	25	18	18	18	14	14	14
2-1/2"	2-1/2"	204.82		308.21	349.20	388.19	416.46	458.13	493.40	540.22	615.42	706.79	784.52	868.87	934.07	1031.79		
		36		36	27	27	24	18	18	18	14	12	12	9	9	9	9	9
3"	2-5/8"	400.89		416.59	471.26	530.79	583.48	641.99	697.57	758.27	884.78	1003.00	1103.81	1228.52	1331.62	1466.72		
		24		24	18	18	16	12	12	12	12	8	8	8	6	6	6	6
4"	2-7/8"	603.14		612.61	687.85	784.46	847.33	935.36	997.96	1101.94	1250.03	1431.97	1601.81	1774.57	1944.87	2083.90		
		15		15	12	12	10	8	8	8	8	5	5	5	4	4	4	4

Note:
Regular pricing applies to the above listed sizes with standard NPT threads each end. All other lengths, threads and thread-one-end nipples are considered "SPECIALS" and will be quoted upon request.



SUBMITTAL PROCEDURES (21 OF 28)

STANDARD PLAN: PN - 030	CITY ENGINEER APPROVAL: Longview: C.B.
DATE: JAN 2017	Kelso:



NORTH ARROW

STREET

LOCATION: _____

TYPE OF CLOSURE: _____

DATES OF CLOSURE: _____

NOTES:
 ATTACHED TO ENGINEER'S AND ON SITE COPY SHALL BE WRITTEN VERIFICATION THAT AFFECTED PROPERTY OWNERS, GARABAGE COLLECTION AND EMERGENCY COMMUNICATIONS CENTER HAVE BEEN NOTIFIED BY THE CONTRACTOR.

ALL SIGNS MUST CONFORM TO MUTCD.

ALL WORK MUST CONFORM TO THE REQUIREMENTS OF THE RIGHT-OF-WAY PERMIT.

 APPLICANT

 CONSTRUCTION MANAGER

12

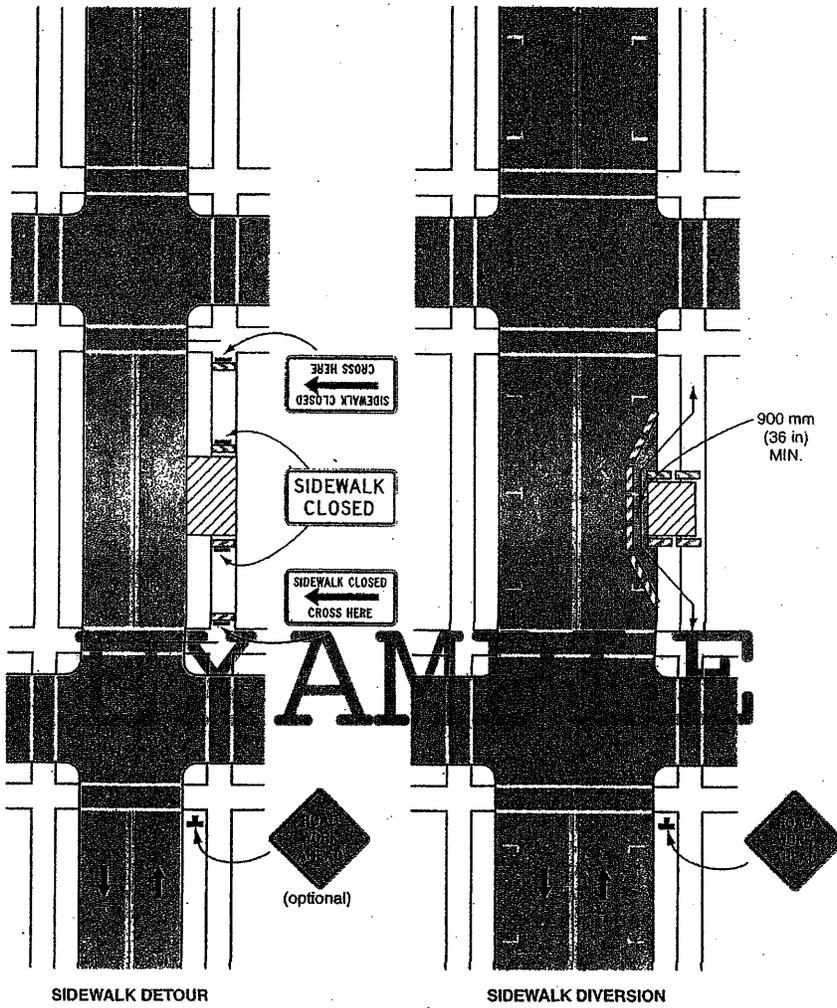
PN - 031 SUBMITTAL PROCEEDURES (22 of 28)



TRAFFIC CONTROL FOR ALLEY CLOSURE	
STANDARD PLAN: TR - 150	CITY ENGINEER APPROVAL: Longview: C.B.
DATE: JAN 2017	Kelso:

(13)

Sidewalk Detour or Diversion



Location: _____

Dates of Closure: From: _____ To: _____

Time of Closure: From: _____ To: _____

Contractor's Signature Date City Employee Date



SUBMITTAL PROCEDURES (23 OF 28)	
STANDARD PLAN: PN - 032	CITY ENGINEER APPROVAL: Longview: C.B.
DATE: JAN 2017	Kelso:

SEP-11-2006 MON 02:07 PM Lakeside Industries

FAX NO. 4253132822

P. 01

SEP-11-2006 11:37 AM WSDOT MATERIALS LAB

360 708 5575

P. 02

Washington State Department of Transportation - Materials Laboratory
PO Box 4726 Olympia / 1655 E 2nd Ave. Tumwater / WA 98504
BITUMINOUS SECTION MIX DESIGN VERIFICATION REPORT

TESTOR: RMA CLASS: 1C
DATE SAMPLED: 7/22/2006
DATE RECEIVED: 8/7/2006
SR NO:
SECTION: LEXINGTON BRIDGE

WORK ORDER NO: TA2416
LAB ID NO: D09203313
TRANSMITTAL NO: 205313
MIX ID NO: C61714
CONTRACTOR: LAKESIDE

~~VALID FOR 2006~~

	4.9	5.3	5.9	Specifications
Pb	4.9	5.3	5.9	≤ 91.5
% Gmm @ 1.18	84.4	85.8	87.6	Appropriate - 4.8
% Va @ 1.18	52	4.0	2.0	≥ 14.0
% VMA @ 1.18	16.7	14.5	14.0	65 - 78
% VFA @ 1.18	65	73	86	≤ 98.0
% Comp @ 1.18		97.3		0.6 - 1.6
D/A	1.5	1.4	1.2	
Pb	4.0	4.4	4.9	
Gmm	2.611	2.586	2.574	
Gmb	2.481	2.482	2.521	
Gb	1.000	1.036	1.036	
Gc	2.811	2.882	2.898	

~~CONTRACT TA2416 ONLY~~

	4.8	5.3	5.9	Specifications	Tolerances
Pb	4.8	5.3	5.9	≤ 91.5	± 0.5%
% Gmm @ 1.18	84.1	86.3	87.3		2.5 - 5.5
% Va @ 1.18	5.3	3.9	2.6	≥ 14.0	
% VMA @ 1.18	14.2	14.3	12	65 - 78	
% VFA @ 1.18	72	74	87	≤ 98.0	
% Comp @ 1.18				0.6 - 1.6	
D/A	1.7		1.5		
Pb	3.5	4.3	4.8		
Gmm	2.610	2.617	2.594		
Gmb	2.481	2.517	2.527		
Gb	1.000	1.036	1.036		
Gc	2.810	2.860	2.858		

~~EXAMPLE~~

~~VERIFIED~~

% Anti-Strip:	0.0%	0.05%	0.17%	0.23%	0.50%
Visual Stripping:	NONE	NONE	NONE	NONE	NONE
% Retained Strength:	92	93	94	100	95

~~NON STATISTICAL~~

Remarks:

Asphalt Binder Supplier: **EXXON/MOBIL**

Asphalt Binder Grade: **PG64-22**

Percent Binder (Pb) (By Wt. Total Mix): **5.3**

% Anti-Strip (By Wt. Aggregate): **0.00**

Type of Anti-Strip:

Mix ID Number: **C61714**

Sample Wt. (grams): **4970** (Informational Only)

Sample Height @ Pallet (mm): **115.0** (Informational Only)

Ignition Calibration Factor: **0.78** (Informational Only)

Oven Drying Temperature: **311°F**

Compaction Temperature: **291°F**

Wet Density (lb/cu ft): **162.9**



SUBMITTAL PROCEDURES (25 OF 28)

STANDARD PLAN:
PN - 034

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Kelso:

SEP-11-2006 MON 02:07 PM Lakeside Industries

FAX NO. 4253132822

P. 02

SEP-11-2006 11:34 AM WSDOT MATERIALS LAB

360 708 5575

P. 03

Washington State Department of Transportation - Materials Laboratory
 PO Box 47315 Olympia / 1635 S 2nd Ave. Tumwater / WA 98504
BITUMINOUS SECTION MIX DESIGN VERIFICATION REPORT

TEST OF AGGREGATE PROPERTIES FOR HMA CLASS: 12" WORK ORDER NO: T23416
 LAB ID NO: 002205313 MIX ID NO: 061714

CONTRACTOR'S DESIGN AGGREGATE STRUCTURE AND AGGREGATE TEST DATA

Material:	34" 1/8"	3/8"-0	Combined Specifications		Tolerance Non-Statistical
Source:	N-1a	N-14b			
Ratio:	30%	70%			
1 1/2" square					
1" square					
3/4" square	100:	100.0	100	100	99-100
1/2" square	80:	100.0	94	80-100	88-100
3/8" square	35:	97.8	79	MAX 90	73-85
U.S. No. 4	3:	65.8	47		41-53
U.S. No. 8	2:	42.6	31	28-38	21-37
U.S. No. 16	2:	28.5	21		
U.S. No. 30	2:	21.0	15		
U.S. No. 50	2:	15.4	11		
U.S. No. 100	1:	11.3	8		
U.S. No. 200	1:	7.7	5.9	2.0-7.0	3.0-7.0

Cb Coarse	2.113	2.743			
Cb Fine		2.778			
Cb Blend	2.113	2.760	2.761		
Sand Equivalent		66	66	45 MIN.	
Uncompacted Voids (FAA)			50	40% MIN.	
Flak & Elongated					
1" square				10% MAX.	
3/4" square				10% MAX.	
1/2" square				10% MAX.	
3/8" square				10% MAX.	
Coarse Agg Free					
1" square					
3/4" square				90% Double	Face Fracture
1/2" square				90% Double	Face Fracture
3/8" square				90% Double	Face Fracture
U.S. No. 4	100	100	100	90% Double	Face Fracture

EXAMPLE

STATE MATERIALS LABORATORY AGGREGATE TEST DATA					
Cb Coarse	2.113	2.787			
Cb Fine		2.769			
Cb Blend	2.113	2.775	2.777		
Sand Equivalent		68	68	45 MIN.	
Uncompacted Voids (FAA)			41	40% MIN.	
Flak & Elongated					
1" square				10% MAX.	
3/4" square				10% MAX.	
1/2" square				10% MAX.	
3/8" square				10% MAX.	
Coarse Agg Free					
1" square					
3/4" square				90% Single	Face Fracture
1/2" square				90% Single	Face Fracture
3/8" square				90% Single	Face Fracture
U.S. No. 4	100	100	100	90% Single	Face Fracture

Environmental & Engineering Program
 Construction Engineer X T152 3 Remarks: Flak and Elongated testing not required.
 Accounting Section X T153
 Control File X T166 2
 Bituminous Materials Section X T172 THOMAS E. BAKER P.E.
 Region: SOUTHWEST X T174 Materials Engineer
 Construction Office - 44 X T178 1 By: Dennis Gully P.E.
 Materials Engineer - 44 X Bituminous Materials Engineer
 P.E.: COWLITZ COUNTY X(2) Date: 9/11/2006



SUBMITTAL PROCEDURES (26 OF 28)

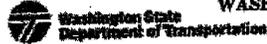
STANDARD PLAN:
 PN - 035

CITY ENGINEER APPROVAL:

DATE: JAN 2017

Longview: C.B.

Kelso:



**WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
QUALIFIED PRODUCTS LIST**

April 21, 2005

Contractor : _____ Contract Number : _____
Sub Contractor : _____ Date : _____

Specification Reference - Material Category	Reference No	Accept. Code	Last Update
9-02.1(2,3) Asphalt - Cut-Back Liquid Asphalt			

U.S. Oil & Refining Co. - Tacoma, WA Bid Item # _____ Qty _____ Verified By _____ Date _____
Medium Cure (MC) Grades 70, 250, 800, 3000 GFI 1993-167 CA 2148 09/19/1994
Cut-Back Liquid Asphalts

9-02.1(4) Asphalt - Asphalt Cements

Albina Fuel - Portland, OR Bid Item # _____ Qty _____ Verified By _____ Date _____
PG Grade Asphalt Cement GFI 1993-021 CA 2148 07/01/1998
Approved Grades: 58-22, 58-34, 64-22, 64-28, 64-34, 70-22, 70-28, 76-22.
See Notes: (1)

Exxon/Mobil - Billings, MT Bid Item # _____ Qty _____ Verified By _____ Date _____

PG Grade Asphalt Cement QPL 2000-061 CA 2148 10/20/2000
Approved Grades: 64-22, 64-28, 64-34, 70-22, 70-28, 76-22.
See Notes: (1)

EXAMPLE

Idaho Asphalt Supply, Inc. - Post Falls, ID Bid Item # _____ Qty _____ Verified By _____ Date _____

PG Grade Asphalt Cement QPL 1999-012 CA 2148 10/03/2001
Approved Grades: 58-22, 58-34, 64-22, 64-28, 64-34, 70-28, 76-28.
See Notes: (1)

Imperial Oil - Toronto, Canada Bid Item # _____ Qty _____ Verified By _____ Date _____

PG Grade Asphalt Cement GFI 1993-024 CA 2148 05/20/1997
Approved Grades: 58-22, 64-22.
See Notes: (1)

Koch Materials Co. - Pasco, WA Bid Item # _____ Qty _____ Verified By _____ Date _____

PG Grade Asphalt Cement GFI 1993-025 CA 2148 05/17/1999
Approved Grades: 58-22, 58-28, 58-34, 64-22, 64-28, 64-34, 70-28, 70-34, 76-28.
See Notes: (1)



SUBMITTAL PROCEDURES (27 OF 28)

STANDARD PLAN:
PN - 036

CITY ENGINEER APPROVAL:

DATE: JAN 2017

Longview: C.B.
Kelso:



**WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
QUALIFIED PRODUCTS LIST**

April 21, 2005

Contractor : _____ Contract Number : _____

Sub Contractor : _____ Date : _____

Specification Reference - Material Category Reference No Accept. Code Last Update

9-02.1(4) Asphalt - Asphalt Cements

McCall Oil Company - Portland, OR Bid Item # _____ Qty _____ Verified By _____ Date _____

PG Grade Asphalt Cement GFI 1993-026 CA 2148 07/01/1998
Approved Grades: 58-22, 58-34, 64-22, 64-28, 64-34, 70-22, 70-28, 76-22.

See Notes: (1)

Paramount Petroleum - Portland, OR Bid Item # _____ Qty _____ Verified By _____ Date _____

PG Grade Asphalt Cement GFI 1993-022 CA 2148 07/01/1998
Approved Grades: 58-22, 58-34, 64-22, 64-28, 64-34, 70-22, 70-28, 76-22.

See Notes: (1)

TAK Petroleum - Spokane, WA Bid Item # _____ Qty _____ Verified By _____ Date _____

PG Grade Asphalt Cement OPL 2001-015 CA 2148 03/12/2001
Approved Grades: 58-22, 58-34, 64-22, 64-28, 64-34, 70-22, 70-28, 76-22.

See Notes: (1)

EXAMPLE

Tesoro Refining and Marketing Company - Anacortes, WA Bid Item # _____ Qty _____ Verified By _____ Date _____

PG Grade Asphalt Cement QPL 1999-011 CA 2148 09/27/2000
Approved Grades: 64-22.

See Notes: (1)

U.S. Oil & Refining Co. - Tacoma, WA Bid Item # _____ Qty _____ Verified By _____ Date _____

PG Grade Asphalt Cement GFI 1993-027 CA 2148 07/01/1998
Approved Grades: 58-22, 58-34, 64-22, 64-28, 64-34, 70-22, 70-28, 70-34, 76-22.

See Notes: (1)

9-02.1(6) Asphalt - Custom-Emulsified Asphalt

Albina Fuel - Portland, OR Bid Item # _____ Qty _____ Verified By _____ Date _____

Emulsified Asphalt GFI 1993-039 CA 2148 08/19/1994
Grade CMS-2, CMS-2H, CMS-2S, CRS-1, CRS-2, CRS-2P, CSS-1, CSS-1H, STE-1. Uses base asphalt from Cenex and Sinclair.



SUBMITTAL PROCEDURES (28 OF 28)

STANDARD PLAN:
PN - 037

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Kelso:

General Provisions Applicable To City of Longview Permits
7-5-06

In accepting this permit, the petitioner, his successors and assigns, agree to protect the City of Longview, Washington, and save it harmless from all claims, actions or damages of every kind and description which may accrue to or be suffered by any person, or persons, corporation or property by reason of the performance of any such work, character of materials used or manner of installation, maintenance and operation or by the improper occupancy or rights of way of public structure and in case of any suit or action is brought against said City for damages arising out of or by reason of any commencement of such action, defend the same at his or their own sole cost and expense and will satisfy any judgment after the said suit or action shall have finally been determined if adverse to the said City.

All work under this permit shall be performed in accordance with the latest edition of the Washington State Department of Transportation Standard Specification for Road, Bridge, and Municipal Construction, in accordance with the latest, current edition of the City of Longview Standard Plans and Specifications and these General Provisions.

Upon approval of this permit the Grantee shall diligently proceed with the work and comply with all the provisions herein.

A bond in the amount of \$ _____ is required to insure compliance with the conditions herein, refundable upon completion and acceptance of the work.

The City Engineers office must be contacted (360.442.5200) 24 hours in advance, prior to any work under this permit and for all required inspections. An onsite pre-construction meeting is required prior to commencement of work and after underground locates have been completed. Call 360.442.5200 to schedule the meeting.

The project permits and all approved drawings including approved shop drawing and approved traffic control plans shall be available at the project site at all times.

All work shall be conducted in accordance with the latest, current edition of WISHA/OSHA regulations. Particular attention shall be paid to the requirements as they pertain to work in trenches, electrical, work in high places, confined spaces and to safety apparel such as hard hats and safety vests.

If the work done under this permit interferes in any way with the drainage of the area, the grantee shall wholly and at his expense make such provisions as the City may direct to alleviate the problem.

The party or parties to whom this permit is issued shall maintain at his or their sole expense the structure or object for which this permit is granted in a condition satisfactory to the City of Longview unless such object or structure is to be owned & operated by the City of Longview.

The City of Longview may revoke, annul, change, amend, amplify, or terminate this permit or any of the conditions herein enumerated if grantee fails to comply with any or all of its provisions, requirements or regulations as herein set forth or thru willful or unreasonable neglect, fails to heed or comply with notices given or if the utility herein granted is not installed or operated and maintained in conformity herewith or for any cause or reason whatsoever.



GENERAL PERMIT PROVISIONS (1 OF 3)

STANDARD PLAN: PN - 050	CITY ENGINEER APPROVAL:
DATE: JAN 2017	Longview: C.B.
	Kelso:

The Longview Police Department, Fire Department, Com Center and Engineering Department shall be notified 24 hours in advance of closing any street or alley to traffic. A traffic control plan is required to be submitted to the Engineering Department for review and approval prior to scheduling any street or pedestrian way closure. All Traffic control shall be in accordance with the latest edition of the MUTCD Standards. All traffic control shall be properly lighted for nighttime use.

All excavations shall be backfilled at days end, temporarily patched or plated to the satisfaction of the Engineering Department unless otherwise approved by the City of Longview Engineering Department. All backfill within the City right of way, City streets, City alleys and City easements shall be crushed surfacing top course meeting the specification for CSTC in the Standard Specifications. No excavation shall be left in a hazardous condition outside of normal work hours unless properly protected to the satisfaction of the Engineering Department. This includes all work within the City of Longview Right of Way. No sidewalks shall remain closed for more than one week without written approval from the Engineering Department. Temporary sidewalk closures shall be properly marked in accordance with the required, approved closure plan.

Pavement Replacement: Cement concrete pavement and Asphalt pavement shall be replaced to a depth of two inches thicker than original pavement. Full panel replacement will be required for concrete replacement unless otherwise approved by the Engineering Department. All AC edges will be saw cut, sealed and sanded at the completion of the permanent patch. In gravel alleys, the permittee shall replace the crushed surfacing materials with ten inches of CSBC and two inches of CSTC. Twelve inches of CSTC may be used if prior approval is obtained from the Engineering Department. AC pavement shall be re-cut 1 foot either side of the disturbed trench prior to final paving. Temporary patches can remain no longer than three weeks before permanent paving is completed. Temporary patching shall be performed the same day as the excavation is performed unless otherwise approved by Engineering.

Daily clean up of the construction area shall be performed to eliminate all rock, debris, dirt, mud, sand etc. from the sidewalk, street and drainage ways. This shall be performed by sweeping or other approved methods to accomplish the clean-up to the satisfaction of the Engineering Department.

The underground utilities coordinating council (1.800.424.5555) MUST be contacted two full working days prior to proceeding with any excavation associated with this permit.

Any use of City water requires a permit. Call 360.442.5700 for details and application.

A copy of all permits and project sketches, plans and material submittals shall be available at the job site at all times.

Upon completion of the work under this permit the applicant shall submit as-built drawings (as required) within three weeks of completion per the submittal process.

Contact Longview Parks Department 360.442.5422 for any work around City trees or if any tree removal is to be performed for City requirements and approval.

Contact the City Solid Waste Coordinator 360.442.5222 for any work interfering with normal garbage service and if any alley or street is to be closed or restricted.



GENERAL PERMIT PROVISIONS (2 OF 3)

STANDARD PLAN:
PN - 051

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Kelso:

Additional Utility Requirements:

Maintain 4 foot horizontal separation and 12 inches vertical separation between all facilities installed around City utilities. Above ground utilities such as street lights, fire hydrants, Air vac stations, control panels etc. required a five-foot separation from new construction, relocations, driveways etc. The permittee shall pothole all known utilities to determine depth and location prior to installation of new facilities. ACP pipe and all non-locatable pipes will need to be potholed by hand digging.

Arterial and collector streets require CDF backfill unless otherwise approved by the Engineering Department.

All striping or channelization disturbed by construction shall be replaced in kind within two weeks of removal.

All utility roadway crossings must be at 90 degrees to the centerline.

All erosion control and inlet protection shall be in accordance with the City of Longview Storm water Ordinance and maintained daily.

All required saw cuts shall be full depth and parallel to the trench or panel as directed by the Engineering Department. No rough or spawled edges will be allowed.

All work to be completed to the satisfaction of the City of Longview and any costs incurred by the City to correct non-compliant work shall be reimbursable to the City of Longview upon request.

No sewer tap shall be located closer than seven feet to any manhole.

Water/Sewer construction shall meet the department of ecology separation requirements.



GENERAL PERMIT PROVISIONS (3 OF 3)

STANDARD PLAN:
PN - 052

CITY ENGINEER APPROVAL:

Longview: **C.B.**

DATE: **JAN 2017**

Kelso: