



AGENDA

ASTORIA CITY COUNCIL

December 21, 2015

*****6:00 p.m.*****

2nd Floor Council Chambers
1095 Duane Street · Astoria OR 97103

6:00 P.M. CITY BOARDS AND COMMISSIONS RECEPTION

7:00 P.M. REGULAR SESSION

1. CALL TO ORDER

2. ROLL CALL

3. REPORTS OF COUNCILORS

4. CHANGES TO AGENDA

5. PRESENTATIONS

- (a) Mac Burns regarding Astoria-Megler Bridge 50th Anniversary Celebration
- (b) Ian Sisson regarding Parks Master Plan Progress and Community Feedback

6. CONSENT CALENDAR

The items on the Consent Calendar are considered routine and will be adopted by one motion unless a member of the City Council requests to have any item considered separately. Members of the community may have an item removed if they contact the City Manager by 5:00 p.m. the day of the meeting.

- (a) City Council Minutes of 11/16/15
- (b) Boards and Commissions Minutes
 - (1) Library Board Minutes of 11/24/15
- (c) Request for Proposals (RFP) for Audit Services (Finance)
- (d) Authorization to Award Contract for Astoria Aquatic Center Sand Filter Media Replacement and Lateral Repair (Parks)
- (e) 2015 Street End Bridge Repair Project – Construction Contract Award (Public Works)
- (f) Heritage Square EPA Grant – AMEC Contract Amendment (Public Works)
- (g) Authorization to Enter into a Lease Agreement with the Astoria School District (Parks)

7. REGULAR AGENDA ITEMS

All agenda items are open for public comment following deliberation by the City Council. Rather than asking for public comment after each agenda item, the Mayor asks that audience members raise their hands if they want to speak to the item and they will be recognized. In order to respect everyone's time, comments will be limited to 3 minutes.

- (a) Resolution Adopting Public Works Department, Engineering Design Standards (Public Works)
- (b) Consideration of Continuance of Appeals AP15-01, AP15-02, AP15-03 by Ron Zilli of the Verizon Permits WCF15-03, V15-03, NC15-03 (Community Development)

8. NEW BUSINESS & MISCELLANEOUS, PUBLIC COMMENTS (NON-AGENDA)

THIS MEETING IS ACCESSIBLE TO THE DISABLED. AN INTERPRETER FOR THE HEARING IMPAIRED MAY BE REQUESTED UNDER THE TERMS OF ORS 192.630 BY CONTACTING JULIE YUILL, CITY MANAGER'S OFFICE, 503-325-5824.



CITY OF ASTORIA
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December 16, 2015

M E M O R A N D U M

TO: MAYOR AND CITY COUNCIL

FROM:  BRETT ESTES, CITY MANAGER

SUBJECT: ASTORIA CITY COUNCIL MEETING OF DECEMBER 21, 2015

PRESENTATIONS

Item 5(a): Mac Burns regarding Astoria-Megler Bridge 50th Anniversary Celebration

Mac Burns, Executive Director of the Clatsop County Historical Society, will brief the City Council regarding the plans for the Astoria-Megler Bridge 50th Anniversary Celebration. As plans are developing, it is important to have the project endorsed by the City. A budget for the celebration is included and it has been requested that \$9,500 be provided. It would be appropriate to use Promote Astoria Funds for this event.

Item 5(b): Ian Sisson regarding Parks Master Plan Progress and Community Feedback

In May of 2015, the Astoria City Council adopted "develop a city parks master plan" as a goal for the 2015-16 Fiscal Year budget. The Parks and Recreation Department is in the process of preparing a Comprehensive Master Plan, with the assistance of RARE AmeriCorps participant Ian Sisson. The plan will establish short and long-term priorities for the Parks and Recreation Department's parks, facilities, operations, and program offerings. Ian will update the Council on the first phase of the project, community engagement and information collection, which will continue through January 2016. The next phase of the project will analyze the information collected, assess the Parks and Recreation Department's level of service, and develop an initial set of recommendations for the Parks and Recreation Comprehensive Master Plan.

CONSENT CALENDAR

Item 6(a): City Council Minutes

The minutes of the City Council meeting of November 19, 2015 are enclosed for review. Unless there are any corrections, it is recommended that Council approve these minutes.

Item 6(b): Boards and Commissions Minutes

The minutes of the (1) Library Board meeting of 11/24/15 is enclosed. Unless there are any questions or comments regarding the contents of these minutes, they are presented for information only.

Item 6(c): Request for Proposals (RFP) for Audit Services (Finance)

The City is required to have an annual audit performed by a Certified Public Accountant (CPA). The current contract is in the first of two option year awards for the Fiscal Year 2014-15 audits currently in process. The Government Finance Officers Association (GFOA) recommends a full-scale competitive process for selection of independent auditors utilizing multiyear contracts. In lieu of awarding the second option year, staff would like to proceed with advertisement for multiyear audit services in order to proactively engage participation of all qualified firms, including the current auditors. With Council approval, staff will begin advertising for audit services in both local and regional publications, for a three year contract beginning with the Fiscal Year 2015-16 audit and two one year renewal options. The Fiscal Year 2015-16 audit would be scheduled to begin July, 2016. Similar to prior Request for Proposals (RFPs), a point system bid process will be utilized to consider firm expertise, audit approach, scheduling and price. The selection process would consist of separate evaluations of applicants by the Director of Finance and Administrative Service, Budget Analyst and a local CPA. The three evaluations will be averaged to determine the successful applicant. Services will include the City and Astor Urban Renewal District audits as well as applicable A-133 audit of aggregate expenditure of Federal Funds. Staff proposes to advertise the RFP no later than February 19, 2016 with a completion of the process by April 8, 2016. Results of the process along with recommendations for selection will be brought to Council in late April or early May. It is requested that Council authorize approval to proceed with the RFP process for audit services.

Item 6(d): Authorization to Award Contract for Astoria Aquatic Center Sand Filter Media Replacement and Lateral Repair (Parks)

Staff has noticed sand in the bottom of the Recreation Pool and in the bottom of the drain in the Kiddie Pool. This is an indication that the laterals in the bottom of the two sand filtration units for the pools are damaged and are allowing filter media (sand) to escape the containment of the filters and enter the pool. Once in the pool, sand can be taken into the pump mechanisms, causing degradation and damage that can result in costly failures of equipment. This also indicates that the filters are not performing to their fullest capacity, resulting in poorer water quality and increases in costs for chemical balancing. Staff solicited four companies to remove and dispose of the existing media, replace internal filter components, install new media, and restart the system. It is recommended that the City Council award a contract with The Pool and Spa House for the removal and disposal of existing media, replacing internal filter components, installing new media and restarting the systems for the Astoria Aquatic Center Lap Pool, Recreation/Leisure Pool, Kiddie Pool, and Spa.

Item 6(e): 2015 Street End Bridge Repair Project – Construction Contract Award (Public Works)

The City of Astoria has six timber street end structures at the north ends of 6th, 7th, 8th, 9th, 10th and 11th Streets that are inspected annually by the Oregon Department of Transportation (ODOT) Bridge Department. ODOT inspects the structures and makes recommendations for repairs that will permit the structures to safely remain open. ODOT has conducted inspections for 2015 and has made recommendations for repairs. The repairs recommended to take place are targeting bridge load limits of 3 tons. The repairs are deemed absolutely essential. Staff solicited quotes for the repair work, and has received two quotes as follows:

<u>Contractor</u>	<u>Total Quote</u>
Bergerson Construction	\$36,706
Columbia Dockworks	\$22,505

Staff is recommending that Columbia Dockworks be awarded the contract. Staff is also recommending a project contingency of \$3,495 for additional work that may be required once repairs are under way. The estimated cost for the project is \$26,000, as budgeted in the 2015-2106 Fiscal Year budget, and is proposed to come from the following sources:

Promote Astoria Fund	\$13,000
Streets Division, Public Works Fund ...	\$13,000

It is recommended that the City Council authorize the award of a contract to Columbia Dockworks in the amount of \$22,505 for the 2015 Street End Bridge Repair Project.

Item 6(f): Heritage Square EPA Grant – AMEC Contract Amendment (Public Works)

The City of Astoria was awarded a United States Environmental Protection Agency (EPA) multi-purpose brownfield pilot grant in 2012 for assessment and cleanup of the Heritage Square site. At the December 7, 2015 Astoria Development Commission (ADC) meeting, the ADC approved the expenditure of \$110,000 for the cleanup of the Heritage Square material including the original \$40,000 match and an additional \$70,000. At the meeting, staff provided an update on the need for additional funding to complete the cleanup of the site. Staff also notified the ADC that a request will be coming before the City Council at the December 21, 2015 Council meeting for authorization to enter into a contract amendment with AMEC for the additional work. The remaining funds within the grant and the additional funds identified in the contract amendment will be used to complete the EPA grant scope of work including Cleanup Implementation, Confirmation Sampling and a Final Cleanup Report. It is recommended that Council execute a contract amendment with AMEC Foster Wheeler, in a total not-to-exceed amount of \$142,325, for Additional Site Cleanup Work for the Heritage Square EPA Grant Cleanup Project.

Item 6(g): Authorization to Enter into a Lease Agreement with the Astoria Senior Center (Parks)

In January, 2011 the City of Astoria Parks and Recreation Department began leasing space at Captain Robert Gray School from the Astoria School District to operate Port of Play and the Lil' Sprouts Academy. The leased space included three classrooms and shared use of the gym, playground, and cafeteria for an annual rent \$12,250 which expired in June of 2014. Due to this expired Lease, the Astoria School District and the City of Astoria Parks and Recreation Department have been working to update the Lease to pay the facilities rent for the 2015 calendar year. Since this original Lease, Lil' Sprouts Academy has experienced significant growth and the Astoria School District has willingly adjusted their programming to allow Lil' Sprouts Academy two additional classrooms. These five classrooms now: serve 50-70 children daily, host an enrollment of over 100 children, and has a long waiting list of eager parents. The proposed Lease includes five classrooms, and shared use of the gym, playground, and cafeteria for an annual rent of \$12,000. The Astoria School District and the City of Astoria Parks and Recreation Department have a strong history of partnering to serve the community. Currently the Astoria School District and the City of Astoria Parks and Recreation Department exchange the in-kind resources of gym space for field use, and the City charges for the services at the Aquatic Center for the High School Swim Team. The School District charges for leased space at Captain Robert Gray School for the Parks and Recreation Departments Port of Play and Little Sprouts programming. It is recommended that Council approve the Lease Agreement with the Astoria School District to authorize the payment of \$12,000 for the 2015 calendar year.

REGULAR AGENDA ITEMS

Item 7(a): Resolution Adopting Public Works Department, Engineering Design Standards (Public Works)

The Public Works Department, with assistance from the firm Plangineering, recently finalized the Engineering Design Standards. The intent of the document is to provide a consistent approach for design professionals to use when designing and implementing public infrastructure improvements or related facilities. Completion and adoption of these standards is anticipated to increase efficiency, reduce staff time associated with development review, and reduce the overall coordination efforts between design consultants and staff. Assistant City Engineer Nathan Crater will provide Council with a brief presentation and will answer any questions that are raised. It is recommended that Council approve the resolution adopting the Public Works Department Engineering Design Standards, and designate authority for interpretation or updates to the City Engineer.

Item 7(b): Consideration of Continuance of Appeals AP15-01, AP15-02, AP15-03 by Ron Zilli of the Verizon Permits WCF15-03, V15-03, NC15-03 (Community Development)

Ron Zilli filed appeals on the Planning Commission and Historic Landmarks Commission permits concerning construction of a wireless communication facility tower in Shively Park. A public hearing was scheduled for December 7, 2015. At that meeting, the City Council continued the hearings to the January 4, 2016 City Council meeting at the request of Verizon due to the holidays. Verizon hired a firm to complete new photographic simulations. Due to the holidays and the time involved in preparing the simulations, Verizon was unable to provide the documents to staff in time for the January 4 City Council meeting. Therefore, Verizon has requested that the public hearings on the three appeals be continued to the January 19 City Council meeting. Both Verizon and Mr. Zilli have requested that the City Council consider the request for a continuance at their December 21 meeting rather than wait until the night of the hearing to make a decision. It would be in order for the Council to consider the request for a continuance and, if a continuance is granted, announce the date and time of the new hearing date.

CLATSOP COUNTY HISTORICAL SOCIETY

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To Mayor LaMear & City Councilors,

On August 27, 1966, four years and two weeks after the project officially commenced, Oregon Governor Hatfield and Washington Governor Evans formally opened and dedicated the Astoria-Megler Bridge. They were assisted by Miss Oregon, Estrellita Schid; Miss Washington, Sandra Lee Marth; a delegation from Walldorf, Germany; Astoria Clowns; elected officials from both States; and 30,000 interested citizens.

Fifty years later, it is easy for us to take the bridge for granted.

The bridge was the final link in the long-desired Trans American Highway – a continuous, uninterrupted motor route between the Canadian and Mexican borders.

At the time of the construction, it was thought to be the longest continuous steel truss bridge in the world.

It represented an economic boost to NW Oregon and SW Washington.

The opening celebration marked an important development in our sister city relationship with Walldorf – the first time a full contingent of Walldorf representatives visited Astoria.

In a time of cynical opinions regarding our government the bridge also represents a promise made and a promise kept. Backers and elected officials promised the public the toll would be removed once the bridge was paid for.

Today, more than 6,000 vehicles cross the bridge each day – bringing tourists, friends and family, vital supplies, and goods to market.

At the time of completion, the newspaper claimed it was one of the most important milestones in the history of our community alongside Robert Gray's voyage into the Columbia River, Lewis & Clark, and John Jacob Astor's establishment of a fur trading outpost here. We came together as a community to commemorate the anniversaries of these and now it is time to celebrate the bridge.

The Clatsop County Historical Society has been planning, and already funded, an exciting and dynamic exhibit to tell the story of our bridge. As word of the exhibit got out, more and more interested parties started contacting us. Walldorf was anxious to know when their delegation should plan on coming over to help celebrate. ODOT was eager to explain what was going on and to help anyway they could. The Chamber of Commerce was wondering what to tell the people calling and asking about the 50th. The Long beach Visitors Bureau wondered how to get involved – "it's our bridge too."

Earlier this year we convened a meeting of interested parties to see what we should do. Representatives from the Astoria-Warrenton Chamber of Commerce, Downtown Association, ODOT, Astoria School District, Regatta, the Sister City Committee, Columbia River Maritime Museum, and volunteers from other organizations began to meet and put a plan together.

While plans are still in development and fluid, key components include:

A recreation of the dedication and ribbon cutting to happen during the Regatta weekend. Walldorf has made reservations and plan on being there. Invitations to the Governors, Miss Oregon, Miss Washington, and other officials need to be sent as soon as possible.


A reunion of people who worked on building the bridge and their families. We have held some open houses to begin finding anyone still alive and the families of workers.

An engineering-day for the local schools. This might include a "balsa wood bridge building" contest.

Some sort of a free series of public programs that may include lectures, slide shows, and movies.

As plans are beginning to cement, and enthusiasm is growing, it is important to know we have the full support and endorsement of the City of Astoria. In addition, I've attached a proposed budget based on the components the committee has discussed. We request \$9,500 from the Promote Astoria Fund to make 2016 the "year of the Bridge." Thank you for your thoughtful consideration.

Cheers,

A handwritten signature in cursive script, appearing to read "McAndrew Burns".

McAndrew Burns

Executive Director

Astoria-Megler Bridge 50th Anniversary Celebration

Budget – Estimate

December 2015

Reenactment – Opening Ceremony – to be held during Regatta - \$1,000

Stage, sound, chairs – donated or rented?

Banner/signage - \$250

Handouts/programs - \$150

Reimburse gas for cars with dignitaries? - \$100

Refreshments - \$250

Official “Thank you” – dignitaries - \$250

School Engineering Day - \$2,000

Supplies - \$750

Prizes - \$1,000

Printed materials - \$250

Lectures/Public Programs - \$1,000

\$250 a program – space, refreshments, honorariums, mileage, hotel, etc.

Workers Reunion - \$1,000

Facility Rental, food, printed materials, memento

Marketing/Public Outreach - \$4,500

Website - \$2,500

Logo - \$500

Advertising - \$1,000

Misc. - \$500

Any additional expenses to be paid for with private donations or sponsorships.



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PRESENTATIONS

Item 5(b) Ian Sisson regarding Parks Master Plan Progress and Community Feedback

(No documentation is included for this agenda item)

A regular meeting of the Astoria Common Council was held at the above place at the hour of 7:00 pm.

Councilors Present: Nemlowill, Herzig, Warr, Price, Mayor LaMear

Councilors Excused: None

Staff Present: City Manager Estes, Police Chief Johnston, Community Development Director Cronin, Parks and Recreation Director Cosby, Finance Director Brooks, Fire Chief Ames, Special Projects Planner Johnson, Library Director Tucker, Public Works Director Cook, and City Attorney Henningsgaard. The meeting is recorded and will be transcribed by ABC Transcription Services, Inc.

Mayor LaMear announced that Agenda Item 6.b regarding the appeals for the wireless communication facility would not be heard tonight as Verizon had requested a continuance until January 4, 2016.

REPORTS OF COUNCILORS

Item 3(a): Councilor Warr reported that on Thursday, November 12, he and City Manager Estes attended the Columbia Pacific Economic Development (COL-PAC) District and Northwest Area Commission on Transportation (ACT) meetings in Tillamook. Astoria is still in first place for receiving funding for the sidewalk project near the high school.

Item 3(b): Councilor Price reported on her most recent salonical, which was sparsely attended. The main topic was the need for sidewalks on Irving and 33rd near the Safeway sign. However, opinions vary on this topic. The next evening, someone told her the only place in Astoria that needs sidewalks is downtown. She also attended the opening of the faculty art center at Clatsop Community College (CCC). The gallery has been renamed for Royal Nebeker. It is rare to be around so many of Royal's works, and she encouraged everyone to see the exhibit. The caliber of art in this community is quite striking. On November 13, she was on the *Friday with Jim* Show, which has been posted on her website www.cindypriceastoria.com. She invited the public to the reopening of the Irving Street Bridge on Thursday, November 18 at 11:00 am, Coffee with a Cop on Wednesday, December 2 at 1:00 pm at Coffee Girl, and the Library Task Force meeting on November 19 at 6:30 pm in the Flag Room of the library.

Item 3(c): Councilor Herzig reported the Lower Columbia Diversity Project (LCDP) hosted a presentation and panel discussion on veteran homelessness. Attendees included Mayor LaMear and State Representative Deborah Boone. The event received good coverage in the *Daily Astorian*. Immediately following the presentation, he went to Salem to sit on a panel to review the Arts Builds Communities grants for this year, noting he had been invited by Brian Wagner, Oregon Arts Commission. The five-member panel reviewed 52 grant applications for projects from communities attempting to build their community through the arts. Projects included murals, public art in gardens and parking lots, literary activities, film projects, and getting theatre into prisons. One film project involved homeless people filming their own lives. The panel was able to fund 27 of the 52 projects. The process provided an interesting overview of how Oregon is trying to bring arts into the community as a community-building tool. He attended a Parks and Recreation Master Plan meeting, where Ian Sisson gave a multimodal presentation. After the last City Council meeting, he reported to Oregon Department of Transportation (ODOT) that citizens had concerns about the pedestrian crossing signals on Marine and Commercial. He had spoken with Mike Schroeder, who said he had not heard any of these concerns. Councilor Herzig was referred to Mark Buffington, who said he would take the concerns under advisement and make adjustments to the signals. The adjustments will leave the walking figure on longer before the "don't walk" hand signal appears. Next year, the traffic signals will be replaced with countdown signals. He was forwarded an email from the emergency room at Columbia Memorial Hospital (CMH), which asked when the warming center would be open. The emergency room is receiving many wet and cold homeless people. The warming center is working to open for this coming weekend. He was overwhelmed knowing that the emergency room was depending on a non-funded, volunteer operation to relieve their load. The community must step up because one small church hall cannot deal with this issue alone. This is a problem everyone shares and everyone needs to be part of the solution.

Item 3(d): Councilor Nemlowill reported she was a member of the Parks and Recreation Master Plan Citizens Advisory Committee (CAC), which will be hosting a tour of park facilities on December 5. This will be a great opportunity for the public to learn about most of the parks and facilities in Astoria. The tour will include a trolley ride, a walk on the Riverwalk, and a hike. Astoria's park system is more vast than most people realize, even people who are familiar with park facilities. The time of the tour is yet to be determined. Next week, the CAC will publish a survey online at www.astoriaparks.com and on Facebook to gather public input about the future of Astoria's parks. As an incentive for taking the survey and sharing it with others, one \$50 park pass will be awarded each day for 40 days. She hoped the survey and incentives would be a good investment that generates a lot of public input. The CAC has already held two public input sessions and conducted a survey at Monster Bash, but the Committee still needs more input. She noted that Dulcye Taylor was also a member of the Committee.

Item 3(e): Mayor LaMear reported that she spoke with the Encore group from Clatsop Community College about the Mayors of Coastal Cities Conference in New Hampshire, which addressed rising sea levels and coastal erosion. The group was very interested in the topic and her talk lasted an hour and a half. She enjoyed the opportunity to use what she had learned at the conference. She also attended LCDP's presentation on veteran homelessness, which was very worthwhile. Sidewalks were discussed at her Meet the Mayor event earlier in the month. She met with Suzanne Bonamici to discuss ways the federal government can assist Astoria with housing issues. Even though new housing is being built for the Coast Guard, the city will still have a housing shortage.

CHANGES TO AGENDA

No changes.

CONSENT CALENDAR

The following items were presented on the Consent Calendar:

5(a) City Council Minutes of 10/19/15

5(b) City Council Work Session Minutes of 10/19/15

5(c) Boards and Commission Minutes

(1) Historic Landmarks Commission Meeting of 9/1/15

(2) Planning Commission Meeting of 8/25/15

5(d) Waiver of Downtown Overtime Parking During the Holiday Season

Councilor Price requested Item 5(b) be removed for further discussion.

City Council Action: Motion made by Councilor Warr, seconded by Councilor Nemlowill, to approve Items 5(a), (c), and (d) of the Consent Calendar. Motion carried unanimously. Ayes: Councilors Price, Warr, Herzig, Nemlowill, and Mayor LaMear; Nays: None.

Item 5(b): City Council Work Session Minutes of 10/19/15

Councilor Price noted the following correction:

- Page 3, paragraph 1, lines 2 and 3 – "Hillsboro has no strategic plan *on its website.*"

City Council Action: Motion made by Councilor Price, seconded by Councilor Warr, to approve Item 5(b) of the Consent Calendar, as corrected. Motion carried unanimously. Ayes: Councilors Price, Warr, Herzig, Nemlowill, and Mayor LaMear; Nays: None.

REGULAR AGENDA ITEMS

Item 6(a): Public Hearing and Ordinance A15-03 regarding Development of Code and Comprehensive Plan Language and Corresponding Map Amendments to Implement the Neighborhood Greenway Area (41st to 54th) of the Riverfront Vision Plan (Community Development) (1st Reading)

In 2008-2009, the City of Astoria developed the Riverfront Vision Plan (RVP) to address issues dealing with open space, land use, and transportation issues along the Columbia River. Significant public involvement

opportunities were designed to gain public input. This process was initiated to plan for these issues in a comprehensive manner and to set a framework for the future of the study area. The City's north Riverfront (Columbia River to West Marine / Marine Drive / Leif Erikson Drive) was divided into four Plan areas of development: Bridge Vista (Port/Smith Point to 2nd Street), Urban Core (2nd to 16th Street), Civic Greenway (16th to 41st Street), and Neighborhood Greenway (41st Street to 54th Street, east end of Alderbrook Lagoon). City Council accepted the Riverfront Vision Plan in December 2009. Since that time, the City Council has set goals regarding implementation of the Riverfront Vision Plan. Implementation of recommendations from the Riverfront Vision Plan in the Neighborhood Greenway Plan Area will take the form of map amendments, Development Code and Comprehensive Plan amendments.

Proposed map amendments will include: 1) Apply the new Neighborhood Greenway Overlay (NGO) Zone to the Neighborhood Greenway Plan Area; and 2) Rezone the water area between 41st and 54th Streets between the shoreline to the pier head line from A-3 (Aquatic Conservation) to A-4 (Aquatic Natural).

Proposed Development Code text amendments will include: 1) Add Neighborhood Greenway Overlay Zone to address the standards for over-water development including structure height and width, allowable uses, and landscaping; 2) Add new design standards for multi-family development in the Neighborhood Greenway Plan Area; 3) Add new design guidelines for multi-family residential and non-residential development in the Neighborhood Greenway Plan Area; 4) Establish landscaping standards for multi-family residential and non-residential construction/uses. There would be no landscaping standards for single-family and two-family dwellings; 5) Allow some exemptions for the few existing over-water buildings to continue to be viable businesses thereby preserving the historic structures; 6) Limit new, over-water development to maximum height of top of bank; and 7) Make miscellaneous "housekeeping" amendments related to references to the above noted amendments.

Proposed Comprehensive Plan text amendments will include: 1) Update the description of the Alderbrook Area and reference the Neighborhood Greenway Overlay Area and Riverfront Vision Plan implementation; 2) Acknowledge the growing impact of traffic to the neighborhood; 3) Add a policy to investigate the possibility of extending the trolley to the Alderbrook area; and 4) Change designation of aquatic area from conservation to natural, and amend allowable uses in the Aquatic Natural designated areas to include the exception for existing structures.

The Planning Commission held a public hearing at the October 27, 2015 APC meeting and unanimously recommended that the Council adopt the proposed amendments. A public hearing on the Amendment is proposed for the November 16, 2015 City Council meeting. It is recommended that Council hold a public hearing and consider adoption of the proposed ordinances. If the Council is in agreement with the recommendation of the Planning Commission, it would be in order for Council to hold a first reading of the two separate ordinances.

City Manager Estes reviewed the Staff report included in the meeting packet.

Mayor LaMear opened the public hearing at 7:28 pm and asked if anyone objected to the jurisdiction of the City Council to hear this matter at this time. There were no objections. She asked if any member of the City Council had any conflicts of interest or ex parte contacts to declare. There were none. She read the procedures governing the conduct of public hearings and rules of appeal to the audience and advised that applicable review criteria was contained in the Staff report, which could be obtained from the Community Development Director. She called for testimony in favor of, impartial to, or against the application. Hearing none, she closed the public hearing at 7:30 pm and called for Council discussion and deliberation.

Councilor Nemlowill asked if the exploration of extending the trolley line through Alderbrook could result in a zone change. Planner Johnson explained the recommended Comprehensive Plan language simply encourages the investigation of whether the trolley line could be extended. If the trolley line were extended, a zone change would not be necessary because utilities, such as the trolley or a railroad, run through all zones. She confirmed that the proposed zone change would not impact railroad tracks.

Councilor Herzig asked if Alderbrook residents understood that extending the trolley line could bring non-residents into the area because the area is so beautiful. It would be wonderful for the Alderbrook residents to be able to ride the trolley into town, but traffic may also come into Alderbrook. Planner Johnson confirmed there was no discussion about visitors riding the trolley into Alderbrook. She noted that visitors would likely ride the trolley

back out of Alderbrook as well, so the trolley extension could reduce the number of pedestrians on Alderbrook's streets.

City Council Action: Motion made by Councilor Warr, seconded by Councilor Price to conduct the first reading of the Ordinance amending the Development Code and Land Use and Zoning Map to implement the Neighborhood Greenway Area of the Riverfront Vision Plan. Motion carried unanimously. Ayes: Councilors Price, Warr, Herzig, Nemlowill, and Mayor LaMear; Nays: None.

Director Cronin conducted the first reading of the ordinance amending the Development Code and Land Use and Zoning Map.

City Council Action: Motion made by Councilor Nemlowill, seconded by Councilor Warr to conduct the first reading of the Ordinance amending the Comprehensive Plan to implement the Neighborhood Greenway Area of the Riverfront Vision Plan. Motion carried unanimously. Ayes: Councilors Price, Warr, Herzig, Nemlowill, and Mayor LaMear; Nays: None.

Engineer Harrington conducted the first reading of the ordinance amending the Comprehensive Plan.

Councilor Herzig noted that much of the correspondence received mentioned tent caterpillars in the Alderbrook area. He asked if Public Works or Parks and Recreation were doing anything to deal with the caterpillar issues. Staff confirmed there were no plans for addressing the caterpillars.

Councilor Herzig understood Parks and Recreation was concerned about the use of pesticides and herbicides. If a plan is developed, he was sure Staff would use caution and refrain from putting toxins into the environment.

Item 6(b): Appeals by Ron Zilli for the Wireless Communication Facility Permits at 1580 Shively Park Road (Request to Continue Hearings to the December 21, 2015 City Council Meeting) (Community Development)

(1) Appeal (AP15-01) on New Construction Permit (NC15-03)

On August 3, 2015, Verizon Wireless LLC applied for a New Construction permit (NC15-03) to the Historic Landmarks Commission (HLC) to construct a new wireless communication facility at 1580 Shively Park Road within Shively Park. On September 15, 2015, the HLC held a public hearing and approved the request with conditions. A Notice of Appeal on the HLC decision was submitted by Ron Zilli on September 30, 2015 stating that the request should be denied listing several issues for the basis of denial. A public hearing on the Appeal has been advertised and is scheduled for the November 16, 2015 City Council meeting. The applicant has requested that the hearing be continued to the December 21, 2015 City Council meeting. It is recommended that the City Council continue the public hearing to December 21, 2015.

(2) Appeal (AP15-02) on Variance (V15-03)

On August 3, 2015, Verizon Wireless LLC applied for a Variance permit (V15-03) to the Astoria Planning Commission (HLC) to construct a new wireless communication facility at 1580 Shively Park Road within Shively Park with a height of 150', which would exceed the maximum 45' height. On September 16, 2015, the APC held a public hearing and approved the request with conditions. A Notice of Appeal on the APC decision was submitted by Ron Zilli on September 30, 2015 stating that the request should be denied listing several issues for the basis of denial. A public hearing on the Appeal has been advertised and is scheduled for the November 16, 2015 City Council meeting. The applicant has requested that the hearing be continued to the December 21, 2015 City Council meeting. It is recommended that the City Council continue the public hearing to December 21, 2015.

(3) Appeal (AP15-03) on Wireless Communication Facility (WCF15-03)

On August 3, 2015, Verizon Wireless LLC applied for a Wireless Communications Facility permit (WCF15-03) to the Astoria Planning Commission (HLC) to construct a new wireless communication facility at 1580 Shively Park Road within Shively Park. On September 16, 2015, the APC held a public hearing and approved the request with conditions. A Notice of Appeal on the APC decision was submitted by Ron Zilli on September 30, 2015 stating

that the request should be denied listing several issues for the basis of denial. A public hearing on the Appeal has been advertised and is scheduled for the November 16, 2015 City Council meeting. The applicant has requested that the hearing be continued to the December 21, 2015 City Council meeting. It is recommended that the City Council continue the public hearing to December 21, 2015.

City Manager Estes noted the Staff reports for all three appeals request the hearings be continued to the December 21, 2015 City Council meeting. However, Verizon has requested the hearings be continued to January 4, 2016 to avoid potential conflicts with holidays.

City Council Action: Motion made by Councilor Nemlowill, seconded by Councilor Price to continue the public hearings of Appeal AP15-01, Appeal AP15-02, and Appeal AP15-03 by Ron Zilli to January 4, 2016. Motion carried unanimously. Ayes: Councilors Price, Warr, Herzig, Nemlowill, and Mayor LaMear; Nays: None.

Councilor Herzig said these appeals were being discussed on social media. He believed it would be difficult for City Council to avoid ex parte contacts. This is a land use issue that Councilors should not discuss with any member of the public. Any privileged information must be shared with the entire Council. He hoped the public would understand that sharing concerns with an individual Councilor would put Councilors in a difficult situation.

Item 6(c): Right Turn Permitted Without Stopping Investigation (Public Works)

There are several primary routes through the City that allow "Right Turn Permitted Without Stopping" secondary signs below stop signs to facilitate movement. While this existing condition has proved successful for many years, it does have some drawbacks that have resulted in complaints. DKS Associates, a transportation engineering and planning firm, investigated the situation. They recently completed both the City of Astoria and Clatsop County Transportation System Plans. DKS has reviewed relevant travel paths through town to identify and will provide recommendations at the City Council meeting. DKS presented the results of their study to the Traffic Safety Advisory Committee at their October 27th meeting. The Traffic Safety Committee recommends adoption of Option 4. Examples include the possible placement of a dedicated right turn lane at the foot of 7th Street turning northbound onto Highway 202 and "Stop Sign Ahead" signs where stop sign violations are known to occur at a rate higher than expected. It is estimated that the cost for these changes will be around \$10,000. This issue is being forwarded to Council to determine if funds should be allocated to address the concerns. Should Council concur with Option 4, Public Works staff will work to implement this within the current Fiscal Year budget.

City Manager Estes stated the Public Works budget had funds available for the signage and striping included in Option 4.

Chris Majeski, DKS Associates, and Engineer Harrington presented the details of Staff's recommendations via Power Point, which were included in the agenda packet. The presentation included the elements and key findings of Staff's investigation and a technical overview of each option. As the details of the changes at each intersection recommended in Option 4 were described, Mr. Majeski and Engineer Harrington responded to questions and comments from Council as follows:

Councilor Nemlowill believed Option 4 was a good option for the intersection of 8th and Irving (Figure 16 on Page 167 of the Agenda Packet) because public feedback has indicated the intersection is currently confusing. However, she believed drivers should be clearly directed to use the right turn lane on 8th Street instead of driving to the stop sign to make a right turn. Mr. Majeski said if this proposal is implemented, some supplemental ground striping could be added. He could work with Staff to determine if a treatment like this would be appropriate. Engineer Harrington suggested a directional arrow, in addition to the advance warning signs that have already been recommended. The advance warning sign is intended to mitigate against increased accidents that could be the result of the added stop sign by giving as much warning as possible.

Councilor Herzig asked how Option 4 would let drivers know a left turn was permitted from southbound 15th on to eastbound Niagara (Figure 17 on Page 168 of the Agenda Packet). The striping shown seems to indicate traffic can only turn right. Even though the striping is a broken line instead of a solid line, he believed it was more confusing than the existing condition at the intersection. Mr. Majeski explained the dashing is part of what indicates turns are allowed. Even a location with a solid double yellow stripe allows turns across the center turn lane. The dashes are a standard striping treatment on any roadway. The Manual on Uniform Traffic Control

Devices recommends the dashed striping to accentuate crossing movements. The dashes are an addition to the striping treatment to make the directions clear.

Councilor Herzig appreciated Mr. Majeski's response, but disagreed. He believed a dotted curved line indicated traffic could only go in one direction. Only people familiar with the traffic manual would know a left turn across the curved dotted line was legal. He believed the dotted line would create confusion about whether one could legally turn across the dotted curving line. Mr. Majeski believed the intent of the policy is to strengthen the need for drivers to stop, use their signals, and yield to traffic turning left heading north. The striping is intended to improve southbound drivers' expectations so they wait for a driver turning left. The dashes are a safety enhancement to make the striping clearer.

Councilor Herzig noted several concerns about the recommended changes to the route that includes the intersections of Niagara and 7th and Niagara and 8th (Figure 18 on Page 168 of the Agenda Packet). He referred to Figure 18 and asked how a driver would know that a left turn across all of the line was legal. Mr. Majeski said per state law, the driver's manual, and the striping.

Councilor Herzig stated he does not drive with the manual in his hand. He believed the striping was very confusing and failed to indicate where turns were allowed, similar to the intersection of 15th and Niagara. He believed more confusion and accidents would occur. Drivers, particularly visitors, are likely to stop in the middle of the intersection while deciding which way to go. He added that the retaining wall on the northwest corner of 8th and Niagara creates a sight distance issue that requires drivers to proceed into the crosswalk in order to see adequately. Mr. Majeski said research of safety treatments considers the safety of potential decisions that drivers may make when confused. A stop is not a crash, so stopping in the middle of the intersection would be safer than proceeding through the intersection when it is inappropriate to do so. He believed the recommendations erred on the side of safety.

Councilor Herzig disagreed. Locals coming up to the stop sign expect to make a right turn. A car that stopped in that intersection out of confusion could cause an accident.

Mayor LaMear asked what made the new wording "except right turn" more clear than "right turn without stopping." She was not sure the new wording was clearer. Mr. Majeski was unsure why the standard language had been changed in the traffic control devices manual. However, the manual is intended to create nationwide consistency, so as signs are upgraded, all communities will display the same message. He believed the wording may have been changed to make the signs more consistent with other signs that use the word "except."

Mayor LaMear asked how many states allowed right turns without stopping. Mr. Majeski explained that national standards allow right turns without stopping, but he was unsure how many states allowed them. Each state can adopt their own supplements to each standard and Oregon has allowed right turns without stopping for quite some time. He was not aware of other state's exception policies and if they were consistent with the national recommendations.

Mayor LaMear said Oregon is the only state she has ever lived in where right turns are permitted without stopping. Engineer Harrington added that ODOT has indicated no problems as a result of converting to the new signs on state highways, which have higher speeds than the streets included in this traffic analysis. Downtown Nehalem is a good example of this. Mr. Majeski said the Washington County study has higher speed applications of the signs. Where speed is higher, advanced speed curve warning signs will be installed. The County does not want drivers to expect to drive 40 miles per hour through a curve on a rural facility, so the warning signs will indicate the curve is to be driven at 15 miles per hour.

Councilor Price was concerned about a 20 percent increase in travel from the north to the south side of Astoria would take 30 to 60 seconds longer. She preferred Option 1 because it seemed simpler. With Option 4, she was concerned about the maintenance of the paint and the need for additional signage. She understood paint would be easy to change if the striping did not work, but paint would need to be reapplied every couple of years. She asked what fund would be used to pay for these improvements and if spending these funds would require another expenditure to be sacrificed. If there is a sacrifice, will the improvements be worth it? City Manager Estes confirmed the project would be paid for out of the Public Works Street and Roads Fund and nothing would need to be sacrificed. Staff can accommodate these improvements this fiscal year without making any cuts. Staff is attempting to respond to citizens and Councilors concerns about improvements to the streets included in

the traffic analysis in a way that meets statutes. Research Washington County and ODOT indicates other jurisdictions are realizing benefits after making similar improvements.

Councilor Herzig was concerned with the new language “except right turn,” which he believed failed to convey a complete thought. He agreed Option 4 was a good proposal for the intersection of 8th and Irving. However, he was very concerned about the changes that Option 4 recommended for other intersections. Confusion already exists at several intersections and the recommended striping will accentuate confusion even more. Striping that indicates fewer options is very problematic. He also believed Option 4 would result in significant traffic delays, especially during rush hour. These delays have not been factored in to the recommendations. Engineer Harrington explained that Fire and Police Department comments were included in the traffic analysis because this is an emergency response route. The time delays may not sound like much, but 20 to 40 seconds could be critical to a patient in an ambulance. This is one of the biggest benefits provided by creating this through route. Requiring emergency vehicles to stop at each stop sign would have an impact.

Councilor Warr confirmed the Manual of Uniform Traffic Devices recommends stop signs at intersections with five or more accidents per year. The traffic analysis indicated there had been 19 accidents in 10 intersections over the last five years, which is an average of one accident at each intersection every 2 1/3 years along the studied route. Historically, these intersections have been very safe and he was astounded these recommendations were being discussed. He asked if Mr. Majeski considered the 10 intersections unsafe. Mr. Majeski said the data did not indicate safety issues.

Councilor Warr said he was confused about why these improvements were being discussed because the existing traffic control measures at each intersection have worked for many years. He understood 8th Street was confusing, but there has only been one accident at 8th and Irving in the last five years. He asked if Mr. Majeski believed Option 4 would make the intersections substantially safer. Mr. Majeski said based on his research, this issue is not about safety, but about clarifying driver expectations and perceptions. He did not believe the recommended improvements would change the accident data substantially.

Councilor Price asked Staff to address her issues with maintenance. It seems like all of the striping would be a lot of maintenance. She asked how often the route would need to be restriped. Engineer Harrington stated the Public Works Department restripes every year. The plan for Option 4 is to stripe the route with paint the first year in case adjustments need to be made. Then, Staff would budget for thermal plastic because it is very important for the dashed striping through the intersections to remain in place. The City currently uses thermal plastic on crosswalks because they get many more years of service out of it. The thermal plastic is almost permanent and only needs occasional patching. Lane lines where traffic does not cross very often does not get too much wear. The thermal plastic wears where the traffic goes through, so the worn pieces would need to be replaced.

Councilor Nemlowill appreciated the TSC’s recommendation and the fire and police chiefs’ comments in the study. She believed Option 4 made sense. She asked if Staff believed a problem existed that required a solution. She questioned whether the City needed to move forward with these improvements since this was less about safety and more about clarifying driver expectations. City Manager Estes confirmed this issue of driver confusion through certain intersections was presented to the TSC and some Councilors who forwarded comments to Staff. Staff considered how to make the intersections easier to navigate with clear direction that complied with the Manual of Uniform Traffic Control Devices. He believed the improvements were necessary to adequately address the public’s perceptions. The improvements will provide benefits and the overall costs are small. There will be an initial set-up cost, but maintaining the thermal plastic will have minimal impact to the budget.

Councilor Nemlowill said she supported the improvements because there would be no negative long-term costs and they address the concerns of the public.

Mayor LaMear said she did not support the recommendations. While she did agree that improvements were needed at 8th and Irving, she did not believe the wording on the signs should change. She understood the City has received many complaints about 8th and Irving and she was only willing to support the recommended changes for that intersection. No other changes are necessary. Engineer Harrington explained that statutes in the Manual of Uniform Traffic Control Devices require the signs to be changed to the new wording. ODOT has already mandated the new signs on Highway 202 and 7th Street to be consistent with their protocol.

Councilor Herzig said since the citizens have brought this concern to the City, the concerns should be addressed. He believed the recommended changes at 8th and Irving were good, but he did not want to adopt the recommended improvements for any of the other intersections. The extra striping creates more confusion and puts people at more risk.

Mayor LaMear called for public comments.

Shel Cantor, 1189 Jerome, Astoria, said DKS produced a well-documented report with creative ideas including a vast improvement for the currently anomalous intersection at 8th and Irving. He agreed these improvements were very impressive. Option 1 would simply remove the signs that permit right turns without stopping at all of the studied intersections, which are confusing. Staff could consider combining Option 1 with removing or moving other stop signs at those intersections to convert the intersections to standard intersections. This would eliminate all confusion. Option 4 includes implementing that idea at 14th and Jerome. However, standard intersections could be implemented in more areas. He believed standard intersections were the least confusing. Currently, emergency vehicles will slow down as they approach an intersection and if the route is clear, they will make a right turn without stopping where signs indicate this is allowed. Removing the "right turn permitted without stopping" signs will not change this. He did not believe removing these signs would prompt fire trucks to stop in fear of receiving a citation from the police. Therefore, he questioned why the wording on the signs was a concern. When intersections become icy, it would be best for a driver to have full control of their vehicle and come to a full stop before attempting a right turn instead of entering the intersection at speed and making a right turn on ice. He urged City Council to consider Option 1 because he believed it was the least expensive, least confusing, and least risky. The other options are good ideas, but anytime changes are made, there is an added risk.

Larry Bryant, 4915 Leif Erikson, Astoria, said when he first came to Astoria 20 years ago and started seeing the right turn allowed on red signs, he thought the idea was crazy. He has always been concerned about visitors and newcomers approaching intersections with these signs, like 8th and Niagara. Visitors and new residents may not know these signs exist because not many states allow right turns without stopping. Astoria's tourism is increasing, so more people are being confused by this situation. Some of the options that call for adding more paint to the ground could add confusion instead of remove confusion. For the benefit of visitors, he suggested signs like one on westbound Niagara that indicates oncoming traffic or traffic from the right does not stop. Pulling up to an intersection and seeing the back side of a stop sign might not be a clear indication of who is supposed to stop.

Daryl Moore, 3377 Grand Avenue, Astoria, stated he was a member of the Planning Commission and Traffic Safety Advisory Committee and he voted to recommend Option 4. He explained that Engineer Harrington is a professional civil engineer who must renew his certification every year, which requires ongoing professional education. The City's professional traffic engineer, who has been employed to make recommendations, has also recommended Option 4, as did the police and fire chiefs. All of these Staff members have quite a bit invested in traffic flow. These professionals have made their careers out of traffic engineering and their work is being judged by people who are not traffic engineers, which he did not understand. He recommended City Council take the advice of the professionals on this issue.

Councilor Price asked if the TSC believed all of the intersections included in the study needed to be fixed and whether there was any discussion about only improving 8th and Irving.

Mr. Moore explained that the TSC was presented with the same four options and unanimously voted to recommend Option 4. While he could not speak for the other Commissioners, he did read the data. Based on the professionals' statements, there are no safety concerns at any of the intersections. When he first moved to Astoria 10 years ago, it only took him one time driving through an intersection to figure out how the traffic pattern worked. Everyone already understands what "except right turn" means. Once the wording on the signs change, it will only take one time through the intersection to figure out the traffic pattern. Therefore, the recommended changes will not be a big problem. He did not believe there has been any concern about safety issues, but clarification was the objective. He believed Option 4 provided some clarification and improvements at all of the intersections.

Karin Temple, 1032 Grand Avenue, Astoria, said she receives quite a few visitors from Europe and her guests are completely dumfounded by a stop sign that is not a stop sign. Visitors do not know what to do at these

intersections. Astoria receives more than just her personal friends from other countries and she believed the changes were not a good idea.

Chris Farrar, 3023 Harrison Avenue, Astoria, said he lives close to one of the studied intersections. He believed the options were flaky, and that he could judge the professionals work on this project because he drives through the intersection daily. The professionals missed the basic point and their work sucks. His opinion is based on his own practical experience and he has been driving a car longer than the younger professionals have. He questioned why oncoming traffic had the right to drive through the intersection and how he would know that. He has been flipped off, honked at, and yelled at in that intersection multiple times. When approaches the intersection on Harrison at 33rd, he is required to stop. After stopping, he has the right to drive through the intersection even if there is a vehicle 25 feet away that is still rolling. How would he know the other driver has the right to make a right turn without stopping? The rule is stupid and anyone who cannot understand why is also stupid.

Mary Eng, 856 Harrison, Astoria, said she no longer drives a car. She asked City Council to consider the recommendations from the pedestrian's perspective. A pedestrian first policy would put Astoria at the highest advantage point. She thanked drivers in Astoria for being very courteous. However, there are times when large elevated vehicles like SUVs and trucks are unable to see strollers or pedestrians without safety lighting or safety vests. Therefore, safety should be the first consideration. She encouraged people to look out for children especially.

City Manager Estes said when this issue was raised, Staff studied ways to make the intersections easier to understand. The issue was with intersections where right turns are allowed without stopping. None of the intersections has large crash histories. One option is to make no changes. However, over time, the City would have to change the wording on the signs to comply with national standards. Another option is to make changes at individual intersections. Staff would like City Council to indicate their perspective with regard to policies. Staff reviewed all of the intersections to provide clarity under existing engineering law.

Engineer Harrington explained that on multiple occasions, Staff has shared well-documented studies with the TSC, Councilor Herzig, and others that show the addition of stop signs in unwarranted locations cause accidents and offers a false sense of security for pedestrians. Staff did not make this up. This is a fact that has been proven throughout the country. He spoke with many long time local residents during the study who indicated it only took one time, maybe two, through an intersection to figure out the traffic situation. The traffic rules are clearly stated in the traffic handbook. Anyone who takes the driver's test in Oregon knows about this law. He quizzed his children and their friends and found they were all familiar with the law. Claiming one is unfamiliar with the law is not an excuse because each person must take responsibility for becoming familiar with the laws. Staff is attempting to make the changes that will create the safest conditions while following guidelines. Now, Staff would like direction from City Council so they can take action. However, he could not and would not do something that would cause him to lose his engineering license, nor was he willing to allow an accident unnecessarily.

Councilor Price said she would make a motion to adopt the changes recommended for 8th and Irving in Option 4. Eight of the 10 intersections are in Ward 3 and she has only heard complaints about 8th and Irving. Occasionally, she will hear that other intersections here and there are kind of confusing. However, 8th and Irving is the one intersection that needs attention.

Councilor Warr said originally, he was against making changes at all intersections except 8th and Irving. However, he just heard some very compelling arguments and now believed City Council should take the advice of the professionals. If Staff agreed changes were only necessary at 8th and Irving, he would support the motion. The professionals should be given the benefit of the doubt and Council should accept their recommendation.

Councilor Nemlowill agreed with Councilor Warr. She apologized for the comments indicating Staff's work sucks, that people have stupid ideas, and that people are stupid. She wanted City Council and the public to agree not to talk to each other like that.

Councilor Herzig believed City Council could do a better job of modeling courteous behavior to each other and maybe the public would pick up on it. Council never intends for their discussions to be disrespectful of Staff, consultants, or other commissions. Recommendations from Staff and commissions are simply starting points for

discussion. It is important to keep in mind that a good robust discussion, hopefully a courteous one, is never intended to insult anyone who brought items to the table. The discussions are intended to ensure City Council fully understands the issues and can make an informed decision. City Council is often told to simply follow the direction of professionals. A government run by professionals is called a technocracy, but a government by the people is a democracy. As much as he respects the opinions of professionals, the will of the people must prevail even if it is misguided. As Councilor Price stated, citizens are concerned about 8th and Irving. He believed Staff's recommendations for this intersection were really good. However, it might be beneficial for Council to take more public comments on the other intersections before making changes to them.

City Council Action: Motion made by Councilor Price, seconded by Councilor Herzig to adopt the recommendations in Option 4 for 8th and Irving and take no action on the other intersections included in the study. Motion carried 3 to 2. Ayes: Councilors Price and Herzig and Mayor LaMear; Nays: Councilors Warr and Nemlowill.

Item 6(d): Temporary Public Restrooms (Police)

Over the previous summer, the number of complaints the Astoria Police Department has responded to regarding public urination and defecation is greatly increased. We have also heard from business owners in the downtown that this is a major issue affecting them regularly. The clear message received from the Astoria Downtown Historic District Association was that this is not just an issue with the members of our community who are homeless but also for tourists who are visiting the community. While public restrooms are available at the Sunset Empire Transportation District office and the City owned restrooms are available east of 12th on Exchange, these facilities are not located where they positively affect this issue.

Since September, the City of Astoria Coalition on Community Homeless Interaction has been meeting. While they are moving toward some other recommendations, one recommendation that was quite unified and was deemed as "low hanging fruit" is to site more public restrooms. This recommendation was unanimous.

Overlaying this issue is the ongoing problems Astoria Parks and Recreation faces with vandalism to existing bathrooms. There has been significant repeated damage to the downtown bathrooms, the Doughboy Monument bathrooms, and the bathrooms at Tapiola Park.

Long term, staff has identified a potential permanent solution to the issue of public restrooms with a facility referred to as the Portland Loo. While these units have a fairly high initial purchase price they are designed in a way that incorporates the concepts of crime prevention through environmental design (CEPTED), a proven community policing and planning concept for crime reduction. These solutions would be brought back to Council as part of the budget process for FY 16-17 if they develop.

In the interim, Angela Cosby and Brad Johnston have developed two locations where temporary portable toilet facilities could be located. The criteria for locations were that they had to be:

- High traffic areas that offered easy visual surveillance (the presence of many eyes reduces crime).
- Not over or under combustible materials (to avoid associated fires where portable are vandalized with fire).
- In an area where they can be easily serviced.
- In a location where their presence would not be visually shocking.
- In an area where calls, complaints, and anecdotal evidence demonstrate a need for public restrooms.

Given these criteria the Parks Director, Angela Cosby, and Police Chief, Brad Johnston, recommend that the City contract to place two portable toilets at People's Park (16th and Marine) in the parking area and one portable toilet at 9th and Astor in the right of way near the street terminus where concrete blocks currently block the street. These toilets would be serviced twice a week. Funding for the service and toilets would come from the Promote Astoria Fund, as these are services provided to support tourism. Cost for this service is estimated to be \$130.40 per unit per 28-day billing period. Staff recommends purchasing the \$7.95 per billing period damage waiver. If delivery is scheduled to coincide with routine trips, there will be no charge for delivery or set up. The total cost for one year of service is \$5,395.65.

Staff will continue to monitor the service levels and explore the possibility of more permanent solutions that may alleviate some of the issues, which cause ongoing problems for Astoria Parks and Recreation with the existing public restrooms. It is recommended that Council contract for placement of three temporary toilets.

Police Chief Johnston said \$7.95 per month for insurance on the portable restrooms was a good price considering the amount of money vandalism costs the Parks Department. Staff confirmed that the portable restrooms would be serviced by Portland Loo, a private company that also owns the facilities, not the Parks Department. However, payment for and maintenance of the facilities would be paid for out of the Parks Department Fund.

Councilor Price asked if the restrooms had timers to prevent people from sleeping in them. Police Chief Johnston said no, but Staff made a conscious decision to refrain from including ADA accessible restrooms. The ADA units are about four times larger than the standard units are and through his career in law enforcement, he has learned that people will use the larger units for a variety of inappropriate activities.

Councilor Warr asked if the restrooms at Tapiola, Doughboy, and 12th Street would be closed to avoid vandalism to those facilities. Police Chief Johnston said not as part of this recommendation. However, if the City moves towards the concept of more permanent, more crime resistant public facilities, Staff might consider closing some of the restrooms and replacing them with facilities designed for crime prevention. Staff is already looking into a stainless steel unit that offers minimal privacy and could resist a lot more damage than the existing restrooms. However, Staff is only looking into these units for now because they will be discussed further during the budget process.

Councilor Warr asked why only two locations were selected, as renting three units could provide facilities to three locations. Police Chief Johnston explained that Staff received anecdotal evidence from a business owner near People's Park who went through eleven rolls of toilet paper on a Saturday. Staff believes restrooms at People's Park will get more use than most. Therefore, Staff is recommending two portable restrooms at People's Park.

Councilor Nemlowill asked how Staff decided on the two recommended sites and whom the restrooms would serve. Police Chief Johnston explained parks user and business owners have indicated two issues that Staff is trying to address. One issue is that people who use the Riverwalk do not know how to find restrooms. The other issue is that homeless people in the community need access to restrooms. He believed Staff's recommendation would solve both problems while providing more facilities to parks users. Director Cosby added that the costs of installing a brand new vandal proof unit could be made up in two years just on the money currently spent on repairing vandalism each year.

Councilor Warr confirmed Director Cosby was talking about a Portland Loo unit.

Mayor LaMear asked if the restroom at the East End Mooring Basin was owned by the City. Police Chief Johnston stated this restroom was owned and maintained by the Port of Astoria.

Councilor Nemlowill asked how Staff planned to measure the effectiveness of these portable restrooms. She has heard of urination and defecation inside and outside of restaurants that are near restrooms. Police Chief Johnston confirmed he had heard the same stories. The effectiveness of these restrooms will not be evident until the end of next summer. Staff believes the behaviors seen this last summer will go away. Restroom usage and behaviors will change because of the weather, which has already turned. Therefore, there is no way to get a good indication soon.

Councilor Nemlowill said she was surprised this recommendation was made by the homelessness taskforce because it seemed to be beyond the original scope of the taskforces agenda, as she understood it. Police Chief Johnston explained that the taskforce intends to effect interaction between the homeless population and the community with particular focus on negative reactions. The taskforce began by brainstorming on the current issues. Urination and defecation were mentioned more often than any other issue. As the taskforce began to consider best practices and actions other communities were taking, this conversation developed. He noted he was trying very hard to use appropriate language when referring to people who are without homes because he has been chastised about his language several times throughout this process. The language used is a very important aspect of making people without homes a part of the community.

Councilor Herzig thanked Police Chief Johnston for working through the process. Initially, there was a lot of anger and talking through the issues made a big difference to everyone. Taskforce meetings were rocky at first, but a lot of understanding and compassion has been achieved. Other communities have found that there is no benefit in asking people to change behaviors without giving them the means to change those behaviors. Urination and defecation is a huge issue downtown, but there are no alternatives. This recommendation benefits the entire community, people with homes, people without homes, and visitors. Many of Astoria's restaurants only allow patrons to use their restrooms, leaving no place for people to go. While this recommendation seems beyond the taskforce's mission, it directly addresses the community friction that these situations cause. He believed the recommendation was a great start that benefited the community.

Mayor LaMear confirmed there were no public comments.

City Council Action: Motion made by Councilor Warr, seconded by Councilor Price to contract with Portland Loo for one year to place two portable toilets at People's Park (16th and Marine) and one portable toilet at 9th and Astor, and purchase a damage waiver. Motion carried 4 to 1. Ayes: Councilors Price, Warr, Herzig, and Mayor LaMear; Nays: Councilor Nemlowill.

NEW BUSINESS & MISCELLANEOUS, PUBLIC COMMENTS (NON-AGENDA)

Ingrid (Sunnie) Bell, 865 Jerome, Astoria, said she owned business property at 1319 Commercial. She learned a lot at Director Cronin's meeting on Heritage Square. Since that meeting, the American Legion and people associated with the Scandinavian festival have had a lot of discussions. She has only lived in Astoria for four years, but she is getting to know a lot about the city and the tone of the community. Newcomers and people who have lived in the community for much longer have put together some ideas she wanted to share. She believed there would be more communication about Heritage Square as time goes on. She understood that part of this meeting would be dedicated to Heritage Square, so she was confused about when to speak. She indicated that Mr. Phelps would introduce why they were speaking before Council.

Mike Phelps, American Legion Bastion Leader, said the Legion has planned some events leading up to the 100-year anniversary of the American Legion. The state's anniversary celebration will be held in Astoria in 2019 because the post in Astoria is one of the oldest in the country. The Legion has begun repairing the east wall of their building by removing the siding. Every wall will be restored to its 1947 condition. The south, and possibly the north wall, will be restored next year. The main wall will be restored the year after that. Storefront windows have been blocked in and there is a possibility the Eisenhower lights are still in place. If so, the lights will be restored. The Legion will notify the historical society about their plans for the south wall, which will demonstrate the significance that the Doughboy Monument, the eagle, the Statue of Liberty, and the flag has to the American Legion. The south wall will also have a memorial for each war beginning with the Spanish-American War. Ceramic tiles with pictures will depict all of the members that have fallen in or after the wars, up through the Middle East conflicts. The Legion will make every effort to restore the building to its 1947 condition. When the Legion purchased the building during World War II, they spent \$60,000 restoring it. Once the restoration was complete, the Legion hosted an open house, which brought between 500 and 1,000 people to the post. The Legion sponsored a bike crew that rode across the United States to raise money for Operation Comfort Warriors, which is a Legion program that gives 100 percent of the donations directly to veterans. The event raised \$22,000 and the bike crew included three high school students from Astoria and a 70-year old Vietnam veteran. The Legion has done a lot of work and the building is paid for. There are artifacts hidden in the building that cannot be displayed. Therefore, the Legion plans to use the top floor as a museum. The flag memorial is already on the top floor. The *Salvage Chief* is back in town and Ms. Bell is finishing a book that will go to the publisher this week. This book is currently being reviewed by the History Channel because they are considering making a movie on it.

Ms. Bell added that all of the proceeds of the book will go to the *Salvage Chief* Foundation. She read the following proposed community plan for Heritage Square:

"Described here is a brief overview of a plan developed and composed by responsible, respected, experienced, and capable community members of Astoria. This plan is in keeping with preservation of an important structure, promoting use of space for use by a large portion of local residents, as well as visitors to the city, and protective of City finances. With concern for taxpayers and all citizens of

Astoria, we come before the Council with a proposal regarding what is known as Heritage Square. A number of worthy, workable, and economical ideas appropriate to and supportive of the community have come forth from the citizenry. Serious consideration is due these ideas. History does not consistently show that such consideration is afforded to the will of communities, even when such ideas truly and fully represent their heritage. Consideration of these ideas presents a great opportunity to reverse that history and also may provide the greatest number of Astorians, children, retirees, business owners, business frequenters, as well as visitors to the area a solid, affordable, long-lasting, vibrant, life-central, activity-supporting Heritage Square with true potential for extending that heritage into its long and fitting future.

Steps to the better plan:

1. Decontaminate and fill the hole. Install concrete over the cleaned and filled soil.
2. Install a large gazebo for public use as has been done in Poulsbo, Washington with success. Around the gazebo, install perimeter kiosks to represent other nationalities being inclusive of most or all of the ethnic and cultural groups who have contributed over time to Astorian history and heritage. These would include, but not be limited to, Pakistanis, Indians, Native American Indians, Germans, and British, including special tribute to Lord Astor, Scandinavians, Finns, Danes, Swedes, Norwegians, Icelanders, and all citizens of mixed Heinz 57 heritage.
3. Create a set of signage on the eastern side of the existing American Legion building to include murals.
4. Retain the existing library and continue to honor its official dedication as the Astor Library and Veterans Memorial, as well as to recognize and honor Astorian citizens who provided funding for the memorial, trusting that it would be maintained in perpetuity. Pressure wash the existing library. Renovate the basement of the existing library to acquire additional space to meet square footage expansion needs. Install an elevator to the basement for ease of access.
5. Transfer the Sunday Market to the waterfront area near the train station. This would be supportive of parking, pedestrian concentration and safety, protection for the business of established downtown vendors including restaurants and others of all types who would like to continue business on Sundays.
6. The current proposal, which includes removing curbs on Exchange Street, is not feasible due to potential flooding of the area during rainy periods.

Much of the present contamination was caused by moving soil from the present site of the Garden of Surging Waves prior to its construction. It is important to also note that the garden did not have general public approval and that such approval would be sought for all components of this plan. Full disclosure, including costs and utilization comparisons, should be provided prior to public vote.

It is inappropriate for privately owned housing to be constructed atop a proposed new public library.

The currently proposed underground parking area would be an invitation to inappropriate usage, crime, and flooding.

The American Legion, along with other proponents of this plan, are in the process of developing an artistic rendering.

It is the belief of the plan proponents that the taxpayers of Astoria should be given opportunity to evaluate this plan. In any case, we believe that a decision should go to the voters. The start of developing Heritage Square with construction of the Garden of Surging Waves did not go to the voters. They should have had opportunity for input as to how City property would be used."

She noted the community group that developed this proposal is in the process of preparing a rendering of their plan. She also noted that the murals on the east side of the American Legion would depict all branches of the military. Incorporating part or all of this plan would help avoid another large unoccupied building, which would be the current library. Only a professional could really examine the relative costs, but the proponents of this plan believe that for a minimum cost, a beautiful site in the center of town could be developed for everyone to access. She gave a copy of the proposal to Council.

Mr. Phelps added that Loran Mathews and the Scandinavian Festival Association support this plan. The Scandinavian Festival Association would love a spot in central Astoria. The existing library is a dedicated memorial to the Astor family and to veterans.

Mary Eng, 865 Harrison, Astoria, said she wanted to speak in a noncontroversial and non-decive way about water quality issues and the larger context of environmental issues. California's Proposition 65 involves warning consumers about neurological fetal damage that may occur when eating seafood. This is exciting because a fully informed public is a public that can feel confident about their choices. Biomedical ethics is another issue she wanted to consider. Biomedical ethics involves biomedical choice, choice of decision and healthcare planning, and how people think of their future in terms of independent medical decisions or one's competency to make those medical decisions. Toxicity of the landscape is obvious, but a lot is going on with the water, including the chemical treatment used to fight forest fires and pharmaceuticals and household cleaners that enter water streams. Everyone faces multiple issues of health consideration, so the best thing is to keep an open mind to the scientific method. In a scientific experiment, too many variables can prevent pure cause and effect results. While one thing might be good for one issue, it might also have a deleterious effect on other systems. Therefore, an integrated system of analysis is needed to look at human health from a holistic viewpoint. Additives, chemicals, vitamins, or minerals can have an effect on pre-existing health conditions. She suggested the City create a committee to evaluate the transparency of the Public Works Department with regard to the fluoride additives being added to the water, evaluate the tank and toxicity of the plastic with the chemical mixing, and consider recent science regarding high levels of fluoridation. She believed people who have moved to the area from Mexico have toxified systems that resulted in conditions like flourosis and brittle bone disease, caused by excessive fluoride pollution in the ground water.

Alana Garner, 1 12th Street, Suite 114, Astoria, invited City Council and the public to attend the Astoria Downtown Historic District Association's (ADHDA) Annual Holiday Lighting on Saturday, November 28 at 5:00 pm. The downtown area will be decorated on November 21st in anticipation of the lighting event.

ADJOURNMENT

There being no further business, the meeting was adjourned at 9:07 pm.

ATTEST:

APPROVED:

Finance Director

City Manager

Astoria Library Board Meeting

Astoria Public Library

November 24, 2015

5:30 pm.

Present: Library Board members Kate Summers, David Oser, Susan Stein, Kimberley Chaput, and Chris Womack. Staff Library Director Jane Tucker, Community Development Director Kevin Cronin, and ALFA Representative Steve Emmons.

Call to Order: Chair Kate Summers called the meeting to order at 5:34 pm.

Approval of Agenda: Chair Summers requested Item 4: Renovation Update be discussed prior to other business. The agenda was approved with changes.

At this time, the Library Board proceeded to Item 4: Renovation Update.

Approval of Minutes: Immediately following Item 4: Renovation Update, the minutes of October 27, 2015 were approved as presented.

At this time, the Library Board proceeded to Item 5: Board Reports.

Renovation Update:

This item was discussed immediately following Item 2: Approval of Agenda.

Item 4(a): Community Development Report on Heritage Square Study

Director Cronin presented an overview of the work done on Heritage Square to date. Over the last three months, Staff has been working with design firm Walker Macy on a site planning exercise that includes a library, housing, and open space. He displayed Options A, B, and C, which showed how each building and the open space could be situated within Heritage Square. Staff has received extensive public comments on all three options through a variety of sources representing many facets of the community. Currently, there is no consensus about how to move forward. Therefore, Staff must rely on a decision by City Council. Prior to making a recommendation to City Council, Staff is seeking feedback from the Library Board and Parks Board. In the mean time, Staff expects to receive cost estimates from the consultant, which will be packaged with Staff's recommendation, to be presented to City Council at their December 7 meeting. He presented an updated project timeline, which would be published on the project website.

David Oser reminded the library's existing situation was neither tenable nor desired by the community. Work completed during the summer of 2013 resulted in a strong consensus among the community as to the type of facility and services. The condition of the existing building cannot accommodate that consensus. Therefore, maintaining the status quo is a poor option. He believed the funding issue was about the gap between City's resources and outside funding, not with total project costs. Therefore, costs should not be the first consideration. The top priority should be what type of structure and work would draw the most money into the community to complete the project, like housing developments or private developers. He added that a library brings an enormous economic benefit to the community, which is demonstrated by the statistics Director Tucker shares. A revitalized library would be a huge economic bonus to this community by bringing people into town and incentivizing nearby structures to redevelop. He believed this economic impact could pay for that funding gap.

- Director Cronin responded that while his task was clear because this was a City Council goal, only about two percent of the population knew City Council's goals. Many people did not understand why Heritage Square was being considered. They did not realize that 18,000+ square feet was needed to accommodate the single floor project. This basic fact was not well known in the community and having to remind everyone about the basic facts regarding this project has been challenging. A continuing education campaign will be necessary for the community, regardless of Council's decision. Staff cannot educate the community alone; the Library Board, other boards, and other volunteer groups must help educate the community.
- Chair Summers added Director Cronin was speaking of the need to educate the Project Advisory Committee (PAC), who she had spent a lot of time educating. The Library Board believed the current

phase of the project was to investigate Options A, B, and C, while most of the PAC believed the task was to debate the location of the library at Heritage Square. The PAC was pro library, but seemed to reject the concept of having the library in Heritage Square.

Director Cronin discussed the housing and parking details of each option, noting that there was no consensus on housing, even though housing is another City Council goal, and everyone agrees Astoria has a housing shortage. Also, everyone wants open space, but there is no consensus on what the space should be. He explained that the exact number of housing units and allocation of parking spaces would be determined by a developer in another phase of the project. He briefly discussed costs associated with parking and listed a few ways the City could pay for these costs. While many public comments were made about parking, he believed the issue would be managing the parking. Chair Summers noted many fear there would be a net loss of parking downtown with the parking required for residents.

Mr. Oser said these issues have been discussed at length, but no one has documented the numbers. He did not believe a decision could be made on any option until more financial details of each option were available, adding he wanted to know the costs and funding sources. Director Cronin reminded this information would be presented to City Council on December 7, which he recommended Library Board members attend.

- Mr. Oser said the financial details really needed to be worked through prior to the City Council meeting. He reiterated that building costs were not his primary concern; he wanted to know the possible funding sources. Director Cronin said the funds would come from a capital campaign and a bond. A private developer would, at most, build the shell or envelope of the building; subsidies would be required to build the housing because new construction is so difficult outside of Portland.

Susan Stein confirmed that the 2013 consensus had assumed the Waldorf space would be cleared for the library expansion, and noted that was the reason people were surprised or questioned locating the library at Heritage Square. If conversations were anchored in that premise, then the 2013 data could not be used.

- Director Tucker explained the premise was that the library would be one level, so it could be staffed with the existing Staff and have more technology improvements given lines of sight and the way space is allocated. A two-story library would be a different story.

The Board briefly discussed the Grout donation used for the Seaside library which stipulated that the funding had to be used within a certain time frame; however, exceptions were made so the library kept the funding past the deadline. Director Cronin noted the Bill and Linda Gates Foundation could be a funding source. Mr. Oser noted that the project currently has \$1 million in funds from the Logan Fund.

Kimberly Chaput asked how much it would cost the City to acquire the American Legion building via eminent domain. Director Cronin estimated between \$250,000 and \$350,000, noting that the land is worth more than the building.

Director Cronin encouraged the Library Board to review the strategy, which was the playbook for getting from Point A to Point Z, and his attempt for being very open and transparent with the community in terms of how the mixed use development could be done in Heritage Square, which he believed would be the headliner for revitalizing the entire Duane Street corridor. Staff is working towards matching City Council's goals with a strategy for partnering with private development.

- As far as the library/open space perspective, Option C received the most support at the open house, but Option A received the most support during the open comment period when the options were displayed at City Hall, the Library, and the Astoria Recreation Center. He noted that Option C worked on many different levels; it included the library and continuous open space providing a view corridor from City Hall to the Banker's Suite.

Chair Summers said she would recommend Option C, noting Option C was also discussed at length at the PAC which had some form of consensus on that floor plan. She confirmed all the options included retention of the American Legion building. Director Cronin noted an option did consider the American Legion moving, which would result in more redevelopment potential. The library building has been discussed with the Legion in the past because of its significance to the veterans. Staff was glad the Legion was engaged in this planning process. Mr. Oser noted the Legion has announced plans to renovate the exterior of their building.

Steve Emmons said he has been speaking with lifetime members of ALFA, who are also taxpayers and voters in Astoria. ALFA would like the City to slow down on pursuing Heritage Square because they believe the City has delusions of grandeur regarding the site. He would like the City to clean up and fill the hole left in the former Safeway site, re-imagine the so-called stacked version of the library, divorce itself from the decrepit Waldorf Hotel, and move away from the scheme of being involved in the subsidized rental housing business. He clarified he was speaking for himself and on behalf of his sphere of influence. He explained the people he has spoken to have lived in Astoria for a long time or have come to Astoria within the last 15 years. He was also trying to give a voice to those who have passed away.

Director Cronin reiterated that Staff has been working on the Safeway site since 2003, when the City acquired the property. He believed the project seemed to be moving forward quite fast now because the community actually has something to respond to and City Council must make a position statement. There has been a lot of discussion about the library and at some point, the City will need to make a decision. He noted that all of the options outlined by Mr. Emmons were addressed in his development strategy; the big issue will be costs.

Chair Summers said that since the PAC did not have a firm recommendation, she asked that the Library Board support Option C. She felt strongly that the Board should name an option, at least in the spirit of pro library.

The Library Board discussed whether they should recommend a preferred option. Director Cronin noted that each interest group is looking at the options with their own interests in mind. He believed Option C allowed the most interest groups to achieve their goals. Ms. Stein said she was hesitant to make a recommendation until communication with the community was improved. She believed the Library Board and PAC should both come to a consensus before making a recommendation as being divisive would not be wise. Chair Summers clarified the PAC did not get to the point of voting on the options, adding three members decided they were not comfortable making a recommendation. Ms. Stein did not believe making a recommendation without the PAC was wise.

Chris Womack noted that even though City Council would weigh the Board's recommendation, Council would still have the final say about which option to pursue.

Chair Summers responded that was why she wanted to participate in the choosing process.

Director Cronin said people would get a chance to participate when voting in the upcoming 2016 elections. He noted that eventually, a bond would be necessary to pay for many of the improvements, and the Board should align its partnerships as much as possible beforehand. However, Board members should still attend the December 7 City Council meeting to show support. Mr. Womack believed outside input from the constituents about each option should be directed to each Councilor individually.

Director Tucker added that the December 7 Council meeting would also include comments from Library Board members who attended the fundraising workshop. She noted the Board members would need to decide who would be the spokesperson at that meeting.

Director Cronin confirmed the financial considerations of each option would be outlined during his presentation to City Council, but they would be very high-level costs. The figures would be shocking because this was such a large public improvement project. The private contribution for housing would be small, so the Parks Department and Library will have to do large capital improvement campaigns to make the project work.

The Library Board decided to refrain from making an official recommendation at this time. All Board members agreed that regardless of the option used, the goal was to get a new or renovated library in Astoria as soon as possible and to emphasize the need and the benefits such a library would do for the city.

Director Cronin replied that was the Board's message to the community because many questioned the need for a new library. The Board needed to help the community visualize what a new library could be and could provide. The existing library was not the library of the future, but people's expectations about

what makes a great library are different. Director Tucker agreed to email a Slate article about the future of libraries which noted that those born today had every chance of seeing the new century. Another article had noted that the first generation born into an entirely digital world was now in their early 20s, and they would change the world as everyone knew it.

Director Cronin excused himself from the meeting at 6:10 pm.

The Library Board proceeded to Item 3: Approval of Minutes at this time.

Board Reports:

This item was addressed immediately following Item 3: Approval of Minutes.

Mr. Oser reported that the foundation had filed its 990 tax return. Director Tucker added the foundation is sponsoring Libraries ROCC at the December 12 Gifts That Make a Difference Fair.

Ms. Chaput said she was concerned about the project pitting people against each other. Director Tucker noted it took years to get the Seaside Library built and the process included conflict, which she believed was common for projects like this. She was pleased that the library matters so much to the community and would be concerned if there was no discussion.

Steve Emmons reported that ALFA's current balance, as of November 17, 2015 was \$7,536.65.

Ms. Stein asked if Little Free Libraries needed any help from the Board. Director Tucker confirmed the program was raising money for Libraries ROCC and reported that three Little Free Libraries had been submitted, one of which was at the library. Staff hopes to have a total of ten Little Free Libraries, three in the county and seven to auction off to raise funds for Libraries ROCC. Parent groups at each school have been asked to contribute financially so the program can show evidence of public support to the Oregon Community Foundation. Also, Little Free Libraries qualify as a 4-H project.

Ms. Stein asked if the schools could make a gift in kind to Friends of the Seaside Library, the ROCC program's fiscal agent. Director Tucker believed a gift in kind would show public support and will consult with Seaside Library Director. She added that the Autzen Foundation awarded the program \$4,000. The program is still \$15,000 short. At the end of next week, she would meet with the Interim County Manager to report on Libraries ROCC.

Public Comments: There were none.

Items for Next Meeting's Agenda: The agenda for the December 8 meeting will include a discussion about the Heritage Square presentation made at the December 7 City Council meeting and an update on the Libraries ROCC program.

Adjournment: There being no further business, the meeting was adjourned at 6:20 pm.

Respectfully submitted,

Jane Tucker, Director, Astoria Public Library



CITY OF ASTORIA

Founded 1811 • Incorporated 1856

December 14, 2015

MEMORANDUM

TO: MAYOR AND CITY COUNCIL

FROM:  BRETT ESTES, CITY MANAGER

SUBJECT: REQUEST FOR PROPOSALS (RFP) FOR AUDIT SERVICES

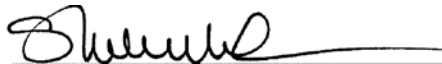
DISCUSSION/ANALYSIS

The City is required to have an annual audit performed by a Certified Public Accountant (CPA). The current contract is in the first of two option year awards for the FY 2014-15 audits currently in process. The Government Finance Officers Association (GFOA) recommends a full-scale competitive process for selection of independent auditors utilizing multiyear contracts. In lieu of awarding the second option year, staff would like to proceed with advertisement for multiyear audit services in order to proactively engage participation of all qualified firms, including the current auditors. With Council approval we will begin advertising for audit services, in both local and regional publications, for a three year contract beginning with the FY 2015-16 audit and two one year renewal options. The FY 2015-16 audit would be scheduled to begin July, 2016. Similar to prior Request for Proposals (RFPs), a point system bid process will be utilized to consider firm expertise, audit approach, scheduling and price. The selection process would consist of separate evaluations of applicants by the Director of Finance and Administrative Service, Budget Analyst and a local CPA. The three evaluations will be averaged to determine the successful applicant. Services will include the City and Astor Urban Renewal District audits as well as applicable A-133 audit of aggregate expenditure of Federal Funds.

Staff proposes to advertise the RFP no later than February 19, 2016 with a completion of the process by April 8, 2016. Results of the process along with recommendations for selection will be brought to Council in late April or early May.

RECOMMENDATION

It is requested that Council authorize approval to proceed with the RFP process for audit services.

By: 
Susan Brooks, Director of Finance
and Administrative Services



December 14, 2015

MEMORANDUM

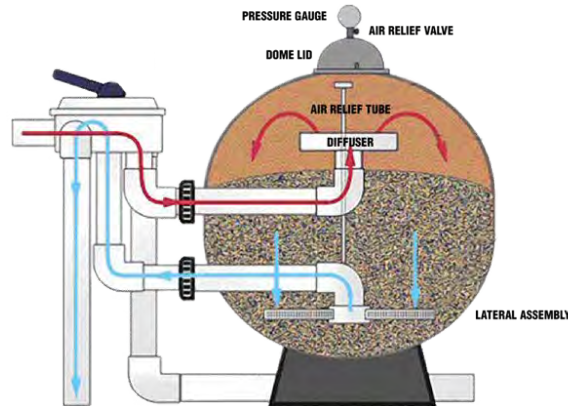
TO: MAYOR AND CITY COUNCIL

FROM:  BRETT ESTES, CITY MANAGER

SUBJECT: AUTHORIZATION TO AWARD CONTRACT - ASTORIA AQUATIC CENTER SAND FILTER MEDIA REPLACEMENT AND LATERAL REPAIR

DISCUSSION/ANALYSIS

Staff has noticed sand in the bottom of the Recreation Pool and in the bottom of the drain in the Kiddie Pool. This is an indication that the laterals in the bottom of the two sand filtration units for the pools are damaged and are allowing filter media (sand) to escape the containment of the filters and enter the pool. Once in the pool, sand can be taken into the pump mechanisms, causing degradation and damage that can result in costly failures of equipment. This also indicates that the filters are not performing to their fullest capacity, resulting in poorer water quality and increases in costs for chemical balancing. Inspection of all the pools' filters has shown that the filter media is very dirty and needs to be replaced in addition to addressing the damaged laterals. The laterals and filter media have not been replaced in the last 7 years and are due for replacement.



To replace the filter media in all pools, it will require an 8 hour sequential closure of pools; each pool will be closed for approximately two hours during the day. The most cost-effective procedure will be to replace all the pools' filter media in a single day. Staff solicited four companies the remove and dispose of the existing media, replace internal filter components, install new media and restart the system. The quotes are as follows:

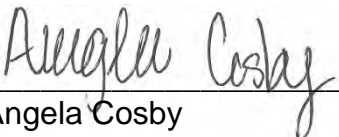
The Pool & Spa House	\$15,353.41
Interlocked	\$17,320.00
Knorr Systems	Declined to bid
Hood to Coast Pool & Spa	Declined to bid

Due to the specialized nature of the work, there are no other companies that can carry out this work in our service area.

In May of 2015, the Astoria City Council allocated \$250,000 of capital improvement funds for the 2015-2106 fiscal year to; replace the lap and recreation/leisure pools plaster, update the HVAC system, replace the shower fixtures, and update the facilities lighting to energy efficient LED fixtures. These projects were completed under budget totaling \$228,570 providing \$21,429 in budgeted funds for Aquatic Center repairs or updates such as the needed repairs to the pools filters.

RECOMMENDATION

It is recommended that City Council award a contract with The Pool and Spa House for the removal and disposal of existing media, replacing internal filter components, installing new media and restarting the systems for the Astoria Aquatic Center Lap Pool, Recreation/Leisure Pool, Kiddie Pool, and Spa.

By: 

Angela Cosby
Director of Parks & Recreation

CITY OF ASTORIA CONTRACT FOR GOODS AND SERVICES
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CONTRACT:

This Contract, made and entered into this ____ day of _____, 2015 by and between the City of Astoria, a municipal corporation of the State of Oregon, hereinafter called "CITY", and The Pool and Spa House, located at 13025 SW Pacific Highway Tigard Oregon 97223, hereinafter called "CONTRACTOR", duly authorized to do business in Oregon.

WITNESSETH

WHEREAS, the CITY requires goods and services which CONTRACTOR is capable of providing, under terms and conditions hereinafter described; and

WHEREAS, CONTRACTOR is able and prepared to provide such goods and services as CITY does hereinafter require, under those terms and conditions set forth; now, therefore,

IN CONSIDERATION of those mutual promises and the terms and conditions set forth hereafter, the parties agree as follows:

1. CONTRACTOR GOODS AND SERVICES

A. CONTRACTOR shall provide goods and services for the City of Astoria, as outlined in its Attachment A, which by this reference is incorporated herein.

B. CONTRACTOR'S obligations are defined solely by this Contract and its attachment and not by any other contract or agreement that may be associated with this project.

C. CONTRACTOR services shall be performed as expeditiously as is consistent with professional skill and the orderly progress of work. All work shall be completed no later than February 1, 2016

2. COMPENSATION

A. The CITY agrees to pay CONTRACTOR a total not to exceed \$15,352 for providing goods and performance of those services provided herein;

B. *The CONTRACTOR will submit a billing upon the completion of work.*

C. CITY certifies that sufficient funds are available and authorized for expenditure to finance costs of this Contract.

3. CONTRACTOR IDENTIFICATION

CONTRACTOR shall furnish to the CITY the CONTRACTOR'S employer identification number, as designated by the Internal Revenue Service, or CONTRACTOR'S Social Security number, as CITY deems applicable.

4. CITY'S REPRESENTATIVE

For purposes hereof, the CITY'S authorized representative will be Jonah Dart-McLean, City of Astoria, 1095 Duane Street, Astoria, Oregon, 97103, (503) 741-1600.

5. CONTRACTOR'S REPRESENTATIVE

For purposes hereof, the CONTRACTOR'S authorized representative will be Howard Stephenson.

6. CITY'S OBLIGATIONS

In order to facilitate the work of the CONTRACTOR as above outlined, the CITY shall furnish to the CONTRACTOR access to all relevant site information which is in the City's possession concerning the project area. In addition, the CITY shall act as liaison for the CONTRACTOR, assisting the CONTRACTOR with making contacts and facilitating meetings, as necessary.

7. CONTRACTOR IS INDEPENDENT CONTRACTOR

A. CONTRACTOR'S services shall be provided under the general supervision of City's project director or his designee, but CONTRACTOR shall be an independent CONTRACTOR for all purposes and shall be entitled to no compensation other than the compensation provided for under Section 2 of this Contract,

B. CONTRACTOR acknowledges that for all purposes related to this contract, CONTRACTOR is and shall be deemed to be an independent CONTRACTOR and not an employee of the CITY, shall not be entitled to benefits of any kind to which an employee of the CITY is entitled and shall be solely responsible for all payments and taxes required by law; and furthermore in the event that CONTRACTOR is found by a court of law or an administrative agency to be an employee of the CITY for any purpose, CITY shall be entitled to offset compensation due, or, to demand repayment of any amounts paid to CONTRACTOR under the terms of the contract, to the full extent of any benefits or other remuneration CONTRACTOR receives (from CITY or third party) as result of said finding and to the full extent of any payments that CITY is required to make (to CONTRACTOR or a third party) as a result of said finding.

C. The undersigned CONTRACTOR hereby represents that no employee of the City of Astoria, or any partnership or corporation in which a City of Astoria employee has an interest, has or will receive any remuneration of any description from the CONTRACTOR, either directly or indirectly, in connection with the letting or performance of this contract, except as specifically declared in writing.

8. CANCELLATION FOR CAUSE

CITY may cancel all or any part of this Contract if CONTRACTOR breaches any of the terms herein or in the event of any of the following: Insolvency of CONTRACTOR; voluntary or involuntary petition in bankruptcy by or against CONTRACTOR; appointment of a receiver or trustee for CONTRACTOR, or any assignment for benefit of creditors of CONTRACTOR. Damages for breach shall be those allowed by Oregon law, reasonable and necessary attorney's fees, and other costs of litigation at trial and upon appeal. CONTRACTOR may likewise cancel all or any part of this contract if CITY breaches any of the terms herein and be therefore entitled to equivalent damages as expressed above for CITY.

9. ACCESS TO RECORDS

CITY shall have access to such books, documents, papers and records of contract as are directly pertinent to this contract for the purposes of making audit, examination, excerpts and transcripts.

10. FORCE MAJEURE

Neither CITY nor CONTRACTOR shall be considered in default because of any delays in completion of responsibilities hereunder due to causes beyond the control and without fault or negligence on the part of the party so disabled provided the party so disabled shall within ten (10) days from the

beginning such delay notify the other party in writing of the causes of delay and its probable extent. Such notification shall not be the basis for a claim for additional compensation.

11. NONWAIVER

The failure of the CITY to insist upon or enforce strict performance by CONTRACTOR of any of the terms of this Contract or to exercise any rights hereunder shall not be construed as a waiver or relinquishment to any extent of its right to assert or rely upon such terms or rights on any future occasion.

12. ATTORNEY'S FEES

In the event suit or action is instituted to enforce any of the terms of this contract, the prevailing party shall be entitled to recover from the other party such sum as the court may adjudge reasonable as attorney's fees at trial or on appeal of such suit or action, in addition to all other sums provided by law.

13. APPLICABLE LAW

The law of the State of Oregon shall govern the validity of this Agreement, its interpretation and performance, and any other claims related to it.

14. CONFLICT BETWEEN TERMS

It is further expressly agreed by and between the parties hereto that should there be any conflict between the terms of this instrument and the proposal of the CONTRACTOR, this instrument shall control and nothing herein shall be considered as an acceptance of the said terms of said proposal conflicting herewith.

15. INDEMNIFICATION

With regard to Comprehensive General Liability, CONTRACTOR agrees to indemnify and hold harmless the City of Astoria, its Officers, and Employees against and from any and all loss, claims, actions, suits, reasonable defense costs, attorney fees and expenses for or on account of injury, bodily or otherwise to, or death of persons, damage to or destruction of property belonging to city, contractor, or others resulting from or arising out of CONTRACTOR'S negligent acts, errors or omissions in services pursuant to this Agreement. This agreement to indemnify applies whether such claims are meritorious or not; provided, however, that if any such liability, settlements, loss, defense costs or expenses result from the concurrent negligence of CONTRACTOR and The City of Astoria this indemnification and agreement to assume defense costs applies only to the extent of the negligence or alleged negligence of the CONTRACTOR.

With regard to Professional Liability, CONTRACTOR agrees to indemnify and hold harmless the City of Astoria, its Officers and Employees from any and all liability, settlements, loss, reasonable defense costs, attorney fees and expenses arising out of CONTRACTOR'S negligent acts, errors or omissions in service provided pursuant to this Agreement; provided, however, that if any such liability, settlements, loss, defense costs or expenses result from the concurrent negligence of CONTRACTOR and the Client, this indemnification and agreement to assume defense costs applies only to the extent of negligence of CONTRACTOR.

With respect to Commercial Liability and Professional Liability, CONTRACTOR reserves the right to approve the choice of counsel.

16. INSURANCE

Prior to starting work hereunder, CONTRACTOR, at CONTRACTOR'S cost, shall secure and continue to carry during the term of this contract, with an insurance company acceptable to CITY, the following insurance:

A. Commercial General Liability. CONTRACTOR shall obtain, at CONTRACTOR'S expense and keep in effect during the term of this Contract, Commercial General Liability Insurance covering bodily injury and property damage with limits of not less than \$1,000,000 per occurrence and the annual aggregate not less than \$2,000,000. Coverage shall include contractors, subcontractors and anyone directly or indirectly employed by either. This insurance will include personal and advertising injury liability, products and completed operations. Coverage may be written in combination with Automobile Liability Insurance (with separate limits). Coverage will be written on an occurrence basis. If written in conjunction with Automobile Liability, the combined single limit per occurrence will not be less than \$1,000,000 for each job site or location. Each annual aggregate limited will not be less than 2,000,000.

B. Automobile Liability. CONTRACTOR shall obtain, at CONTRACTOR'S expense and keep in effect during the term of the resulting contract, Commercial Business Automobile Liability Insurance covering all owned, non-owned, or hired vehicles. This coverage may be written in combination with the Commercial General Liability Insurance (with separate limits). Combined single limit per occurrence will not be less than \$1,000,000.

C. Additional Insured. The liability insurance coverage shall include CITY and its officers and employees as Additional Insured but only with respect to Contractor's activities to be performed under this Contract. Coverage will be primary and non-contributory with any other insurance and self-insurance. Prior to starting work under this Contract, CONTRACTOR shall furnish a certificate to CITY from each insurance company providing insurance showing that the CITY is an additional insured, the required coverage is in force, stating policy numbers, dates of expiration and limits of liability, and further stating that such coverage is primary and not contributory.

D. Notice of Cancellation or Change. There will be no cancellation, material change, potential exhaustion of aggregate limits or non-renewal of insurance coverage(s) without thirty (30) days written notice from CONTRACTOR or its insurer(s) to CITY. Any failure to comply with the reporting provisions of this clause will constitute a material breach of this Contract and will be grounds for immediate termination of this Agreement.

17. CITY'S BUSINESS LICENSE

Prior to beginning work, the CONTRACTOR shall have a current City of Astoria business license (occupational tax). Before permitting a subcontractor to begin work, CONTRACTOR shall verify that subcontractor has a current City of Astoria business license.

18. WORKMEN'S COMPENSATION

The CONTRACTOR, its subcontractors, if any, and all employers working under this Agreement are either subject employers under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage for all their subject workers, or are employers that are exempt under ORS 656.126.

19. LABORERS AND MATERIALMEN, CONTRIBUTIONS TO INDUSTRIAL ACCIDENT FUND, LIENS AND WITHHOLDING TAXES

Contractor shall make payment promptly, as due, to all persons supplying CONTRACTOR labor or material for the prosecution of the work provided for this contract.

Contractor shall pay all contributions or amounts due the Industrial Accident Fund from CONTRACTOR or any subcontractor incurred in the performance of the contract.

Contractor shall not permit any lien or claim to be filed or prosecuted against the state, county, school district, municipality, municipal corporation or subdivision thereof, on account of any labor or material furnished.

Contractor shall pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

20. NONDISCRIMINATION

It is the policy of the City of Astoria that no person shall be denied the benefits of or be subject to unlawful discrimination in any City program, service, or activity on the grounds of age, disability, race, religion, color, national origin, sex, sexual orientation, gender identity/expression. Contractor, its employees, agents and subcontractors shall comply with this policy.

21. PAYMENT OF MEDICAL CARE

Contractor shall promptly, as due, make payment to any person, copartnership, association or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury to the employees of such CONTRACTOR, of all sums which the CONTRACTOR agrees to pay for such services and all moneys and sums which the CONTRACTOR collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service.

22. OVERTIME

Employees shall be paid for overtime work performed under this contract in accordance with ORS 653.010 to 653.261 and the Fair Labor Standards Act of 1938 (29 U.S.C. sections 201 to 209).

23. STANDARD OF CARE

The standard of care applicable to contractor's services will be the degree of skill and diligence normally employed by contractors performing the same or similar services at the time CONTRACTOR'S services are performed. CONTRACTOR will re-perform any services not meeting this standard without additional compensation.

24. NO THIRD PARTY BENEFICIARIES

This contract gives no rights or benefits to anyone other than the CITY and CONTRACTOR and has no third party beneficiaries.

25. SEVERABILITY AND SURVIVAL

If any of the provisions contained in this Agreement are held illegal, invalid or unenforceable, the enforceability of the remaining provisions shall not be impaired thereby. Limitations of liability shall survive termination of this Agreement for any cause.

26. COMPLETE CONTRACT

This Contract and its referenced attachments constitute the complete contract between CITY and CONTRACTOR and supersedes all prior written or oral discussions or agreements. CONTRACTOR services are defined solely by this Contract and its attachments and not by any other contract or agreement that may be associated with this Contract.

IN WITNESS WHEREOF, the parties hereto have executed this agreement the day and year first written above.

Approved as to form:

CITY OF ASTORIA, a municipal
corporation of the State of Oregon

City Attorney

BY: _____
Mayor Date

BY: _____
City Manager Date

BY: _____
Contractor Date



Remit To:

P.O. Box 23788
Portland, OR 97281-3788
CCB 147444

Quote

Quote ID: 494119
Customer ID: 5566
Employee ID: hjs
Quote Expires: 3/13/2016

City of Astoria
1095 Duane St
Astoria, OR 97103

Location:
Astoria Aquatic Center
1997 Marine Dr
Astoria, OR 97103
Home (503) 325-7027

Qty	Item	Unit Price	Total
1	COMMERCIAL SAND FILTER MEDIA & LATERALS REPLACEMENT - REC POOL	\$7,491.7601	\$7,491.75
1	COMMERCIAL SAND FILTER MEDIA & LATERALS REPLACEMENT - LAP POOL	\$6,145.2193	\$6,145.21
1	SAND FILTER MEDIA & LATERAL ASSEMBLY REPLACEMENT - WADER POOL	\$1,021.4363	\$1,021.45
1	FILTER SAND REPLACEMENT - SPA	\$694.9999	\$695.00

COMMERCIAL FILTER(S) MEDIA REPLACEMENT - INSTALLATION OF VITRO CLEAN GREEN RECYCLED GLASS MEDIA & PEA GRAVEL INSTALLATION

REPLACEMENT OF FILTER LATERAL ASSEMBLIES - MANWAY GASKETS (SPA SAND FILTER LATERALS NOT INCLUDED - REPLACEMENT TO BE DETERMINED UPON REMOVAL OF SAND FOR INSPECTION)

- * RECREATION POOL - ASTRAL 33.8 SQ FT / 06634
- * LAP POOL - ASTRAL 27.34 SQ FT / 06633
- * WADER POOL - STA-RITE HRPB 30
- * SPA - PENTAIR TRITON TR-140C

VACUUM TRUCK FILTER MEDIA SITE REMOVAL AND DISPOSAL

- Vitro Clean Recycled Glass Media & Pea Gravel
- Filter Media Removal and Off Site Disposal - Vacuum Truck
- Lateral Assemblies (Recreation, Lap & Wading Pool Filters)
- Manway Gasket - Dome Closure O-Ring - Tank Body O-Ring
- Miscellaneous Parts and Materials
- Labor for Sand Removal - Site Disposal and Installation of New Media

NOTE: Once the existing filter media is removed our technicians will be able to visually inspect the internal filter assembly. If upon inspection filter damage is present in excess of the above quoted items replacement parts will be billed in addition to this quote. Written authorization for parts and labor exceeding this quote shall be obtained prior to order placement.

PLEASE FAX OR EMAIL SIGNED APPROVAL TO (503) 620-5909 or service@thepoolandspahouse.com

Site Inspected By: John Achtel

Quote Prepared By: Howard Stephenson

P. O. Box 23788, Portland, OR 972813788, (503) 906-8100, service@thepoolandspahouse.com

Sub Total	\$15,353.41
Taxes	\$0.00
Total	\$15,353.41

ACCEPTANCE: The above prices and specifications are satisfactory and are hereby accepted.

Signature: _____

Date: _____ Deposit: _____

All work to be completed in a workmanlike manner in accordance with standard practices.
Any alterations or deviations from above specifications involving extra costs will be executed only upon written orders and will become an extra charge over and above this estimate.
All agreements contingent upon strikes, accidents or delays beyond our control.
Our workers are fully covered by Workmen's Compensation Insurance.
Owner to carry fire, flood and other necessary insurance.



CITY OF ASTORIA
Founded 1811 • Incorporated 1856

Date: December 10, 2015

MEMORANDUM

TO: MAYOR AND CITY COUNCIL

FROM:  BRETT ESTES, CITY MANAGER

SUBJECT: **2015 STREET END BRIDGE REPAIR PROJECT - CONSTRUCTION
CONTRACT AWARD**

DISCUSSION/ANALYSIS

The City of Astoria has six timber street end structures at the north ends of 6th, 7th, 8th, 9th, 10th and 11th Streets that are inspected annually by the Oregon Department of Transportation (ODOT) Bridge Department. ODOT inspects the structures and makes recommendations for repairs that will permit the structures to safely remain open. Without the identified repairs, the structures could be recommended for closure to vehicular traffic by ODOT inspectors. ODOT has conducted inspections for 2015 and has made recommendations for repairs on the 6th, 9th, 10th and 11th Street structures.

Most of the structures are currently limited to a 3 ton vehicle load due to their poor condition. The repairs recommended to take place are targeting bridge load limits of 3 tons. The repairs are designed to be limited to only what has been deemed absolutely essential in order to minimize the expenditure of funds prior to the upcoming planned replacement of the structures.

The City's compliance with the ODOT recommendations has aided the City in obtaining a 8.2 million dollar grant from Federal Bridge replacement funds through the State Transportation Improvement (STIP) program. This is the same program that funded at a 90% level the replacement of the Franklin Avenue Bridge, and the replacement of the Irving Avenue Bridge. It is anticipated that construction of the replacement project would commence during the fall of 2017. The replacement project is currently being designed.

The most recent structure inspections have identified needed repair work at 6th, 9th, 10th and 11th Streets. Staff has solicited quotes for the repair work, and has received two quotes as follows:

Contractor	Total Quote
Bergerson Construction	\$36,706.00
Columbia Dockworks	\$22,505.00

Staff is recommending that Columbia Dockworks be awarded the contract.

Staff is also recommending a project contingency of \$3,495 for additional work that may be required once repairs are under way. Therefore funding for the project is estimated at approximately \$26,000 (as budgeted in the 2015/2106 fiscal year budget) and is proposed to come from the following sources:


- Promote Astoria Fund \$13,000
- Streets Division, Public Works Fund \$13,000

City Attorney Henningsgaard has reviewed and approved the contract as to form.

Staff will contact affected businesses and the Trolley Association prior to start of construction. The repair work is expected to take approximately 74 days to complete.

RECOMMENDATION

It is recommended that the City Council authorize the award of a contract to Columbia Dockworks in the amount of \$22,505.00 for the 2015 Street End Bridge Repair Project.

Submitted By 
Ken P. Cook, Public Works Director

Prepared By JEFF HARRINGTON 
Jeff Harrington, City Engineer

AGREEMENT

1.00 - GENERAL

THIS AGREEMENT, made and entered into this ____ day of _____, 2015, by and between Columbia Dockworks, hereinafter called "CONTRACTOR" and the City of Astoria, a municipal corporation, hereinafter called "CITY."

WITNESSETH:

That the said CONTRACTOR and the said CITY, for the consideration hereinafter named agree as follows:

2.00 - DESCRIPTION OF WORK

The CONTRACTOR agrees to perform the work of:

2015 STREET END BRIDGE REPAIR PROJECT

and do all things required of it as per his Bid, all in accordance with the described Bid, a copy of which is hereto attached and made a part of this Contract.

3.00 - COMPLETION OF CONTRACT

The CONTRACTOR agrees that the Work under this Contract shall be completed by the following dates:

- Substantial Completion – [60 days from Notice to Proceed]
- Final Completion – [74 days from Notice to Proceed]

If said CONTRACTOR has not fully completed this Contract within the time set or any extension thereof, it shall pay liquidated damages in accordance with Section 00180.85 of the General Conditions.

4.00 - CONTRACT PRICE

The Contract Price for this project is \$22,505.00. Payment will be made in accordance with ORS 279C.560 including progress payments at the end of each month. Retainage will be withheld in accordance with ORS 279C.550 - .565.

5.00 - CONTRACT DOCUMENTS

The CONTRACTOR and the CITY agree that the plans, specifications (including the ODOT/APWA 2015 Oregon Standard Specifications for Construction and Contract Documents defined in Section 00110.20 of the Contract Documents General Conditions and all modifications thereto) and bid are, by this reference, incorporated into this Contract and are fully a part of this contract.

6.00 - NONDISCRIMINATION

It is the policy of the CITY that no person shall be denied the benefits of or be subject to unlawful discrimination in any CITY program, service, or activity on the grounds of age, disability, race, religion, color, national origin, sex, sexual orientation, or gender identity/expression. CONTRACTOR, its employees, agents and subcontractors shall comply with this policy.

7.00 - CONTRACTOR IS INDEPENDENT CONTRACTOR

A. CONTRACTOR acknowledges that for all purposes related to this Contract, CONTRACTOR is and shall be deemed to be an independent CONTRACTOR and not an employee of CITY, shall not be entitled to benefits of any kind to which an employee of the CITY is entitled and shall be solely responsible for all payments and taxes required by law; and furthermore in the event that CONTRACTOR is found by a court of law or an administrative agency to be an employee of the CITY for any purpose, CITY shall be entitled to repayment of any amounts from CONTRACTOR under the terms of the Contract; to the full extent of any benefits or other remuneration CONTRACTOR receives (from CITY or third party) as result of said finding and to the full extent of any payments that CITY is required to make (to CONTRACTOR or to a third party) as a result of said finding.

B. The undersigned CONTRACTOR hereby represents that no employee of the CITY of Astoria, or any partnership or corporation in which a CITY employee has an interest, has or will receive any remuneration of any description from the CONTRACTOR, either directly or indirectly, in connection with the letting or performance of this Contract, except as specifically declared in writing.

8.00 - SUBCONTRACTS - RELATIONS WITH SUBCONTRACTORS, ASSIGNMENTS AND DELEGATION

A. Assignment or Transfer Restricted. The CONTRACTOR shall not assign, sell, dispose of, or transfer rights nor delegate duties under the contract, either in whole or in part, without the CITY's prior written consent. Unless otherwise agreed by the CITY in writing, such consent shall not relieve the CONTRACTOR of any obligations under the contract. Any assignee or transferee shall be considered the agent of the CONTRACTOR and be bound to abide by all provisions the contract. If the CITY consents in writing to an assignment, sale, disposal or transfer of the CONTRACTOR's rights or delegation of the CONTRACTOR's duties, the CONTRACTOR and its surety, if any, shall

remain liable to the CITY for complete performance of the contract as if no such assignment, sale, disposal, transfer or delegation had occurred unless the CITY otherwise agrees in writing.

B. CONTRACTOR may not discriminate against a subcontractor in awarding a subcontract because the subcontractor is a minority, women or emerging small business enterprise certified under ORS 200.055 or a business enterprise that is owned or controlled by or that employs a disabled veteran, as defined in ORS 408.225. If **CONTRACTOR** violates this prohibition, the CITY will regard the violation as a breach of contract and may either terminate the contract or exercise any other remedy for breach of contract.

9.00 - NONWAIVER

The failure of the CITY to insist upon or enforce strict performance by **CONTRACTOR** of any of the terms of this Contract or to exercise any rights hereunder shall not be construed as a waiver or relinquishment to any extent of its right to assert or rely upon such terms or rights on any future occasion.

10.00 - LABORERS AND MATERIALMEN, CONTRIBUTIONS TO INDUSTRIAL ACCIDENT FUND, LIENS AND WITHHOLDING TAXES

CONTRACTOR shall make payment promptly, as due, to all persons supplying **CONTRACTOR** labor or material for the prosecution of the work provided for this contract.

CONTRACTOR shall pay all contributions or amounts due the Industrial Accident Fund from **CONTRACTOR** or any subcontractor incurred in the performance of the contract.

CONTRACTOR shall not permit any lien or claim to be filed or prosecuted against the CITY on account of any labor or material furnished.

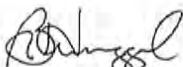
CONTRACTOR shall pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

11.00 - CERTIFICATION OF COMPLIANCE WITH TAX LAWS

As required by ORS 305.385(6), **CONTRACTOR** certifies under penalty of perjury that the **CONTRACTOR**, to the best of **CONTRACTOR's** knowledge, is not in violation of any of the tax laws described in ORS 305.380(4).

12.00 - CITY OCCUPATION TAX

Prior to starting work, **CONTRACTOR** shall pay the CITY occupation tax and provide the Public Works Department with a copy of occupation tax receipt. **CONTRACTOR** shall, likewise, require all subcontractors to pay the CITY occupation tax and provide a copy of the receipt to the Public Works Department prior to commencement of work.


City Attorney

FORM:
201501144546159324e7440354e773d3d
DN:
cnc.com.apple.idm.apple.prd.49317566476d
4a3867254144546059324e7440354e773d3d

CITY OF ASTORIA, a municipal of the
State of Oregon

BY: _____
Mayor Date

ATTEST:

Contractor Date

City Manager Date

- The Contractor must be prequalified with ODOT and be experienced in marine timber construction.
- The completed work will be inspected by the ODOT Bridge Inspection Crew for completeness and compliance with their recommendations.

Location	Lump Sum Quote
6 th Street	\$ 8,265
9 th Street	\$ 6,055
10 th Street	\$ 1,955
11 th Street	\$ 6,230
Total Quote	\$ 22,505

Estimated completion date if issued notice to proceed by December 03, 2015: December 23

A draft of the City of Astoria construction contract is attached to this RFQ. Contractor must review this contract to be certain of all requirements.


Quotes must be submitted no later than 2:00 pm on Friday, November 20, 2015. City will consider qualification, price and completion date in awarding work. Please send e-mail, fax or sealed quotes to:

Steve Ruggles
 Engineering Technician
 City of Astoria
 1095 Duane Street
 Astoria, OR 97103
sruggles@astoria.or.us
 Office: 503-338-5173
 Cell: 503-791-2934
 Fax: 503-338-6538

CITY OF ASTORIA
 NOV 20 2015
 BUILDING CODES

11/20/15
 DATE SIGNED

Columbia Dockworks Inc.
 OFFEROR

 Tim Peitsch President
 SIGNED (NAME AND TITLE)

9266A Pearson Rd
 MAILING ADDRESS

Astoria OR 97103
 CITY, STATE, AND ZIP CODE

PHONE NUMBER: 503 741 6383

CORPORATION: YES NO

IF NO, TAX ID NUMBER OR SOCIAL SECURITY NUMBER: 543 23 2278

CONTRACTOR BOARD NO. 200641

1:00 pm

SR




CITY OF ASTORIA
Founded 1811 • Incorporated 1856

Date: December 15, 2015

MEMORANDUM

TO: ASTORIA CITY COUNCIL

FROM:  BRETT ESTES, CITY MANAGER

SUBJECT: HERITAGE SQUARE EPA GRANT - AMEC CONTRACT AMENDMENT

DISCUSSION/ANALYSIS

The City of Astoria was awarded a United States Environmental Protection Agency (EPA) multi-purpose brownfield pilot grant in 2012 for assessment and cleanup of the Heritage Square site. The 1.37-acre site is located in a primarily commercial area of downtown Astoria. The site occupies an entire City block with the exception of a 0.11-acre portion in the southwest quarter of the block, which is owned and occupied by the American Legion.

At the December 7th Astoria Development Commission (ADC) meeting, the ADC approved the expenditure of \$110,000 for the cleanup of the Heritage Square material (including the original \$40,000 match and an additional \$70,000). At the meeting, staff provided an update on the need for additional funding to complete the cleanup of the site. Staff also notified the ADC that a request will be coming before the City Council at the December 21st Council meeting for authorization to enter into a contract amendment with AMEC for the additional work.

The remaining funds within the grant and the additional funds identified in the contract amendment will be used to complete the EPA grant scope of work including Cleanup Implementation, Confirmation Sampling and a Final Cleanup Report.

Funding from the following sources to complete the cleanup project has been allocated:

- Original \$40,000 match from the Astor East Urban Renewal District
- Additional \$70,000 from the Astor East Urban Renewal District
- \$39,842 from the Capital Improvement Fund which includes EPA Grant reimbursement funds not allocated to the consultant
- \$128,482 in EPA grant funds not yet distributed to the City

At the December 7th meeting it was also noted that a Business Oregon Brownfields Grant may be awarded in the amount of \$60,000. This would be used to pay for a required groundwater monitoring well and to offset the funding sources noted above. Unused Business Oregon Grant funds remaining after the monitoring well would offset the Capital Improvement Fund allocation.

City Attorney Henningsgaard has reviewed and approved the attached contract amendment as to form.

RECOMMENDATION

It is recommended that City Council execute a contract amendment with AMEC Foster Wheeler a total not-to-exceed amount of \$142,325, for Additional Site Cleanup Work for the Heritage Square EPA Grant Cleanup Project.

Submitted By 
Kevin A Cronin, CD Director

Prepared By 
Jeff Harrington, City Engineer

CONTRACT AMENDMENT NO. 1

To

PROFESSIONAL SERVICES CONTRACT

Between

CITY OF ASTORIA and AMEC Environment & Infrastructure

The parties hereby agree to amend the contract for Professional Services for environmental engineering services, dated December ___, 2015, per Proposal / Scope of Work attached. Therefore, Section 2.A on Page 1 is hereby deleted and replaced to read as follows:

2. COMPENSATION

A. The CITY agrees to pay CONSULTANT a total not to exceed \$142,325.00 for performance of those services provided in Attachment A, Proposal / Scope of Work dated December 9, 2015.

Except as hereby amended, all terms and provisions of the original agreement shall remain in full force and effect.

CITY OF ASTORIA

CONSULTANT

Brett Estes, City Manager

Amec Foster Wheeler
Environment & Infrastructure, Inc.

APPROVED AS TO FORM:



Digitally signed by
com.apple.idms.appleid.prd.49317566476d
4a3867754144546f59324e744d354e773d3d
DN:
cn=com.apple.idms.appleid.prd.493175664
76d4a3867754144546f59324e744d354e773
d3d
Date: 2015.12.15 11:37:42 -08'00'

Blair Henningsgaard, City Attorney

December 9, 2015
Proposal No. 15 247

City of Astoria
Public Works Engineering Department
1095 Duane Street
Astoria, Oregon 97103

Attention: Mr. Jeff Harrington, PE

Subject: Proposal
Heritage Square Brownfield Cleanup
1153 Duane Street, Astoria, Oregon



Dear Mr. Harrington:

In follow-up to our November 17 and November 30, 2015 telephone conversations, Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) is pleased to present this work scope and estimated cost to complete the soil cleanup at the Heritage Square site (Site). The project is currently receiving funding via an Environmental Protection Agency (EPA) grant (#00J67901). Regulatory oversight is by both EPA and the Oregon Department of Environmental Quality (DEQ) Voluntary Cleanup Program (VCP). Current EPA grant funding is not sufficient to cover the preferred cleanup remedy, specified as Alternative 3c in the Analysis of Brownfield Cleanup Alternatives (ABCA). The funding herein requested is to supplement the remaining grant funds, in essence providing the funding to get from Alternative 3a (Safeway soil stockpiles only) which can be covered by the EPA grant funding, to the preferred Alternative 3c (Safeway soil stockpiles plus impacted soils beneath the raised parking deck).

SCOPE OF WORK

The scope of work will be to complete Section 1.3.3 (Cleanup Implementation), Section 1.3.4 (Confirmation Sampling), and Section 1.3.5 (Final Cleanup Report) of the existing scope of work, such that Alternative 3c can be implemented rather than Alternative 3a. Work would continue to be done according to the EPA grant requirements for the soil cleanup.

Installation and sampling of a monitoring well north of the raised parking deck in the Duane Street shoulder or sidewalk area (defined as Alternative 6 for groundwater), is not included in this scope.

Amec Foster Wheeler Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon
USA 97224
Tel+1 (503) 639-3400
Fax+1 (503) 620-7892
www.amecfw.com

It is our understanding that the City of Astoria plans to pursue separate funding (estimated at \$35,000) for completion of the DEQ-required groundwater work.

ESTIMATE COST

Based upon our existing remaining budget balance of approximately \$96,000.00, the estimated additional funding required to complete the work scope is \$142,325.00, which includes a 5% contingency for the subcontractor. Costs will be billed on a time and materials basis according to our current contract and rate schedule. Amec Foster Wheeler will invoice costs through the balance of available EPA funding separate from costs outside of the EPA funding. The intent is to avoid complicating the City's EPA reporting requirements.

LIMITATIONS

The costs provided are estimates based on subcontractor bids, and past incurred costs (including DEQ costs) for the project to date. It should be recognized that not all Site conditions are known, and while Amec Foster Wheeler will work to minimize subcontractor change orders, some subcontractor change orders may occur and subcontractor costs could vary as a more complete understanding of Site conditions occurs throughout the cleanup process. Amec Foster Wheeler also has no control over weather conditions or other factors (parking deck stability) which may cause delays or complications. Amec Foster Wheeler has no control over DEQ oversight costs. Lastly, undocumented contamination may be present beyond the existing area of investigation, which may require capping of those soils at a later date.

Proposal
Heritage Square Brownfield Cleanup

CLOSING

Amec Foster Wheeler proposes to perform the services set forth in this proposal subject to and in accordance with the terms of our existing City of Astoria Contract for Professional Services. It is our understanding that the City will modify our existing contract in an amount of \$142,325.00, of which only a portion will be covered by the EPA grant 00J67901, and that the balance of the \$142,325.00 will not be subject to the terms and conditions of the grant. If the City of Astoria is in agreement with this proposal, please provide a written notice to proceed followed by the contract documents.

We appreciate the opportunity to work for you. Please feel free to contact the undersigned at (503) 639-3400 if you have any questions.

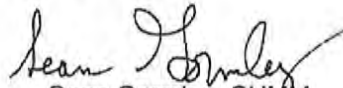
Sincerely,

**Amec Foster Wheeler
Environment & Infrastructure, Inc.**



John L. Kuiper, R.G.
Principal Geologist

Reviewed by:



Sean Gormley, CHMM
Principal Chemist, Office Manager

APPROVED BY:

Signature

Date: _____

Name

Title



CITY OF ASTORIA

Founded 1811 • Incorporated 1856

December 14, 2015

MEMORANDUM

TO: MAYOR AND CITY COUNCIL

FROM:  BRETT ESTES, CITY MANAGER

SUBJECT: AUTHORIZATION TO ENTER INTO A LEASE AGREEMENT WITH THE
ASTORIA SCHOOL DISTRICT

DISCUSSION/ANALYSIS

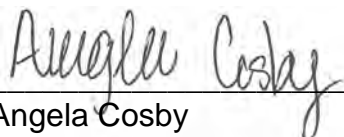
In January, 2011 the City of Astoria Parks and Recreation Department began leasing space at Captain Robert Gray School from the Astoria School District to operate Port of Play and the Lil' Sprouts Academy. The leased space included three classrooms, and shared use of the gym, playground, and cafeteria for an annual rent \$12,250 which expired in June of 2014. Due to this expired lease, the Astoria School District and the City of Astoria Parks and Recreation Department have been working to update the lease to pay the facilities rent for the 2015 calendar year.

Since this original lease, Lil' Sprouts Academy has experienced significant growth and the Astoria School District has willingly adjusted their programming to allow Lil' Sprouts Academy two additional classrooms. These five classrooms now: serve 50-70 children daily, host an enrollment of over 100 children, and has a long waiting list of eager parents. The proposed lease includes 5 classrooms, and shared use of the gym, playground, and cafeteria for an annual rent of \$12,000.

The Astoria School District and the City of Astoria Parks and Recreation Department have a strong history of partnering to serve the community. Currently the Astoria School District and the City of Astoria Parks and Recreation Department exchange the in-kind resources of gym space for field use, and the City charges for the services at the Aquatic Center for the High School Swim Team and the School District charges for leased space at Captain Robert Gray School for the Parks and Recreation Departments Port of Play and Little Sprouts programming.

RECOMMENDATION

It is recommended that City Council approve the lease agreement with the Astoria School District to authorize the payment of \$12,000 for the 2015 calendar year.

By: 
Angela Cosby
Director of Parks & Recreation

RENTAL AGREEMENT
BETWEEN
CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT)
AND
ASTORIA SCHOOL ASTORIA SCHOOL DISTRICT

This Agreement is entered into this 1st day of January 2016 between Astoria School District 1C. and City of Astoria (Parks and Recreation Department)

CURCUMSTANCES

The City of Astoria (Parks and Recreation Department) and the Astoria School District, in consideration of the promises of each other, agree to a rental beginning January 1, 2016 and ending December 31, 2018 on the following terms.

SECTION 1: The Astoria (Parks and Recreation Department) agrees:

1. To pay the ASTORIA SCHOOL DISTRICT \$12,000 a year for lease of space to operate the CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT) on site at Captain Robert Gray School. Astoria School District will bill the City of Astoria in August of each year of the contract. Lease of space includes:
 - a. The use of four classrooms to operate a child care facility. One classroom may be shared with other entities as worked out between Astoria School District and the Parks and Recreation Department.
 - b. The use, the gym, the playground, the cafeteria, and other joint use areas for staff and children as scheduled and determined with the ASTORIA SCHOOL DISTRICT and with input from other organizations within the facility.
2. To obey all applicable laws and regulations.
3. To return the premises in as good or better condition as concerned to cleanliness and good repair. Any loss, breakage, or damage of ASTORIA SCHOOL DISTRICT property caused by the CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT) will be paid by the CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT).
4. To insure the CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT) property and equipment as it sees fit.

5. To provide a copy of liability insurance covering staff and children to the ASTORIA SCHOOL DISTRICT.
6. To pay for maintenance and use of telephone lines into the rental space.

SECTION II: The ASTORIA SCHOOL DISTRICT agrees:

1. To provide space for the CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT) to operate programs on site at Captain Robert Gray School commencing January 1, 2016 and continuing through December 31, 2018 from 7:00 a.m. to 6:00 p.m., Monday through Friday. The space provided includes:
 - a. The use of four classrooms to operate a child care by the CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT).
 - b. The use, the gym, the playground, the cafeteria, and other joint use areas for staff and children as scheduled and determined with the CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT) and with input from other organizations within the facility.
 - c. Access to Gray Elementary on weekends if needed.
2. To provide use of bathrooms.
3. To provide heat, electricity and water.
4. To provide daily janitorial services to bathroom in the hallway on the second floor next to the child care facility.
5. To allow access by CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT) staff to the rented classroom facilities for scheduled after hour program functions, if needed.

SECTION III: The CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT) and ASTORIA SCHOOL DISTRICT agree:

1. The CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT) and ASTORIA SCHOOL DISTRICT shall not discriminate on any bases related to individual's race, color, religion, sex, national origin, marital status, age or disability.
2. The CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT) and ASTORIA SCHOOL DISTRICT, as sole parties to this Agreement, to the extent permitted by law and the Oregon Constitution, agree to indemnify, save

and hold the other, its officers, agents and employees harmless from and (subject to ORS Chapter 180) defend each of them against any and all claims, suits, actions, losses, damages, liabilities, cost and expenses of any nature whatsoever resulting from, arising out of or relating to the acts or omissions of its own officers, employees, subcontractors or agents in regard to this rental agreement. Nothing in this paragraph shall be deemed to increase the liability of either party beyond that specified as the limit of liability for a public body, its officers, employees or agents under the Oregon Tort Claims Act.

3. During the term of the lease, the ASTORIA CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT) shall carry public liability and property damage insurance in a responsible company with limits of not less than \$1,000,000. Such insurance shall cover all risks arising directly or indirectly out of the CITY OF ASTORIA (PARKS AND RECREATION DEPARTMENT) activities on or any condition of the leased premises, and shall protect ASTORIA SCHOOL DISTRICT against claims of third persons. Certificates evidencing such insurance and bearing endorsements requiring ten (10) days written notice to the ASTORIA SCHOOL DISTRICT prior to any change or cancellation shall be furnished to the ASTORIA SCHOOL DISTRICT within thirty (30) days of execution of this Agreement.
4. This Agreement may be terminated any time during the length of the contract by mutual consent, or by either party upon 120 days' notice. No such termination shall prejudice any right or obligation of either party already accrued prior to the effective date of termination.
5. This Agreement shall be governed by and construed in accordance with the laws of the State of Oregon.
6. This Agreement constitutes the entire Agreement between the parties. No waiver, consent, modification or change of terms or provisions of this Agreement shall bind either party unless in writing and signed by both parties. Such waiver, consent, modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements or representations, oral or written, not specified herein regarding this Agreement.
7. Each party, by the signature of its authorized representative, hereby acknowledges that it has read this Agreement, understands it, and agrees to be bound by its terms and conditions. Each person signing this Agreement represents and warrants to have the authority necessary to execute this Agreement.

CITY OF ASTORIA
(PARKS AND RECREATION DEPARTMENT)

Tax ID Number:

Astoria School District

Craig Hoppes
Superintendent

785 Alameda Ave.
Astoria, OR 97103

Tax ID Number: 93-6000297

Approved as to form:



CITY OF ASTORIA
Founded 1811 • Incorporated 1856

December 14, 2015

MEMORANDUM

TO: MAYOR AND CITY COUNCIL

FROM: BRETT ESTES, CITY MANAGER

SUBJECT: **RESOLUTION TO ADOPT PUBLIC WORKS DEPARTMENT, ENGINEERING DESIGN STANDARDS**

DISCUSSION/ANALYSIS

The Public Works Department, with assistance from the firm Plengineering, recently finalized the Engineering Design Standards. This process includes incorporation of previous design standard documents, formalizing current practice and precedence, and implementing input from other City Departments and a community outreach effort. Community outreach included distribution of the draft document to; Clatsop County, Sunset Empire Transportation District, local Cities, local contractors, and design consultants that have recently worked in Astoria.

The intent of the document is to provide a consistent approach for design professionals to use when designing and implementing public infrastructure improvements or related facilities. Completion and adoption of these standards is anticipated to increase efficiency and reduce Staff time associated with development review, and reduce the overall coordination effort between design consultants and Staff. It will also provide more clearly delineated guidance for developers in the planning and scoping phase of perspective projects. Assistant City Engineer Nathan Crater will provide Council with a brief presentation and will answer questions raised.

RECOMMENDATION

It is recommended that City Council approve the resolution adopting the Public Works Department Engineering Design Standards, and designate authority for interpretation or updates to the City Engineer.

Submitted By

Ken P. Cook, Public Works Director

Prepared By

Nathan Crater, Assistant City Engineer

RESOLUTION NO. 15-_____

A RESOLUTION OF THE COMMON COUNCIL OF THE CITY OF ASTORIA
FOR THE PURPOSE OF ADOPTING THE PUBLIC WORKS DEPARTMENT,
ENGINEERING DESIGN STANDARDS

WHEREAS, the Public Works Department regulates the design and implementation of public infrastructure projects and related facilities; and

WHEREAS, to facilitate these projects the Public Works Department has developed Engineering Design Standards to provide a consistent approach for designing public improvements and related facilities; and

WHEREAS, adopting these Engineering Design Standards will provide design professionals guidance for design and implementation of public infrastructure projects and related facilities, and will provide the Public Works Department a uniform method for reviewing and approving these projects.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF ASTORIA, THAT

Section 1. The Common Council of the City of Astoria hereby adopts the Public Works Department, Engineering Design Standards.

Section 2. The Common council of the City of Astoria hereby designates authority for interpretation and updates to the Public Works Department, Engineering Design Standards to the City Engineer or authorized designee.

Section 3. Effective Date. This Resolution is effective on the date of its passage.

ADOPTED BY THE CITY COUNCIL THIS _____ DAY OF DECEMBER, 2015.

APPROVED BY THE MAYOR THIS _____ DAY OF DECEMBER, 2015.

Mayor

ATTEST:

City Manager

ROLL CALL ON ADOPTION	YEA	NAY	ABSENT
Councilor Nemlowill			
Herzig			
Price			
Warr			
Mayor LaMear			



City of Astoria
Public Works Department

Engineering Design Standards
December 2015

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1 INTRODUCTION

The following Design Standards were developed by the City of Astoria's Public Works Department and established by City Resolution No. _____. This document is intended to facilitate the planning, design and implementation of public infrastructure projects and related facilities. The Design Standards are primarily intended for use by a Developer's Design Engineer. However, they will also be utilized by Design Consultants under contract with the City for preparation of public infrastructure designs.

The Design Standards cannot provide for all situations. They are intended to establish a consistent policy for implementing design of public improvements and related facilities, but do not substitute for competent work by design professionals. Engineers are expected to provide expertise and judgement from their respective disciplines. In addition to these standards, design consultants and engineers must comply with appropriate state and federal codes, safety regulations, environmental requirements and other applicable regulations. Note that this document refers to many other potentially applicable requirements, but references herein do not necessarily comprise a comprehensive list.

Design professionals are encouraged to read this document prior to the project planning phase so that potential compliance issues may be identified and resolved early. The City's unique terrain, geology, climate and historic context make project development to modern standards a challenging endeavor. The City recognizes these challenges and encourages designers to actively collaborate with the Public Works Department as new projects are planned, designed and constructed.

The City Engineer or authorized designee has authority to periodically update and interpret the provisions of this document. Future modifications are intended to promote uniformity in the application of the Design Standards.

These standards are not intended to unreasonably limit any innovative or creative effort which could result in better quality, cost savings, or both. The City Engineer will evaluate any proposed departure from these standards based on the design exception process detailed in Chapter 2.

Other permits and standards may be applicable to specific projects. The design professional bears the responsibility to obtain necessary permits and to comply with all applicable standards related to specific projects.

2 GENERAL REQUIREMENTS

This chapter provides procedural requirements for public works projects, from design through construction. Requirements for preparation, submittal and review of required documents are included, along with administrative procedures for design exceptions, design approval, construction coordination and final project acceptance by the City.

2.1 DEFINITIONS AND ABBREVIATIONS

AASHTO: American Association of State Highway and Transportation Officials.

ADA: Americans with Disabilities Act.

ADS. Advanced Drainage Systems, a manufacturer of storm water and sanitary sewer materials.

Alley: A narrow street through a block which affords only secondary means of access to abutting property at the rear or sides thereof.

All-Weather Surface: An improved roadway surface, with sufficient ballast and structural support to be used under all weather conditions. The uppermost layer of an all-weather surface may be concrete or asphalt pavement, or in some cases gravel.

Appurtenance: Equipment and/or accessories that are part of an operating system or subsystem.

APWA: American Public Works Association.

ARTA: Astoria Riverfront Trolley Association.

Arterial: A street of considerable continuity which is primarily a main traffic route for intercommunication among large areas; used predominantly for the movement of through traffic with less emphasis on access to abutting properties. (In Astoria, all arterial streets are State highways managed by ODOT.)

ASCE: American Society of Civil Engineers.

Asphalt Institute: A United States based association of international petroleum asphalt producers, manufacturers and affiliated businesses.

ASTM: American Society for Testing and Materials.

AWWA: American Water Works Association.

Backflow: The flow of water or other liquids, mixtures or substances into the distribution pipes of the potable water supply from any source other than its intended source, and which is caused by back-siphoning or back-pressure.

Backflow Prevention Assembly: An effective assembly used to prevent backflow into a potable water system.

Boardwalk: Elevated walkway located over land or on submersible land, primarily for pedestrian use similar to a sidewalk or trail, not otherwise covered by pier or wharf.

Buildable Lot: See Lot, Buildable.

Building Code: The Oregon Structural, Mechanical, Electrical, Plumbing and Residential Specialty Codes.

Building Official: The officer or other designated authority charged with the administration and enforcement of the Building Code, or a regularly authorized deputy.

Chair Wall: Subsurface concrete structures which were built after Astoria's 1922 fire to support the City's downtown street system. Curbs and sidewalks for many downtown streets are integral with the structural chair walls. The chair wall system also includes concrete tunnels for utilities.

City: The City of Astoria, Oregon.

City Engineer: The duly appointed City Engineer of the City of Astoria.

City Water Service Line: Any pipe, valves and fittings leading from the water main to the water meter or customer water service line.

Clearing: Any activity that removes vegetative cover while leaving the root system intact.

Collector: A street with a functional purpose that balances through traffic and access to abutting properties. The proportion of through traffic on collector streets is generally greater than local streets, but less than arterial streets. Collector streets may serve residential, mixed use, or commercial/industrial areas.

Community Development Director: The duly appointed Community Development Director, chief land use regulatory officer, and designated authority responsible for enforcement of the Development Code of the City of Astoria.

Contractor: The person, partnership, firm or corporation licensed in Oregon contracting to do work under these Standards. The term shall also include the Contractor's agents, employees and subcontractors.

Cul de Sac: A short street or dead end street having one end open to traffic and terminating in a vehicle turnaround. This definition includes circular and hammerhead style turnarounds.

Curb Ramp: A short, depressed section of curb and sidewalk, normally placed at street intersections, designated to facilitate travel of disabled persons.

Customer Water Service Line: Pipe, valves and fittings leading from the water meter or city water service line into the premises served or the point of ultimate use.

CWA: Clean Water Act, a federal law enacted in 1972 which establishes the structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.

Design Engineer: A Professional Engineer licensed by the OSBEELS.

DEQ: Oregon Department of Environmental Quality.

Detention Facility: A storm water basin or structure where excess storm water is stored or held temporarily and then slowly drains when water levels in the receiving piping system or channel recede. A detention facility is typically dry between storm events.

Development Agreement: An agreement between the City and a private Developer as provided in ORS Chapter 94.

Developer: Any individual, company, partnership, joint venture, corporation, association, society or group that has made, or intends to make, application to the City for a development proposal, permit or approval.

Dock: A secured float or floats for boat tie-up or other water use.

Drain: A structure intended to receive only storm waters, surface run-off, street wash waters and drainage.

Drain, Private: Privately owned drain that is not maintained by the City.

Driveway: Private vehicular travel way that provides vehicular access from a public or private road.

Driveway Apron: A concrete section of depressed sidewalk constructed in the City right-of-way to provide a transition between the City street and a private driveway.

Dwelling Unit: Refer to Astoria Development Code definitions for dwelling.

Easement: A grant of the right to use a piece of land for specific purposes.

Erosion: Movement of soil by water or wind.

Excavation: Removal of topsoil, gravel, sand, rock or any other type of soil material. Also includes removal of roots.

Existing: Buildings, facilities or conditions, which are already in existence, constructed or officially authorized prior to the adoption of these Standards.

Fence: An accessory structure, including landscape planting, designed and intended to serve as a barrier or as a means of enclosing a yard or other area, or other structure; or to serve as a boundary feature separating two or more properties.

Fill: Placement of topsoil, gravel, sand, rock or any other type of soil material.

Fill, Structural: Fill that is intended to support structures.

Fire Apparatus Access Road: A road that provides access for fire department vehicles and equipment from a fire station to a facility, building or portion thereof. This is a general term inclusive of all other terms such as fire lane, public street, private street, parking lot lane and access roadway.

Fire Code Official: The City's Building Official or other designated official appointed by the Astoria City Council who is charged with the administration and enforcement of the Oregon Fire Code.

Fire Lane: A road or passageway developed to allow the passage of fire apparatus. A fire lane is not necessarily intended for vehicular traffic other than fire apparatus.

GPM: Gallons per minute.

Grading: Any combination of excavation and/or fill activities.

Hammerhead: See cul de sac.

HDPE: High-density polyethylene.

Landscaping: Preservation, planting and maintenance of trees, shrubs, groundcovers, and lawns, and associated walkway, benches, decks, fences, fountains, sculptures, courts, plazas or interpretive displays.

Lot: A parcel or tract of land as shown on a legally recorded plat of a subdivision, or a parcel or tract of land under one ownership.

Lot, Buildable: A parcel or combination of parcels that meet the minimum standards for construction. This definition does not imply the site is suitable for a building.

Lot, Platted: A parcel or tract of land as shown on a legally recorded plat of a subdivision.

Lot, Tax: A parcel of land that is designated for tax purposes only.

Luminaire: A complete street lighting unit, including lamps, sockets, wiring, poles, foundations and other parts needed to hold the lamp in place, and protect it.

MUTCD: Manual on Uniform Traffic Control Devices.

Natural Outlet: Any non-manmade discharge into a watercourse, pond, ditch, lake or other body of surface water.

NAVD: North American Vertical Datum. Refers to NAVD 88, the North American Vertical Datum of 1988, which is the vertical control datum established in 1991 by the National Geodetic Survey for surveying in the United States.

NRS: Non-Rising Stem, a type of water valve operation.

NVGD: National Geodetic Vertical Datum. Refers to the Sea Level Datum of 1929, which was adjusted in 1947, and later renamed as the National Geodetic Vertical Datum of 1929 on May 10, 1973. NVGD was used by the National Geodetic Survey prior to 1991.

NW POINT: Northwest Public Oregon Intercity Transit.

OAR: Oregon Administrative Rules.

ODOT: Oregon Department of Transportation.

OFC: Oregon Fire Code.

OPSC: Oregon Plumbing Specialty Code.

ORS: Oregon Revised Statutes.

OSBEELS: Oregon State Board of Examiners for Engineering and Land Surveying.

Owner: Those individuals, partnerships, corporations or public agencies holding fee simple title to property, or a purchaser under a recorded instrument of sale. Owner does not include those holding easements, leaseholds, or purchasers of less than fee interest.

Pathway: A travel corridor provided for non-motorized use. Pathways typically accommodate both bicycles and pedestrians.

Pedestrian Zone: See Walking Zone.

Pier: A structure, usually of greater length than width and projecting from the shore into a body of water with direct access from land that can be either open deck or provided with a superstructure.

Planting Strip: A vegetated area located between the back of curb and sidewalk within the Walking Zone.

Platted Lot: See Lot, Platted.

POINT: Public Oregon Intercity Transit.

Private Drain: See Drain, Private.

Private Sewer: See Sewer, Private.

Private Street: See Street, Private.

Public Works Director: The duly appointed Public Works Director of the City of Astoria.

Public Works Superintendent: The duly appointed Public Works Superintendent of the City of Astoria.

PVC: Polyvinyl Chloride.

Retention Facility: A basin, structure or pond which stores water on a permanent or semi-permanent basis. Water often remains in a retention basin indefinitely, with the exception of volume lost to evaporation or absorbed into soils. Retention facilities typically contain water between storms, as opposed to detention facilities which typically drain after the peak of the storm flow has passed and are usually dry between storms.

Right-of-Way: Land, property or interest therein, usually in a strip, acquired for public benefit and typically devoted to transportation purposes.

Riprap: A layer, facing, or protective mound of stones randomly placed to prevent erosion, scour or sloughing of a structure or embankment; also, the materials so used.

River Walk: The developed walkway along the Columbia River waterfront from 11th Street to 17th Street.

River Trail: The entire developed walkway along the Columbia River waterfront.

Roadway: See Street.

ROW: See Right-of-Way.

Sanitary Sewer: See Sewer, Sanitary.

SDR: Standard Dimension Ratio.

SDWA: Safe Drinking Water Act, the main federal law that ensures the quality of drinking water.

Sedimentation: Deposition of soil moved by water or wind from its site of origin.

SETD: The Sunset Empire Transportation District.

Sewer, Private: Privately owned sewer that is not maintained by the City.

Sewer, Sanitary: A pipe or conduit intended to carry liquid and water-carried wastes from residences, commercial buildings, industrial plants and institutions together with minor quantities of ground, storm and surface waters that are not intentionally admitted.

Shall: A requirement.

Sharrow: A shared lane marking, placed on the street pavement to indicate where bicyclists should position themselves in the travelled way.

Should: A requirement, unless it can be shown that to comply with the requirement would be unreasonable, impractical, or unfeasible. Economic hardship alone shall not be justification for noncompliance with the requirement, but may be considered in conjunction with other reasons for noncompliance.

Sidewalk: A pedestrian walkway improved with rock, decking or paved surfacing that is located adjacent to or offset from and parallel to a street.

Standard Details: City of Astoria Engineering Division standard detail drawings.

Storm Drain: A conduit intended to carry only storm waters, surface run-off, street wash waters and drainage.

Storm Sewer: See Storm Drain.

Street: The improved portion of a public right-of-way that is developed for multi-modal travel. Synonymous with the terms road, highway, avenue, lane, drive, and other similar designations. A Street includes both a vehicular zone and a walking zone.

Street, Private: Privately owned street that is not maintained by the City, or privately-maintained street improvements within the public right-of-way.

Sunset Empire Transportation District: Public transportation provider serving Clatsop County.

Surveyor: A Professional Land Surveyor licensed by the OSBEELS.

Tax Lot: See Lot, Tax.

Trail: A pedestrian walkway improved with rock, decking, bark chips or paved surfacing not otherwise covered by sidewalk or boardwalk.

Trestle: A complex bridge structure, usually wooden, that is used to support a transportation corridor over water, a ravine, etc.

TSP: The City of Astoria Transportation System Plan.

Uni-Bell: The Uni-Bell PVC Pipe Association.

Utilities: Overhead or underground facilities such as towers, lines for communication and power transmission, sanitary sewers, storm drains, water lines, drains, gas lines, and other similar pipes, wires conduits, vaults, etc.

Vehicular Zone: The portion of a City street from face of curb to face of curb. The vehicular zone includes travel lanes for motorized vehicles and bicycles, and may also include median and parking areas.

Walking Zone: The portion of a City street behind the face of curb that provides sidewalk, roadside landscaping, and other amenities for pedestrian travel.

Water Main: Any pipe owned by the City of Astoria laid in a street, alley or easement, and used or intended to be used for the transmission and distribution of water to customers.

Water Meter: Any device used for the measurement of water delivered to an individual location or user (service).

Water Service Line: Combined facility made up of both the city water service line and the customer water service line.

Water Service Line, City: See City Water Service Line.

Water Service Line, Customer: See Customer Water Service Line.

Wharf: A structure at the shoreline, having a platform built alongside and parallel to a body of water that may have an open deck or a superstructure.

2.2 CODE COMPLIANCE AND PERMITTING

Private developments and public facilities must comply with all City codes, plans and permits.

Developers are also responsible for obtaining any necessary state and federal permits that may be required for construction near wetland areas, streams or other waterways, or if hazardous materials are present on the property. The following agencies should be contacted to determine if state or federal permitting regulations apply:

- Department of State Lands
- Department of Environmental Quality
- US Army Corps of Engineers
- Environmental Protection Agency
- Oregon Department of Transportation
- National Marine Fisheries Services
- Oregon Department of Fish and Wildlife
- U.S. Fish and Wildlife Services

2.3 CONSTRUCTION STANDARDS

The City has adopted the 2015 Oregon Standard Specifications for Construction with supplemental City General Conditions and Special Provisions. See Appendix B for City of Astoria Special Provisions. These specifications shall be used for all City public works projects.

2.4 DESIGN SUBMITTAL REQUIREMENTS

Three sets of plans shall be submitted to the City Engineer for review. Plans shall be twenty-two inches by thirty-four inches (22" X 34"). A scale of one inch equals twenty feet (1"=20') is preferred, one inch equals thirty feet (1"=30') and one inch equals ten feet (1"=10") are also acceptable. Other scales may be used only with the approval of the City Engineer.

At minimum, interim plans shall be submitted for City review at the 60% design stage. Interim plan submittals at 30% and 90% are encouraged.

2.4.1 General Plan Requirements

The following general items shall be shown on all plan sets submitted:

- a. Vicinity Map: On first sheet of plan set.
- b. Index of Plan Sheets: On first sheet of plan set.
- c. Title Block: Including project name, Design Engineer, file number, sheet number, date and revision block, Oregon Registered Professional Engineer's Stamp and Signature.
- d. North Arrow: On each sheet, as applicable.
- e. Elevations shall be referenced to the City of Astoria datum (NAVD 88) or NGVD (with conversion to City datum supplied), with benchmarks identified on the plans.

2.4.2 Utility Information

Subsurface utilities shall be depicted on design drawings per ASCE/CI 38-02 Quality Level C. Refer to ASCE Standard Guidelines for the Collection and Depiction of Existing Subsurface Utilities.

2.4.3 Street Plans

Street plans shall have both plan and profile views on the same sheet. Typical section and signing and striping information is also required.

Plan views shall contain the following information:

- a. Right-of-way, property lines, and easements (existing and construction).
- b. Section, township and range.
- c. Street centerline with 100-ft stationing.
- d. Horizontal alignment data for centerline, curb returns and cul-de-sacs, including tangent bearings.
- e. Curb/gutter elevations at intersections and cul-de-sacs.
- f. Location of existing and proposed underground and overhead utilities, roadways, driveways, sidewalks, structures, watercourses, survey monuments, fences and vegetation within the right-of-way and outside right-of-way, if affected by construction.
- g. Storm drainage facilities with station and offset referenced to street centerline.
- h. Existing contours and spot elevations, cut/fill limits. A minimum contour interval of 2 feet is required.

- i. Sidewalk ramp locations.

Profile views shall show the following information:

- j. Proposed street centerline profile (**bold**) with tangent grades, vertical curve data (including k value, length and beginning and ending stations and elevations) and high/low points.
- k. Original ground at centerline.
- l. Proposed (**bold**) and existing storm drainage facilities with information on type, inverts, rim/grate elevations, slopes, pipe material, and trench backfill.
- m. Existing utility crossings.
- n. Continuation of profile 200 feet beyond project limits if street is being reconstructed or if it may be extended in the future.

Typical cross-sections shall show the following information:

- o. Dimensions of traffic lanes, shoulders, gutters, sidewalks, swales, depths of planting strips, easements, right-of-way, etc.
- p. Cross slope of all elements, such as pavement, sidewalks, planting strips, etc.
- q. A separate full-width roadway typical section, for each street or portion of the street that differs significantly. Station ranges shall be provided for each typical section.

The following signing and striping information shall be provided:

- r. Locations of all public and privately maintained signs to be installed, including sign details and/or MUTCD sign designation number, where applicable.
- s. Location and dimensions of all pavement markings.
- t. For simple projects, signing and striping information may be combined on the plan views, provided that information is legible and does not overcrowd the sheet. For collector facilities and local access streets that may intersect with City collector routes or State highway facilities, separate signing and striping plans may be required by the City Engineer.

2.4.4 Water, Sanitary Sewer and Storm Drain Plans

Water, sanitary sewer and storm drain plans shall have plan and profile views. Profiles shall be to the same horizontal scale on the same sheet and drawn immediately below the corresponding plan view to a typical vertical scale of 1" = 5' with stationing increasing from left to right. In areas of significant elevation change, a vertical scale of 1" = 10' may be used. City Engineer approval is required for any other proposed vertical scale.

Water, sanitary sewer and/or storm drain plans may be combined into a single set of utility plans, provided that information is legible. Utility design information may also be incorporated into street plans, provided that all required information can be provided legibly and without overcrowding the sheet.

Plan views shall contain the following information:

- a. Right-of-way, property lines, and easements (existing and construction).
- b. Pipe centerline with stationing and reference to street stationing where appropriate.
- c. Pipe material, length, invert elevation and slope.
- d. Location of existing and proposed (bold) underground and overhead utilities, roadways, driveways, sidewalks, structures, watercourses, survey monuments, fences and vegetation within the right-of-way and outside right-of-way, if affected by construction.
- e. Existing and proposed contours and spot elevations. A minimum contour interval of 2 feet is required.

Profile views shall show the following information:

- f. Pipe invert profile with grades.
- g. Existing and proposed (bold) ground at centerline.
- h. Existing and proposed manholes, catch basins, field drains and inlets, with information on type, inverts, rim elevations, slopes, materials, and trench backfill.
- i. Existing and proposed water, storm drain, sanitary sewer, gas, power, cable and other utility crossings. Show separation requirements where appropriate.
- j. Continuation of profile 200 feet beyond project limits if sanitary sewer, water or storm drain may be extended in the future.

2.4.5 Storm Water Management System Plans

Structural detention and retention facility plans must show:

- a. Facility dimensions and setbacks from property lines and structures
- b. Profile view of facility, including typical cross-sections with dimensions.
- c. All storm water piping associated with the facility, including pipe materials, sizes, slopes, and invert elevations at every bend or connection.
- d. Additional detail as determined by the City Engineer, depending on individual site conditions.

For projects that include vegetated storm water management facilities, catch basin pre-treatment inserts or storm water retention/detention facilities, a plan outlining the scope of activities, schedule and responsible parties for periodic inspection and maintenance of those

facilities shall be included with the construction submittal. This plan shall cover vegetation management, structural repairs, sediment removal/disposal and other activities necessary for the continued long-term function of the storm water facilities.

2.4.6 Additional Storm Water Design Documentation

Storm water documentation prepared in accordance with the ODOT Hydraulics Manual shall be submitted, including but not limited to a hydraulics report, bridge and culvert studies, supporting data, and other storm water design documentation, as applicable.

2.5 PHASED PROJECT SUBMITTALS

For large developments intended to be implemented in phases over multiple years, a phased design submittal process will be considered by the City Engineer on a case by case basis. Ultimate traffic volumes, water usage, sanitary sewer flows and storm water runoff shall be estimated for the entire project prior to approval of a phased approach. Design of each phase shall accommodate the ultimate build-out condition.

2.6 DESIGN EXCEPTIONS

A documented design exception is required for any design or construction deviation from these City design standards. Exceptions may be granted by the City Engineer upon evidence that such adjustments are in the public interest. Requirements for safety, function, fire protection, transit needs, appearance and maintainability based upon sound engineering and technical judgment must be fully met.

2.6.1 Design Exception Submittal Requirements

Design exception requests must be submitted in writing and shall include the following:

- a. Complete description of the desired modification.
- b. Identified sections of the Design Standards that are relevant to the proposed alternative.
- c. Reason for the request.
- d. Comparison between the specification/design standard and the modification addressing the performance, particularly in regard to public safety. Document nationally accepted design standards, such as AASHTO and ASTM, where applicable.
- e. Additional design exception considerations specific to individual topics are provided in the applicable chapter of these Design Standards.
- f. It is the responsibility of the applicant to provide sufficient, clear and accurate supporting information.

The City Engineer will review the design exception request and will allow a modification if one or more of the following requirements is met:

- g. The specification or design standard does not apply in the particular application.
- h. Topography, right-of-way or other conditions specific to the site impose an undue economic hardship on the applicant and an equivalent alternative, which can accomplish the same design objective while not adversely affecting public safety, is available.

The City Engineer will approve the application as is, approve with changes, or deny with an explanation.

2.6.2 Appeal Process

If the applicant is unsatisfied with the City Engineer's decision, the appeal process is as follows:

- a. Written request addressed to the Public Works Director;
- b. If not resolved at Public Works Director level, a written appeal shall be submitted to the City Manager;
- c. If not resolved at the City Manager level, the applicant shall submit a written appeal to the City Council.

2.7 DESIGN APPROVAL

Written acceptance of design plans and specifications by the City Engineer is required.

2.8 CONSTRUCTION SURETY

Prior to construction, the Developer shall provide a performance bond to protect against:

- a. Adverse construction events that may disrupt City systems and services;
- b. Failure to complete the project due to insolvency of the Developer or contractors; or
- c. The project's failure to meet approved design requirements or contract specifications.

A warranty is also required to guarantee against project defects for a designated period of time after project acceptance by the City Council. Refer to the Oregon 2015 Standard Specifications for Construction and City Supplemental General Conditions for performance bond and warranty requirements.

Surety requirements covered by a City Council-Approved Development Agreement may supersede the standards of this section.

2.9 CONSTRUCTION SUBMITTAL

A complete set of construction documents shall be submitted to the City Engineer prior to beginning construction. The construction submittal package shall include:

- a. Two (2) copies of the construction plan set with Design Engineer's seal and original signature.
- b. Complete construction specifications and contracting documents, including cover sheet with Design Engineer's seal and original signature.
- c. List of construction materials, including manufacturer, to be installed by the Developer and accepted by the City.
- d. Copy of City Engineer's design approval letter.
- e. Performance bond.

Construction activities shall not commence prior to City review of the construction submittal package and written authorization to proceed from the City Engineer. The City will stamp the construction plans when the construction submittal is approved. The original construction plans bearing the City's stamp shall be kept at the project site and made available to City representatives upon request.

2.10 CONSTRUCTION COORDINATION AND INSPECTION

A preconstruction meeting is required unless waived by the City Engineer. The Developer shall notify the Engineering Division at (503) 338-5173 to schedule the preconstruction meeting.

The following requirements apply during construction:

- a. Materials submittals are required and must be accepted by the City Engineer prior to construction of any facilities which are intended to be accepted by the City for public use. Refer to the Oregon 2015 Standard Specifications for Construction and City Supplemental General Conditions for material submittal requirements.
- b. The Engineering Division will need to observe the following construction work, and must be called at least two working days in advance to schedule an inspection for:
 - i. Installation of new storm drains, sanitary sewer systems, and water facilities.
 - ii. Connections to existing storm and sanitary sewers, and existing water facilities.
 - iii. Forms for concrete curb, gutter and sidewalk
 - iv. Roadway subgrade, crushed rock base course and asphalt paving
- c. Subgrade and base rock compaction tests shall be performed by an independent testing laboratory during construction, and results provided to the City Engineer.
- d. Pilings require inspection by a licensed professional engineer. Copies of all piling inspection reports shall be provided to the City Engineer.

- e. The City's Operations Division at (503) 325-3524 must be contacted to open or close any water valves, including hydrants, and must be called at least two working days in advance.

2.11 AS-BUILT DOCUMENTS

Upon construction completion, the following documents shall be submitted to the City Engineer:

- a. As-built drawings showing actual constructed locations and elevations of all street facilities, pipes, manholes and laterals. Two paper copies shall be submitted along with an AutoCAD compatible file on CD or USB drive.

As-built drawings shall be twenty-four inches by thirty-six inches (22" X 34"). A scale of one inch equals twenty feet (1"=20') is preferred, one inch equals thirty feet (1"=30') and one inch equals ten feet (1"=10") are also acceptable. Other scales may be used only with the approval of the City Engineer.

- b. Written certification from the Developer's engineer confirming that the project was constructed in accordance with approved plans and specifications.
- c. City utility services will not be provided until as-built documents have been provided to, and accepted by, the City Engineer.

2.12 FINAL PROJECT ACCEPTANCE

Following receipt of as-built documents, the City Engineer will forward a project acceptance and street adoption recommendation to the Astoria City Council. The City will not assume maintenance responsibility for constructed facilities prior to Council acceptance.

3 TRANSPORTATION FACILITIES

This chapter provides information for the design of street improvements as well as non-motorized facilities and transit infrastructure. Transportation design plans are reviewed and approved by the Engineering Division. Design criteria for storm water facilities serving transportation corridors are discussed in Chapter 5.

The following standards are based on the City's adopted Transportation System Plan (TSP), and have been developed with the goals of improving motorist and pedestrian safety, and minimizing long term maintenance costs while also considering the initial cost of construction. The main purpose of these standards is to provide the requirements for geometric design of the streets to meet safety and construction guidelines, and to promote active transportation through integration of facilities for pedestrians, bicyclists and transit users.

Traffic impact studies for new developments may be required by the City Engineer as provided in Section 3.015 of the City's Development Code.

Compliance with these standards does not relieve the Design Engineer of the responsibility to apply conservative and sound professional judgment. These are minimum standards and are intended to assist, but not substitute for competent work by design professionals. The City may, at its sole discretion due to special conditions and/or environmental constraints, require more stringent requirements than would normally be required under these Standards.

This chapter is intended to be consistent with and a supplement to the following policies and standards:

AASHTO	American Association of State and Transportation Officials
ADA	Americans with Disabilities Act
APWA	American Public Works Association
ASTM	American Society for Testing and Materials
MUTCD	Manual on Uniform Traffic Control Devices
OAR	Oregon Administrative Rules
ODOT	Oregon Department of Transportation
OFC	Oregon Fire Code

TSP	Astoria Transportation System Plan
	Astoria Development Code
	Astoria City Code
	Astoria Comprehensive Plan

Where conflict exists between these Design Standards and the above referenced documents, the most stringent requirements shall take precedence.

3.1 CITY STREETS

3.1.1 Street Classifications

The City has adopted the following multi-modal street classifications based on the context of the surrounding land use:

- a. Residential Collector
- b. Residential Local Street
- c. Mixed Use Collector
- d. Mixed Use Local Street
- e. Commercial/Industrial Collector
- f. Commercial/Industrial Local Street
- g. Arterial (Only State highway facilities under ODOT jurisdiction have Arterial designation in the City's TSP. Refer to ODOT for design criteria on these facilities.)

Refer to the TSP for a map showing the City's multi-modal street designations.

The Engineering Division will determine the classification of any new streets which are not indicated in the TSP prior to design.

3.1.2 Vehicular Zone

3.1.2.1 Vehicular Zone Cross Section

The vehicular zone width is defined as the horizontal distance from face of curb to face of curb, measured perpendicular to the centerline. The vehicular zone includes paved travel lanes for motorized vehicles and bicycles, and may also include median spaces and paved areas for on-street parking. The width of the vehicular zone shall be sufficient to allow for the safe passage of normal multi-modal traffic and emergency vehicles.

Required lane widths and configuration are shown in Table 3-1 and **Detail ST-2**. Streets should be centered within the right-of-way; however, design exceptions may be considered due to topography or other physical constraints. The City’s design exception process in Section 2.6 will apply. Street width design exceptions require review and approval of both the City Engineer and City Fire Code Official. Design exceptions may require approved fire suppression, such as fire sprinkler systems, to be installed in structures to be accessed, including garages.

Table 3-1. Lane Widths and Configuration in the Vehicular Zone

Street Classification	Travel # Lanes – Width	Parking # Lanes - Width	Bicycle Config. or # Lanes - Width	Total Pavement Width	Right-of- Way Width ⁽²⁾
Residential Local Street In-fill development, 3 units or less	2 - 10'	-	Shared, not marked	20' ⁽¹⁾	40'
Residential Local Street	2 - 10'	2 - 7'	Sharrows	34'	54'
Residential Collector	2 - 10'	2 - 7'	2 - 6'	46'	66'
Mixed Use Local Street	2 - 10'	2 - 8'	Sharrows	36'	60'
Mixed Use Collector	2 - 10'	2 - 8'	2 - 6'	48'	72'
Commercial/Industrial Local Street	2 - 12'	-	Shared, not marked	24' ⁽¹⁾	44'
Commercial/Industrial Collector	2 - 12'	-	2 - 6'	36'	62'
¹ Written authorization from the City’s Fire Code official is required for roadways with a paved width less than 26 feet. ² If a proposed roadway is not located within an existing public right-of-way, or if the existing right-of-way is less than indicated, right-of-way must be dedicated.					

3.1.2.2 Design Speed

The design speeds listed in Table 3-2 have been selected for the various street classifications. Posted speed may differ and will be designated by the City Engineer. Designers shall use the design speed to select horizontal and vertical alignments.

Table 3-2. Design Speed

City TSP Street Classification	Design Speed (mph)
Residential Local Street	25
Residential Collector	30
Mixed Use Local Street	25
Mixed Use Collector	30
Commercial/Industrial Local Street	25
Commercial/Industrial Collector	30-35

3.1.2.3 Pavement Section

The minimum allowable section is as shown on **Detail ST-1**.

The pavement section may vary depending on soil conditions. If, in the opinion of the City Engineer, soil subgrade conditions are potentially unsuitable, soil testing and pavement design will be required. The Design Engineer will have the responsibility for obtaining traffic figures for pavement design. The ODOT Pavement Design Guide and the Asphalt Institute method are acceptable pavement design references. Concrete streets shall be designed using the guidelines and requirements of the Portland Cement Association.

3.1.2.4 Crown

A minimum crown slope of two percent (2%) shall be provided. A standard center crown section is recommended, but an offset crown or a curb crown (shed) configuration may be permitted with approval of the City Engineer for areas with steep side slopes. Maximum crown slope shall be four percent (4%). An inverted crown section is typically not allowed, but may be considered for alleys with City Engineer’s approval.

3.1.2.5 Vertical Clearance

Vertical, unobstructed clearance over the traveled roadway width must be a minimum of 14 feet.

3.1.2.6 On-Street Parking

On-street parking shall be provided as shown in Table 3-1. The minimum dimension of a standard parallel on-street parking stall is 7 feet wide in residential areas, 8 feet wide in all other areas, by 20 feet long. Smaller dimensions may be allowed when additional

maneuvering area is available. Disabled on-street parking stalls may be required and must meet current ADA standards.

Where parking is restricted on one or both sides of the street, no-parking signs shall be installed by the Developer. A minimum of three (3) no-parking signs, equally spaced, are required per block. The City will maintain no-parking signs after the street is accepted by City Council.

3.1.2.7 Signing and Striping

Street signing and pavement markings shall be designed in accordance with the current MUTCD. Where required, the Developer shall install signing and striping. The City will maintain signing and striping after acceptance of the street by City Council. A sign order approved by the City Engineer is required for any new sign or pavement marking on existing facilities.

Special installation protocol may be required when installing signage on existing streets in downtown Astoria. Many downtown streets are supported by structural chair walls resulting in a hollow-type sidewalk configuration. Installation of new signs or modification of existing signs in these areas requires approval of the City Engineer and will be considered on a case-by-case basis.

3.1.3 Walking Zone

The walking zone is defined as the portion of a City street behind the face of curb that provides sidewalk, roadside landscaping, and other pedestrian travel amenities.

3.1.3.1 Walking Zone Cross Section

Improvements required within the walking zone are shown in Table 3-3. Walking zone improvements are required on both sides of the street except for infill developments of three units or less, where walking zone improvements may be omitted from one side of the street with the City Engineer's approval. Sidewalk and landscaped areas within the walking zone shall have a maximum cross-slope of two percent (2%), draining towards the street.

Table 3-3. Required Walking Zone Improvements and Widths

Street Classification	Curb/Edge Width (Measured from Face of Curb)	Landscape Buffer Configuration and Width	Sidewalk Width	Total Walking Zone Width
Residential Local Street In-fill development, 3 units or less ¹	0.5'	3.5' Planting Strip (optional)	5'	9'
Residential Local Street	0.5' with optional 1' hardscaped edge area behind curb	3.5' Planting Strip (2.5' if optional edge area is provided behind curb)	6'	10'
Residential Collector	0.5' with optional 1' hardscaped edge area behind curb	3.5' Planting Strip (2.5' if optional edge area is provided behind curb)	6'	10'
Mixed Use Local Street	0.5'	3.5' Hardscaped with trees spaced at 25' intervals	8'	12'
Mixed Use Collector	0.5'	3.5' Hardscaped with trees spaced at 25' intervals	8'	12'
Commercial/Industrial Local Street	0.5'	3.5' Planting Strip	5'	9'
Commercial/Industrial Collector	0.5'	6.5' Bioswale	5'	12'
¹ For infill developments serving 3 units or less and where the constructible width is limited by terrain or other constraints, sidewalk width may be reduced to 4 feet with a 5 foot by 5 foot passing space at 200-foot intervals. Also, in infill areas, sidewalk may be omitted from one side of the roadway with approval of the City Engineer.				

3.1.3.2 *Curb, Gutter and Edge Area*

Standard curb is required on both sides of streets within the City of Astoria (see **Detail ST-4**). Rolled curb is not allowed unless approved through the design exception process described in Section 2.6.

Curb and gutter is required on streets with longitudinal (flow line) slopes less than 1.5% (see **Detail ST-4**).

Where curb is adjacent to landscaped areas, a 1-foot wide edge area with compacted backfill may be provided behind the curb to facilitate egress from parked vehicles. Where compacted materials cannot sustain adjacent plantings, hardscape or other surface treatments should be used in the edge area to discourage weeds.

3.1.3.3 *Landscaped Buffer*

A landscaped area shall be provided between the curb/edge area and the sidewalk as indicated in Table 3-3. The provisions of Section 3.5 apply to any landscaping in the public right-of-way. Existing landscape buffers should be retained.

3.1.3.4 *Sidewalk*

Sidewalks are required on both sides of the street (see **Details ST-3, ST-5 and ST-6**), except in residential infill areas serving 3 units or less. Curb ramps meeting ADA requirements are required at all intersections (see ODOT Standard Drawings).

Placement of utility poles, hydrants and other obstructions should avoid sidewalk areas. Any sidewalk obstruction requires the prior approval of the City Engineer and a minimum unobstructed clear passage width of 48 inches must be maintained around any obstruction.

The standard sidewalk longitudinal grade and cross slope shall comply with current ADA standards. The back of sidewalk grade shall be maintained parallel to the gutter grade at driveways (**Details ST-5 and ST-6**). In some locations where the elevation of the adjacent property is much lower than the street, a dip in the sidewalk may be permitted. In this case, the driveway shall have the standard ½ inch lip and slope at a two percent (2% maximum) grade towards the street. The transition from the driveway back to the normal sidewalk grade shall be in accordance with ADA slope requirements.

Sidewalks shall be constructed of concrete (**Detail ST-3**). Alternative materials, such as asphalt or wood, require City Engineer approval.

3.1.3.5 Differential Grade Sidewalks

Differential grade sidewalks will be evaluated by the City Engineer on a case-by-case basis and may be allowed in certain situations where it is necessary to match existing improvements.

3.1.3.6 Grading Adjacent to Sidewalks

Section 3.3 of the City's Development Code applies to grading activities for both publicly and privately developed transportation facilities. Slopes behind the sidewalk shall start one foot (1') beyond the edge of the sidewalk or curb and shall not be steeper than 1.5:1 (horizontal: vertical) in a cut condition and 2:1 for a fill condition with cohesive soils. Sand or other non-cohesive soils shall be sloped no steeper than 3:1. (**Detail ST-1.**)

If a grading plan is required for the site per the City's Development Code, the Geologist/Geotechnical Engineer's recommendations may replace the above slope requirements with the approval of the City Engineer.

A pedestrian guardrail or barrier shall be installed when the slope within 2 feet of the back of a sidewalk exceeds 2:1 for a height of 30-inches or greater. Protection for pedestrians is recommended when slopes are vertical and exceed 18 inches in height. Pedestrian guardrail shall meet or exceed the minimum requirements of the current edition of the Building Code.

3.1.4 Horizontal Alignment of Streets

The centerline of street improvements shall coincide with the centerline of the public right-of-way unless approved by the City Engineer.

Minimum centerline curve radius shall be as follows:

Table 3-4. Minimum Horizontal Curve Radius

<u>Design Speed (mph)</u>	<u>Minimum Horizontal Curve Radius (ft)</u>
25	200
30	300
35	480

Centerline radii of curves shall not be less than 200 feet on collectors, or 100 feet on local streets, and shall be designed to an even 10 feet. For any development over 3 units, regardless of whether it is a subdivision, refer to the requirements of the *Development Code*

Article 13 concerning General Regulations and Design Standards for Subdivisions and Land Partitions.

Super-elevation may be allowed for the purpose of reducing minimum required radius providing that it can be shown that there are no adverse impacts on access to adjacent property, storm drainage and intersections.

Sufficient sight distance must be provided to allow drivers time to avoid obstacles, other vehicles or people in their path. Sight distance shall be considered in horizontal alignment design. Stopping sight distances shall be provided in accordance with the following table:

Table 3-5. Stopping Sight Distance

<u>Design Speed (mph)</u>	<u>Required Stopping Sight Distance (ft)</u>
25	155
30	200
35	250
Adapted from AASHTO Table 3-1	

3.1.5 Vertical Alignment of Streets

Minimum longitudinal grade of streets shall be one percent (1%). Maximum street grades are shown in the following table:

Table 3-6. Maximum Street Grades

Street Classification	Maximum Grade (%)
Residential Local	12
Residential Collector	10
Mixed Use Local	10
Mixed Use Collector	10
Commercial/Industrial Local	10
Commercial/Industrial Collector	8

Vertical curves shall be provided at changes of grade exceeding two percent (2%) and shall provide the stopping sight distance required in Table 3-5. The grade of the through street at intersections shall be maintained through the intersection. Intersecting streets shall

match the curb flow line of the through street and be provided with a landing area. The landing shall extend 25 feet from the pavement edge of the through street and have a grade of five percent (5%) or less. Alternative geometry may be necessary at intersections on steep slopes and should be coordinated with the City Engineer.

Streets shall be graded to provide adequate storm water drainage in accordance with Section 3.1.11 and Chapter 5. Accumulated storm water shall not be allowed to flow across travel lanes. Special care should be taken in the design of vertical curves to avoid long flat grades at the crest or sag of curves.

Curb or gutter grade information shall be provided in design plans for curb returns at intersections and for cul-de-sacs.

Due to the City's challenging topography, consideration will be given to exceeding vertical alignment standards providing that it can be shown that there will be no adverse impacts on traffic safety and emergency vehicle access. Requests for modification of standards shall be submitted in accordance with the design exception process provided in Section 2.6. Design exception requests shall include numeric and graphical sight distance analyses showing existing topographic features that are proposed to remain after development of the street, as well as any future features anticipated. Road grade design exceptions require approval of both the City Engineer and the City's Fire Code Official.

3.1.6 Roadway Intersections

3.1.6.1 Intersection Geometry



The interior angle between centerlines at intersecting streets shall be kept as near to ninety degrees (90°) as possible and in no case shall it be less than seventy-five degrees (75°). The centerlines of intersecting streets must be spaced at least 150 feet apart.

Horizontal point of curvature (PC) must be located a minimum of 25 feet from the right-of-way of intersecting streets.

An arterial or collector street intersecting with another street shall have at least 100 feet of tangent adjacent to the intersection unless topography requires a lesser distance. Other streets, except alleys, shall have at least 50 feet of tangent adjacent to the intersection.

The curb radius at the intersection of two streets shall be as shown in Table 3-7, unless otherwise approved by the City Engineer.

Table 3-7. Design Curb Radius

Approach/Entering Street at Intersection 	No Parking or Bicycle Lane	With Bicycle Lane	With Parking Lane	Both Parking and Bicycle Lane
Exiting Street 	Design Curb Radius (ft)			
No Parking or Bicycle Lane	30	25	20	10
With Bicycle Lane	25	12	8	5
With Parking Lane	20	8	5	5
Both Parking and Bicycle Lane	10	5	5	5

The intersection of more than two streets at any one point is not allowed.

Bulbed-out intersections for improved pedestrian crossings may be required at intersections specified by the Community Development Department or Engineering Division. Additional traffic calming measures may be required by the City Engineer.

3.1.6.2 Clear-Vision Area

A clear-vision sight triangle must be maintained at the intersections of any two streets, at a street and a railroad crossing, or where a driveway enters a street. Refer to Article 3 of the *Development Code* for specific requirements.

3.1.7 Illumination and Signalization

The City Engineer will consider factors such as traffic, crash data, and roadway characteristics to support lighting installation decisions. AASHTO provides the threshold or minimum conditions of when to consider lighting. Refer to the ODOT *Lighting Policy and Guidelines*. Street lighting requirements of Article 13 of the *Development Code* also apply for subdivisions and land partitions.

The City accepts Pacific Power’s standard luminaires, and will pay for power and maintenance of street lights that have been approved by the City Engineer and installed by the electric utility company in City rights of way. Where specialty light fixtures are desired, financial responsibility for monthly power and maintenance costs shall be determined prior to design approval.

Signals shall be designed by a Professional Engineer in accordance with the *ODOT Traffic Signal Design Manual*.

3.1.8 Access to City Streets

Proposed driveway or private street access to a City street requires a permit from the City. State highway access requires a permit from ODOT.

3.1.8.1 Driveway Access

Driveways shall meet the requirements of Chapter 2.0 of the *Astoria City Code*. Driveways greater than 150 feet in length shall meet the design requirements for Private Streets provided in Section 3.2.

Maximum and minimum driveway dimensions are detailed in Table 3-8.

Table 3-8. Driveway Apron Width

Property Frontage	Minimum width (ft)	Maximum width for single driveway (ft)	Maximum width each for two driveways (ft)
Less than 50 feet	12	20	N/A
50 to 75 feet	12	25	20
More than 75 feet	12	30	20

Widths in this table do not include sloped wings.

Properties with 50 to 100 feet of right-of-way frontage are allowed a maximum of two driveways. The maximum width for each driveway is 20 feet.

Each additional 100 feet of frontage for contiguous property is considered a separate frontage and shall meet the requirements above.

Requests for additional or wider driveways other than those allowed above must be approved through the design exception process (see Section 2.6).

Restrictions may be imposed on additional driveways, such as limited turn movements, shared access between uses, closure of existing driveways or other access management actions.

Design and construction of the driveway apron shall conform to **Details ST-5** and **ST-6**. Driveways shall meet applicable ADA guidelines.

3.1.8.2 Access from Alleys and Private Streets

Alley and private street connections to the public street shall be designed in accordance with **Detail ST-6**.

3.1.8.3 Controlled Access

Controlled or gated access is not permitted on public or private streets except as approved for emergency-only access or public utility access. Gated communities and gated neighborhoods are not allowed. Any proposed controlled access devices will be evaluated through the design exception process.

3.1.9 Cul-de-sacs

Dead-end streets over 150 ft in length shall terminate in an approved turnaround (see Appendix D of the Oregon Fire Code) to provide adequate emergency vehicle access. The maximum length of a dead-end street shall be 400 feet unless approved through the design exception process (see Section 2.6). This length shall be measured from the centerline of the intersecting street along the centerline of the dead end street to the center of the turnaround.

No islands or other obstructions are allowed in the centers of cul-de-sacs.

The entire cul-de-sac or hammerhead must be contained within the public right-of-way and signed appropriately to restrict parking. Refer to Section 3.1.2.7 for information regarding sign installation responsibilities.

3.1.10 Alleys

Alleys must be a minimum of 20 feet wide with a 5-ft curb radius at the intersection of the public road. Alleys shall be constructed using the pavement section required for residential local streets. (Refer to pavement section information on **Detail ST-1**.) The City will not construct or maintain alleys.

3.1.11 Roadway Drainage

Storm water disposal from streets requires a collection and piping system. Roadway storm drain facilities shall be separate from the City's sanitary sewer lines. Discharge points for all roadway storm drains shall be approved by the City Engineer. Refer to Chapter 5 for storm water system design standards.

Bioswales and other storm water infiltration systems shall be employed only in commercial/industrial collector streets in areas designated by the City Engineer. Bioswales (where allowed) shall be designed in accordance with Chapter 14 Appendix B of the ODOT Hydraulics Manual. Landscaping of bioswales (where allowed) shall meet the standards provided in Section 3.5.

3.2 PRIVATELY-MAINTAINED STREETS

The City will not construct or maintain streets or access roads unless they meet all standards provided in Section 3.1. In addition, the Astoria Development Code discourages private streets. However, in cases where public street standards cannot be met, the Developer may elect to construct a privately-maintained access road to serve an infill development.

With the approval of the City Engineer, privately maintained streets may be allowed within an existing public right-of-way. Or, privately maintained streets may be developed exclusively within private property. In either case, the following conditions shall apply:

- a. The maximum number of dwelling units served by the access road shall be three. Streets serving more than three dwelling units must meet the requirements in Section 3.1.
- b. Sidewalks are not required.
- c. The street or access road surface must be constructed of an all-weather surface, as approved by the City Engineer and City Fire Code Official.
- d. Any new development on a private street shall have a fire suppression system approved by the City Engineer and City Fire Code Official.
- e. The traveled way of a private road shall be designated as a fire lane under the Oregon Fire Code. Private streets must have a minimum of 20 feet unobstructed width with 14 feet of vertical clearance.
- f. With the approval of the City Fire Code Official, the travel surface of the access road may be reduced to 16 feet if two or three dwelling units will be served, or 14 feet if only one dwelling unit will be served. The total length of any access road with a reduced pavement width must be 400 feet or less. Access roads in excess of 400 feet must have a paved surface at least 20 feet wide.
- g. A standard turnaround shall be required at any dead end. (See Section 3.19)
- h. A maximum profile grade of 12% is allowed.
- i. All runoff from new access roads must be controlled and directed to appropriate storm drains, combined sewers or existing natural drainage channels. Connection to a combined sewer or natural drainage requires City Engineer approval.
- j. Construction of privately-maintained improvements within existing public rights of way must not obstruct or reduce access to existing homes.
- k. The Developer shall arrange for future maintenance and repair of the access road, through a recorded road maintenance agreement or other legal mechanism to ensure perpetual maintenance. The maintenance agreement shall be binding upon all subsequent property owners and shall clearly specify that the City may remove any road improvements as needed to construct, repair or maintain City utilities in the right-of-

way. Restoration or repair of any roadway damage caused by City utility work will be the responsibility of the parties to the maintenance agreement.

- l. In areas where additional development is anticipated, a City-maintained standard street may someday be needed. Therefore, if a privately-maintained access road is permitted within a public right-of-way, the Developer must also agree to financially participate in any future street improvements. Covenants shall be placed on lots within the development so that this responsibility passes to subsequent owners.
- m. Street improvements constructed in the public right-of-way should be positioned to allow for future widening, if additional development is anticipated.
- n. Developers shall install their own signs in accordance with the MUTCD and City Standards, including a street identification sign at all intersections. City Engineer approval is required when installing signs at intersections with public roads. Once installed, the City will assume maintenance responsibility for traffic control signs and devices and street name signs located at the intersection with a City street. The City will not furnish, install or maintain other signs for private streets.

3.3 NON-MOTORIZED FACILITIES

3.3.1 Sidewalks

Sidewalks in City street corridors shall be designed in accordance with Section 3.1.3.

3.3.2 Bicycle Facilities

Bicycle facilities in City street corridors shall be designed in accordance with Section 3.1.2.1.

3.3.3 Multi-Use Pathways

Multi-use pathways within the City are intended for non-motorized use by bicycles and pedestrians. As land is developed, publicly accessible multi-use pathways may be required by the City's Community Development Department, to facilitate non-motorized circulation and connectivity. ADA requirements apply to these facilities. Design of new multi-use pathways shall include logical connections to existing or planned pedestrian and bicycle facilities in street corridors.

General requirements for multi-use pathways are provided in Table 3-9. For additional design guidance, refer to the AASHTO Guide for the Development of Bicycle Facilities, and the Oregon Bicycle and Pedestrian Design Guide.

Table 3-9. Multi-Use Pathway Design Elements

Pathway Element	Requirements
Surfacing	Stable, firm and slip resistant. Asphalt or concrete are preferred. Other materials require City Engineer approval.
Maximum Longitudinal Slope	5%
Maximum Cross Slope	2%
Clear Width	10' minimum; 12' preferred; in areas of significant walking or biking demand the clear width should be 16'.

3.3.4 River Walk/River Trail

The City's River Walk and River Trail are unique multi-use facilities consisting of both paved shoreline segments and structural sections which traverse wharf and trestle areas. The Astoria Riverfront Trolley (see Section 3.4) operates adjacent to portions of the River Walk and River Trail, and in some instances shares the travel space with non-motorized users.

ADA standards apply to design of new or altered River Walk/River Trail areas. In addition, the multi-use pathway standards provided in Section 3.3.3 shall apply to River Trail segments that are constructed on land. Design of segments in wharf or trestle areas shall be performed by an Oregon-licensed engineer.

3.3.5 Public Stairways

New pedestrian facilities and alterations to existing pedestrian facilities within the public right-of-way shall conform to ADA Standards. Due to the City's topographical setting however, hillside conditions may constrain modification or addition of pedestrian features in full and strict compliance with minimum ADA standards. In cases where ADA compliance is technically infeasible, stairway access for pedestrians may be considered by the City Engineer. Where allowed, public stairways shall conform to ADA requirements for general site and building elements.

3.3.6 Street Crossings

Enhanced street crossings are required on roadways with high traffic volumes and/or speeds in areas with nearby transit stops, residential uses, schools, parks, shopping and employment destinations. These crossings shall include treatments such as marked crosswalks, high visibility crossings, and/or curb extensions as determined by the City Engineer.

3.4 TRANSIT FACILITIES

Public transportation services within the City include bus service operated by Sunset Empire Transportation District (SETD), the Astoria Riverfront Trolley operated by the non-profit Astoria Riverfront Trolley Association (ARTA), and intercity motor coach provided by the Northwest Public Oregon Intercity Transit (NW POINT).

Documented coordination with transit providers is required for design of street and other transportation facilities that are located within 100 feet of existing or planned transit routes and stops. ADA-accessible transit stop improvements, pedestrian connections to transit stop locations and furnishings such as shelters, benches, bicycle racks and/or other amenities may be required by the City Engineer.

3.5 LANDSCAPING WITHIN THE RIGHT-OF-WAY

In addition to the guidelines in this section, landscaping within the right-of-way must meet the requirements of *City Code* Chapter 2 and *Development Code* Article 3.

3.5.1 General Requirements

Landscaping within the right-of-way may be a requirement of a development or installed at the request of property owners. If landscaping is a requirement of a development, it may only be removed if it is replaced elsewhere and approved by the Community Development Director and City Engineer.

Landscaping within the right-of-way must be maintained by the adjacent property owner. Irrigation in the right-of-way must comply with the OPSC and also be maintained by the adjacent property owner. Refer to *City Code* Chapter 2 for further information and clarification.

3.5.2 Clearance

Landscaping within the right-of-way must meet the Clear-Vision Area requirements in the *Development Code* Article 3. Vegetation must be maintained so all branches and foliage are removed to a height of 7 feet above the sidewalk and 14 feet above the roadway.

3.5.3 Street Tree Installation

Both underground and overhead utilities need to be considered when choosing the type and location of landscaping. A root barrier shall be installed to prevent heaving of the sidewalk or roadway and may be required when underground utilities are located near the root system. A 24" deep barrier is required adjacent to public sidewalks and a 36" deep barrier is required adjacent to the roadway. Barrier specifications shall meet requirements of DeepRoot® UB 24-2 and UB 36-2, or approved equal.

Street trees installed within Mixed Use Collector or Mixed Use Local streets require tree grates. Grates must have removable rings to accommodate the growing width of the tree trunk. Potted trees may be allowed within sidewalk buffer areas if the pots are constructed for permanent installation.

3.5.4 Suggested Types of Trees

Native vegetation is recommended to reduce watering and maintenance requirements. Trees should not be fruit bearing to avoid debris on the sidewalk. A list of acceptable tree types for planting in the public right-of-way may be obtained from the City's Community Development Department.

3.6 TRANSPORTATION FACILITY CONSTRUCTION AND MAINTENANCE RESPONSIBILITIES

Developers are responsible for constructing, signing and striping new street facilities and improving existing roadways as required for developments such as subdivisions and commercial buildings. Maintenance of roadway improvements within dedicated right-of-way is the responsibility of the Developer (or designated private parties) until formal acceptance of the roadway by City Council. Any non-standard roadway within the right-of-way that is not accepted by the City Council must be maintained by the Developer (or designated private parties) in perpetuity or until the roadway is improved and accepted by City Council. Maintenance responsibility needs to be documented, recorded and a copy provided to the City prior to any final inspections or occupancy of the associated development.

Transportation facilities within the vehicular zone of street corridors that are located within the public right-of-way and that are formally accepted by City Council are maintained by the City. This includes pavement, gutter, signing, striping and signalization. State highways are maintained by ODOT.

Transportation facilities within the walking zone of street corridors are maintained by adjacent property owners.

Private roads and alleys must be maintained in perpetuity by the Developer, adjacent property owners, homeowners association or other designated party. A maintenance agreement shall be submitted to the City with any new development project.

Table 3-10. Maintenance Responsibilities

Facility	Location	Accepted by City Council?	Maintenance Responsibility
Standard street vehicular zone improvements	Public Right-of-way (ROW)	Yes	City
Standard street walking zone improvements	Public ROW	Yes	Private ¹
Sub-standard street, private street or alley	Public ROW	No	Private ¹
Multi-use pathway	Public ROW, easement or tract	TBD ²	TBD ²
State highway	State ROW	N/A	ODOT
¹ Developer, owners of properties served by the street, or other designated parties. ² To be determined prior to design approval			

3.7 FORMAL ACCEPTANCE OF TRANSPORTATION FACILITIES

Astoria Code 2.360(6) provides for acceptance of new street facilities by City Council. Only improvements that have been constructed in accordance with City standard specifications (2015 Oregon Standard Specifications for Construction) and inspected and approved by the Engineering Division shall be recommended for Council acceptance by the City Engineer. Upon City Council approval, the City will provide a formal letter of acceptance. The City will not maintain or repair any facilities until they have been formally accepted.

4 SANITARY SEWERS

This chapter provides information for the design of public sanitary sewers. Public sanitary sewer design plans are reviewed and approved by the Engineering Division.

All new common sanitary sewers serving more than one lot of record must be public sanitary sewers. If allowed by the City, private sanitary sewers constructed on private property within a single lot of record must be designed according to the Oregon Plumbing Specialty Code.

The following sanitary sewer design standards have been developed with the goals of proper sizing for current and future flows, correct installation for long life, ease of access for maintenance and repair while taking into account construction costs.

Compliance with these standards does not relieve the Design Engineer of the responsibility to apply conservative and sound professional judgment. These are minimum standards and are intended to assist, but not substitute for competent work by design professionals. The City may at its sole discretion due to special conditions and/or environmental constraints, require more stringent requirements than would normally be required under these standards.

This chapter is intended to be consistent with and a supplement to the following documents:

APWA	American Public Works Association
ASTM	American Society for Testing and Materials
OAR	Oregon Administrative Rules City of Astoria Sewer Service Resolution
OPSC	Oregon Plumbing Specialty Code
DEQ	Oregon Department of Environmental Quality Water Quality Program Rules ¹

Where conflict exists between these Design Standards and the above referenced documents, the most stringent requirements shall take precedence.

¹ Oregon Department of Environmental Quality, *Water Quality Program Rules – Division 052*
<http://www.deq.state.or.us/regulations/rules.htm>

4.1 DESIGN FLOWS

The entire basin to be served by a sanitary sewer must be taken into account when developing design flows for new or replacement sanitary sewers. In Astoria, basin sizes are generally small and slopes sufficient to allow an 8-inch diameter line to adequately serve most areas. Much of the existing sanitary sewer system is combined sanitary and storm, but all new construction must be separated. If upstream tributary areas are not separated, the sanitary sewer must be designed to handle sanitary as well as the 25-year storm flows.

Flow calculations prepared by a Professional Engineer are required for all lines serving 10 or more residences and all commercial or industrial facilities with flows in excess of 3,600 gallons per day (gpd). Table 4-1 includes suggested residential sanitary sewer flow generation rates for sanitary sewers up to 12 inches in diameter.

Table 4-1. Suggested Flow Generation Rates

Average Flow Generation	120 gallons per capita per day (gpcd)
Peak Flow Factor**	1.8 to 4

**Peak flow factors are referenced from OAR52 Appendix A and vary depending on the type and size of the development.

The sanitary sewer flow rates above are suggested. The Design Engineer should use judgment to determine if they are appropriate for the pipe being designed. The Design Engineer shall provide a map of the basin served by the sanitary sewer and take into account existing and potential connections. Future connections shall be estimated by the existing lot layout or zoning of undeveloped areas. An estimate of infiltration and inflow shall be included in the design flows. Surcharging shall not be designed into the system for flows up to the expected peak.

4.2 SANITARY SEWER PIPES

4.2.1 Sanitary Sewer Pipe Material

The standard pipe material to be used for sanitary sewers is PVC meeting the requirements of ASTM D3034 SDR35. High-density polyethylene (HDPE) pipe with fused joints is also acceptable. All HDPE pipe shall be de-beaded. Minimum wall thickness class of HDPE pipe is SDR 26. Other pipe materials may be considered where appropriate and must be approved by the City Engineer. Tracer wire shall be a minimum 14-gauge, solid core, green-coated copper wire with thermoplastic insulation recommended for direct burial, and shall be installed with all sanitary sewer pipes.

4.2.2 Sanitary Sewer Pipe Size

Sanitary sewers shall be sized to adequately handle the expected flows. The minimum sanitary sewer diameter is 8 inches. For dead-end lines up to a maximum length of 250 feet, that have no possibility of future extension and serve less than 6 houses or have limited flow, 6 inch lines will be allowed providing that they can be shown to have sufficient capacity and flow velocity.

4.2.3 Sanitary Sewer Pipe Slope

Sanitary sewers shall be sloped to provide a minimum velocity of 2 feet per second (fps) for the average daily flow using a Manning's roughness coefficient of 0.013 or greater. In no case shall the slope be less than shown in Table 4-2.

Table 4-2. Minimum Pipe Slopes

Pipe Diameter (inches)	Minimum Slope (%)
6	0.75
8	0.40
10	0.35
12	0.30

Slopes shown are an absolute minimum. Calculations shall be provided to show that minimum flow velocity requirements can be met. Sizing pipes larger than needed for the anticipated flow to allow installation at a reduced slope is not acceptable. Sanitary sewer diameters may not be reduced in a downstream direction even if steeper slopes allow a smaller diameter pipe to have sufficient capacity for the design flow.

Flow velocities greater than 15 fps under daily peak flows should be avoided. This may not be possible with Astoria's steep topography and allowances will be made if steep pipe slopes are unavoidable. A velocity over 15 fps in sanitary sewer pipes requires special consideration for pipe scour control (and manhole scour, see Section 4.3.4). Pipe restraints or anchors may be required for pipe slopes in excess of 20%.

4.2.4 Sanitary Sewer Depth

Sanitary sewers shall be installed with a minimum of 36 inches of cover from the top of the pipe to the finish surface. Maximum cover from top of pipe to finish grade shall not exceed 6 feet, unless approved by the City Engineer. The depth should be sufficient to provide for access by gravity from all adjacent properties in the area whether proposed or existing. Sanitary sewer main depth shall be designed to avoid conflict with other existing and

proposed utilities as provided in Section 4.4.2. Conflicts between sanitary sewer laterals and other utilities must also be taken into account in the design.

4.2.5 Sanitary Sewer Laterals

Sanitary sewer laterals shall be a minimum of 4-inch diameter for residential areas and 6-inch diameter for commercial areas, see **Detail S-8**. Side sewer stubs shall have a minimum slope of 2% and extend from main line to the property line. Sanitary sewer laterals shall terminate in an in-line clean out at the property line. Sanitary sewer laterals shall have at least 36 inches of cover in all traveled ways and not less than 2 feet of cover in other areas. Sanitary sewer lateral materials must meet the requirements of Section 4.2.1.

4.3 MANHOLES AND CLEANOUTS

4.3.1 Location

Manholes shall be installed at the following locations:

- a. All changes of pipe size, direction, alignment and grade
- b. At the upstream end of the pipe
- c. Maximum spacing of 300 feet
- d. Each intersection or junction of sanitary sewer mains
- e. Any intersection of a service or private sewer of 8 inches or larger

Manhole placement within the street right-of-way should allow easy access without blocking both traffic lanes. Manhole covers shall not be located in the normal wheel path for the street nor within a crosswalk. Place manholes to avoid surface runoff or storm water ponding. In certain situations, a cleanout may be allowed in lieu of a manhole, as approved by the City Engineer.

4.3.2 Standard Manhole

Manholes shall be 48 inches in diameter for main sizes up to 24 inches, see **Details S-1, S-2, S-3, S-4** and **S-5**. For line sizes in excess of 24 inches, the Design Engineer shall submit manhole designs. A maximum of two sanitary sewer laterals may be connected directly to the manhole as long as channels are provided. A minimum 0.1 foot drop in inverts across the manhole is required where the angle between the upstream and downstream pipe is less than 90 degrees. Provide at least a 0.2 foot drop in inverts where the outlet pipe is 90 degrees from the inlet pipe, or where manholes larger than 48 inches have been approved for use by the City Engineer. Designs for connections to existing manholes shall show the location of the cover and ladder and the elevations of all pipe inverts, channels, ledge and rim. When different size pipes enter/exit a manhole, the elevation of the crowns of the pipe shall match.

Flat top manholes should be used when there is less than 6 feet from the pipe invert to the top of the manhole.

4.3.3 Drop Manhole

The maximum permitted channelized drop across a manhole is 24 inches. For drops in excess of 24 inches, a drop manhole is required; see **Detail S-6**. Inside drops are only permitted when adequate room is available within the manhole and when site conditions make an outside drop extremely difficult to construct, see **Detail S-7**. Only one inside drop is permitted in each manhole. Inside drops require approval by the City Engineer.

4.3.4 Manhole Scour Protection

Internal manhole scour protection, such as HDPE flat plate (1/4 inch thick), epoxy coating or energy dissipation mechanisms shall be provided whenever entering flows exceed 15 feet per second. Scour protection treatments require approval by the Engineering Division.

4.3.5 Cleanout

Cleanouts may be used instead of manholes at the upper end of a 6 or 8-inch lateral that is less than 250 feet in length, see **Detail S-9**. Cleanout size shall match the pipe size for diameters up to 8 inches.

4.3.6 Connections to Existing Manholes

When connecting new lines to existing manholes, the manhole wall must be core drilled cleanly, and grouted or otherwise sealed to prevent groundwater inflow and infiltration.

4.4 SANITARY SEWER ALIGNMENT

Sanitary sewer lines shall have a straight alignment with a constant grade between manholes. Curved alignment will not be allowed unless there are no reasonable alternatives and must be approved by the City Engineer. Sanitary sewer alignment shall be in a street right-of-way whenever possible. Sanitary sewer lines shall be located no closer than 5 feet from the right-of-way or easement line.

4.4.1 Sanitary Sewer Easements

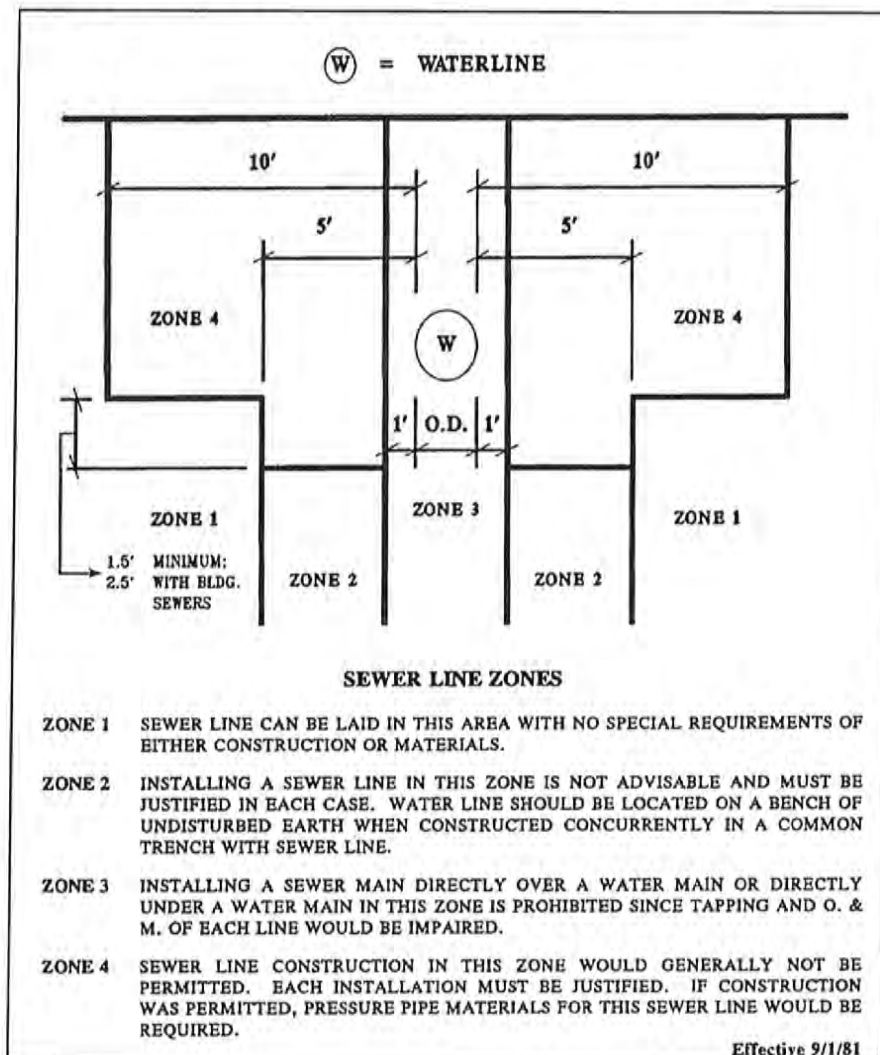
If due to topographic constraints the sanitary sewer must run along the alignment of a property line, adequate access must be provided. A minimum 20-foot wide sanitary sewer easement is required for legal access and an adequate surface is required for physical access. A wider sanitary sewer easement may be required based on the depth of the pipe. Sanitary sewer pipe shall be located in the center of the easement. The sanitary sewer alignment must be graded to permit travel by utility trucks and backhoes. The sanitary sewer alignment should be offset from the property line to avoid conflicts with survey monuments. The easement description must hold the City harmless for any damage to or

removal of fences, retaining walls, trees or other improvements constructed in the easement area. Easements need to be shown on the final plat or recorded easement document prior to City acceptance.

4.4.2 Clearance from Other Utilities

Separation of parallel water and sanitary sewer lines shall meet the requirements of OAR 340-052 Appendix A, as shown in Figure 4-1.

Figure 4-1. Sanitary Sewer Line Separation from Parallel Water Lines²



Water and sanitary sewer line crossings shall be in accordance with the OAR 340-052 Appendix A. Sanitary sewer/water line crossings shall be as near to 90 degrees as practical.

² Oregon Administrative Rules, Chapter 340, Division 52, Appendix A, September, 1981.

A minimum of 18 inches of clearance is required from the top of the sanitary sewer line and the bottom of the water line. If at least 18 inches of separation cannot be maintained, the crossing shall meet the requirements of OAR 340-052 Appendix A.

Adequate separation is required from other utilities. All clearances listed below are from edge of pipe to edge of pipe:

Table 4-3. Minimum Horizontal Clearance from Sanitary Sewer

Utility	Min. Distance (ft)
Cable TV	5
Gas	5
Power	10
Storm	5
Telephone, Fiber Optic	10

Table 4-4. Minimum Vertical Clearance from Sanitary Sewer

Utility	Min. Distance (ft)
Cable TV	1
Gas	1
Power	1
Storm	1
Telephone, Fiber Optic	1

4.5 SANITARY SEWER CONNECTIONS

In accordance with the Astoria Sewer Resolution, each residential, commercial or industrial building is required to have a separate connection to the public sanitary sewer. Private sewers serving more than one lot are not allowed, unless the lots are combined as one buildable lot of record as approved by the City. See OPSC, Section 721 for exceptions.

A number of older homes in Astoria are connected to common private sewers. The OPSC requires that two buildings under different ownership must have their own separate

connections to the public sewer. New connections will not be permitted on these private lines.

4.5.1 Connection of Sanitary Sewer Laterals

Connection of sanitary sewer laterals to the public sanitary sewer main is shown in **Detail S-8**. The cost of new lateral connections or extensions is the responsibility of the property owner.

City responsibility for sanitary sewer maintenance is limited to public sanitary sewer mains. Sanitary sewer laterals from the point of connection at the sanitary sewer main, back to the building are the responsibility of the property owner.

4.5.2 Connection of New Sanitary Sewer Mains

Connections of new sanitary sewer mains to existing pipes must be done with a manhole. There is a possibility of surcharging in some existing sanitary sewer lines, particularly the interceptor. This must be taken into account when designing new connections and measures such as storage or backflow prevention constructed to avoid problems.

4.5.3 Pre-Treatment Requirements for Sanitary Sewer Connections

Astoria City Code section 5.555 (9) prohibits the introduction of mastics, oil, grease or petroleum products into the public sanitary sewer by any user connected to the sanitary sewer system. Industrial, commercial and/or retail operations, regardless of size, that generate petroleum/animal/vegetable fats, oils or grease (FOG) waste, must pre-treat wastewater prior to discharging to the public sanitary sewer. Pre-treatment systems are reviewed and approved by the City Building Official. Ongoing maintenance and repair of pretreatment systems to ensure proper function is the responsibility of the property owner.

4.6 WASTEWATER PUMP STATIONS

Pump stations will be evaluated on a case-by-case basis by the City Engineer and Public Works Superintendent. Pump station design plans require DEQ approval in addition to City approval.

Wastewater pump stations must be designed by an Oregon Registered Professional Engineer and must meet DEQ standards for design and construction of wastewater pump stations. Operation and maintenance manuals meeting DEQ guidelines must also be provided. Contact the Public Works Superintendent for additional specifications on pump station controls and appurtenances required by the City.

4.7 SANITARY SEWER SYSTEM TESTING

All new sanitary sewer pipes and manholes must be tested for watertightness prior to City acceptance, using a DEQ-approved method. (Refer to Appendix A of OAR 52.)

In addition, new sewer pipes must be thoroughly flushed and inspected by video, after trench backfilling is complete and prior to City acceptance. This includes video confirmation that the line is free from sags, irregular joints and connections, obstructions, restrictions or other anomalies that may cause solids to accumulate.

Pump station inspection and testing shall be performed to manufacturer's specifications in the presence of the City Public Works Superintendent or designated representative. Testing documentation must be provided to the City Engineer for approval prior to City acceptance.

5 STORM WATER MANAGEMENT SYSTEMS

5.1 GENERAL GUIDELINES

Plans for temporary and permanent storm water management shall be provided for every street improvement and land development proposal.

In areas where storm drains exist within 100 feet of proposed residential development or 200 feet of proposed commercial/industrial development, the storm drain shall be extended to serve the new development. The City Engineer may require longer line extensions and/or additional design parameters for larger developments that have the potential to significantly impact the City's infrastructure. The City will accept maintenance of new storm drains installed within dedicated street rights-of-way, provided that construction is in accordance with City standards.

In areas where public sanitary and storm drains are combined, storm water may be directed to the combined sewer system only with the approval of the City Engineer. Storm water and sanitary sewer originating on private lots shall be piped separately to the property line. At the property line, storm and sanitary sewer lines may be joined and then connected to the public combined sewer line with a single sewer lateral. Street runoff in combined sewer areas shall be captured in catch basins and routed to an existing sanitary sewer structure designated by the City Engineer.

In addition to adhering to the standards provided below, storm water designs should identify the potential overland flow path in the event the storm water infrastructure becomes plugged or fails, and provide safeguards to minimize property damage.

Runoff from streets and other impervious surfaces may not be directed to a natural drainage channel, without prior approval of the City Engineer. If approved, runoff directed to natural drainage channels shall be pre-treated using a pollution control structure or biofiltration method. Riprap or other energy dissipation facilities may be required at storm water discharge points to prevent erosion.

5.2 STORM WATER DESIGN DOCUMENTATION

Hydraulics reports and other storm water design documentation documents shall be prepared in accordance with the ODOT Hydraulics Manual.

5.3 TEMPORARY STORM WATER AND EROSION CONTROL

Management of storm water during construction shall adhere to the Oregon Department of Environmental Quality's Construction Stormwater Best Management Practices Manual.

A plan for temporary slope stability and erosion control, along with a plan for permanent slope stability, erosion control and plant establishment, is required as part of the construction submittal. A grading permit must be obtained from the Engineering Division before any site work, including clearing and grubbing, begins.

If a geological study is required by the City's Development Code, the study shall address both local and global slope stability, before, during, and after development. Geological recommendations shall include methods for maintaining slope stability and managing storm water during construction. All geological recommendations shall be incorporated in the Developer's grading permit application, and approved by the geologist or engineer upon completion of construction.

5.4 PERMANENT STORM WATER MANAGEMENT SYSTEMS

5.4.1 Flow Calculations and Sizing Methodology

Runoff calculations and pipe sizing performed by a registered engineer are required, and should be based on anticipated build-out. All future anticipated impervious surfaces in the development such as streets, walkways, driveways, roofs, patios, etc. should be accommodated when designing storm water improvements.

Refer to the ODOT Hydraulics Manual for acceptable hydrologic methods for calculating peak flows. Selection of methodology is at the discretion of the Design Engineer. Calculations should be confirmed using a second analysis method, also selected at the discretion of the designer.

5.4.2 Inlets, Catch Basins and Storm Water Pre-Treatment

Inlets and catch basins in the public right-of-way shall be constructed as shown in **Details SD-1 through SD-5**. Inlets and catch basins on private property shall comply with Plumbing Code requirements.

Pre-treatment of storm water destined for conveyance in a public sanitary sewer or storm drain system is not standard for the City, but may be required by certain funding sources for public projects. If required, pre-treatment may be accomplished through the use of biofiltration swales, catch basin inserts, or other methods approved by the City Engineer which are designed to remove oil and grease, trash, debris and sediment. If catch basin inserts are used, filter systems shall encapsulate contaminants and shall be designed for easy

installation, removal and disposal. Any catch basin inserts proposed for use on public facilities require approval of the Public Works Superintendent.

5.4.3 Storm Drain Manholes

Storm drain manholes shall meet the requirements of Section 4.3 and **Details S-1 through S-7**. Channelization is not required in storm drain manholes. A sump is required with a 12" minimum depth.

5.4.4 Storm Drain Pipes

The City allows the use of the following materials for storm drain piping:

- a. Pipe meeting ASTM D3034 SDR 35 specifications
- b. High-density polyethylene (HDPE) pipe with fused joints. Joints shall be de-beaded.
- c. Dual wall corrugated HDPE pipe with smooth interior wall (for example, ADS N-12 piping for diameters of 24" and less; and ADS SaniTite for diameters of 30" and larger.)

Storm drain piping shall otherwise meet the requirements of Section 4.2, except that the minimum storm drain pipe size shall be 8 inches.

White locate wire shall be installed as shown in **Detail UT-1**.

5.4.5 Connection of Private Drains to the Public Storm Drain

For Commercial/Industrial developments, storm water originating on private property shall be treated on-site.

Private drains may be connected directly to the public storm water system, if approved by the Engineer. Drain pipes 10-inch diameter and larger, shall be connected at a nearby manhole or catch basin rather than directly to public storm water pipelines. All connection points shall be approved by the City Engineer.

For private developments adjacent to Mixed Use and Residential Streets, small private drains for individual lots may be piped under the sidewalk and through the curb, for discharge to the street gutter, provided that the street cross section does not allow sheet flow across the travelled way. Gutter discharge points shall be approved by the City Engineer. The City Engineer may require connection to the public storm water system where gutter discharge has the potential for detrimental effects.

5.4.6 Vegetated Storm Water Facilities

Biofiltration swales shall be provided for storm water treatment in the public right-of-way along Commercial/Industrial streets where well-draining soils exist. Refer to the water quality section of the ODOT Hydraulics Manual for swale sizing and design guidelines.

If infiltration is planned to reduce the volume of storm water directed to the public sanitary sewer, at least one onsite infiltration test shall be conducted to estimate the rate of infiltration before selecting and sizing infiltration facilities. Selection of a standard infiltration test procedure shall be at the discretion of the designer, provided that the method selected is appropriate for the facility being designed. Refer to technical guidance published by the Oregon State Extension office³.

Along Residential and Mixed Use streets, the City Engineer may consider the use of swales, rain gardens and other non-traditional planting strip treatments for collection and treatment of storm water from the public right-of-way. In hillside areas, these facilities shall be designed as flow-through facilities, either lined with an underdrain, or unlined at the City's discretion. Lined facilities may be required to prevent infiltration in geologically active locations or areas where underground contaminants may be present. Design shall include energy dissipation elements and discharge connections to the public storm drain or combined sanitary sewer system.

For new subdivisions, maintenance of vegetated storm water areas within the public street right-of-way is the responsibility of the Developer and the subsequent property owners' association. This includes keeping any storm water treatment and conveyance elements within planted areas in a state of good repair. In existing City streets where a vegetated storm water treatment area is installed to help the City meet storm water management goals, the City will assume responsibility for maintaining the vegetated area.

In designated geohazard areas, vegetated facilities for storm water infiltration or partial infiltration are not allowed.

5.4.7 Retention and Detention Facilities

The City's preference is unrestricted conveyance of storm drainage to the Columbia River or Young's Bay without the use of detention or retention structures. Therefore design efforts should first seek to address any limiting downstream capacity impediments within the City's storm water conveyance system. The following treatments require City Engineer approval and will be considered for storm water detention or retention only when it is not feasible to resolve downstream capacity issues in the public storm drain system.

³ "Infiltration Testing", Low Impact Development Fact Sheet, Document Number ORESU-G-11-008; Oregon Sea Grant, Corvallis, OR
<http://extension.oregonstate.edu/stormwater/sites/default/files/Infiltration%20Testing.pdf>

5.4.7.1 Basins

Storm water retention and detention basins are uncommon in Astoria and will be considered by the City Engineer on a case by case basis. If allowed, basins intended as storm water management facilities shall meet the design criteria provided in the ODOT Hydraulics Manual.

5.4.7.2 Detention Flow Control Structures

Structural detention facilities such as tanks, vaults and oversized pipes shall be designed to prevent surcharge of downstream piping systems during storm events.

The following criteria apply to detention tank, vault, and oversized pipe design:

- a. All areas within a tank or vault shall be within 50 feet of a rectangular hatch with a 30 x 36 minimum opening. All access openings shall have solid locking lids.
- b. Publicly owned detention tanks, vaults, and pipes are permitted within public rights-of-way. If developments are served with publicly operated and maintained tanks and vaults that are not located within the right-of-way, the tanks/vaults shall be located in separate open space tracts with public sanitary sewer easements that are dedicated to the City of Astoria. All privately owned and maintained facilities shall be located to allow easy maintenance and access.
- c. Minimum size for a public detention pipe shall be 36 inches.
- d. The minimum internal height of a vault or tank shall be 3 feet, and the minimum width shall be 3 feet. The maximum depth of the vault or tank invert shall be 20 feet.
- e. Where the tank or vault is designed to provide sediment containment, the structure shall be designed with a sump to facilitate cleaning.
- f. Pipe materials shall conform to Section 5.4.4
- g. Detention vaults shall be constructed of structural reinforced concrete (3000 psi, ASTM 405). All construction joints shall be provided with water stops.
- h. In soils where groundwater may induce flotation and buoyancy, measures shall be taken to counteract these forces with concrete ballast, earth backfill, concrete anchors, or other counteractive measures. Calculations demonstrating stability shall be submitted to the City Engineer.
- i. Tanks and vaults shall be placed on stable, consolidated native soil with suitable bedding. For installation in fill slopes, a geotechnical analysis shall be performed to confirm stability and determine construction practices.

Flow control structures must be approved by the City Engineer and must meet the following design criteria:

- j. Refer to the ODOT Hydraulics Manual for orifice and weir flow control equations.

- k. Weir structures must be enclosed in a catch basin, manhole, or vault and must be accessible for maintenance.
- l. The control structure shall be designed to pass the 100-year storm event as overflow, without causing flooding of the contributing drainage area.

5.4.8 Operation and Maintenance Plans

A plan outlining the scope of activities, schedule and responsible parties for periodic inspection and maintenance of permanent storm water facilities shall be prepared and included with the construction submittal. This plan shall cover vegetation management, structural repairs, sediment removal and other activities necessary for the continued long-term function of the storm water facilities.

5.4.9 Storm Drain System Testing

All new storm drain pipes and manholes must be tested for watertightness prior to City acceptance using a water exfiltration test procedure.

In addition, new storm drain pipes must be thoroughly flushed and inspected by video, after trench backfilling is complete and prior to City acceptance. This includes video confirmation that the line is free from sags, irregular joints and connections, obstructions, restrictions or other anomalies that may cause solids to accumulate.

6 WATER SYSTEMS

This chapter provides information for the design of public water systems. Private water systems must be designed according to the State Specialty Plumbing Code. Public water design plans are reviewed and approved by the Engineering Division and the Oregon Health Authority Drinking Water Program.

The following water design standards have been developed with the goals of proper sizing for current and future flows, correct installation for long life, ease of access for maintenance and repair while taking into account construction costs.

Compliance with these standards does not relieve the Design Engineer of the responsibility to apply conservative and sound professional judgment. These are minimum standards and are intended to assist, but not substitute for competent work by design professionals. The City may, at its sole discretion due to special conditions and/or environmental constraints, require more stringent requirements than would normally be required under these standards.

This chapter is intended to be consistent with and a supplement to the following documents:

SDWA	Safe Drinking Water Act
CWA	Clean Water Act
APWA	American Public Works Association
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
	Oregon Fire Code
	City of Astoria Water Resolution
OPSC	Oregon Plumbing Specialty Code

Where conflict exists between these Design Standards and the above referenced documents, the most stringent requirements shall take precedence.

6.1 CITY PRESSURE ZONES

Contact the Engineering Division for pressure zone information. The City has several pressure zones within the water system.

6.2 DESIGN FLOW RATES

Water system design shall meet distribution needs for projected maximum daily demand plus fire flow within a given service area. New water systems shall allow for future extensions beyond present development that are consistent with the *Development Code*. Flow testing at peak demand may be required by the Fire Department.

For reference, the average domestic water use in Astoria is 320 gpd per Equivalent Dwelling Unit. The City's Water Resolution provides water consumption estimates for specific individual uses, which may be used for design purposes. An appropriate peak hour factor shall be used for water system design.

6.3 WATER PIPES

6.3.1 Water Pipe Size

Water distribution main sizes shall generally conform to the following:

- a. **4-inch** – May only be used with approval of the City Engineer in residential zones on dead-end streets less than a centerline distance of 250-feet measured from the center of the intersection street to the radius point of the cul-de-sac and that serves 12 or fewer single-family residences. All 4-inch mains shall be connected to a looped minimum 6-inch main. Fire hydrants are not permitted on 4-inch lines. All 4-inch lines shall terminate with a standard blow-off (**Detail W-6**).
- b. **6-inch** – Minimum size residential subdivision distribution water main for the grid (looped) system, limited to single family residential. A 6-inch line shall not be permanently dead-ended. Looping of the distribution grid shall be at least every 600 feet.
- c. **8-inch** – Minimum size for permanently dead-ended mains supplying fire hydrants and mains in residential subdivisions. Dead-end pipe length shall not exceed 600 feet.
- d. **10-inch and larger** – As required for mains in subdivisions, industrial areas, and commercial areas.

Standard design velocity in distribution mains shall not exceed 5 feet per second (fps) for maximum daily demand. Designs that propose occasional short term velocity increases of an additional 2 fps to meet required fire flows may be considered by the City Engineer. Velocity in service lines shall be designed not to exceed 10 fps.

For portions of the water system with mid-range to low-static pressures, required flows may not be achievable while still maintaining a minimum system residual of 20psi. Oversizing of waterlines may be required to achieve the required flows.

Standard pipe sizes for distribution mains are 4" (limited to cul-de-sacs where the City's Fire Code Official has determined that fire hydrants are not required), 6", 8", 10", 12" and sometimes 18".

Standard sizes for transmission mains are 18" and 24". In some instances, 12" distribution mains are designed to serve as transmission mains.

Design exceptions to standard sizes may be allowed in cases of a bridge crossing or other conditions where a standard size would be infeasible, or would limit the capacity below that needed.

Water main, service line and meter sizes are based on the City's Water Resolution, and must be approved by the Engineering Division.

6.3.2 Water Pipe Material

All public water distribution systems shall be constructed with ductile iron, PVC or HDPE pipe meeting AWWA standards. Exceptions may be approved on bridge crossings or in other locations where structural constraints exclude the use of bell and spigot pipe.

- a. **Ductile iron** pipe shall be Class 52, cement mortar-lined with push-on or mechanical type joints, and conform to AWWA C151.
- b. **PVC** pipe, 4-inches to 12-inches shall conform to AWWA C900 and Uni-Bell standards. PVC pipe, 14-inches to 36-inches shall conform to AWWA C905 and Uni-Bell standards. All PVC pipe shall have a dimension ratio no greater than 18, with an outside diameter identical to cast iron pipe.
- c. **HDPE** pipe, 4-inches to 63-inches shall conform to AWWA C906. All HDPE water pipe shall have a standard dimension ratio no greater than 11.

Tracer wire shall be 14-gauge, solid core, blue-coated copper wire with thermoplastic insulation recommended for direct burial, and shall be installed with all PVC and HDPE water pipe.

Service lines 1-inch and smaller are to be type "K" copper or HDPE. 2-inch service lines must be HDPE or brass. Service lines larger than 2 inches can be ductile iron, HDPE or PVC.

When a potential corrosive condition is encountered, all ductile iron pipe and fittings will be polyethylene encased with an 8-mil tubing meeting manufacturer and AWWA Standards. Where an active cathodic protection system is encountered as a result of other utilities, a

deviation from the normal water pipe design/material/installation practice may be required by the City Engineer. PVC pipe or HDPE pipe shall be used where an active cathodic protection system is encountered.

6.3.3 Water Pipe Depth

The minimum cover over buried water mains shall be 30 inches within the road right-of-way from finish grade. Maximum depth for buried water mains shall be 42 inches unless otherwise approved by the City Engineer.

6.4 WATER LINE ALIGNMENT

The distribution system mains shall be looped at all possible locations. All developments will be required to extend mains across existing or proposed streets for future extensions of other developments. All terminations shall be planned and located such that new or existing pavement will not have to be cut in the future when the main is extended.

Dead-end mains that are permanent or that will be extended in the future shall be provided with a properly sized blow-off. See **Detail W-6**.

The installation of permanent or long-term, dead-end mains greater than 250-feet, upon which fire protection depends, and single mains serving relatively large areas will not be permitted unless otherwise approved by the City Engineer.

No more than 20 single-family residences shall be served from an un-looped waterline, unless approved by the City Engineer.

Unless otherwise directed or approved by the City Engineer, water mains shall be located within the public right-of-way for ease of maintenance and access, control and operation of the facility, and to permit required replacement and/or repair.

6.4.1 Water Line Easements

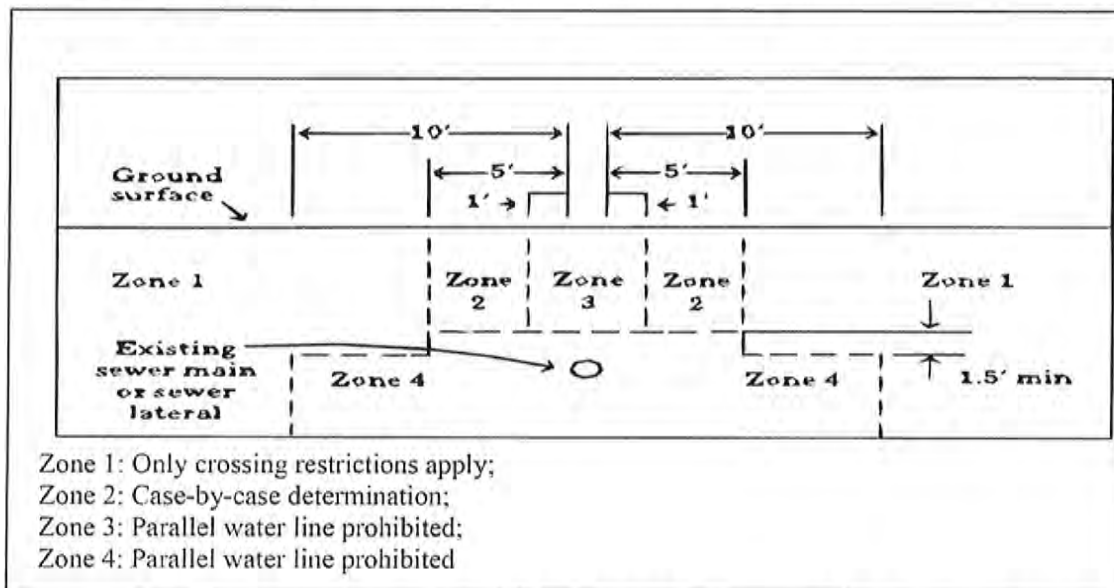
If due to unavoidable constraints the water main must run along a property line, adequate access must be provided. A minimum 20-foot wide water easement approved by the City is required for legal access and an adequate surface is required for physical access. Wider easements may be required for deeper pipes. The water alignment must be graded to permit travel by utility trucks and backhoes. The easement description must hold the City harmless for any damage to or removal of fences, retaining walls, trees or other improvements constructed in the easement area. Easement needs to be shown on final plat or recorded easement document prior to acceptance of the water line by the City.

6.4.2 Clearance from Other Utilities

Water and sanitary sewer line crossings shall be in accordance with the OAR 333-061-0050(9). Sanitary sewer/water line crossings shall be as near to 90 degrees as practical. The bottom of the water line shall be 1.5 feet or more above the top of the sanitary sewer line and one full stick of water line shall be centered at the crossing.

Horizontal separation of parallel water and sanitary sewer lines shall meet the requirements of Figure 6-1. In areas where separation requirements are unable to be met, construction shall comply with OAR 333-061-0050(9)(B & C) and will require City Engineer approval.

Figure 6-1. Water Line Separation from Parallel Sanitary sewer Lines⁴



No new utility pole shall be located within 5 feet of an existing hydrant or within 8 feet of an existing water line.

Adequate separation is required from other utilities. All clearances listed below are from edge-to-edge of each pipe:

⁴ Oregon Administrative Rules 333-061-0050, Construction Standards Figure 1, <http://arcweb.sos.state.or.us/pages/rules/oars_300/oar_333/tables_333/333-061-0050_1-25.pdf> (Accessed: October 15, 2014).

Table 6-1. Minimum Horizontal Clearance from Water Main

Utility	Min. Horizontal Distance from Water Main (ft)
Cable TV	5
Gas	5
Power	5
Storm	5
Telephone, Fiber Optic	5

Table 6-2. Minimum Vertical Clearance from Water Main

Utility	Min. Vertical Distance from Water Main (ft)
Cable TV	1
Gas	2
Power	1
Storm	1
Telephone, Fiber Optic	1

6.5 VALVES

Valves shall be installed in accordance with **Detail W-1**. Gate valves are required on water lines from 2" to 12" diameter and shall meet the requirements of AWWA C509 or C515. Butterfly valves are required on water lines larger than 12" diameter and shall meet the requirement of AWWA C504. Valves shall be 2" square nut Non-Rising Stem (NRS) operating, unless specified otherwise. Valves must be tested to ensure proper movement prior to installation.

6.6 FITTINGS

All ductile iron mechanical joint fittings shall be pressure rated at 350 psi and meet the requirements of AWWA C153. All flanged fittings and cast iron mechanical joint fittings shall be manufactured domestically and meet the requirements of AWWA C110 and C111. All fittings shall be factory cement mortar lined and coated.

6.7 FIRE HYDRANTS

Required fire flows are determined by the City's Fire Code Official.

The distribution of hydrants shall be based upon the required average fire flow for the area served. Design coverage shall result in hydrant spacing that meets the Oregon Fire Code of no greater than 400 feet in residential areas and approximately 300 feet in commercial or industrial areas. Additional hydrants shall be placed as required by the Fire Department, Building Division and/or Engineering Division.

No fire hydrant shall be installed on a main of less than 8-inch inside diameter. The hydrant lateral shall be a minimum of 6 inches nominal diameter.

Private fire hydrants are limited to large commercial or industrial developments where public access is not feasible, or as approved by the City's Fire Code Official.

All fire hydrants will be located at the back of the existing or proposed sidewalk, or in the planter strip. Where there is no sidewalk, fire hydrant shall be located a minimum of 2 feet from the face of curb, as shown in **Detail W-2**. If any public hydrant encroaches on private property, an easement must be provided to the City. In general, fire hydrants will be located at or near the point of curvature of the curb return or at a common property line. The pumper port of each fire hydrant shall be perpendicular to the curb line or shoulder as applicable.

No hydrant shall be installed within 5 feet of any above-ground utility, nor shall any utility install facilities closer than 5 feet to an existing hydrant. Hydrants shall not be blocked by parking, fences or other obstructions.

Hydrant installation shall conform to **Detail W-2**. Public fire hydrants shall be painted yellow and private hydrants shall be painted red. Private hydrants must be maintained in accordance with the Oregon Fire Code. Installation of hydrant extensions will not be allowed, unless approved by the City Engineer.

Unless connected to a fire line/fire sprinkler service, fire hydrants shall be placed on the same side of the right-of-way as the waterline serving the fire hydrant. Other proposed locations must be approved by the City Engineer.

Each fire hydrant shall have an auxiliary valve and valve box that will permit repair of the hydrant without shutting down the main supplying the hydrant. The auxiliary valve shall be a resilient-wedge gate valves. See **Detail W-2**.

Guard posts, a minimum of 3-feet high, shall be required for protection from vehicles when necessary (see Oregon Fire Code). Such protection shall consist of 6-inch diameter steel

pipes 6-feet long, filled with concrete, buried a minimum of 3-feet deep in concrete and located at the corners of a 6-foot square with the hydrant located in the center. Use of posts other than at the 4 corners may be approved by the City Engineer.

6.8 COMBINATION AIR/VACUUM RELEASE VALVES

Combination air/vacuum release valve units are required on all transmission and distribution lines, at all high points in grade and at other points as determined by the City Engineer. See **Detail W-7**.

6.9 PRESSURE-REDUCING VALVES

The City's water distribution system is divided into several pressure zones. Where water systems cross these zone lines, a pressure-reducing valve (PRV) station is required. The specific design and location for such valves will be reviewed and approved by the City Engineer. Combination air-vacuum units must be installed downstream of each PRV.

6.10 WATER SERVICE LINES

Water service line refers to the combined facility made up of both a "City water service line" and a "customer water service line." The City service line extends from the water main to the water meter. The customer service line extends from the water meter to the point of use. Customer service lines shall meet the standards of the current edition of the OPSC.

6.10.1 City Service Lines and Meters

Allowable water service line sizes are ¾-inch, 1-inch, 2-inch, 4-inch, 6-inch, 8-inch, 10-inch and 12-inch. Corresponding meter sizes are shown in Table 6-3. A minimum of 30 inches of cover is required for all water service lines. All meters 3 inches and larger require a bypass line as shown in **Detail W-5**. Water service lines will be reviewed for impacts on the distribution system and shall not be greater in size than the distribution main.

Domestic service lines ¾-inch, 1-inch and 2-inch shall extend from the main to behind the curb, with a meter curb stop and meter box located at the termination of the service connection (**Details W-3 and W-4**). Meter shall be provided and installed by the City. Meter boxes are to be provided by the City. Whenever possible, individual service connections shall terminate in front of the property to be served along the street frontage where property is addressed. Meter boxes should be located outside a vehicle travel way. Water service via an easement across a separate parcel under separate ownership, or capable of being sold off, is not allowed unless otherwise approved by the City Engineer.

For services 4-inch and larger (3-inch and larger meters), a design drawing must be submitted to the City showing the vault and fitting requirements with the expected flow

(normal and maximum daily flow) requirements and proposed usage. Meter vaults shall be placed at the entrance to the property being served, unless otherwise approved by the City Engineer. See **Detail W-5**.

Multiple service connections to a premises shall be laid out to follow a logical sequence of addresses to facilitate matching of service connection to building(s). On-site water lines shall be laid out to facilitate a logical matching of service connection to building and address. Each meter must have its own service line and connection to a water main. Manifolds require approval of the City Engineer.

Where an active cathodic protection system is encountered, the service line material shall be HDPE.

Table 6-3. General Design Criteria for Water Service and Meter Sizing

Water Service Size (inches)	Meter Size (inches)	Max Design Flow (GPM)*
3/4	5/8 x 3/4	30
1	1	50
2	1 ½	100
2	2	160
4	3	320
4	4	500
6	6	1,000
8	8	1,600
Larger than 8	Reviewed and approved on a case-by-case basis.	
<p><i>*Continuous flow not to exceed 30% of max design flow for ¾-inch to 2-inch disk meters. Continuous flow not to exceed 50% of max design flow for all compound meters.</i></p>		

6.10.2 Fire Service Lines

Water system design shall provide adequate flow for fire protection during projected maximum water usage and consumption. Required water system demands shall be met while maintaining the minimum operating pressures of 20 psi required by the State of Oregon (OAR 333-061-0050). Refer to the most current edition of the Oregon Fire Code for fire flow requirements.

There are 4 categories of private fire services: (1) hydrants, (2) fire sprinkler lines, (3) combination hydrant and fire sprinkler lines, and (4) combination hydrant, fire sprinkler and domestic service lines. Table 6-4 provides general design criteria for fire line and fire sprinkler system services.

The City portion of a fire service line shall extend from the main to the property line and end with a vault, metering device, and valves. An approved backflow prevention assembly is required for the property being served, and must be located at the property line. The property owner is responsible for maintenance.

Fire lines serving only fire sprinkler systems shall be metered by a detector meter on the approved backflow assembly. Valves controlling fire suppression water supplies shall be monitored in accordance with the Oregon Fire Code.

Whenever possible, the fire service shall be located along the street frontage where the parcel is addressed.

Fire sprinkler systems for one and two family dwellings shall be served through a standard metered service. The fire sprinkler system may be served through the domestic service for the same residence. The combined domestic, irrigation, and fire sprinkler flow demands may not exceed the City of Astoria allowable flow for that particular size of service and meter.

Table 6-4. General Design Criteria for Fire Line and Fire Sprinkler System Services

Fire Service Size (inches)	Double Detector Check Valve Assembly or Reduced Pressure Assembly (inches)	Max Design Flow (GPM)*
1	¾	30
1	1	50
2	1 ½	100
2	2	160
4	4	500
6	6	1,000
8	8	1,600
10	10	2,500
Larger than 10	Reviewed and approved on a case by case basis	
<p><i>*Continuous flow not to exceed 30% of max design flow for ¾-inch to 2-inch disk meters. Continuous flow not to exceed 50% of max design flow for all compound meters.</i></p>		

6.10.3 Fire Vaults

A vault for a 3-inch and larger double detector check valve assembly will be required when a development provides fire sprinklers. The vault drawing will be included on construction drawings submitted to the City.

6.11 BACKFLOW PREVENTION

A backflow prevention device is required for any system with potential to backflow, such as commercial, some residential and stand-alone fire suppression systems. Refer to the City Water Resolution for requirements pertaining to backflow prevention. Installation of backflow prevention devices shall conform to the OPSC when located on private property.

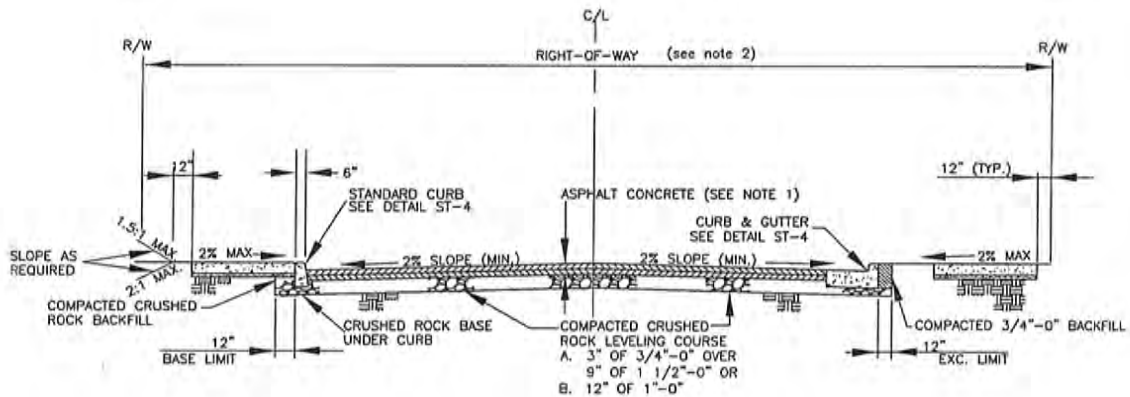
6.12 BOOSTER STATIONS

Booster stations must be designed by an Oregon Registered Professional Engineer and will be evaluated on a case-by-case basis by the City Engineer and Public Works Superintendent. Contact the Public Works Superintendent for specifications on booster station controls and appurtenances required by the City.

6.13 WATER SYSTEM TESTING

All new water systems (including lines, valves, hydrants and services) shall be individually pressure tested, chlorinated, and tested for bacteria. All testing shall be performed in accordance with AWWA C600 and C651, in the presence of a City Inspector.

APPENDIX A - STANDARD DETAILS



NOTES:

1. ASPHALT SHALL BE LEVEL 2, 1/2" DENSE HMAC WITH THE FOLLOWING THICKNESS:
 3" MIN. ON RESIDENTIAL LOCAL STREETS.
 4" MIN. ON RESIDENTIAL COLLECTOR AND MIXED USE STREETS.
 4" MIN. IN COMMERCIAL AND INDUSTRIAL AREAS.
2. SEE STANDARD DETAIL ST-2 FOR STANDARD WIDTH DIMENSIONS.
3. SOIL TESTING TO DETERMINE STRUCTURAL SECTION MAY BE REQUIRED BY THE CITY ENGINEER.
4. UNSUITABLE SUBGRADE MATERIAL SHALL BE REMOVED AND REPLACED WITH COMPACTED 2.5"-0" CRUSHED ROCK AT ENGINEER'S DIRECTION.



City of Astoria
Public Works Department
 1095 Duane Street

Street Cross Section Detail

Date Adopt. 11/01/12 Date Rev. 11/20/15

Dwg. Name: ST-1 Street Cross Section.dwg

DWG. NO.

ST-1

SEE CITY OF ASTORIA TSP ADOPTED
APRIL 21, 2014 - VOLUME 1, SECTION 6
"STANDARDS"



City of Astoria
Public Works Department
1095 Duane Street

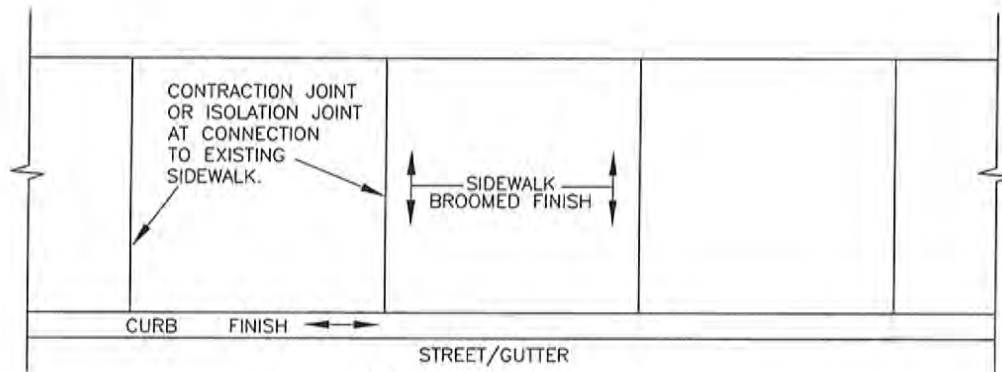
Typical Street Widths

Date Adopt. 11/01/12 | Date Rev. 07/24/14

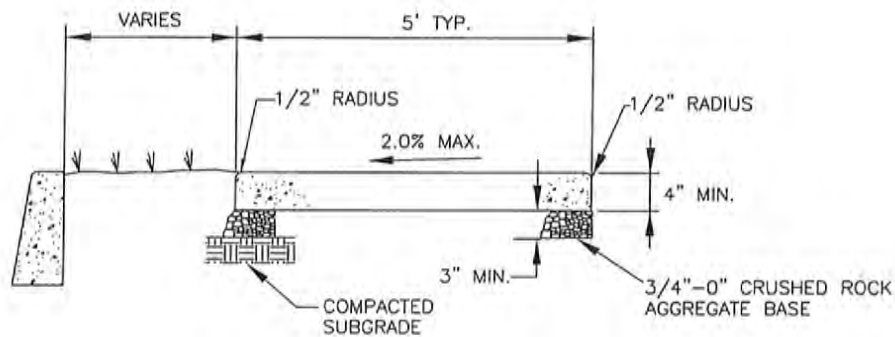
Dwg. Name: ST-2 Typical Street Widths.dwg

DWG. NO.

ST-2



PLAN



PROFILE

NOTES:

1. PORTLAND CEMENT CONCRETE SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 3300 P.S.I.
2. CONTRACTION JOINTS SHALL BE PLACED SO AS TO MAKE SQUARE BLOCKS FOR WALKS UP TO 8' WIDE AND ALSO AT ALL CHANGES IN DIRECTION AND POINTS OF CURVATURE. JOINT SHALL BE 1/8" TO 1/4" WIDE WITH A MINIMUM DEPTH OF 1/3 OF THE CONCRETE THICKNESS.
3. ISOLATION JOINTS SHALL BE PLACED AT CONNECTIONS TO EXISTING SIDEWALK, EDGES OF DRIVEWAYS AND ALL STRUCTURES WITHIN SIDEWALK. JOINTS SHALL CONSIST OF A PREFORMED FILLER MATERIAL WITH MINIMUM 1/2" THICKNESS.



City of Astoria
Public Works Department
 1095 Duane Street

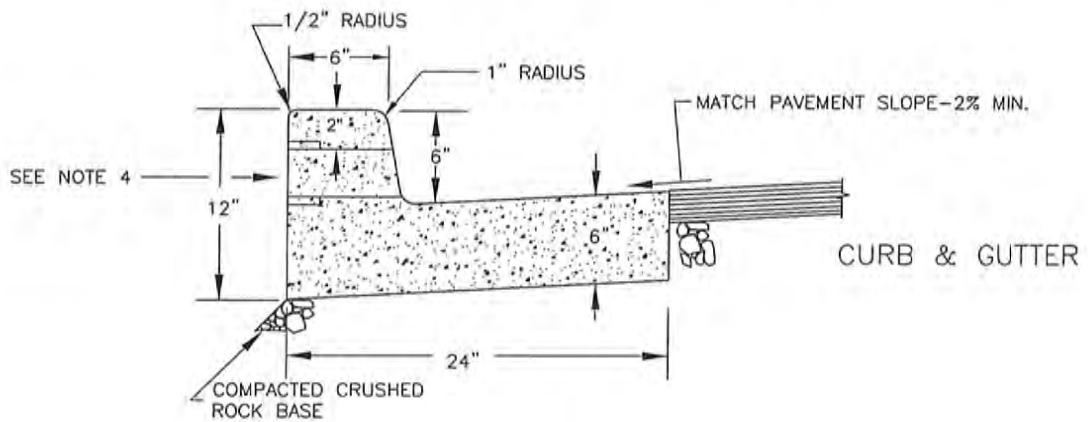
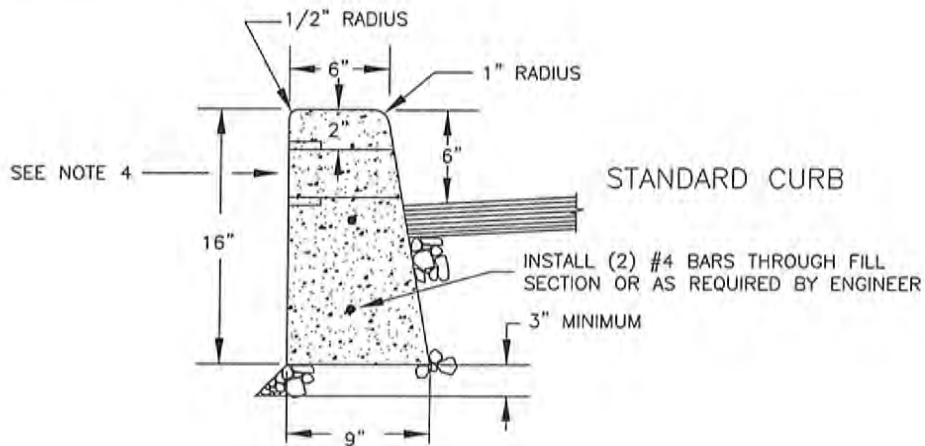
Sidewalk Detail

Date Adopt. 11/01/12 Date Rev. 11/10/15

Dwg. Name: ST-3 Sidewalk.dwg

DWG. NO.

ST-3



NOTES:

1. PORTLAND CEMENT CONCRETE SHALL ATTAIN A 28-DAY COMPRESSIVE STRENGTH OF 3300 P.S.I..
2. CONTRACTION JOINTS SHALL BE PLACED AT 15 FOOT MINIMUM INTERVALS WITH 1 1/2" DEPTH. MATCH SIDEWALK JOINTS.
3. PLACE CONTRACTION JOINT IN CURB OVER CENTER OF PIPE EXTEND PIPE TO BACK OF SIDEWALK IF SIDEWALK IS ADJACENT TO CURB.
4. DRAINAGE BLOCKOUT 3" I.D. PLASTIC PIPE W/BELL. LOCATED AS DIRECTED IN THE FIELD. GENERALLY NOT LESS THAT 2 PER LOT.



City of Astoria
Public Works Department
1095 Duane Street

Curb Detail

Date Adopt. 11/01/12

Date Rev. ----

DWG. NO.

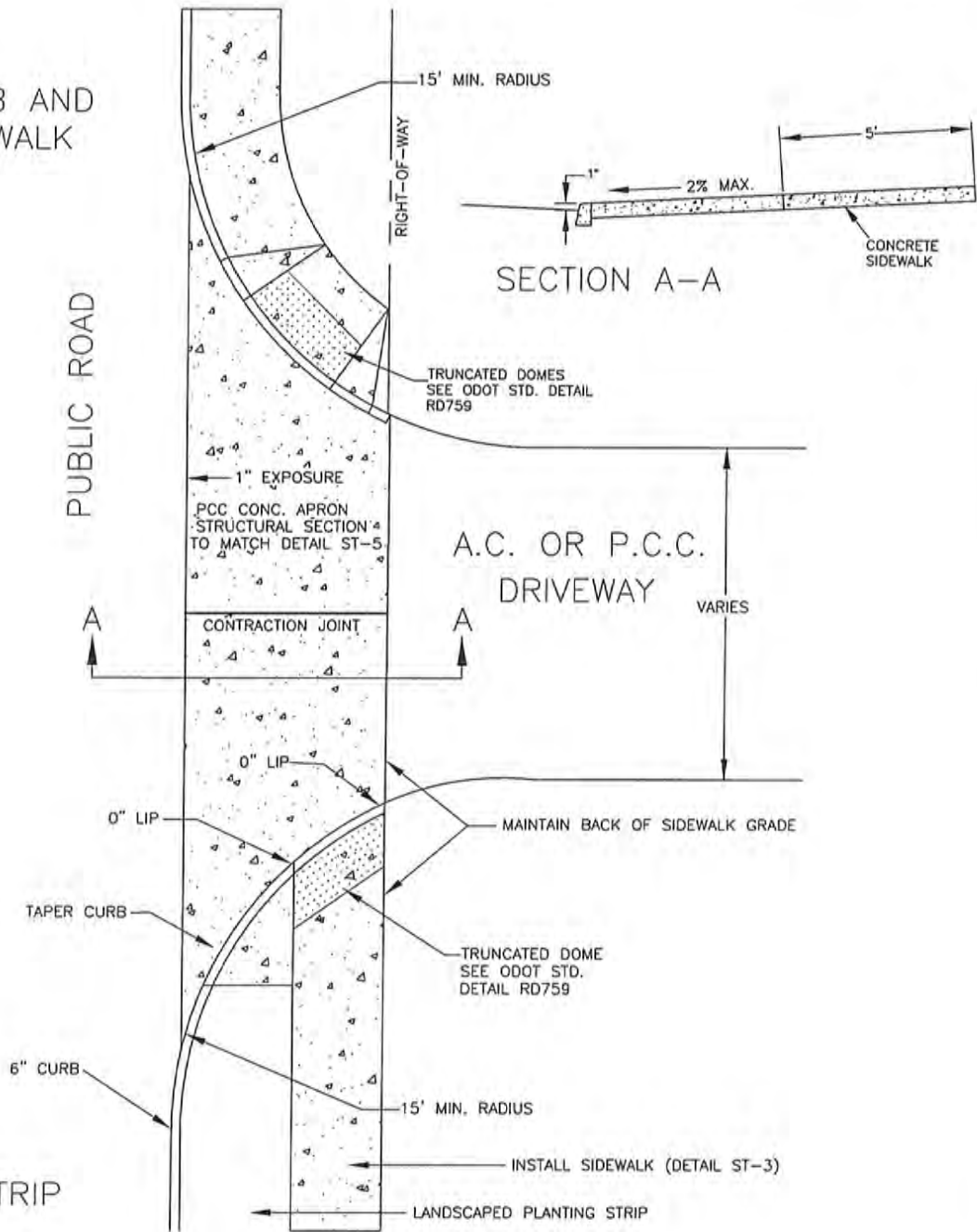
ST-4

Dwg. Name: ST-4 Curb.dwg

CURB AND
SIDEWALK

PUBLIC ROAD

PLANTING STRIP
SIDEWALK



NOTES:
THIS TYPE OF APPROACH TO BE USED FOR HIGH VOLUME
TRAFFIC GENERATORS WITH APPROVAL OR AS REQUIRED BY
THE CITY ENGINEER.



City of Astoria
Public Works Department
1095 Duane Street

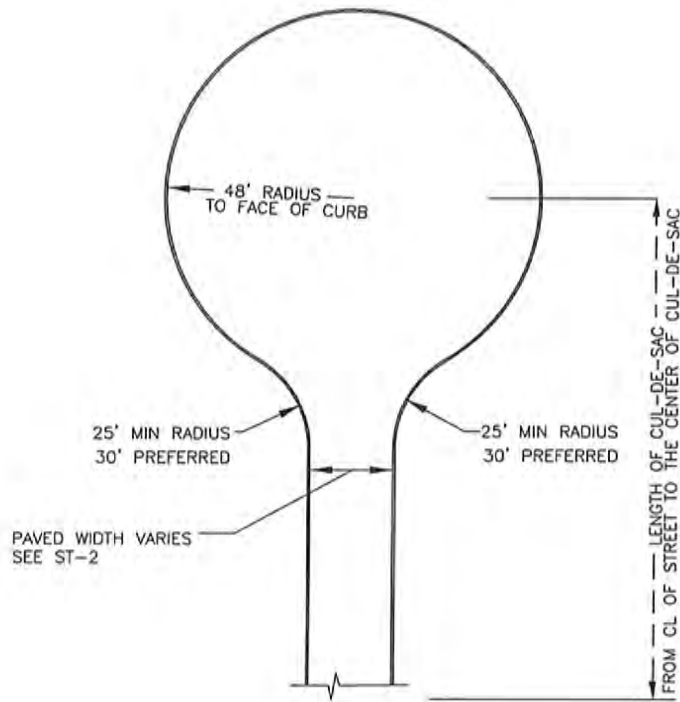
Curb Return Driveway Detail

Date Adopt. 11/01/12 Date Rev. 11/10/15

Dwg. Name: ST-6 Curb Return.dwg

DWG. NO.

ST-6



NOTES:

1. LENGTH OF CUL-DE SAC NOT TO EXCEED 400 FEET
2. NO PARKING SIGNS REQUIRED AROUND BULB OF CUL-DE-SAC
3. THE DIMENSION OF THE CUL-DE-SAC BULB MAY BE REDUCED IF ADDITIONAL FIRE SUPPRESSION IS PROVIDED. FIRE SUPPRESSION MUST BE APPROVED BY THE FIRE MARSHAL.



City of Astoria
Public Works Department
 1095 Duane Street

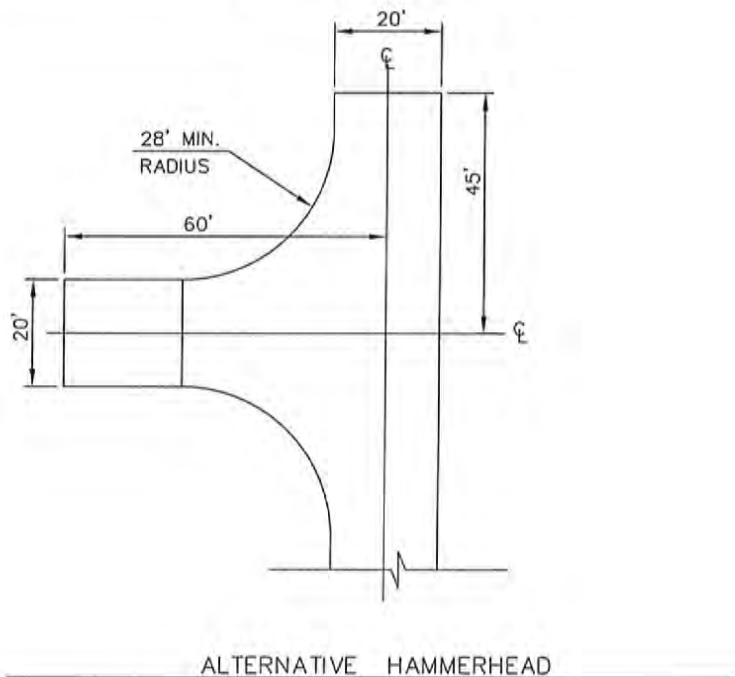
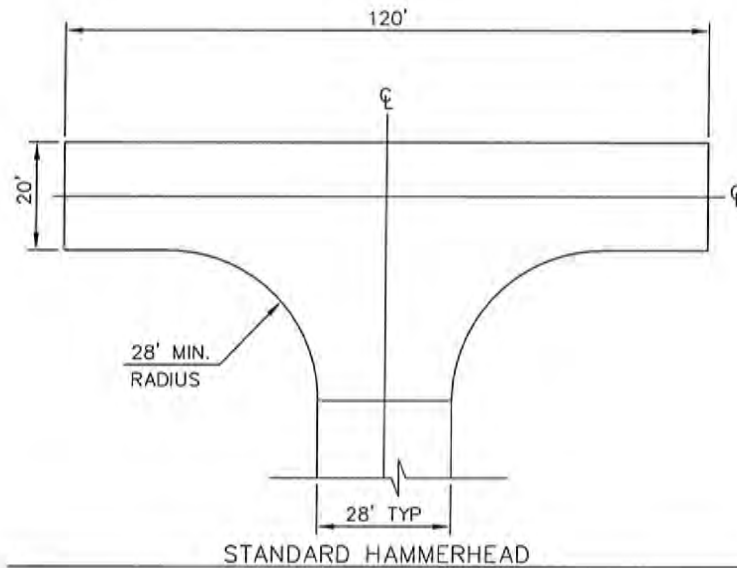
Cul-de-Sac Detail

Date Adopt. 11/01/12 Date Rev. ----

Dwg. Name: ST-7 Cul-de-Sac.dwg

DWG. NO.

ST-7



NOTES:

1. HAMMERHEAD WIDTH RANGES BETWEEN 90' TO 120', DEPENDENT UPON ROADWAY LENGTH, SIDEWALKS AND UTILITIES MAY BE LOCATED WITHIN PUBLIC EASEMENTS.
2. ALTERNATIVE DESIGNS BY APPROVAL OF CITY ENGINEER AND FIRE MARSHAL.
3. TURNAROUND FACILITIES CANNOT BE LOCATED ON DRIVEWAYS.
4. ALL STREET ENDS SHALL BE SIGNED PER THE MUTCD.
5. NO PARKING SIGNS REQUIRED IN TURNAROUND AREAS.



City of Astoria
Public Works Department
 1095 Duane Street

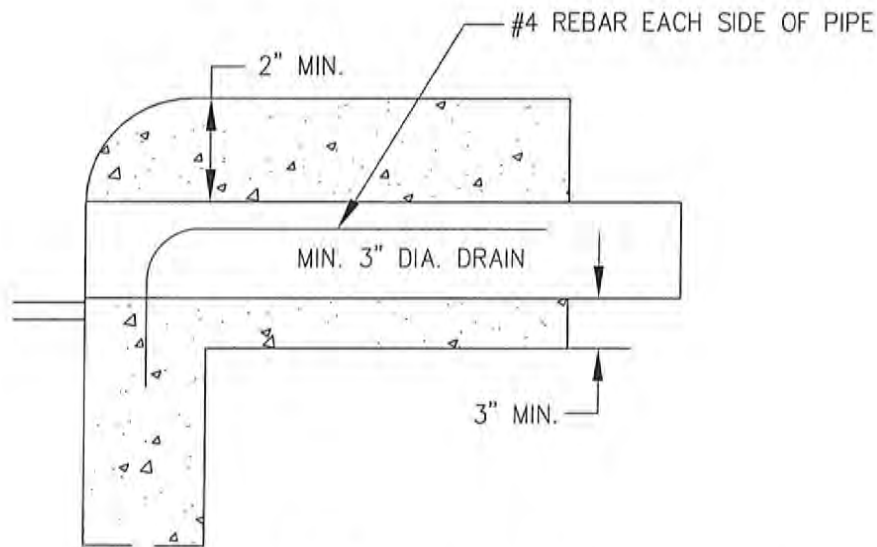
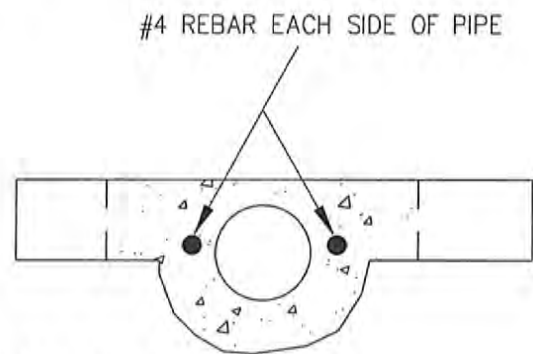
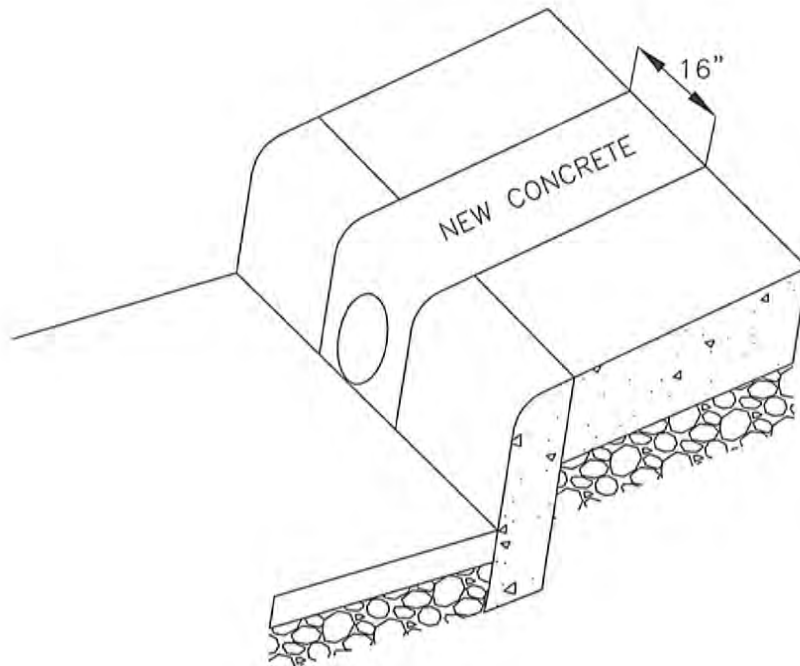
Hammerhead Detail

Date Adopt. 11/01/12 Date Rev. ----

Dwg. Name: ST-8 Hammerhead.dwg

DWG. NO.

ST-8



NOTE:

1. DRAINS WILL BE SIZED ACCORDING TO FLOW FROM ROOF DRAINS, WHERE REQUIRED MULTIPLE RAIN DRAINS SHALL BE INSTALLED.
2. SIDEWALKS SHALL BE SAWCUT.



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Public Works Department
 1095 Duane Street

Curb Rain Drain Detail

Date Adopt. 11/01/12

Date Rev. 11/13/15

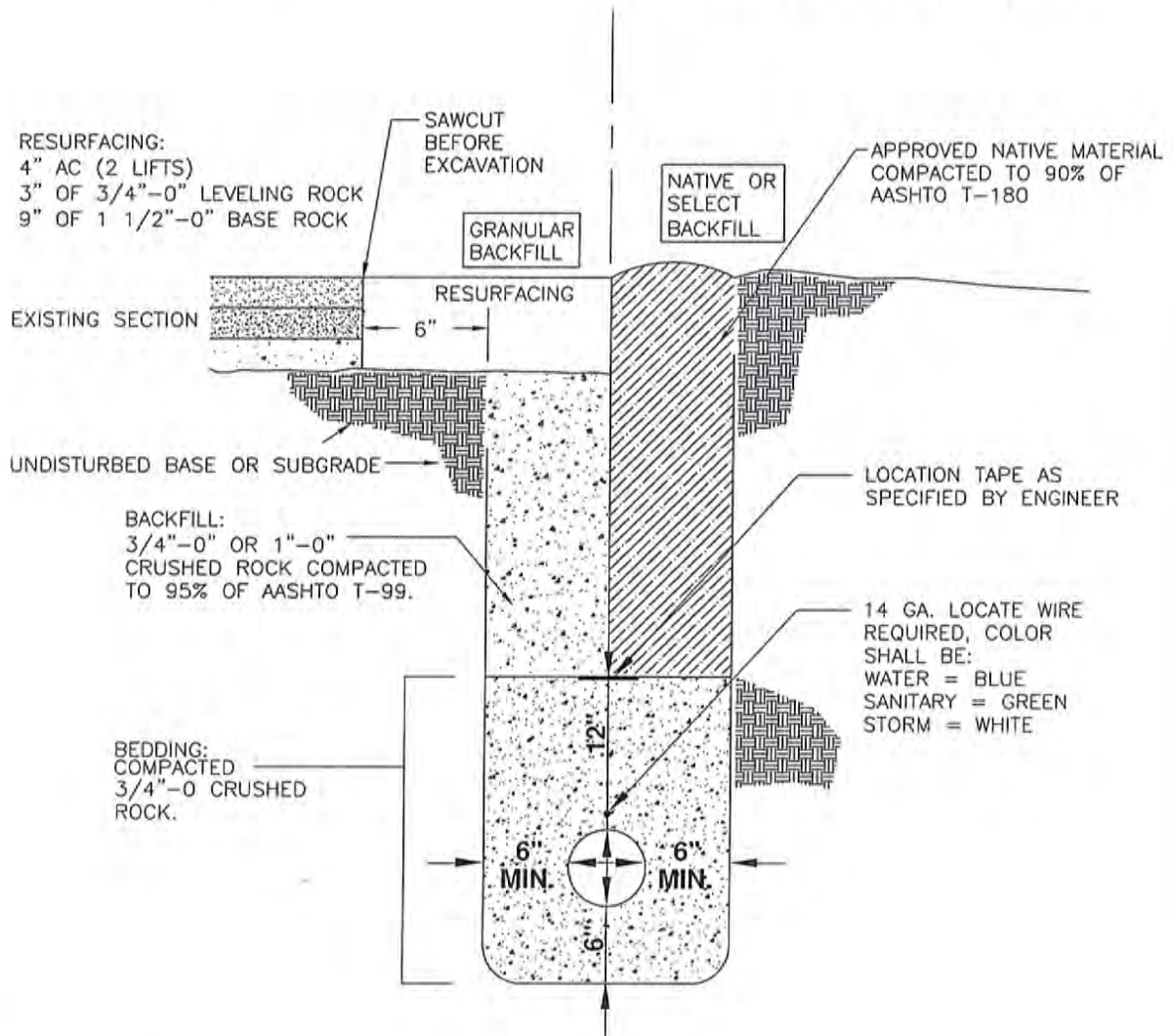
DWG. NO.

ST-9

Dwg. Name: ST-9 Curb Rain Drain.dwg

IN PAVED AREAS

LANDSCAPED OR UNIMPROVED AREAS



NOTE:

1. CONTRACTOR SHALL TACK EDGES OF TRENCH AND PLACE AND COMPACT ASPHALT IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS.
2. REPLACE CONCRETE ROADWAY AS ENCOUNTERED, EQUIVALENT SECTION. CONCRETE TO BE CLASS 3300, 1 1/2" MAX AGGREGATE.
3. IN ROADWAY SHOULDERS AND GRAVEL DRIVEWAYS IN RIGHT-OF-WAY USE GRANULAR BACKFILL AND SURFACE WITH 6" OF 3/4"-0" CRUSHED ROCK.



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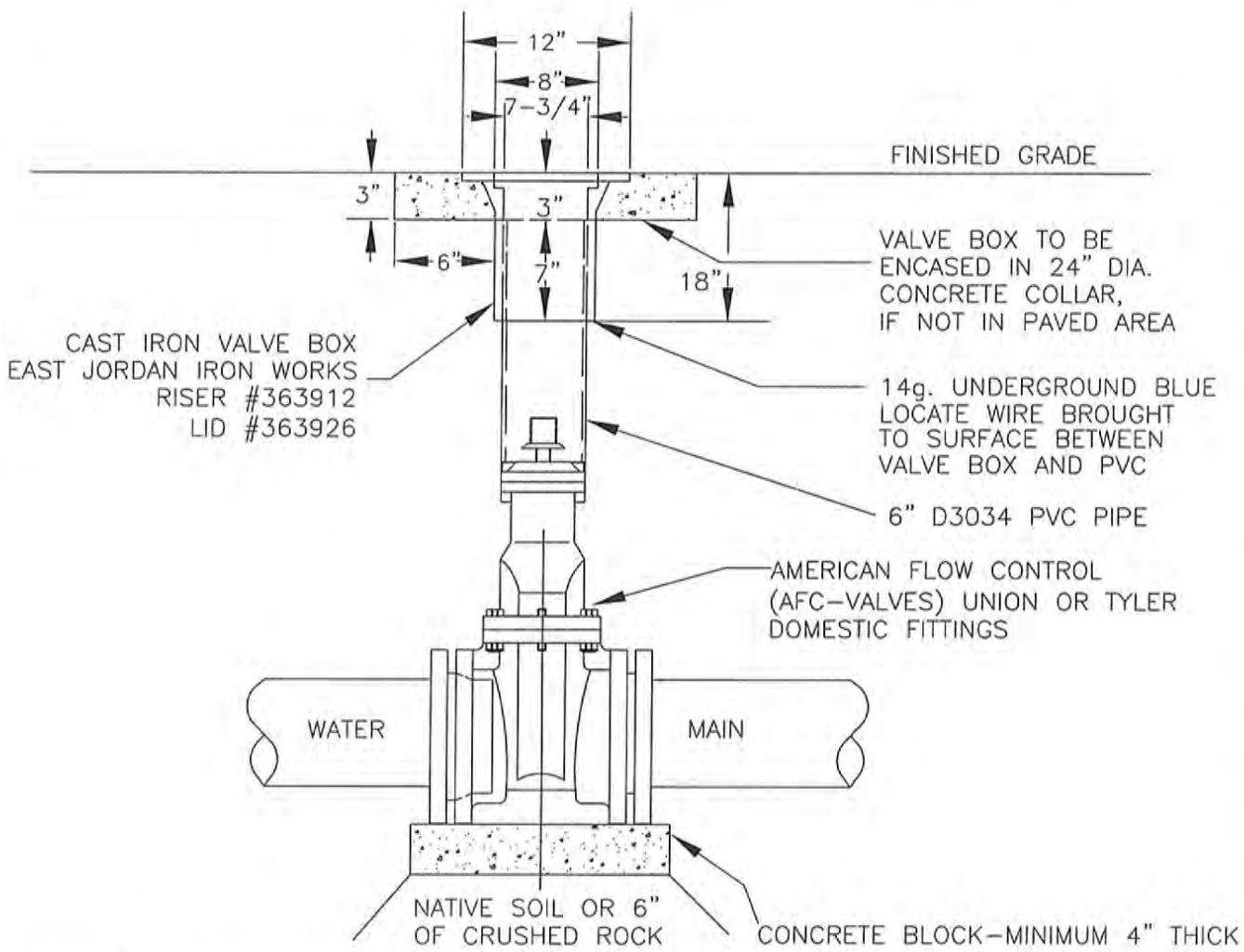
Utility Trench Detail

Date Adopt. 11/01/12 Date Rev. 11/20/15

Dwg. Name: UT-1 Utility Trench.dwg

DWG. NO.

UT-1



CAST IRON VALVE BOX
 EAST JORDAN IRON WORKS
 RISER #363912
 LID #363926

FINISHED GRADE
 VALVE BOX TO BE ENCASED IN 24" DIA. CONCRETE COLLAR, IF NOT IN PAVED AREA

14g. UNDERGROUND BLUE LOCATE WIRE BROUGHT TO SURFACE BETWEEN VALVE BOX AND PVC

6" D3034 PVC PIPE

AMERICAN FLOW CONTROL (AFC-VALVES) UNION OR TYLER DOMESTIC FITTINGS

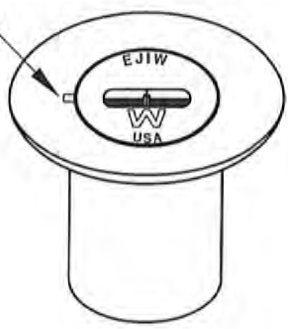
WATER

MAIN

NATIVE SOIL OR 6" OF CRUSHED ROCK

CONCRETE BLOCK-MINIMUM 4" THICK

NOTCH 1/16" DEEP AND 3/8" LONG INDICATING DIRECTION OF MAIN



VALVE BOX

NOTES:

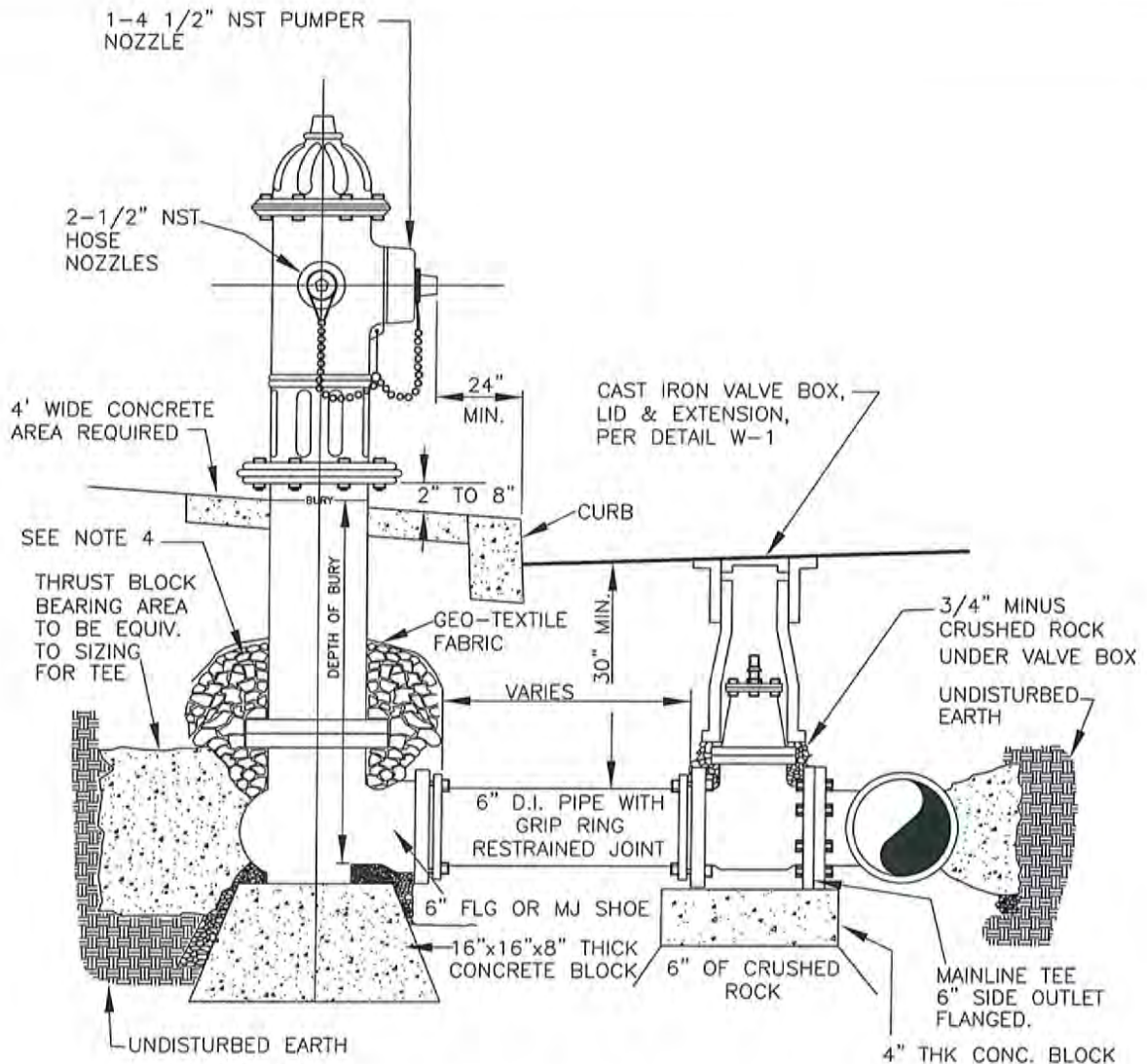
1. VALVE BOXES SHALL BE PLUMB & CENTERED DIRECTLY OVER THE VALVE NUT IN A VERTICAL POSITION.
2. VALVE BOX TOP SHALL BE ADJUSTED TO MEET FINISHED GRADE.



City of Astoria
Public Works Department
 1095 Duane Street

Water Valve Detail

Date Adopt.	10/31/12	Date Rev.	11/13/15	DWG. NO.
Dwg. Name: W-1 Water Valve.dwg				W-1



NOTES:

1. HYDRANTS TO BE MUELLER SUPER CENTURION A423-PN, INLET 6" - 5 1/4" MVO, 1-1/2" PENTAGON OPERATING NUT OPEN LEFT.
2. HYDRANTS ARE YELLOW AND PRIVATE HYDRANTS ARE RED.
3. RESTRAIN JOINTS BY USING FLANGED HYDRANT SHOE, SPOOL, AND GATE VALVE -OR- WITH GRIP RING GASKET JOINT RESTRAINTS.
4. ALL FITTINGS IN CONTACT WITH CONCRETE SHALL BE WRAPPED IN PLASTIC. HYDRANT DRAIN HOLES TO REMAIN OPEN TO DRAIN ROCK AND OPERATIONAL.
5. 1 1/2" - 3/4" CLEAN DRAIN ROCK SHALL BE PLACED A MINIMUM OF 6" ABOVE DRAIN OUTLET 1 YD MINIMUM AREA.
6. WHERE PLANTER STRIP EXISTS HYDRANT SHALL BE PLACED SO FRONT PORT IS A MINIMUM OF 24" BEHIND FACE OF CURB.
7. BURY OF HYDRANT SHALL BE MEASURED FROM FINISHED GRADE TO BOTTOM OF CONNECTION PIPE.
8. THRUST BLOCK AT FIRE HYDRANT TEE SHALL HAVE A 3.7 SQ. FT BEARING AREA.
9. HYDRANT VALVE SHALL BE AMERICAN FLOW CONTROL RESILIENT SEAT GATE VALVE ONLY.
10. PIPING BETWEEN HYDRANT AND VALVE TO BE SAME PRESSURE CLASS AND MATERIAL AS WATER MAIN OR GREATER.
11. HYDRANT MAY NOT BE LOCATED WITHIN 3' OF ANY OBSTRUCTION.



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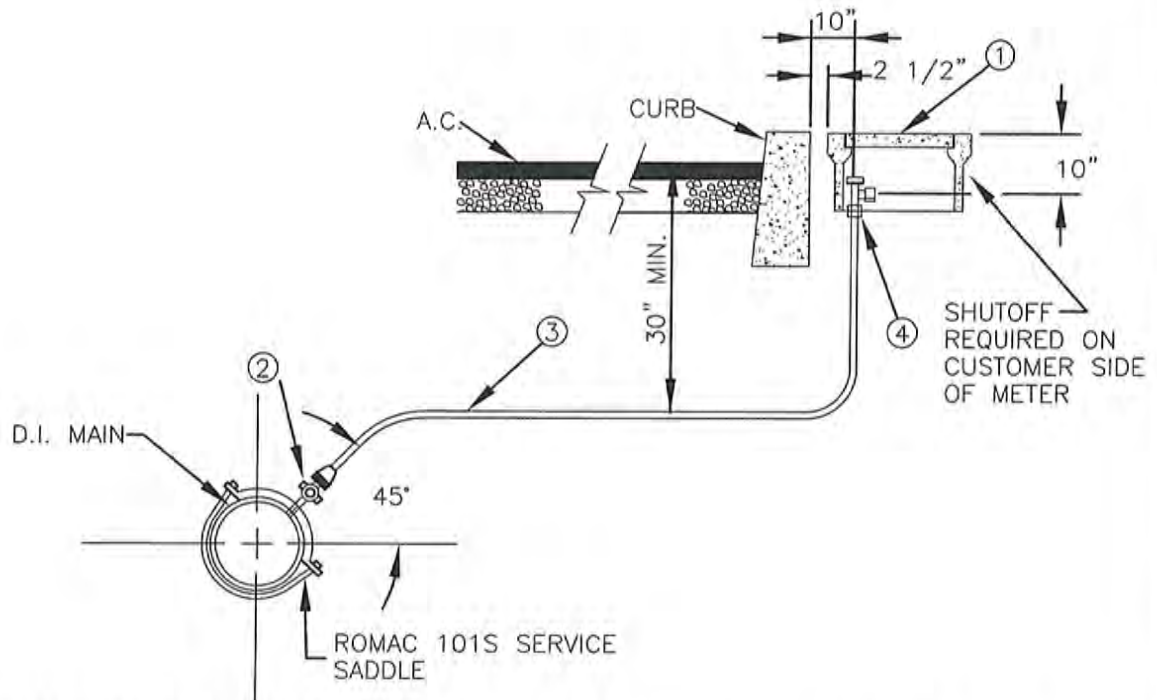
Fire Hydrant Detail

Date Adopt. 10/31/12 Date Rev. 11/13/15

Dwg. Name: W-2 Fire Hydrant.dwg

DWG. NO.

W-2



MATERIALS:

1. ARMOR CAST POLYMER CONCRETE METER BOX AND LID.
 - A. 3/4" SERVICE - 12"X20"X12" BODY NO. A6000485 20K AND CAST IRON READ COVER NO. A6000484TRC1 20K.
 - B. 1" SERVICE - 13"X24"X12" BODY NO. A6001946PCX12 20K AND CAST IRON READ COVER NO. A6001969RC1 20K.
 - C. FOR IRRIGATION APPLICATIONS OR UPON ENGINEER'S APPROVAL USE A CARSON 3/4" METER BOX: 1419-12 (GREEN) BODY WITH A 1419-3 (GREEN) NO BOLT FLUSH COVER.
2. MUELLER CORP. STOP NO. H-15028N
3. 3/4" & 1" CTS SDR 9 (200 PSI) PE TUBING OR SOFT TEMPER, TYPE 'K' COPPER TUBING COMPLYING WITH ASTM B-88 UPON ENGINEERS APPROVAL.
4. MUELLER ANGLE METER STOP NO. H-14258N (3/4" AND 1")

NOTES:

1. SUBSTITUTES FOR ANY MATERIALS SHOWN SHALL BE APPROVED BY THE CITY ENGINEER.
2. ALL PIPE AND STRUCTURE ZONES SHALL BE BACKFILLED USING 3/4" MINUS CRUSHED AGG. AND COMPACTED TO 95% MAX. DENS. AS DETERMINED BY AASHTO T-180.
3. METER BOX SHALL BE CENTER OVER THE COMPLETED METER ASSEMBLY.
4. WATER METERS THAT ALSO PROVIDE FIRE SUPPRESSION MUST BE TAGGED WITH "SUPPLIES FIRE SUPPRESSION." TAG SHALL BE MIN. 2.5" X 5", WEATHERPROOF, HEAVY DUTY RED PLASTIC. PRE-DRILL AND SECURED TO THE METER WITH PLASTIC CABLE TIES.



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Public Works Department
 1095 Duane Street

3/4" & 1" Water Service Detail

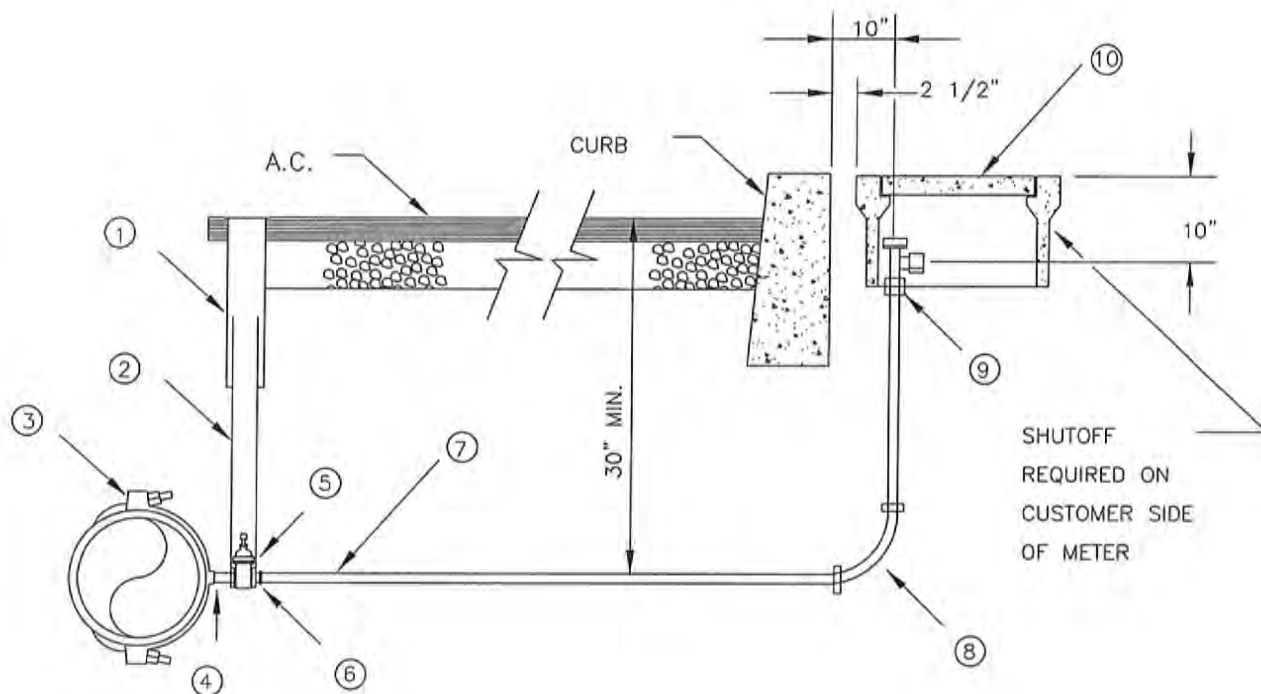
Date Adopt. 11/01/12

Date Rev. 11/16/15

DWG. NO.

Dwg. Name: W-3 1 Inch Water Service.dwg

W-3



NOTES:

1. EJIW - 18" VALVE BOX TOP WITH COVER
2. 6" PVC D3034 SEWER PIPE
3. PIPE SIZE-ROMAC 202S STYLE SERVICE SADDLE DOUBLE STRAP STAINLESS STEEL-TAP 2" I.P. THREAD.
4. 2" BRASS CLOSE NIPPLE
5. 2" C.I. GATE VALVE WITH 2" OPERATING NUT, BOTH ENDS FEMALE I.P. THREADS-AMERICAN FLOW CONTROL
6. 2" MUELLER COMPRESSION #110 COUPLING, MALE I.P. THREADS #15428N.
7. 2" HDPE TUBING CTS SIZE SDR 9 (200 PSI).
8. IF NEEDED 2" QUARTER BEND UNION, COMPRESSION CONNECTOR CTS O.D. TUBING BOTH ENDS-#H15526N
9. 2" GROUND KEY ANGLE METER STOP MUELLER 110 COMPRESSION, FOR CTS O.D. TUBING, METER FLANGE 180 TURN CHECK-LOCK WING-#H14277N.
10. ARMORCAST 17" X 30" X 12" POLYMER CONCRETE METER BOX (A6001640PCX12) AND COVER W/ CAST IRON READ LID (A6001947TRC1)
11. WATER METERS THAT ALSO PROVIDE FIRE SUPPRESSION MUST BE TAGGED WITH "SUPPLIES FIRE SUPPRESSION." TAG SHALL BE MIN. 2.5" X 5", WEATHERPROOF, HEAVY DUTY RED PLASTIC. PRE-DRILL AND SECURED TO THE METER WITH PLASTIC CABLE TIES.



City of Astoria
Public Works Department
 1095 Duane Street

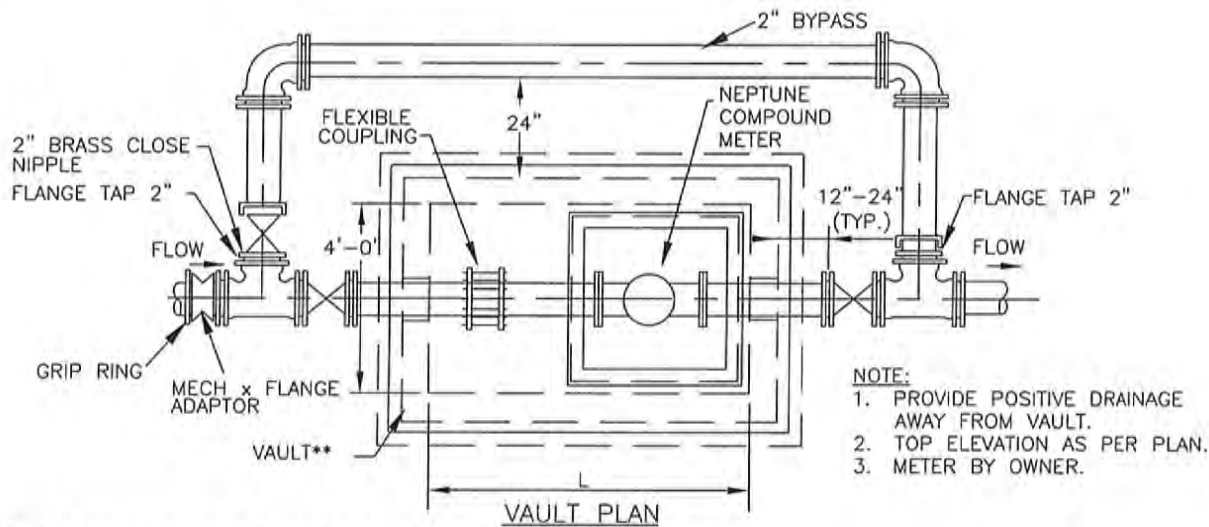
2 Inch Water Service Detail

Date Adopt. 11/01/12 Date Rev. 11/16/15

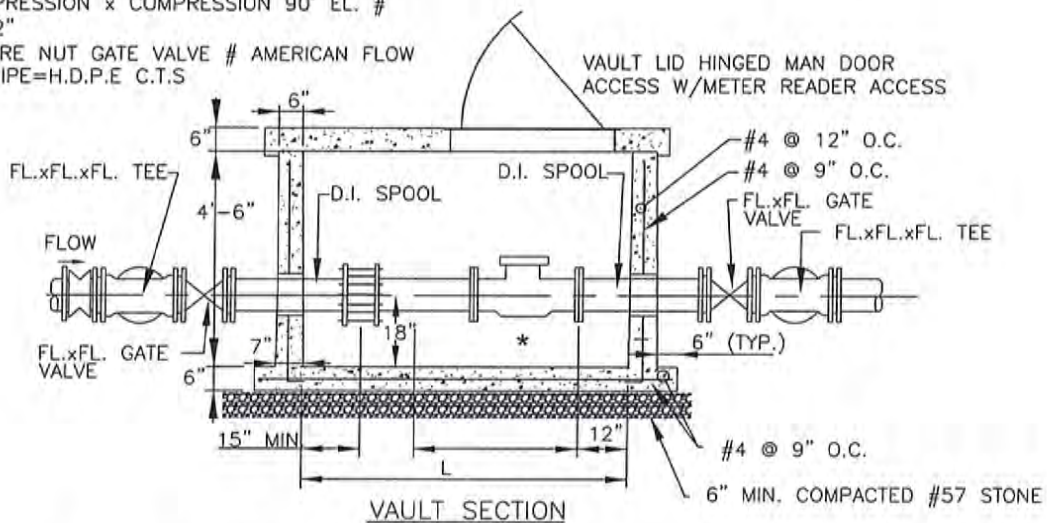
Dwg. Name: W-4 2 Inch Water Service.dwg

DWG. NO.

W-4



2" BYPASS (SIZE OF BYPASS TO BE DETERMINED BY ENGINEER).
 2-2" COMPRESSION x I.P. MALE #H15428N-2"
 2-2" COMPRESSION x COMPRESSION 90° EL. # H15526N-2"
 1-2" SQUARE NUT GATE VALVE # AMERICAN FLOW
 CONTROL PIPE=H.D.P.E C.T.S



VAULT** MINIMUM 1 FT. CLEARANCE ON FLANGED ENDS AND SIDES OF 3" & 4" METERS .
 MINIMUM 2 FT. CLEARANCE ON FLANGED ENDS AND SIDES OF 6" AND LARGER METERS.
 VAULT TO HAVE ATTACHED LADDER IF OVER 3' DEEP WITH 3' REMOVABLE SECTION THAT WILL EXTEND ABOVE VAULT LID.
 METER TO BE SET 18" FROM TOP OF LID.
 METER READER ACCESS DOOR TO BE CENTERED EVER METER REGISTER.
 FLOOR TO HAVE DRAIN OR SUMP PUMP MAINTAINED BY CUSTOMER.
 VAULT TO BE SET AT FINISHED GRADE.
 *METER MIN.1' ABOVE BOTTOM OF VAULT
 CONCRETE PAD AROUND GATE VALVE BOXES, SEE W-1



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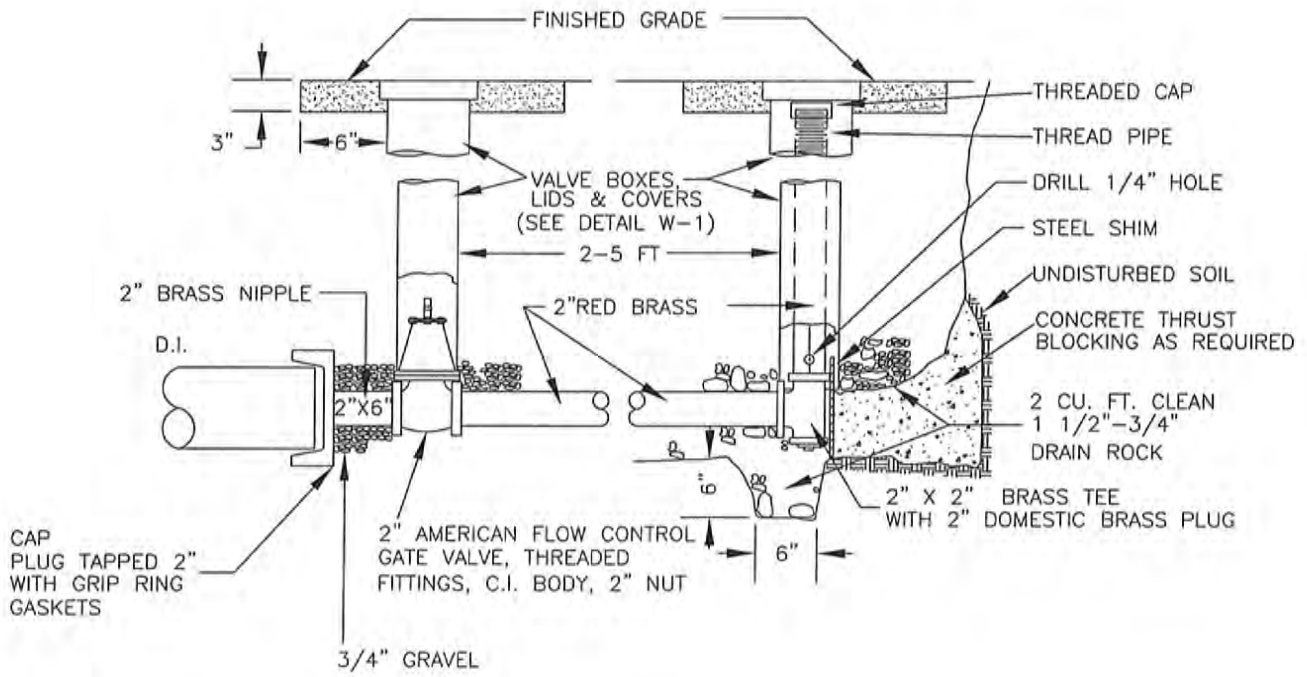
3 to 10 Inch Water Service Detail

Date Adopt. 11/01/12 Date Rev. 10/23/14

Dwg. Name: W-5 3 to 10 Inch Water Service.dwg

DWG. NO.

W-5



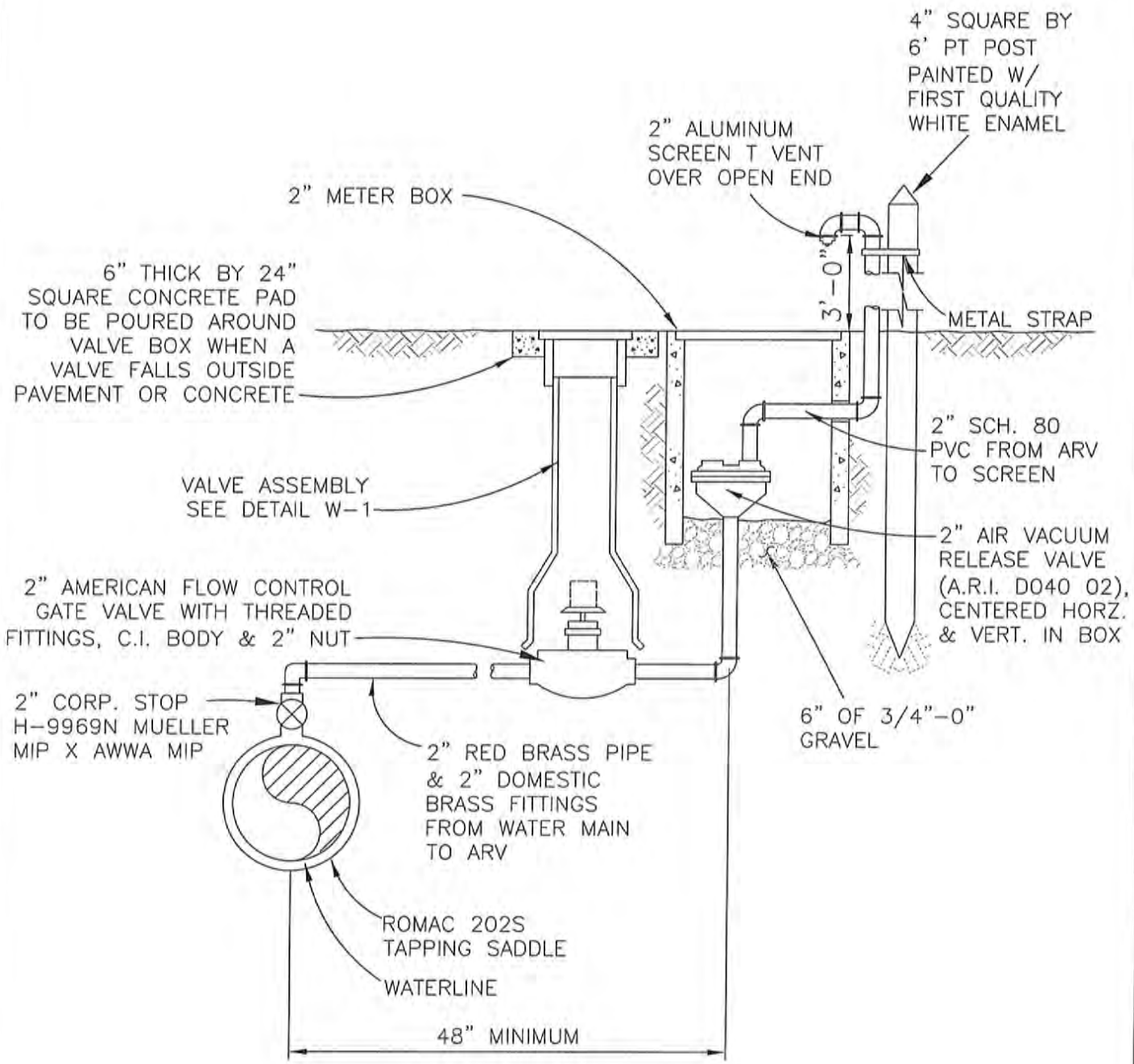
- NOTES:
1. VALVE BOX SHALL BE PER STANDARD DETAIL W-1.
 2. BLOW-OFF UNIT SHALL BE GRAVEL BACK FILLED AND COMPACTED AS SHOWN.



City of Astoria
Public Works Department
 1095 Duane Street

Blow Off Detail

Date Adopt. 11/01/12	Date Rev. ----	DWG. NO.
Dwg. Name: W-6 Blow Off.dwg		W-6

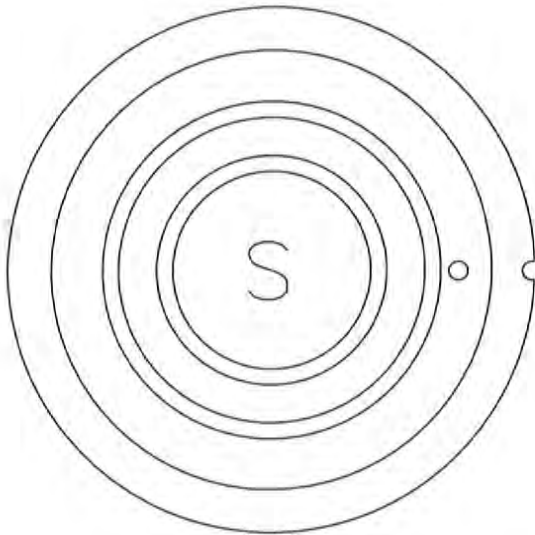


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Public Works Department
 1095 Duane Street

Air/Vacuum Release Valve Detail

Date Adopt. 09/23/15	Date Rev. ----
Dwg. Name: W-7 Air Release.dwg	

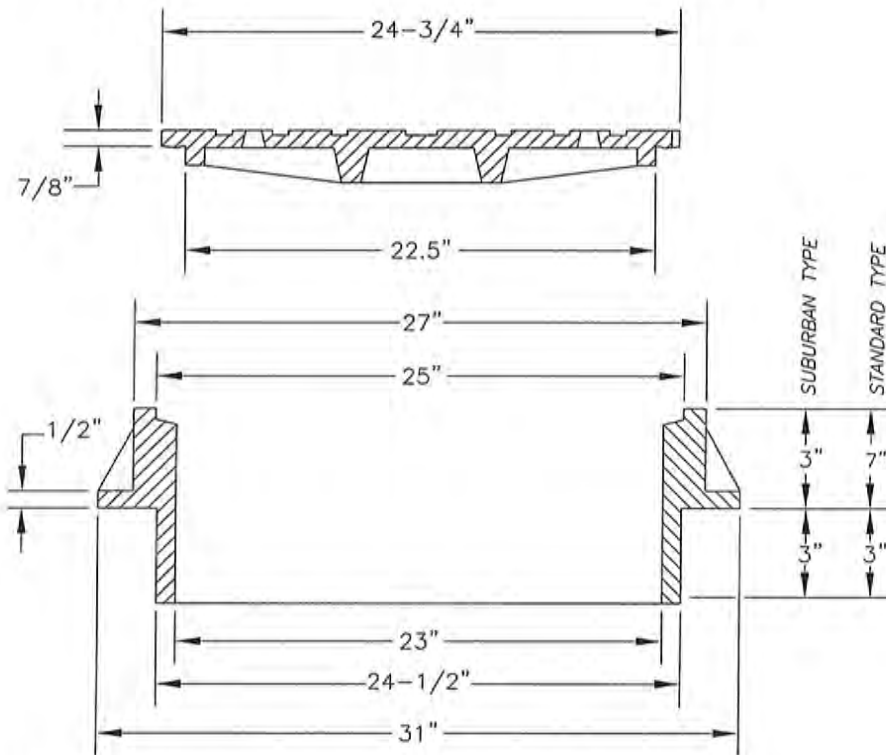
DWG. NO.
W-7



SANITARY



STORM



- NOTES:
1. USE SUBURBAN TYPE ONLY IN NON-TRAFFIC AREAS.
 2. COVER & FRAME SHALL BE GRAY CAST IRON ASTM A-48 CLASS 30.
 3. COVER & FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
 4. NOTCH LID FOR LIFTING HOOK.



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Manhole Frame & Cover Detail

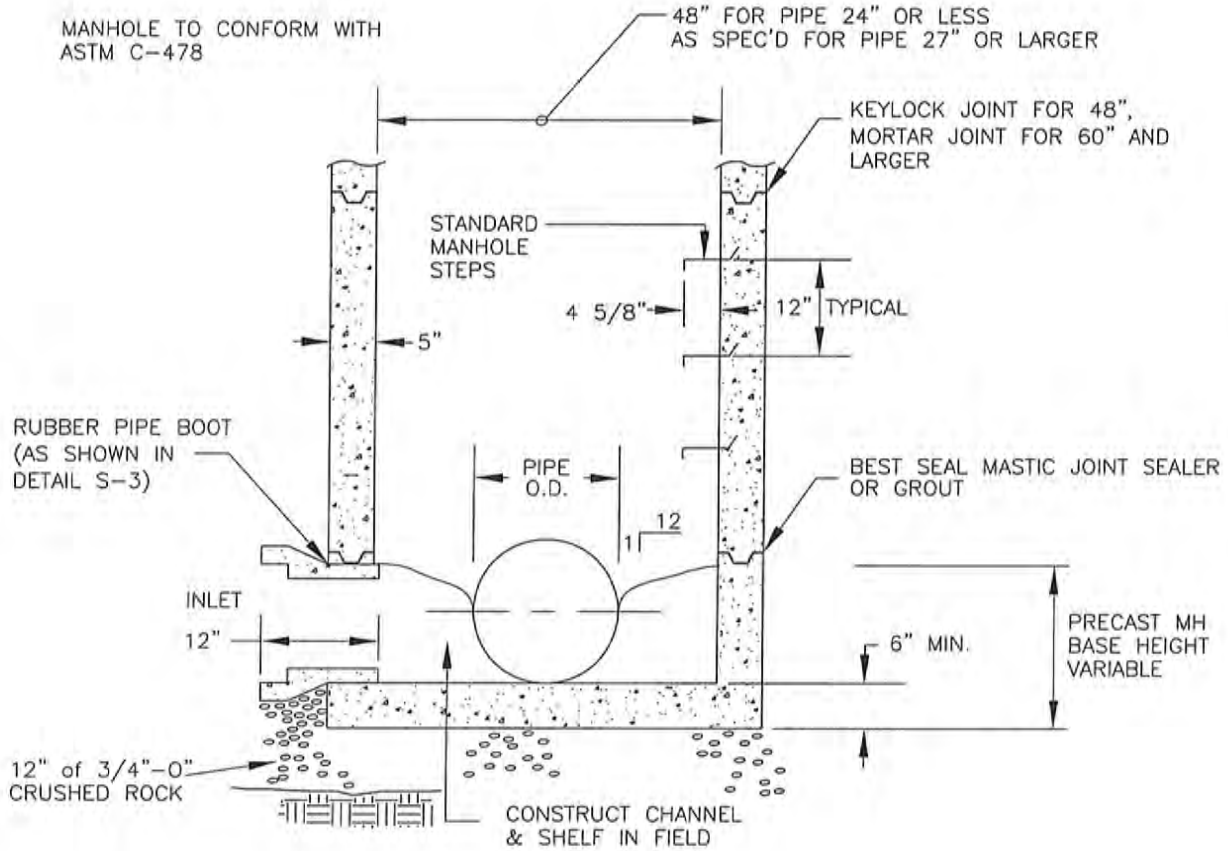
Date Adopt. 11/01/12 Date Rev. 11/16/15

DWG. NO.

S-1

Dwg. Name: S-1 Manhole Frame & Cover.dwg

MANHOLE TO CONFORM WITH
ASTM C-478



City of Astoria
Public Works Department
1095 Duane Street

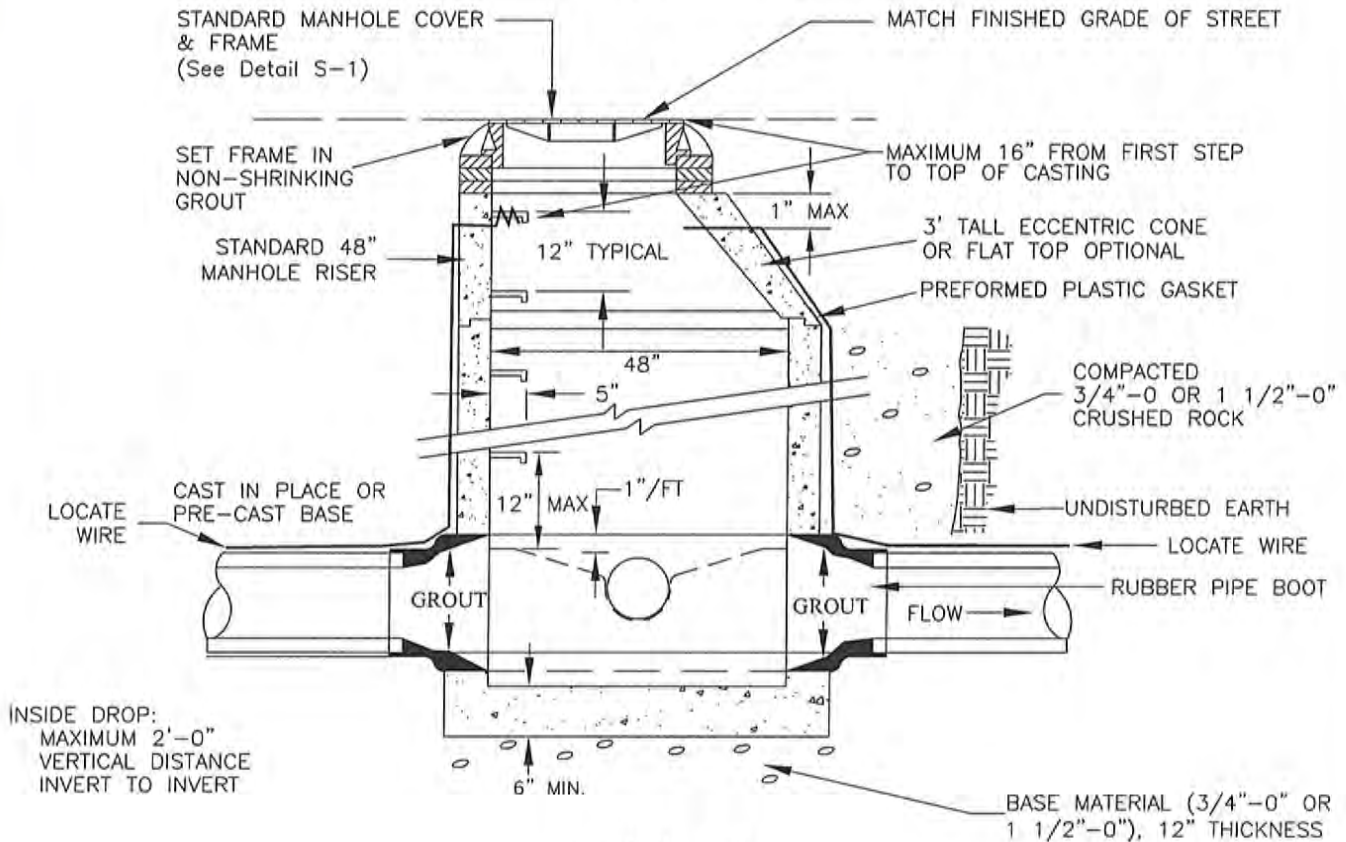
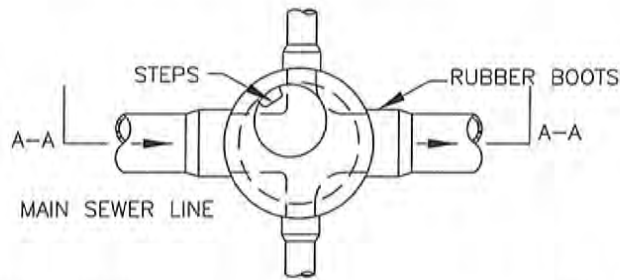
Precast Manhole Base Detail

Date Adopt. 11/01/12 Date Rev. 11/16/15

DWG. NO.

S-2

Dwg. Name: S-2 Precast Manhole Base.dwg



SECTION A-A

NOTES:

1. THIS TYPE OF MANHOLE SHALL BE USED ONLY FOR PIPE SIZE OF 24" OR LESS.
2. GROUT INSIDE AND OUTSIDE AT PENETRATION IF NO BOOT, GROUT INSIDE IF THERE IS A BOOT, GROUT INSIDE WHERE SECTIONS COME TOGETHER AND PICK HOLES.
3. LOCATE WIRE SHALL BE 14 GAGE GREEN, DRILL NO MORE THAN 1" BELOW FRAME, LEAVE ENOUGH WIRE TO GET TO TOP, GROUT HOLES.
4. CONSTRUCT CHANNEL AND SHELF IN FIELD.
5. FLAT TOP MANHOLE SLABS SHALL HAVE A 25" OPENING, OFFSET TO ONE SIDE.



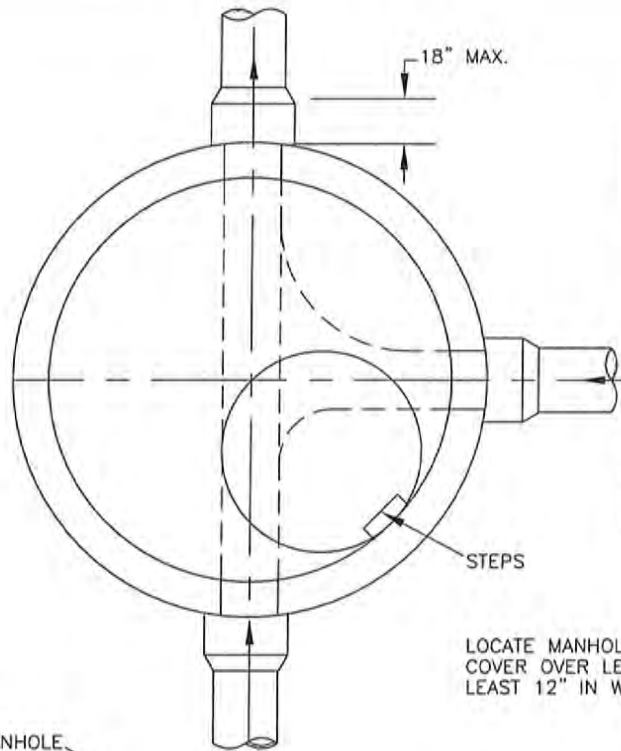
City of Astoria
Public Works Department
 1095 Duane Street

Standard Manhole Detail

Date Adopt. 11/01/12 Date Rev. 11/20/15

Dwg. Name: S-3 Standard Manhole.dwg

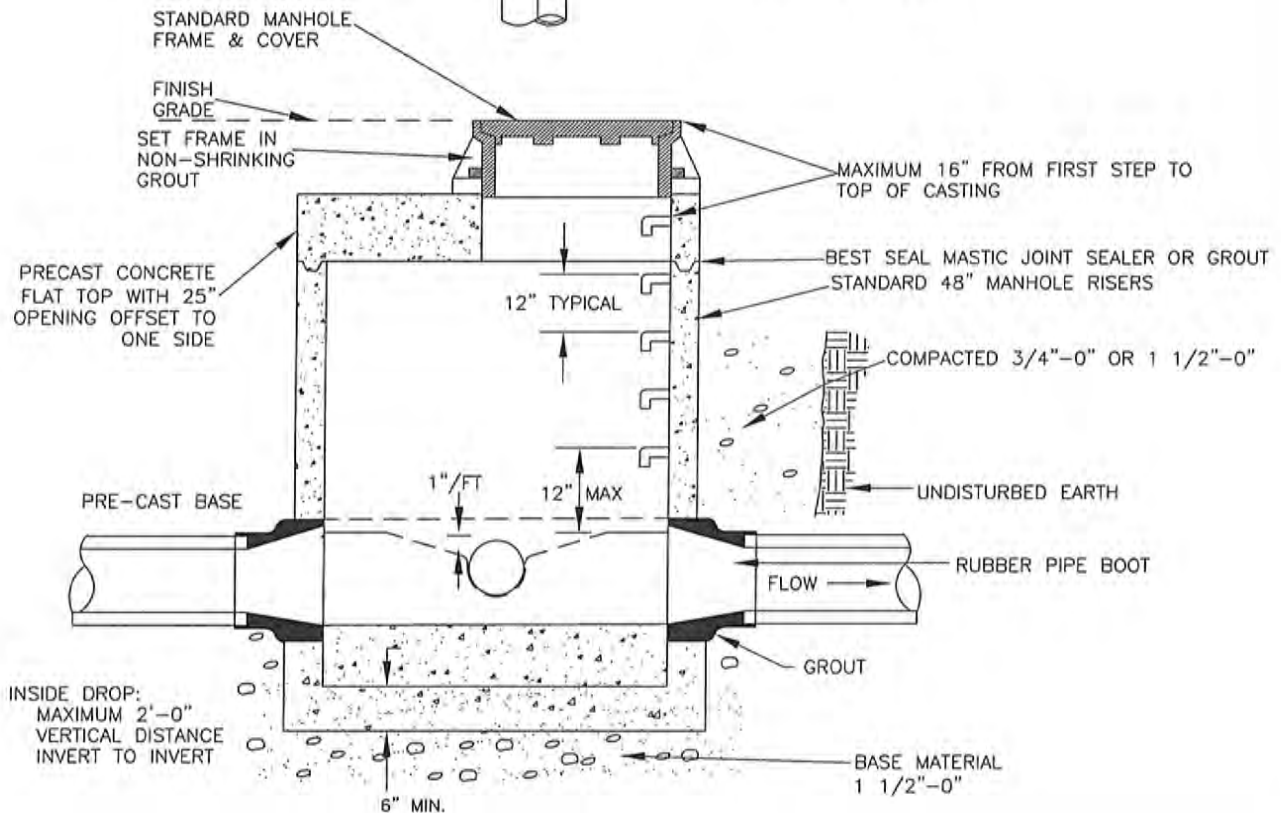
DWG. NO.
S-3



MAKE SURFACE OF GROUT FILLET SMOOTH & FORM GROOVED INVERT TO DIRECTION OF FLOW

NOTE: INLETS/OUTLETS AS REQUIRED.

LOCATE MANHOLE FRAME & COVER OVER LEDGE OF AT LEAST 12" IN WIDTH.



INSIDE DROP: MAXIMUM 2'-0" VERTICAL DISTANCE INVERT TO INVERT



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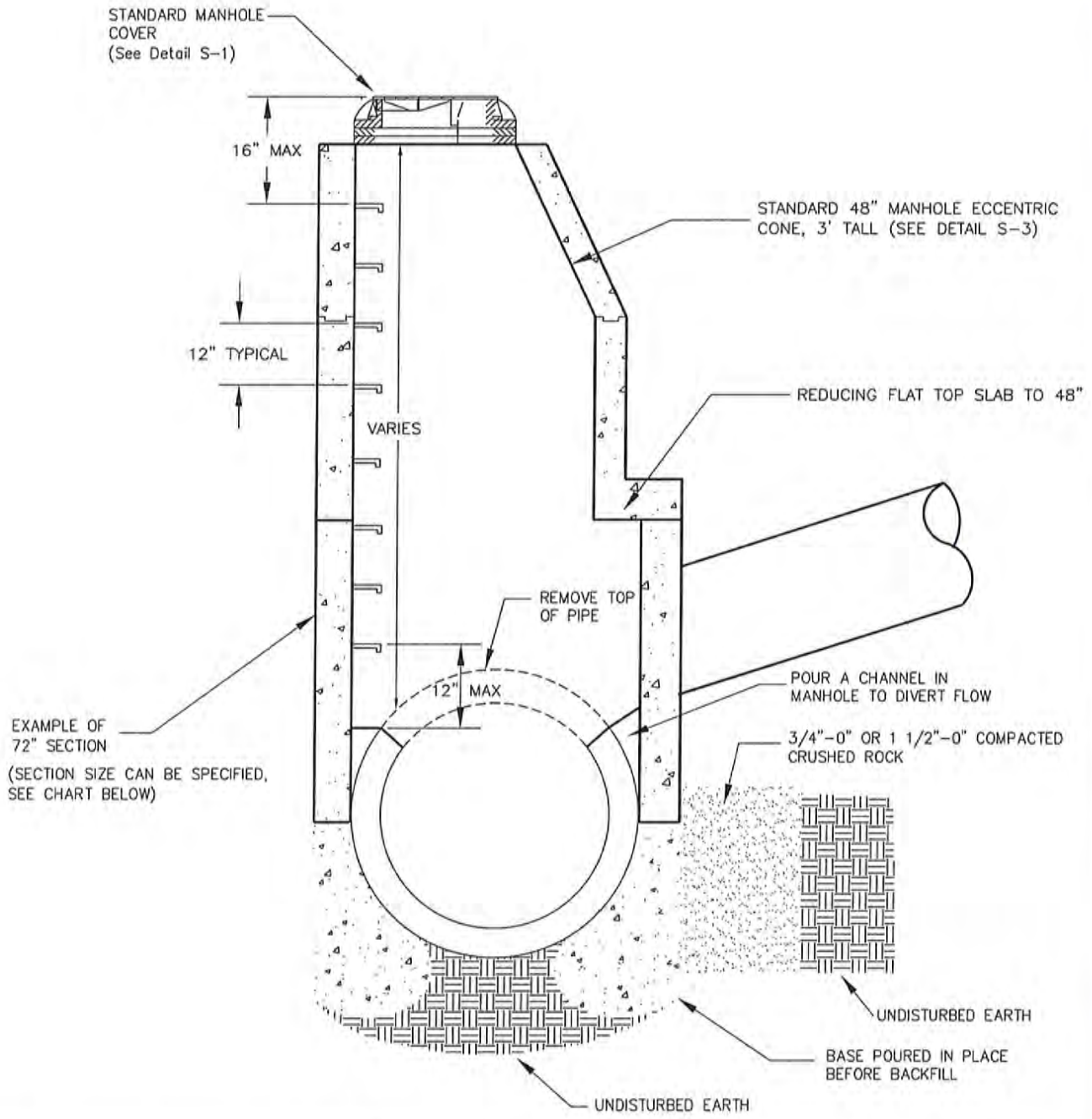
Flat Top Manhole Detail

Date Adopt. 11/01/12 Date Rev. 11/15/12

Dwg. Name: S-4 Flat Top Manhole.dwg

DWG. NO.

S-4



EXAMPLE OF 72" SECTION
(SECTION SIZE CAN BE SPECIFIED, SEE CHART BELOW)

Manhole Sizing	Manhole Sizing
36" Hole in a 48" Manhole	60" Hole in a 72" Manhole
42" Hole in a 54" Manhole	72" Hole in a 84" Manhole
48" Hole in a 60" Manhole	84" Hole in a 96" Manhole

Largest diameter hole that a 90' will fit	
2-28" holes in 48" Manhole	2-36" holes in 60" Manhole
2-32" holes in 54" Manhole	2-42" holes in 72" Manhole

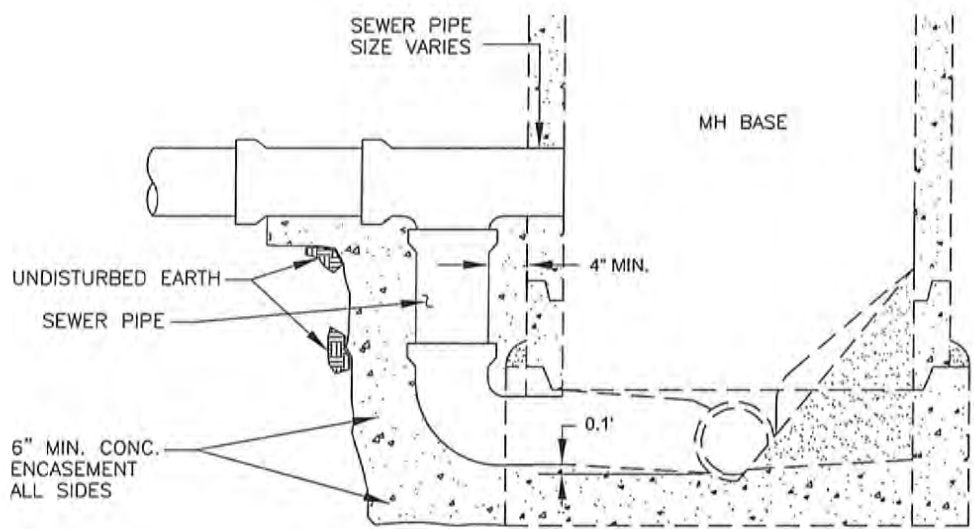


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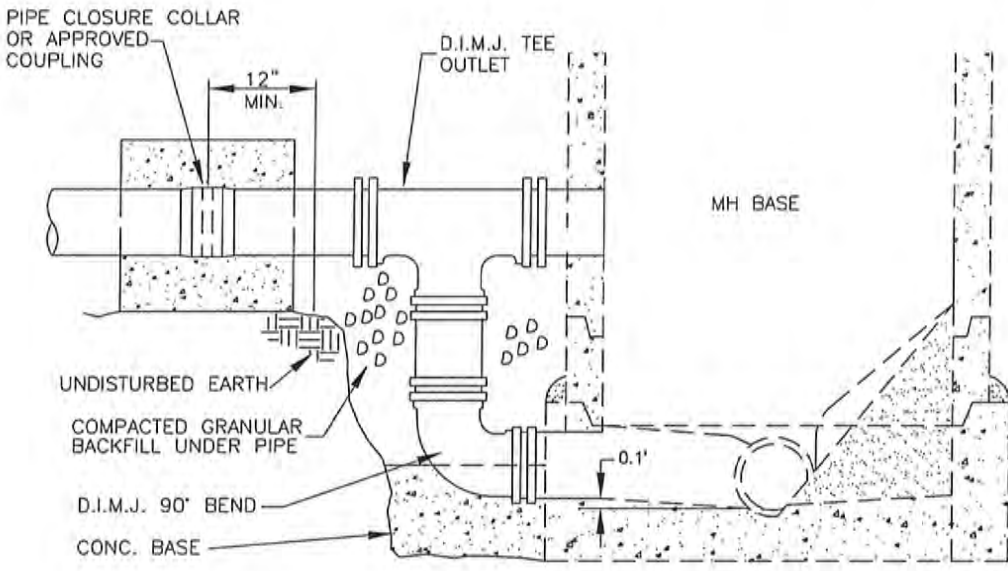
Manhole Over Existing Sewer Detail

Date Adopt. 11/01/12 Date Rev. 11/15/12
 Dwg. Name: S-5 Manhole Over Existing Sewer.dwg

DWG. NO.
S-5



CONCRETE OR P.V.C. PIPE DROP



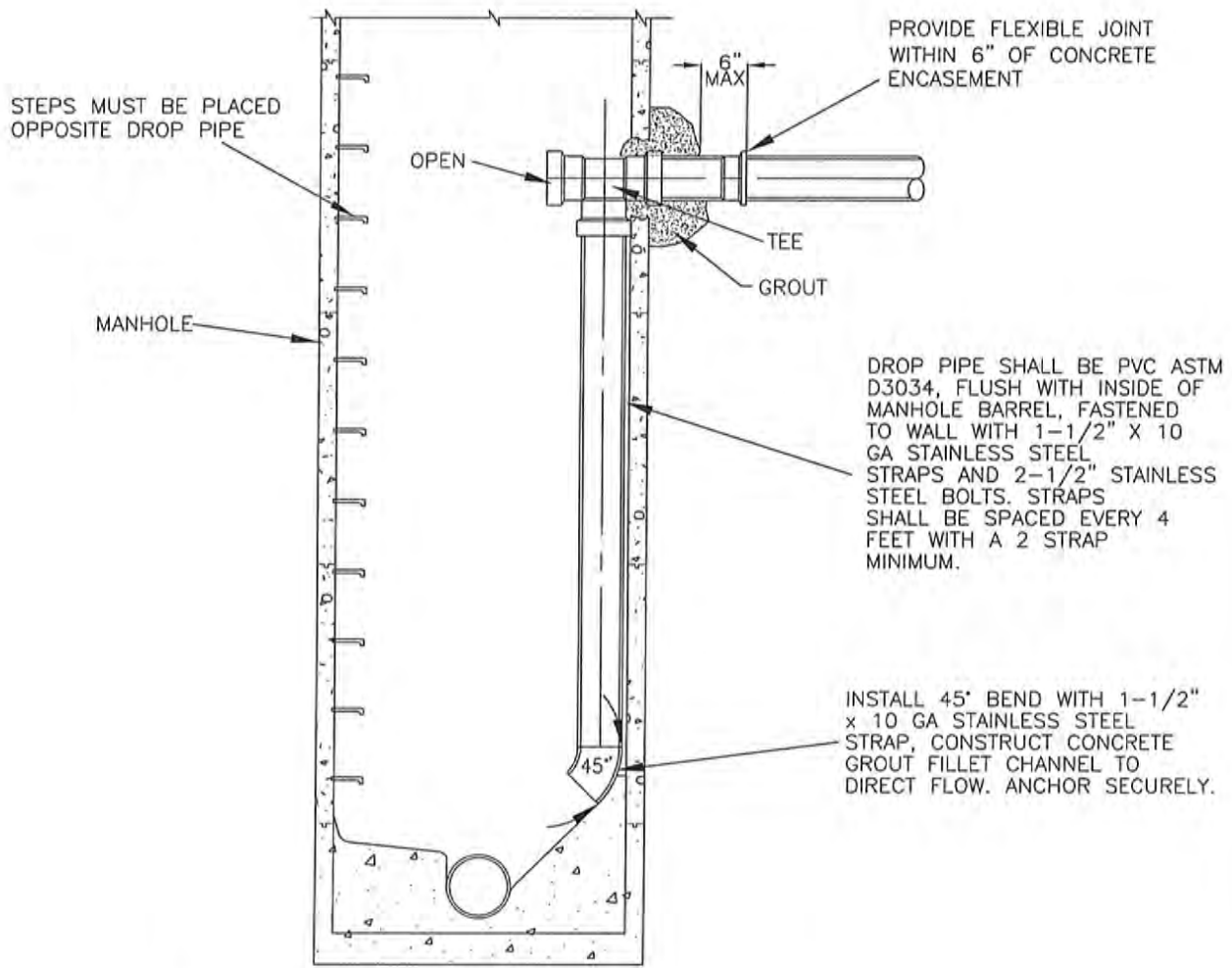
DUCTILE IRON PIPE DROP



City of Astoria
Public Works Department
 1095 Duane Street

Outside Drop Connection Detail

Date Adopt. 11/01/12	Date Rev. ----	DWG. NO.
Dwg. Name: S-6 Outside Drop Manhole.dwg		S-6



NOTE

1. ONLY ONE INSIDE DROP CONNECTION ALLOWED PER MANHOLE.
2. MINIMUM MANHOLE DIAMETER WITH DROP CONNECTION SHALL BE 48 INCHES.
3. MAXIMUM DROP PIPE DIAMETER SHALL BE 8 INCHES.



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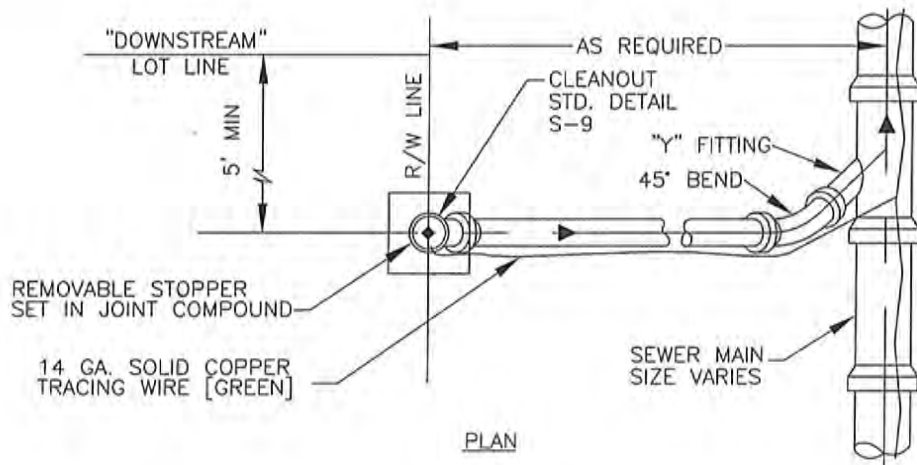
Inside Drop Connection Detail

Date Adopt. 11/01/12 Date Rev. 10/06/14

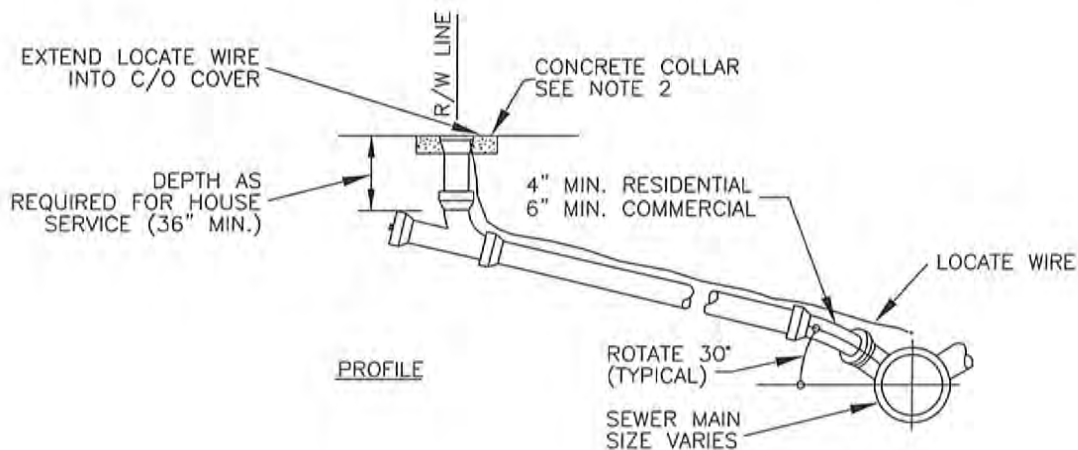
Dwg. Name: S-7 Inside Drop Manhole.dwg

DWG. NO.

S-7



PLAN



PROFILE

NOTES

1. SERVICE CONNECTION DETAILS ARE BASED ON PVC PIPE AND FITTINGS. SEWER LATERAL PIPE SHALL BE PVC ASTM D3034.
2. SEWER CLEAN-OUTS NOT IN PAVEMENT SHALL HAVE CONCRETE COLLAR 18"x18"x4" AROUND THE COVER AND MUST BE INSTALLED AND ADJUSTED TO FINISHED GRADE AT THE RIGHT-OF-WAY/PROPERTY LINE.
3. ALL PVC TO CLAY SERVICE CONNECTIONS UNDER LOAD BEARING SURFACES SHALL USE FERNCO TYPE CONNECTORS WITH STAINLESS STEEL SHEAR RINGS OR APPROVED EQUAL.
4. 90° FITTINGS ARE PROHIBITED. MINIMUM 6" PIPE LENGTH BETWEEN 45° FITTINGS.



City of Astoria
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Typical Sewer Connection Detail

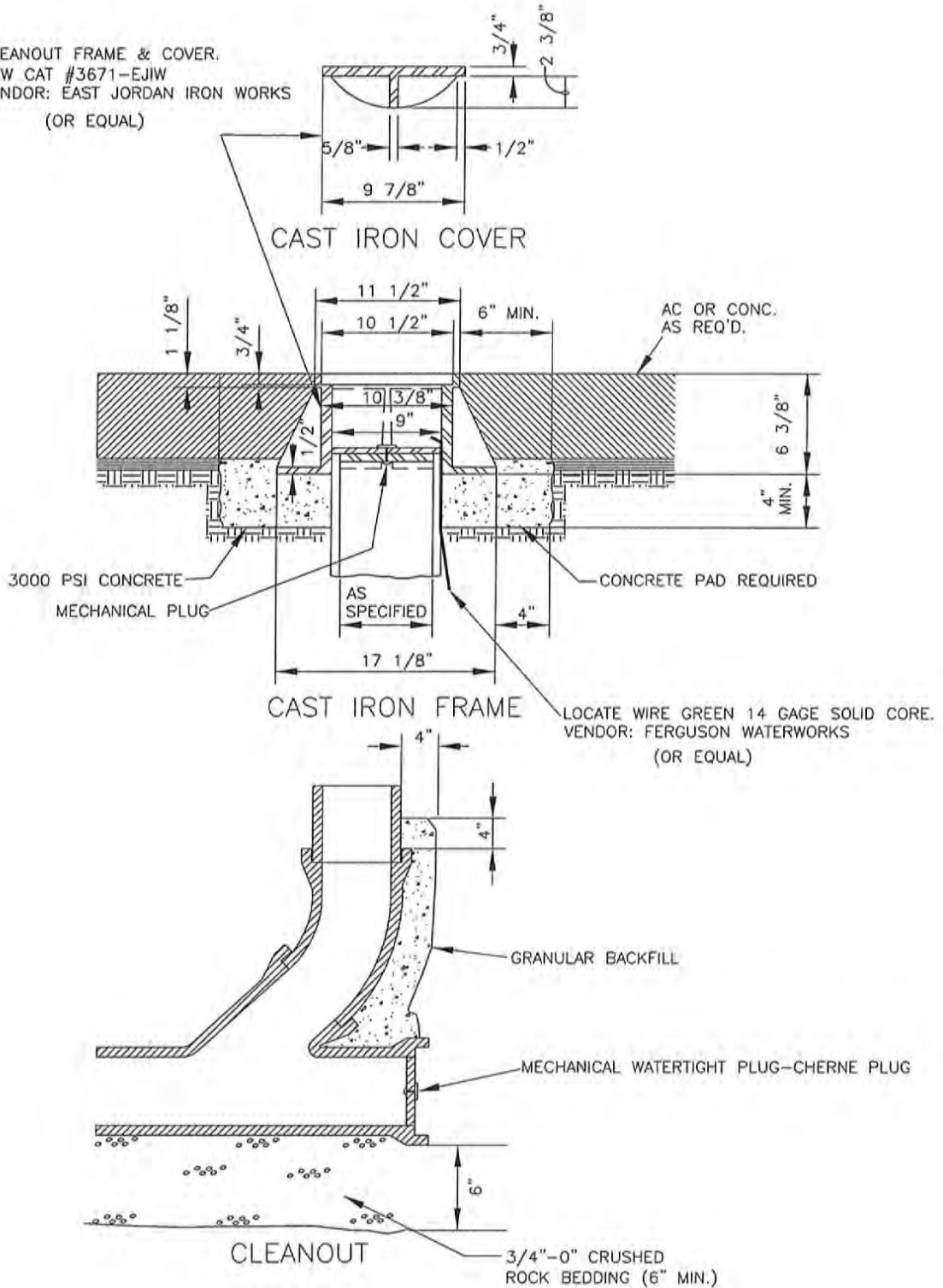
Date Adopt. 11/01/12 Date Rev. 10/06/14

Dwg. Name: S-8 Typical Sewer Connection.dwg

DWG. NO.

S-8

CLEANOUT FRAME & COVER.
 NEW CAT #3671-EJIW
 VENDOR: EAST JORDAN IRON WORKS
 (OR EQUAL)



NOTES:
 ALL CLEANOUT MATERIAL TO
 BE SAME AS CARRIER PIPE



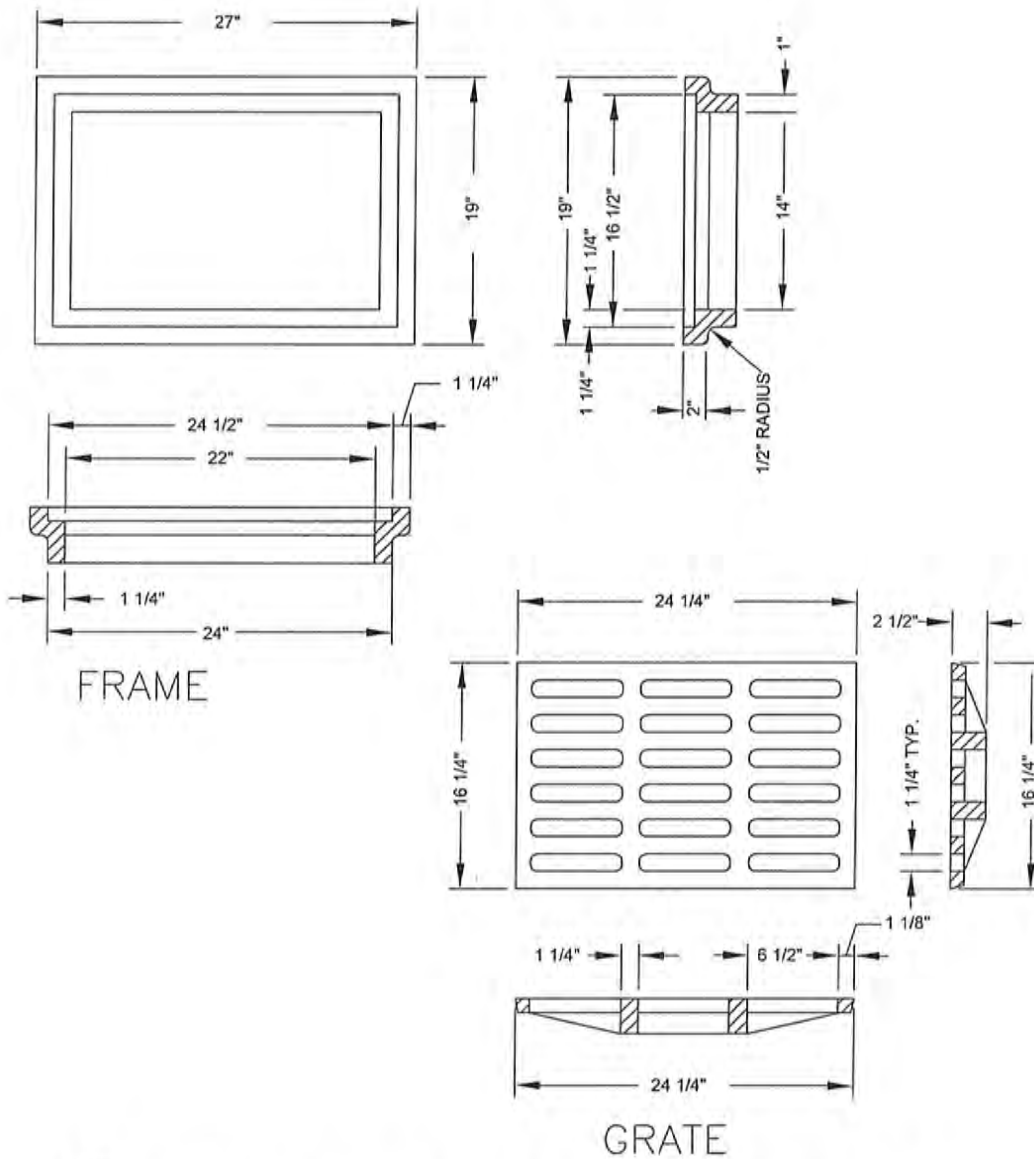
City of Astoria
Public Works Department
 1095 Duane Street

Clean Out Detail

Date Adopt. 11/01/12 Date Rev. 11/16/16

Dwg. Name: S-9 Clean Out.dwg

DWG. NO.
S-9



NOTES:

1. ALL CASTINGS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A48, CLASS 30B.
2. ROUNDS, FILLETS, TAPERS AND OTHER MINOR MODIFICATIONS TO THE DEMINIONS SHOWN MAY BE MADE TO CONFORM TO COMMON SHOP PRACTICES.
3. GRIND SMOOTH FINISH BEARING SURFACES.
4. AVAILABLE THROUGH OLYMPIC FOUNDRY INC., PART NO. SM41.



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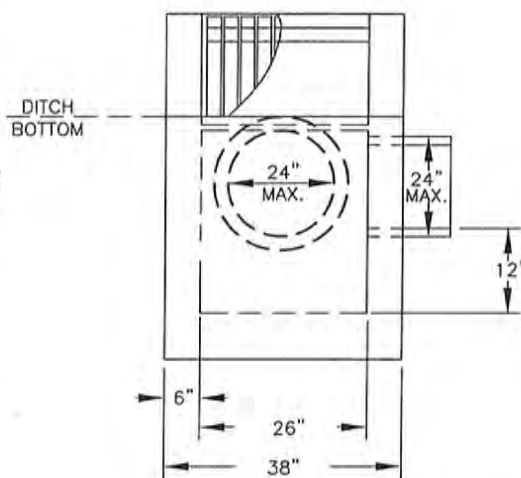
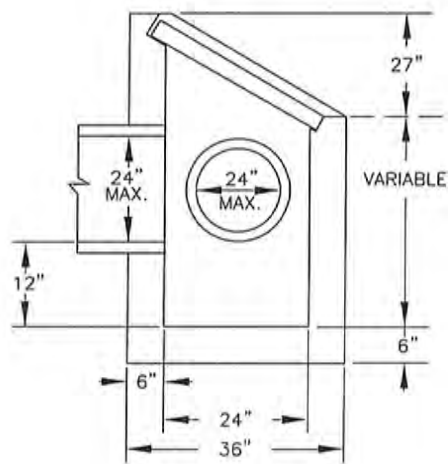
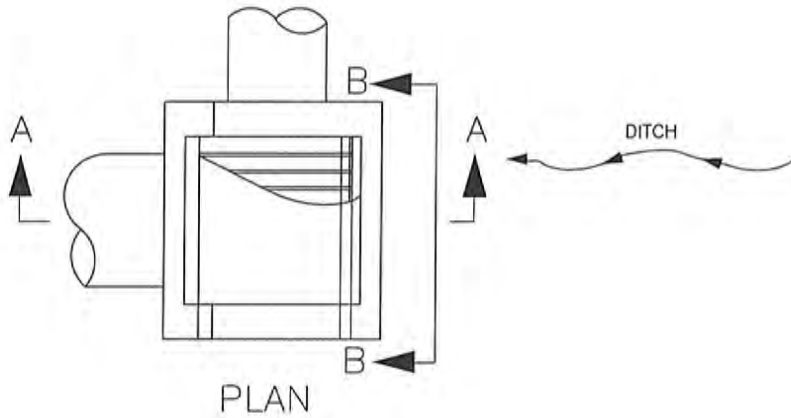
Catch Basin Frame & Grate Detail

Date Adopt. 11/01/12 Date Rev. 11/16/15

Dwg. Name: SD-1 CB Frame & Grate.dwg

DWG. NO.

SD-1



NOTES:

1. CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3300 P.S.I. IN 28 DAYS.



City of Astoria
Public Works Department
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Field Inlet Detail

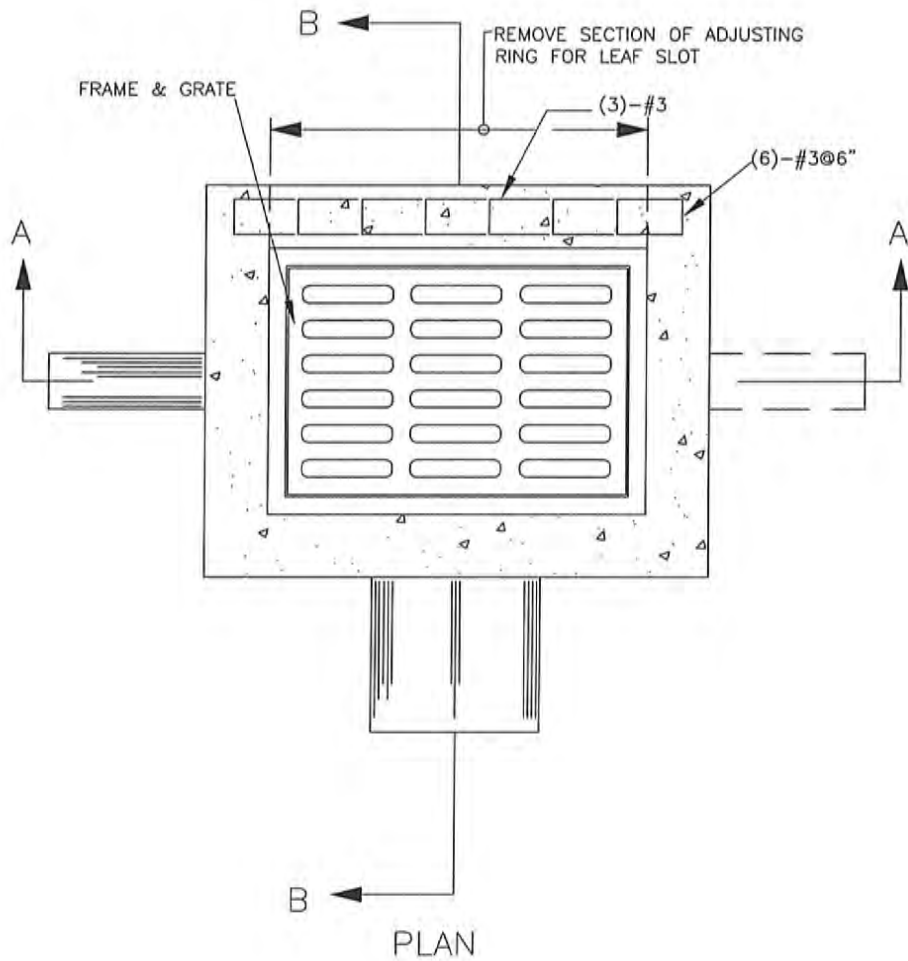
Date Adopt. 11/01/12

Date Rev. ----

DWG. NO.

SD-2

Dwg. Name: SD-2 Field Inlet.dwg



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Public Works Department
 1095 Duane Street

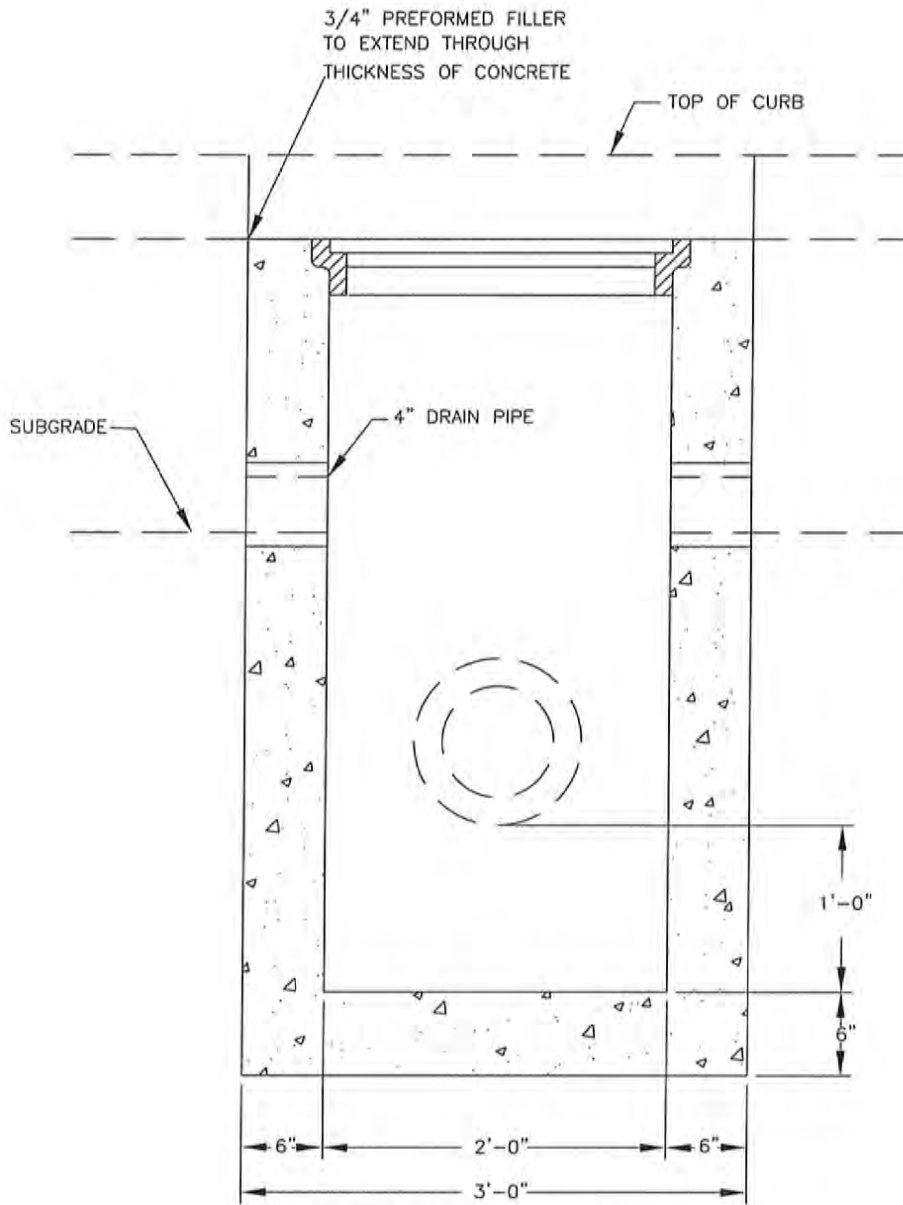
Catch Basin Detail

Date Adopt. 11/01/12 Date Rev. ----

Dwg. Name: SD-3 Catch Basin.dwg

DWG. NO.

SD-3



SECTION A

NOTES:

1. SUMP REQUIRED IN CATCH BASINS WITH OUTLET PIPE ONLY. FOR CATCH BASINS WITH INLET AND OUTLET PIPES FORM CHANNELS TO DIRECT FLOW.

2. CATCH BASIN BASE SHALL BE CITY OF SALEM TYPE 1, SHORT 36".



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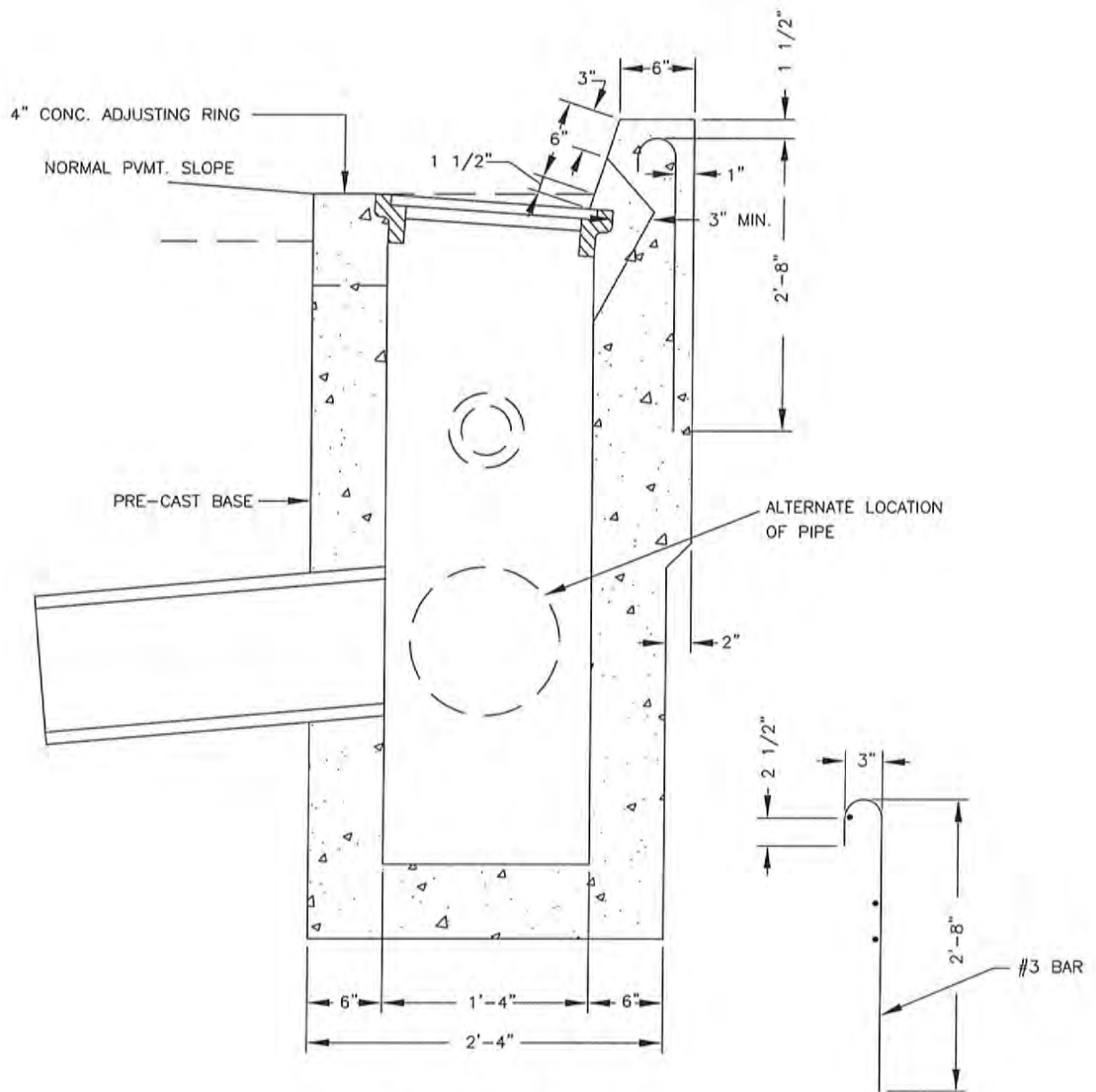
Catch Basin Detail

Date Adopt. 11/01/12 Date Rev. 11/16/12

Dwg. Name: SD-4 Catch Basin.dwg

DWG. NO.

SD-4



SECTION B



City of Astoria
Public Works Department
 1095 Duane Street

Catch Basin Detail

Date Adopt. 11/01/12

Date Rev. ----

DWG. NO.

SD-5

Dwg. Name: SD-5 Catch Basin.dwg

APPENDIX B – CITY STANDARD SPECIAL PROVISIONS

STANDARD SPECIAL PROVISIONS

STANDARD SPECIAL PROVISIONS

PART 00200 – TEMPORARY FEATURES AND APPURTENANCES

Section 00220 – Accommodations for Public Traffic

00220.02 Public Safety and Mobility - In the eighth "bulletized" item, delete the words "as shown on the Plans".

00220.40(d) Adjacent to Excavations - In the first "bulletized" item, delete the words "as shown on the standard drawings".

00220.40(e)(1) Closed Lanes - Add the following to the subsection:

Unless otherwise authorized by the City Engineer, the Contractor shall maintain two lanes of traffic on all streets affected by construction between the hours of 6:00 p.m. and 7:00 a.m.

Detours and closures will be allowed, but must be approved by the City Engineer in advance.

Section 00225 – Work Zone Traffic Control

00225.00 Scope - Delete the phrase "according to the standard drawings, the traffic control plan (TCP) for the Project, these Specifications, or as directed" and replace with the phrase "traffic control plan (TCP) for the Project submitted by the Contractor and accepted by the City Engineer, these Specifications, or as directed".

00225.05 Contractor Traffic Control Plan - Delete the subsection in its entirety and replace with the following:

The Contractor shall submit a proposed TCP prepared by an engineer currently licensed in Oregon for the City Engineer's review and acceptance at least 14 days prior to start of any construction. The proposed TCP shall address all operational aspects of the Contractor's work, and shall include provisions for areas used by the Contractor for staging and storage of materials and equipment. The proposed TCP shall include order and duration of the TCP, all TCMs, TCDs, lane and street closures, and detours. If additional modifications are proposed by the Contractor to the Contractor's TCP as accepted by the City Engineer, submit modifications prepared by an engineer currently licensed in Oregon at least 7 days before beginning the construction activities that require the TCP changes.

The following parameters shall apply to the Contractor's Traffic Control Plan:

- Traffic control shall be designed to move traffic past the area smoothly, with proper and adequate advance signing.
- Wherever the existing roadway surface is disturbed by construction and except where temporary paving is required, the Contractor shall regularly grade and maintain a smooth gravel surface for vehicular traffic traveling through and within the project area until the project is complete.
- Access for Emergency vehicles shall be accommodated at all times.
- The Contractor shall have the responsibility of coordinating the needs of the abutting residents and businesses for parking and access. Temporary on-street parking changes during construction may be allowed, but must be approved by the City Engineer.
- The Contractor shall retain a Traffic Control Supervisor for the project, with responsibility and authority to continuously monitor and direct traffic control operations at all times on the project. The Traffic Control Supervisor shall have specific training in temporary traffic control for construction. The Contractor shall provide the Traffic Control Supervisor's name and phone number and training credential documentation to the City Engineer at the pre-construction conference. The Traffic Control Supervisor shall not be changed by the

Contractor without prior notification to the City Engineer and providing the same information for the new Traffic Control Supervisor and receiving City Engineer acceptance of the change.

Section 00280 – Erosion and Sediment Control:

00280.04 Erosion and Sediment Control Plan on City Controlled Lands - In the last sentence of the first paragraph, delete "before" and replace with "after".

00280.05 Erosion and Sediment Control Plan on Non-City Controlled Lands - In the last sentence of the first paragraph, delete "before" and replace with "after".

00280.30 Erosion and Sediment Control Manager - In the second paragraph, delete "10 days before" and replace with "at".

Section 00290 – Environmental Protection

00290.20(b) Fuel Storage – Delete the second sentence of the second paragraph.

00290.30(b) Pollution Control Plan: In the first paragraph, delete the phrase "for approval 10 calendar days before the preconstruction conference".

Delete the last paragraph which begins "A Pollution Control Plan Contractor Packet..."

00290.32 Noise Control – Delete the first "bullet" and replace with the following:

The Contractor shall comply with all requirements regarding noise control, as in accordance with Chapter 5, Offenses, in the Astoria Code.

PART 00300 – ROADWORK

Section 00310 – Removal of Structures and Obstructions

00310.42 Salvaging Drainage Structure Fittings – Add the following to subsection:

Manhole frames and lids, and catch basin frames and grates not reused on new structures shall be salvaged and provided to the City at its maintenance shop at 550 30th Street, Astoria, OR 97103.

00310.44 Earthwork in Connection with Removal – Add the following to subsection:

Catch basins and manholes removed shall be backfilled with compacted Class B Backfill in accordance with 00405.14 from the bottom of the excavation to the top of the street subgrade.

Section 00330 – Earthwork

00330.41(a)(9)c Unstable Subgrade Material - Add the following to subsection:

Where unsuitable foundation is encountered and over-excavation is required, the Contractor shall excavate to a depth as directed by the City Engineer and replace the resultant void with 2-1/2" – 0" aggregate base material.

Section 00350 – Geosynthetic Installation

00350.10 Materials – Add the following to subsection:

Woven geotextile in accordance with 02320.20 (Table 02320-4) shall be used for separation between subgrade and aggregate base material.

PART 00400 – DRAINAGE AND SEWERS

Section 00405 – Trench Excavation, Bedding, and Backfill

00405.02 Definitions

Pipe Bedding: Add the following:

The total bedding depth shall be a minimum of 6 inches below the bottom outside surface of the barrel of the pipe for the full width of the trench.

Pipe Zone: Delete "8 inches" and replace with "12 inches".

Trench Backfill: Add the following:

Imported Trench Backfill shall be imported crushed aggregate materials free from wood waste, organic material, and other extraneous or objectionable materials.

Lateral Restraint Shoring System: Add the following:

Lateral Restraint Shoring System is defined as a shoring system with full face braced shields tightly against the trench sidewalls throughout trench excavation and pipe installation to maintain lateral stability.

00405.11 Trench Foundation - Delete the four "bulleted" items and replace with the following: 2-1/2"-0 base aggregate in conformance with 02630.10.

00405.12 Bedding – Add the following to subsection:

Pipe Bedding material shall be ¾" – 0 base aggregate material in conformance with 02630.10.

00405.13 Pipe Zone Material – Add the following to subsection:

Pipe Zone Material shall be ¾" – 0 base aggregate material in conformance with 02630.10.

00405.14 Trench Backfill - Add the following to subsection:

Trench Backfill shall be Class B Backfill.

00405.16 Pipe Zone Locate Wire – Add this subsection:

The Contractor shall install 14 gauge locate wire 6 inches above all non-ferrous pipe. Sanitary Sewer wire shall be green, water wire blue, storm drain wire white. Run wires into valve, cleanout and meter boxes, manholes and other structures to a point accessible from the cover. Locate wires to not hinder access into manholes.

00405.41(c) Trench Width – Delete third and fourth sentences of subsection.

00405.41(f) Trench Excavation, Trench Protection - This section is supplemented with the following:

The Contractor shall be responsible for providing Trench Protection as follows:

1. The Contractor is solely responsible to design, install and maintain shoring, sheeting, bracing and sloping necessary to support the sides of the excavation and to prevent any movement that may trigger landslides, damage adjacent structures and facilities, endanger life and health, or pose a threat to the environment. Conform to the requirements of applicable governmental regulations and agencies.
2. All sheeting, bracing, shoring and trench shields shall be designed or certified by a currently registered Oregon professional engineer and meet the requirements of all applicable local, state, and federal safety codes. The designer shall comply with all applicable codes, ordinances and statutes, and bear sole responsibility for any and all penalties imposed for noncompliance.
3. Do not install sheeting and shoring using vibratory methods.
4. Make and maintain all excavations in a safe manner.
5. Carefully reconsolidate the bedding and side support outside a trench shield prior to placing backfill.

6. Leave in place those portions of sheeting extending below the crown elevation of the pipe, unless the bedding and side support can be reconsolidated to the satisfaction of the City Engineer.
7. Where removal of sheeting would result in damage to adjacent utilities or other property, the Engineer may order all or a portion of sheeting to be cut off and left in place.
8. Do not use horizontal strutting below the barrel of a pipe.
9. Do not use the pipe as support for trench bracing.
10. Contractor shall restore all existing facilities damaged, destroyed, or altered by soil movements resulting from temporary shoring movements or nonperformance.
11. Detrimental Movements or Settlements: Work shall be stopped immediately and the causes of detrimental movements be ascertained if:
 - (a) Damage is noted on adjacent structures.
 - (b) Total settlements of an adjacent structure are noted to be 1/4-inch or larger.
 - (c) Total horizontal movements of an adjacent structure are noted to be 1/4-inch or larger.
 - (d) Shoring systems horizontal movements are noted to be 1/4-inch or larger.
 - (e) Total ground settlements, when measured at settlement measurement points, are noted to be 1/2-inch or larger.
 - (f) There is a trend or a rate of change of any settlement or movement that indicates the maximum movements given above will be exceeded.
 - (g) Work is directed to stop by the City Engineer due to other detrimental effects or factors.
12. The causes of the detrimental movements or excessive settlements must be identified by the Contractor. Corrective measures must be proposed to and approved by the City Engineer before further Work.

00405.43 Dewatering - This section is supplemented as follows:

Dewatering equipment shall be provided to remove and dispose of all surface water and groundwater entering excavations, trenches, or other parts of the work.

1. The Contractor is solely responsible to design, furnish, install, maintain, and operate all necessary dewatering wells, sump/pumps and other devices for dewatering all excavations. The Contractor's plan for the dewatering system shall be submitted to the City Engineer for review.
2. At all times have on the project sufficient dewatering devices for immediate use, including standby pumps in case other pumps become inoperable.
3. Provide a sufficient number of dewatering devices so as to hold the groundwater level at an elevation of not less than 1 foot below the lowest elevation of the pipe or other material to be placed. When groundwater is encountered, the Contractor shall assess the situation and develop a plan to accommodate dewatering. The Contractor shall be solely responsible for control of groundwater through dewatering and trench excavation control Plan.
4. The dewatering operation shall be continuous, so that the excavated areas shall be kept free from water during subgrade preparation, while pipes are installed, and until backfill has been placed to the extent that no damage from hydrostatic pressure, flotation, or other cause will result.
5. Continue dewatering during backfilling operations such that the groundwater is at least 1 foot below the level of the compaction effort at all times. No compaction of saturated materials will be allowed.
6. If pumping is required on a 24 hour basis, requiring engine drives, then engines shall be equipped in a manner to keep noise to a minimum.
7. Dewatering devices must be adequately filtered to prevent the removal of fines from the soil.
8. Settle and/or filter all dewatering system collected flow through Contractor provided settling tanks and systems in order to meet Water Quality Standards; Beneficial Uses, Policies, and Criteria for Oregon (OAR 340-041-0036) prior to discharging.
9. Dispose of water in such a manner as to cause no injury or nuisance to public or private property, or be a menace to the public health.

10. The Contractor shall be responsible for any damage to existing structures, pavement, utilities, or of the new works caused by Contractor's dewatering activities or failure of any part of the Contractor's dewatering activities.

The Contractor shall be responsible for furnishing temporary drainage facilities to convey and dispose of surface water falling on or passing over the site.

00405.44 Trench Foundation - Delete the third sentence of the second paragraph and replace with the following: Place the trench foundation material in no more than 12-inch layers and compact according to 00330.43.

00405.45 Pipe Bedding - Add the following paragraph to subsection:

The Contractor shall place subsequent lifts of not more than 6-inches in thickness up to one foot above the top of the pipe, bringing lifts up together on both sides of the pipe.

Bedding material shall be compacted to 95% of the Standard Proctor maximum dry density (ASTM D698, AASHTO T-99). For the case that bedding material is not density testable, procedures in accordance with 00405.46(c) (2) shall be followed. In this case, the bedding materials should be compacted using suitable compaction equipment until non-yielding.

Bedding disturbed by pipe movement, by removal of shoring, or by movement of a trench box or shield shall be recompacted prior to backfill. Special care shall be taken to provide adequate bedding support at wye or tee connections, at Fernco connections and adjacent to other structures so as to avoid bending or shearing stresses at these critical points. The Contractor shall prevent pipe movement either horizontally or vertically during placement and compaction of pipe bedding material.

00405.46(b) Pipe Zone - Add the following to the subsection:

Pipe zone material shall be compacted to 95% of the Standard Proctor maximum dry density (ASTM D698, AASHTO T-99).

00405.46(c)(2) Class A, B, C, or D Backfill – Delete the second paragraph of the subsection and add the following:

Within rights of way and paved surfaces, trench backfill shall be compacted to 98% of the Standard Proctor maximum dry density within two feet of final pavement subgrade elevation and to 95% of the Standard Proctor maximum dry density below two feet of final pavement subgrade elevation. Water jetting is not acceptable as a method of compaction.

Contractor shall remove and recompact material that does not meet specified requirements.

For materials where a compaction curve cannot be developed in accordance with ASTM D698 or AASHTO T-99, compaction and field verification procedures for non-testable soils in ODOT Section 00330.43(c) should be followed. Deflection testing is not required.

When the backfilling is complete, the Contractor shall finish the surface area as specified. In paved areas, the Contractor shall maintain the surface of the trench backfill level with the existing grade, until final pavement replacement is completed and accepted by the City Engineer.

Add the following at the end of the subsection:

When crossing below an existing natural gas pipeline main or service of any size, the Contractor shall provide and install sand drainage material conforming to 00360.10 to provide a 12-inch envelope in all directions around the existing gas piping.

00405.48(c) Pavement, Curb and Sidewalk

Add the following to the first paragraph, after the second sentence:

Saw cut to nearest joint, panel or as indicated in the Standard Drawings.

In second paragraph, delete "6 inches" and replace with "12 inches" and add the following:

The Contractor is responsible for any damage to the sawcut trench edges between the time of excavation and paving. Trenches excavated for paving may not be left open for more than one day without steel plates or backfilling.

Section 00415 – Video Pipe Inspection

00415.00(c) Inspection – Delete the last sentence of the first paragraph and replace with the following:

Stop and inspect the full circumference of all pipe joints.

Section 00430 – Subsurface Drains

00430.10 Materials - Interceptor drain, underdrain/slotted pipe and drain pipe shall be Perforated Polyvinyl Chloride Pipe.

00430.11 Granular Drain Backfill Material - Material shall be 1-1/2" - 3/4" size.

00430.46(a) Special Filter Material - Material is not required.

Section 00445 – Sanitary, Storm, Culvert, Siphon, and Irrigation Pipe

00445.11 Materials – Sanitary sewer and storm drain pipe shall be Polyvinyl Chloride Pipe (PVC) conforming to ASTM D 3034.

00445.11(e) Tracer Wire

In first sentence, delete "12-gauge" and replace with "14-gauge".

Delete the second sentence and replace with the following:

The HMW-PE insulated cover shall be green for sanitary sewer and white for storm drain and a minimum 45 mil thick.

00445.11(h) Sanitary Sewer Laterals – Add this subsection:

Construct sanitary sewer laterals per the Standard Drawings - Detail S-8 including the "Y" fitting in the main. Tee's consisting of a PVC hub, rubber sleeve and stainless steel band are not acceptable.

00445.43(a) General – Add the following to subsection:

Replace existing sewer laterals that are disturbed by new pipe construction a minimum of 2 feet outside the new pipe trench.

00445.48 Tracer Wire - Add the following to the first paragraph:

Run wires into cleanouts, manholes and other structures to a point accessible from the cover and not to impede access.

In the second sentence of the first paragraph, delete "and on top of the pipe zone" and replace with "as shown in the Standard Drawings".

Section 00470 – Manholes, Catch Basins and Inlets

00470.00 Scope – Add the following to subsection:

This Work shall consist of installing storm sewer and sanitary sewer manholes.

Storm sewer manholes shall be constructed per the Standard Drawings – Details S-3 and S-4, 12-inch depth sump.

Sanitary sewer manholes shall be constructed per Standard Drawings – Details S-3 and S-4.

Catch basins shall be constructed per the Standard Drawings.

00470.10 Materials – Grout shall be Hey'di Powder X System mix for grouting inside of manholes and catch basin structures.

00470.11 Precast Concrete Manholes and Bases – Storm sewer manholes shall be core drilled in the field for catch basin laterals.

00470.72 Adjusting Manholes and Catch Basins to Grade – Add this subsection:

Manhole structures and catch basins shall be set to grade of preliminary asphalt surface and adjusted to final grade of surface at the time of final asphalt paving.

Section 00490 – Work on Existing Sewers and Structures

00490.40 General – Add the following to subsection:

Contractor shall be solely responsible for safety during the performance of the Work. No one shall enter into any sewer segment, or structure, where hazardous conditions may exist until such time as the source of these conditions is identified and eliminated by the Contractor and/or City. The Contractor shall perform all tests that may be required to identify and assess unsafe conditions and shall perform all work in accordance with the latest OSHA confined space entry regulations. Contractor will coordinate its work with local fire, police and emergency rescue units so they are aware of his working conditions. Access for cleaning purposes shall be via existing manhole openings.

00490.43 Abandoning Pipe in Place - Abandoned pipes shall be filled with controlled low-strength material in accordance with Section 00442 and capped.

00490.50 Sanitary Sewer and Storm Drain Connections – Add this subsection:

Connecting new sanitary sewer or storm drain pipe larger than 6-inch diameter to existing sanitary sewer or storm drain pipe shall be with a Romac 501 coupling, Romac Macro HP coupling or Fernco coupling with shear rings. Connecting new PVC pipe to existing tile drains shall be with a Fernco coupling (shear rings not required).

Section 00495 – Trench Resurfacing

00495.10 Materials - Permanent trench surfacing materials in existing paved areas shall be Asphalt Concrete Pavement (ACP) to in accordance with Section 00744.

PART 00600 – BASES

Section 00610 – Reconditioning Existing Roadway

00610.40 Removal and Replacement of Unsuitable Materials - Delete the last three sentences of the subsection and replace with the following:

Replace the removed materials with successive courses of 2-1/2"-0 base aggregate.

Section 00641 – Aggregate Subbase, Base, and Shoulders

00641.10(a) Base and Shoulder Aggregate - After the second sentence, add the following:

Base aggregate shall consist of both leveling rock and base rock as shown on the Standard Drawings. Leveling rock and base rock shall conform to Section 02630.10 for 3/4"-0 and 1-1/2"-0, respectively.

PART 00700 – WEARING SURFACES

Section 00744 – Asphalt Concrete Pavement

00744.12(a) Mix Type - Mix Type shall conform to 1/2" ACP.

00744.13 Job Mix Formula Requirements - JMF shall conform to Level 3.

00744.42 Tack Coat - Delete the last sentence of the first paragraph and replace with the following:

Tack coat asphalt shall be approved by the Engineer prior to application. Hot tack is required prior to all applications of asphalt concrete pavement.

00744.43(c) Placing - In last paragraph of subsection, delete the third sentence and replace with the following:

Where 4-inches of ACP is required for trench pavement patching or street section, place in two separate 2-inch lifts.

Section 00748 – Asphalt Concrete Pavement Repair

00748.10 Materials - Add the following to subsection:

Aggregate base shall consist of both leveling rock and base rock as shown on the Standard Drawings.

Leveling rock and base rock shall conform to Section 02630.10 for 3/4"-0 and 1-1/2"-0, respectively.

Asphaltic Concrete Pavement shall conform to Section 00744.

Emulsified Asphalt Concrete shall not be allowed.

Section 00759 – Miscellaneous Portland Cement Concrete Structures

00759.12 Sidewalk Ramp Treatment - Detectable warning surfaces shall be color red.

00759.41 Earthwork - Excavation for curb shall be performed at the same time as excavation for roadway section, and shall extend to 1-foot beyond the back of curb.

00759.42 Foundations - Delete the words "using selected granular backfill material according to Section 00330 or".

00759.50(b) Curbs, Islands, and Stairs - Curbs shall be stamped with the letters "SS", while the concrete is still wet, at the location where sanitary sewer side laterals cross beneath the curb.

PART 00800 – PERMANENT TRAFFIC SAFETY AND GUIDANCE DEVICES

Section 00850 – Common Provisions for Pavement Markings

00850.50 General – Add the following to subsection:

Temporary pavement markings shall be maintained in serviceable condition throughout the project until permanent pavement markings are installed. Temporary pavement markings that are damaged shall be repaired or replaced by the Contractor immediately.

00850.75 Manufacturer's Warranty – In the first sentence, delete "on Agency supplied warranty forms". Delete the last sentence.

Section 00865 – Longitudinal Pavement Markings – Durable

00865.00 Scope – Add the following to subsection:

Continental style crosswalks shall be High Skid Resistant Pre-formed Thermoplastic.

Crosswalks with standard bars and diagonal striping shall be constructed with a City provided legend using white paint with reflective glass beads.

If any portion of a crosswalk marking is removed or damaged during construction, the entire crosswalk marking shall be replaced with thermoplastic or paint, as applicable. All four sides of the crosswalk marking are to remain consistent.

00865.45 Installation - Method B: Spray Markings, shall apply to this project.

Paint for school crosswalks with standard bars and diagonal crosswalks shall be "Legend Build" by Ennis Flint, white, 985611-5A-5P.

Paint for yellow curb shall be "Legend Build" by Ennis Flint, yellow, 985612-5A-5P.

Paint for centerline striping shall be ORW-21-M-4 waterborne paint by Ennis Flint, applied at 10-11 gallons per mile with 4 pounds of beads/mile.

Section 00867 – Transverse Pavement Markings – Legends and Bars

00867.45 Installation - Type B-HS: Prefomed, Fused Thermoplastic Film High Skid material shall apply.

PART 01000 – RIGHT OF WAY DEVELOPMENT AND CONTROL

Section 01040 - Planting

01040.00 Scope - All planting, including sod lawn installation, shall be completed by a professional/licensed landscape company.

01040.48(c) Method "C" (Sod Lawn and Seeded Lawn Areas) – All lawn replacement shall be in accordance with Method "C" for sod lawn.

01040.55(k) Site Specific Restoration – Add this subsection:

At any point of connections to private storm drain catch basins, storm drain lines, water or sewer services, or other facilities, restore the site of connection to existing conditions or better. Lawn sod shall be used for all grass restoration.

PART 01100 – WATER SUPPLY SYSTEMS

Section 01140 – Potable Water Pipe and Fittings

01140.10 Materials – Modify this subsection as follows:

All water lines shall be ductile iron thickness Class 52 meeting the requirements of Section 02470.20.

All ductile iron pipe and fittings and all brass fittings shall be manufactured within the U.S.

01140.40(a) Dewatering Trenches – This section is supplemented with the following:

See subsection 00405.43 Dewatering for additional requirements.

01140.41(a) General – Add the following to subsection:

Pipe shall be installed with 30 inches minimum and 48 inches maximum cover from the top of the pipe to finished grade unless otherwise approved by the Engineer.

01140.41(c) Polyethylene Encasement – Delete this subsection in its entirety.

01140.43 Polyethylene Encasement – Delete this subsection in its entirety.

01140.44(b) Restrained Joints – Delete the first sentence and replace with the following:

In addition to concrete thrust blocks as required in subsection 01140.44(a), mechanically restrain all joints at bends, tees, dead ends and crosses.

01140.47(a) Notification - Delete and replace with the following: The Agency will notify customers impacted by a shutdown, turn off meters as necessary, close valves in the existing system and assist with refilling the line and expelling air.

01140.47(b) Permission – Delete and replace with the following:

The City will be responsible for shutting down the existing water system when necessary for connection of a new waterline. The Contractor shall notify the City Engineer at least 2 working days in advance of each requested shutdown. Shutdowns shall not be scheduled on Friday or the day before a holiday and shall be planned to take place early in the day. Shutdowns may also have to be scheduled during times other than normal working hours. To minimize the inconvenience to water customers, the Contractor shall plan carefully for the installation of the new pipe by exposing the existing pipe in advance and making sure to have all necessary fittings, tools, equipment and personnel to make the connection in as short a time period as possible. The Contractor shall notify the City Engineer of any changes to the schedule prior to customer notification. If the schedule is changed after Agency staff has spent time or resources preparing for the shutdown, the Contractor will reimburse the City for personnel and equipment time and other expenses. Reimbursement will not be required if circumstances beyond the control of the Contractor cause the schedule change.

01140.51 Hydrostatic Testing – Delete and replace with the following:

Test Pressure - In accordance with AWWA C600, the line shall be subjected to a hydrostatic pressure of at least 1.5 times the working pressure. The test pressure shall be based on the lowest elevation (maximum static pressure) of the section of line to be tested. It is also necessary to carefully choose test sections in lines with large elevation differences to insure compliance with AWWA C600 where it says "the test pressure shall not be less than 1.25 times the working pressure at the highest point along the test section" wherever possible. Water service testing shall be done after all taps and service lines are completed.

For example, a section of line has a working pressure at the low end of 110 psi and 70 psi at the high end. The test pressure at the low end should be 1.5 x 110 psi or 165 psi. This will result in a pressure of 125 psi at the high end which easily exceeds the 1.25 times the working pressure requirement of 87.5 psi.

Required Length of Test - 2 hours

Pass/Fail Determination - If there is any pressure drop during the 2-hour test period, the determination of whether the line can be accepted will be made on the amount of leakage that occurred. The allowable leakage is based on the length of line, diameter and test pressure as shown in Section 4.16 of AWWA C600. The leakage may be measured

by pumping the line back to test pressure from a vessel which will permit the determination of the volume of makeup water pumped. Leakage may also be determined by pumping the line back up to test pressure and then measuring the amount of water that must be released to create the same drop in pressure that occurred over the 2-hour test.

The preceding paragraphs are intended to clarify certain portions of AWWA C600. All requirements of AWWA C600 apply to testing of waterlines.

Hydrostatic testing of HDPE pipe shall be to 150% of the working pressure of the piping system at the lowest elevation of the section being tested but not less than 1.25 times the working pressure at the highest point of the test section and shall be performed on all installed pipelines in accordance with the manufacturer's written instructions.

01140.52 Disinfecting – Delete and replace with the following:

Prior to placing new water mains in service, the Contractor shall disinfect new mains, and any repaired portions of, or extensions to, existing mains, and obtain two satisfactory bacteriological reports. Disinfection shall be performed in accordance with AWWA C651, or as directed by the City Engineer. The first sample will be collected and bacteriological tests obtained by the City at its cost. The second sample shall be collected by the Contractor and the Contractor shall be responsible for having the bacteriological test conducted by a State of Oregon certified laboratory at the Contractor's cost. The Contractor shall notify the City Engineer at least 24 hours in advance to schedule bacteriological testing.

No connections will be made to the existing water system until the Contractor has successfully passed specified pressure and bacteriological testing. Temporary piping, valves and connections may be required to maintain water service and complete testing. Contractor is responsible for detailing and providing all temporary piping, valves and connections required.

Section 01160 – Hydrants and Appurtenances

01160.49 Existing Hydrants and Appurtenances – Add this subsection:

The Contractor shall leave existing hydrants in service while the existing water main is in service or until just prior to removing and reinstalling the new hydrant to minimize the length of time the hydrant is non-functional.

Where existing hydrants are shown to be removed, the removal shall include removing and disposing of the existing hydrant and appurtenances including the existing auxiliary gate valve.

Section 01170 – Potable Water Service Connections, 2 inch and Smaller

01170.40 General – Add the following to subsection:

Connect to all water mains, including Class 52 ductile iron, using saddles. Direct taps are prohibited.

01170.40(b) Installation – Add the following to subsection:

When copper tubing is used for service connections, the tubing shall only be bent by using a suitable copper tubing tool to bend. Any divots for bends found in the copper tubing upon installation will be unacceptable. The Contractor shall replace the damaged tubing.

PART 02000 – MATERIALS

Section 02320 – Geosynthetics

02320.10(a)(2) Geogrids – Geogrids shall be TriAx 160 as manufactured by Tensar Corporation, or equal.

Section 02470 – Potable Water Pipe Materials

02470.20(a) General - Delete the last sentence of the subsection and replace with the following:

Ductile iron pipe shall be Standard Thickness Class 52. All ductile iron pipe and fittings shall be manufactured within the United States.

Section 02475 - Potable Water Fitting Materials

02475.20 Ductile Iron Pipe Fittings – Delete the first sentence and replace with the following:

All ductile iron fittings shall meet the requirements of AWWA C153.

02475.50 Restrained Joints – Delete subsection and replace with the following:

Restrained mechanical joints shall be restrained with Romac Grip Rings. Romac Grip Rings are an Agency standard and no substitutions will be accepted.

Restrained push on pipe joints shall be restrained with Field LOK gaskets or equal.

02475.60 Bolted, Sleeve-Type Couplings for Plain-End Pipe - Add the following to subsection:

When connecting ductile iron pipe to ductile iron pipe, the transition couplings shall be a mechanical joint ductile iron Class 350 long body sleeve fitting. If a long sleeve cannot be used to connect to the existing piping material use a Romac Macro HP two bolt wide range coupling or equal.

Transition couplings shall be ALPHA Wide Range Restrained Joints as manufactured by Romac Industries.

Flanged coupling adapters (FCA's) shall be Megaflange 2100 series as manufactured by EBAA Iron or approved equal.

Section 02480 – Potable Water Valve Materials

02480.10 General – Valves shall be manufactured by American Flow Control (AFC).

02480.25 Valve Boxes – Valve boxes shall be East Jordan Iron Works (Riser #363912; Lid #363926) 18-inch overall in accordance with the Standard Drawings.

02480.26 Valve Stem Extensions – Delete last sentence and replace with the following:

Valve stem extensions shall be provided to raise the operating nut to no more than 2 feet below the finished grade.

Section 02485 – Hydrant and Appurtenance Materials

02485.10 Fire Hydrants – Add the following to subsection:

Hydrants shall be Mueller Super Centurion A-423. The fire hydrant tee shall be flanged or mechanical joint as shown on the Standard Drawings.

Section 02490 – Potable Water Service Connection Materials, 2 Inch and Smaller

02490.10 General – Service line materials shall be designed for a minimum working pressure of 150 psi.

02490.20 Saddles – Add the following to subsection:

3/4-inch and 1-inch service saddles shall be Romac 101S. 2-inch service saddles shall be Romac 202S.

This specification for saddles includes saddles shown for installation of blow off assemblies and connecting waterlines 2-inch or smaller as shown on the Standard Drawings.

02490.30(a) Less Than or Equal to 1 Inch – Corporation stops shall be Mueller No. H-15028N.

02490.40 Service Pipe and Fittings – Supplement this subsection with the following:

- (a) Copper Tubing Service Pipe - 3/4-inch and 1-inch services shall be copper; Type K. The tubing shall only be bent by using a suitable copper tubing tool to bend. Any divots or bends found in the copper tubing upon installation will be unacceptable. The Contractor shall replace the damaged tubing.
- (b) Polyethylene Tubing Service Pipe - 2-inch services shall be HDPE tubing, CTS Size, SDR9, 200 PSI, Blue.
- (c) Service Fittings - Service connection fittings shall be low-lead brass. Fittings for copper tubing shall be compression-type. Fittings for polyethylene tubing shall be compression-type (Mueller 110). Fittings for polyethylene tubing shall be same DR as service line tubing.

02490.70 Meter Boxes - Delete subsections (a) and (b) and replace with the following:

Meter boxes shall be in conformance with Standard Drawings – Details W-3 and W-4.

02490.72 Meters – Add this subsection:

Meters shall be Badger Model 25 with cast iron bottom, low lead and read in gallons. 2-inch water services shall be provided with 1-1/2 inch meters, unless approved otherwise by the Engineer.



CITY OF ASTORIA

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REGULAR ITEMS

Item 7(b)

**Appeals AP15-01, AP15-02, AP15-03
by Ron Zilli of the Verizon Permits
WCF15-03, V15-03, NC15-03
(Community Development)**

(No documentation is included for this agenda item)
