

APPENDIX I

*STANDARD SPECIFICATIONS AND
DRAWINGS*



CITY OF RICHLAND

PUBLIC WORKS

CIVIL AND UTILITY ENGINEERING

PUBLIC INFRASTRUCTURE CONSTRUCTION PLAN REQUIREMENTS AND DESIGN GUIDELINES

SECTION 1 - PROJECT PROCEDURE

Any project that includes the construction of public infrastructure, or represents an impact to public infrastructure shall comply with the following procedures. Public infrastructure includes all construction or impact to public streets, water lines, sanitary sewer lines, storm drainage lines, street lights and any other facilities that will be owned, operated and maintained by the City.

1. When submitting drawings for a new subdivision (long plat), four stapled paper copies of the construction plans are required for the first review submittal (24" x 36" standard size). Addendums are not allowed, all information shall be supplied in 24 x 36 format. Subsequent re-submittals require two copies, minimum. Submittals of projects other than property subdivisions (long plats) shall be made directly to the Building Dept. They will dictate the appropriate number of copies needed for submittal.
2. Grading permits are issued by The City of Richland Building Department. Submission for a grading permit is a completely separate process from the Public Works plan review process outlined here. Please contact the Building Dept. for further information. Any grading that is to take place within existing or future public Right of Way shall be placed and compacted per City standards. Compaction tests from an independent materials testing firm shall be taken at intervals consistent with City standards, and passing results submitted to the Public Works Engineering Department at the time of pre-construction meeting. If filling and compaction within future or existing Right of Way is done after issuance of the Right of Way Construction permit, the City will contract for the compaction testing.
3. One copy of stamped storm drainage calculations and any other support information are required with the first submittal. Calculations do not need to be included with re-submittals unless there is a substantial change to the project or they are requested. Please reference the new storm drainage calculations requirements outlined below.
4. After the construction plans are approved a minimum of 11 full-size stapled paper copies are required (unless stated differently). In addition an electronic copy of the drawings shall also be submitted in a format that is compliant with the City's CADD software. The contractor shall also provide all material submittals at the time of pre-con meeting. All paper construction sets will be stamped (and redlined, if necessary) by the City Engineer and 6 copies will be distributed internally as follows (all other copies will be for the owner's / contractor's use, if more are needed, please include);
 - 1 copy to the City Engineering Private Development office
 - 1 copy to Public Works Inspector
 - 1 copy to the City sewer/stormwater division
 - 1 copy to the City water division
 - 1 copy to the City streets division
 - 1 copy to Richland Energy Services
5. A plan review and inspection fee in an amount equal to 5% of the public infrastructure construction cost and any other fees such as street signs and water tapping fees that are required for the project will be collected when the construction permit is issued. Permit application forms are available at the Richland Development Services Center. A stamped, itemized engineer's cost estimate is required to determine the inspection fee.

6. After the Right-of-Way construction permit is issued a pre-construction conference will be scheduled and will include representatives from the City, owner, contractor, subcontractors, surveyor, various utilities, other agencies and others who may have an interest in the project or who are likely to be affected by it. The underground contractor that is installing the City infrastructure shall be present at this meeting.
7. When the permit is issued a public works inspector will be assigned to the project. From this point all communications with the City shall go through the public works inspector. Any discrepancies on the plans or any disputes needing to be resolved shall first go through the project engineer. If a solution cannot be found then the City Engineer shall be consulted. Any involvement by other City staff will be scheduled by the inspector.
8. Datum: The topographic survey used for the construction plans shall use NAD83/91 State Plane coordinates for the Horizontal Datum and NAVD 88 Vertical Datum, for control. A minimum of three (3) City of Richland approved control points shall be referenced on all construction and record drawings. The City Surveyor will delineate an acceptable list of existing monuments for collection.
9. When the construction is substantially complete a paper set of "record drawings" shall be prepared by a licensed surveyor and include all changes and deviations. Please reference the Public Works document "RECORD DRAWING REQUIREMENTS & PROCEDURES" for a complete description of the record drawing process. After approval by the City of the paper copy, a mylar copy of the record drawings shall be submitted along with a CAD copy of them.
10. Public utility infrastructure located on private property will require recording of a City standard form easement prior to acceptance of the infrastructure and release of a certificate of occupancy. The City requires preparation of the easement legal description by the developer's surveyor two weeks prior to the scheduled date of occupancy / acceptance. Once received, the City will prepare the easement document and provide it to the developer. The developer shall collect signatures and record the easement at the Benton County Assessor and return a recorded original document to the City Engineer's office prior to application for occupancy / final platting. All easements granted to Public Works shall be exclusive easements and not general "utility" easements.
11. After all mylar "record drawings", associated paperwork, and easement documents have been provided, and all punchlist items have been completed, the City will issue a final "Letter of Acceptance" for the project. This issuance of this letter will begin the one-year warranty period for all infrastructure built as part of this project.
12. Please reference the City's Traffic Impact Policy. If your project generates 25 or more vehicle trips per hour during the "peak hour", it may trigger the need for a traffic impact analysis (TIA). Please have one prepared and submit it with the first review if required by staff.
13. Any and all necessary permits that may be required by jurisdictional entities outside of the City of Richland shall be the responsibility of the developer to obtain.
14. A copy of the construction drawings shall be submitted for review to any appropriate jurisdictions by the developer and his engineer. All required comments / conditions shall be incorporated into one set of drawings and resubmitted (if necessary) for final permit review and issuance.

SECTION 2 - CONSTRUCTION PLANS

All public infrastructure construction plans shall contain the following minimum information. Additional information shall be added by the design engineer or may be required by the City to address specific concerns for each project.

A. GENERAL

1. The cover sheet shall include the following:
 - a. The title of the project.
 - b. The name, address and phone number of the owner.

- c. The name, address and phone number of the engineer.
 - d. A vicinity map that clearly indicates the project location.
 - e. General construction notes. (See Section 4)
 - f. The survey benchmark used for the project. The benchmark shall be on City of Richland datum (NAD83/91 State Plane coordinates for the Horizontal Datum and NAVD 88 Vertical Datum, for control. A minimum of three (3) City of Richland approved control points shall be referenced on all construction and record drawings).
 - g. A sheet index.
 - h. A legend.
 - i. An overall plan view of the project.
2. All sheets shall be stamped and signed by a currently licensed professional engineer registered in the State of Washington. Electronically reproduced signatures will not be accepted.
 3. All sheets shall be drawn on standard 24" x 36" format.
 4. All sheets shall include a north arrow and bar scale.
 5. All sheets shall be drawn at a scale that is large enough to clearly depict the proposed construction.
 6. All sheets shall be drawn at one of the following scales:
 $1" = 10'$, $1" = 20'$, $1" = 30'$, $1" = 40'$
 7. All sheets shall include the note "CALL TWO WORKING DAYS BEFORE YOU DIG, DIAL 811 OR 1-800-424-5555."
 8. Cross sections of all streets shall be shown on the plans.
 9. Match lines are required at breaks between sheets.
 10. An erosion/sedimentation control plan sheet shall also be included in the plan set.
 11. Any special construction details not included in the City Standard Details shall be shown on the plans.
 10. All existing and proposed facilities shall be shown on the plans.
 11. All existing and proposed easements shall be shown on the plans.
 12. All existing and proposed underground utilities and pipes shall be shown in the profile views.
 13. The location and depth of existing facilities should be verified if there is a potential conflict with proposed facilities.
 14. All street, water, sewer and storm drainage work shall be drawn on standard plan and profile sheets. Street, water, sewer, storm drainage, irrigation, and electrical design information shall all be shown on the same plan and profile sheets. The limits of work shown in the profile view on each sheet shall match the limits of work shown in the plan view on the same sheet. The plan and profile sheets shall show the following minimum information. Additional information shall be shown when needed to clearly specify the proposed work.
 15. If the project has on-site water main work only then the profile requirement may be waived, unless there are substantial grade changes involved. Check with the City Engineer first.

16. Please do NOT include reproductions of the City's standard details in the plan sets. The City has a policy in place that the standard details that are currently on the City's webpage are the correct details to be used in the field. Supplying them in the plan sets can cause confusion and is also a waste of paper.

B. WATER, PLAN VIEW

1. Location, size, length and material type of all water mains.
2. Location, size and type of all water valves.
3. Location and size of all blow-offs, air relief valves, pressure reducing valves, tees, bends, caps, thrust blocks, service lines, fire hydrants and any other water facilities.
4. The finished ground elevation shall be provided at the location of all new fire hydrants.
5. 10-foot horizontal spacing shall be maintained between domestic water and sanitary sewer mainlines and service lines.

C. WATER, PROFILE VIEW

1. Location, depth, size and material type of all water mains.

D. SANITARY SEWER, PLAN VIEW

1. Location, size, length and material type of all sewer mains.
2. Location and number designation of all manholes, cleanouts and lift stations.
1. Location and size of all service lines and any other sewer facilities.
2. 10-foot horizontal spacing shall be maintained between domestic water and sanitary sewer mainlines and service lines.

E. SANITARY SEWER, PROFILE VIEW

1. Location, size, length, material type and slope of all sewer mains.
2. Location, size, number designation and rim elevation of all manholes, cleanouts and lift stations.
3. All pipe invert elevations at all manholes, cleanouts and lift stations.
4. Show all manhole penetrations in the profile view.

F. STORM DRAINAGE, PLAN VIEW

1. Location, size, length and material type of all storm drainage mains.
2. Location and number designation of all manholes, inlets and catch basins.
3. Location and size of any other storm drainage facilities.

G. STORM DRAINAGE, PROFILE VIEW

1. Location, size, length, material type and slope of all storm drainage mains.
2. Location, size, number designation, rim elevation and grate elevation of all manholes, inlets and catch basins.
3. All storm manholes with grated lids shall have an 18-inch sump in the bottom of them.

H. STREETS, PLAN VIEW

1. Contours of the existing, native ground shall be shown.
2. Survey stations along the centerline of road.
3. Bearing and distance of all straight portions of the road centerline.
4. Radius, length and central angle of all centerline curves and curb line curves.
5. Survey monuments along the road centerline at all ends of curves, intersection points, angle points and center of cul-de-sacs.
6. Centerline road station and top of curb or flowline (or edge of pavement) elevations at all ends of curves, angle points and changes of slope.
7. Flowline slopes of all proposed curb and gutter. Curb returns shall have a minimum of 3 elevations supplied.
8. Design elevations for pedestrian ramps shall be shown. See guidelines below for specifics.

I. STREETS, PROFILE VIEW

1. Existing, native ground elevations at centerline of road shall be shown.
2. Location and slope at centerline of proposed road.
3. Location, length and data for all vertical curves.
4. Centerline elevation at all ends of curves, intersection points, angle points and changes of slope.
5. Crosswalks between pedestrian ramps shall be designed to City standard details and A.D.A. guidelines, and shall have cross-slopes less than 2%. The road profile shall be designed to accommodate this. See specifics below.

J. IRRIGATION, PLAN VIEW

1. Location, size and material type of all irrigation facilities located within the limits of the proposed work.
2. City-owned irrigation systems require the inclusion of a separate irrigation plan sheet along with the full plan submittal.

K. IRRIGATION, PROFILE VIEW

1. Location, size, depth and material type of all irrigation facilities located within the limits of the proposed work.

L. STREET LIGHTING, PLAN VIEW

1. Location of all street lights, junction boxes, disconnect boxes and underground lines.
2. All street lighting, wire sizes, conduit sizes, pole specifications, details and other information required by the City Electrical Department shall be shown on a separate street lighting sheet. As-built information shall include the exact model of light installed.

M. TELEPHONE, POWER, CABLE TELEVISION AND NATURAL GAS, PLAN VIEW

1. Location of all transformers, vaults, boxes, underground lines, overhead lines and any other existing or proposed facilities.

SECTION 3 - DESIGN GUIDELINES

The following guidelines shall be used for the planning and design of all public infrastructure projects. Some of the items listed in this section may need to be adapted to address specific circumstances for each project.

A. DOMESTIC WATER

1. Minimum ten foot wide public utility easements are required for all public utilities not located within a dedicated public right-of-way.
2. Recorded exclusive easements shall be provided prior to final acceptance of the project.
3. Water service lines shall not be located within driveways or driveway transitions.
4. Domestic water and non-potable irrigation services should be extended to opposite lot corners in new construction wherever possible. Where it is impossible to install them in that manner, 10-feet of separation needs to be supplied between the service points (meter boxes). Typically the irrigation service is installed behind the domestic water meter box. 5-feet of separation needs to be supplied between the underground service lines where they run parallel. They may not be installed in the same ditch.
5. Longer water services (longer than 50-feet) shall be upsized to 2" to reduce pressure loss due to friction. Long service lines shall have no couplings, and shall be a continuous piece of pipe.
6. All water service lines for 3/4 or 1-inch meters shall be 1-inch in diameter. All service lines for 1 1/2-inch and 2-inch meters shall be 2-inches in diameter.
7. Service taps on PVC mains shall be 18-inches apart and staggered either side of the main. If they need to be on the same side of the main then they need to be 36-inches apart.
8. Live water line taps or cut-ins to existing water lines shall be performed by City crews. The contractor shall supply all materials, excavation and traffic control but the connection to existing City water lines shall be completed by City crews at the developer's expense.
9. Water mains in minor streets shall be 8-inch diameter unless flow analysis or the City's Comprehensive Water Plan indicates that a larger pipe is required. Water mains in major streets shall be as indicated in the Comprehensive Water Plan or as determined by the City.
10. 8-inch water mains in residential streets may be class 150, AWWA C900 polyvinyl chloride pipe. Water mains larger than 8-inches, or mains that are outside of the roadway, or water mains in commercial and industrial areas shall be class 50 ductile iron pipe. If the native soil is exceptionally rocky the watermain shall be ductile iron instead of PVC.
11. The following options need to be noted on the construction plans when connecting to or extending an existing City domestic watermain;
 - A new 8-inch gate valve shall be installed at the point of connection to isolate the new, untested watermain from the existing City main. This is standard for new construction.
 - Or, the contractor shall provide a pressure test showing that the existing watermain stub can hold 150 psi for 2 hours and can therefore pass a standard pressure (and bacteriological) test. The contractor therefore takes responsibility for the existing watermain stub that he is connecting to.
 - Or, the new main shall be installed and pressure tested entirely separate from the existing water stub, and the City water crews will make the connection between new and existing after the watermain has been tested and accepted as public infrastructure. This will result in an additional fee.
12. All water mains shall be installed with a minimum of 4-feet of cover.

13. A minimum of 2 valves are required at a tee. A minimum of 3 valves are required at a cross.
14. Valves 8-inches and smaller shall be gate valves. Valves 10-inches and larger shall be butterfly valves.
15. Water lines that are stubbed for future extension shall have a valve at the tee or cross where the stub leaves the main line and the end of the stub shall have a fire hydrant or a blow-off assembly. In certain circumstances, a minimum of two sticks of pipe may need to be installed beyond the last valve. This is to facilitate connection in the future if the mainline cannot be shut down.
16. Combination air & vacuum valves (ARV) will be installed on new distribution mains when;
 - There are long watermain extensions of over 1000-feet with few or no service connections.
 - In areas with long steep slopes of 10% or greater.
 - Significant, localized high points with few or no service connections nearby.
 - At all pressure zone breaks (at closed valves or PRVs).

Air/Vacuum valves for all new mains 12" in diameter or greater and all transmission mains shall be evaluated by a professional engineer following AWWA M51 Guidelines.

17. The above-ground portion of any required ARVs shall be piped to the nearest lot corner.
18. Mainline blow-offs (and sanitary sewer cleanouts) shall be installed at least 20-feet from the curb & gutter line in cul-de-sacs so as to minimize their conflict with the concrete curb & gutter machine.
19. A minimum horizontal separation of ten-feet shall be maintained between water mains and sewer mains and service lines. Water mains should cross over the top of sewer mains with a minimum vertical separation of 18-inches. Any crossing with a vertical separation of less than 18" or any crossing in which the water main crosses below the sewer main shall be in accordance with Washington State Department of Ecology standards (sewer lines shall be constructed of water-class pipe, crossing pipes shall be centered so that the ends are equidistant from one another, intersections of pipes shall be encased in concrete, etc.). Pressurized sewer mains shall NOT cross over potable water mains in any case. If a minimum vertical separation of 12" cannot be maintained between mainline pipes, CDF or concrete shall be used as backfill in place of native soils or gravel.
20. Fire hydrants shall be located 2-feet behind the back of sidewalk to the face of equipment where the sidewalk is adjacent to the curb and 7-feet behind the back of curb where the sidewalk is not adjacent to the curb.
21. Fire hydrants shall be located at the ends of curb returns or at property lines between lots.
22. Fire hydrants shall not be located within driveways, driveway transitions or handicap ramps.
23. Fire hydrants shall be spaced at approximately 600-feet in residential areas. The final decision on hydrant locations will be made by the City fire inspector.
24. All fire hydrant runs shall be restrained ductile iron pipe with thrust blocks.
25. The finished grade around the base of the new hydrant shall be noted on the plans. Extensions are not allowed on new hydrant installations.
26. Hydrants installed outside of paved areas where there will not be maintained landscaping shall install a 4' X 4' concrete pad around the hydrant to prevent weeds from obscuring it.
27. All fire hydrants shall have the following minimum clearances:
 - 3 feet from any obstacle
 - 5 feet from poles, transformers, etc.
 - 5 feet from shrubs
 - 10 feet from trees

28. No bends are allowed in fire hydrant runs. If a bend can't be avoided, the fittings shall be "mega-lugged" and all-threaded.
29. Dead end fire hydrant runs that are 50-feet or longer shall be 8-inch diameter pipe, minimum.
30. Water mains that are installed beneath irrigation canals, railroad tracks, State highways, building structures, etc. shall be encased in a continuous welded steel casing and provided with casing spacers in accordance with City Standards & Details.
31. If a new utility line crosses under an existing asbestos cement water pipe, a section of the asbestos cement water pipe shall be replaced prior to the undermining. Replacement pipe shall be ductile iron in commercial areas and PVC in residential areas. This replacement shall be completed by the City at the developer's expense.
32. All water fixtures that need to be adjusted to grade that are outside of a paved area shall have a concrete collar around them in the following dimensions: 30" x 30" x 8" thick.
33. Watermains shall be extended to all adjacent properties, 10-feet past the end of pavement.
34. City standards state that watermains can only be deflected to 50% of the manufacturers recommendation. Bending the pipe is strictly prohibited.
35. The City of Richland has adopted new a new ordinance, RMC Chapter 18.13, regarding System Cross Connections. This chapter requires a premise isolation backflow assembly to be installed on the domestic water service of all new commercial/industrial buildings, and also of all buildings undergoing a tenant improvement, change of use, remodel, addition, etc. The correct device for this application is either a Double Check Valve Assembly (DCVA) or a Reduced Pressure Backflow Assembly (RPBA), which shall be installed outdoors, immediately downstream of the City's water meter. Check with Public Works Engineering to determine which assembly is required. Please note this on the plans, and indicate where the backflow device is to be installed. Because of the above-ground installation requirement for RPBA's, a method of freeze-protection is also required. It is required that this information also be included in the plan set.
Yearly test reports shall be provided to the City's Water Quality Inspector. The backflow device shall be on the state approved list, available through the Washington State Dept. of Health.
36. The City of Richland has recently adopted a new policy of allowing only one domestic water meter per multi-tenant commercial shell building (AKA "strip malls"). A separate irrigation meter is allowed however. Privately owned & maintained sub-meters can be installed downstream of the City domestic water meter if needed.
37. Please include the following City standards or requirements as notes on the irrigation sheet:
 - Non-potable irrigation mains installed within the right of way that are 4-inches or smaller shall be schedule 40 PVC, mains larger than 4-inches shall be constructed out of C900 PVC.
 - Irrigation valve boxes or lids within the roadway or public Right-of-Way need to be per City of Richland spec: "Rich 931" cast iron lid shall have "Irr" cast into top.
 - Approval from the Irrigation District with jurisdiction over the developing property is required prior to issuance of Right-of-Way permit.
38. City-owned irrigation systems require the inclusion of a separate irrigation plan sheet along with the full plan submittal. This separate, stand-alone irrigation sheet shall show the entire irr. system along with all valves, fixtures, services, drains, etc. This sheet shall also include all of the property lines, the lot numbers and the finished grade elevations.
39. City-owned irrigation systems shall reference all City standard irrigation details.

B. SANITARY SEWER

1. All sanitary sewer design shall be in accordance with the Washington State Department of Ecology publication "Criteria for Sewage Works Design" (the "Orange Book").

2. Sewer services shall extend 10-feet beyond the right-of-way and the pipe end shall be capped and marked. Services are typically located 10-feet from the water service toward the low side of the lot.
3. Sewer services to residential single family lots shall be 4", and commercial properties shall be 6", minimum.
4. Manholes are required at all angle points and all changes in slope. Curved sewer lines are not allowed.
5. The length of pipe between manholes shall not exceed a distance of 400-feet for pipes smaller than 12-inches, and shall not exceed a distance of 600-feet for pipes 12-inches and larger.
6. A cleanout is allowed at the end of a sewer main in place of a manhole if the length of the sewer line from the last manhole does not exceed 150-feet.
7. All sewers shall be designed and constructed to give velocities, when flowing full, of not less than 2.0 fps. Where velocities greater than 15 fps are expected, special provisions shall be made to protect against internal erosion or displacement. Minimum sewer slopes are as follows:

| | | | |
|-----------|-------|-----------|-------|
| 6" pipe: | 1.00% | 18" pipe: | 0.12% |
| 8" pipe: | 0.40% | 21" pipe: | 0.10% |
| 10" pipe: | 0.28% | 24" pipe: | 0.08% |
| 12" pipe: | 0.22% | 27" pipe: | 0.07% |
| 14" pipe: | 0.17% | 30" pipe: | 0.06% |
| 15" pipe: | 0.15% | 36" pipe: | 0.05% |
| 16" pipe: | 0.14% | | |

7. Sewer mains should not exceed a slope of 5% if possible. If sewer slopes in excess of 10% are required then the use of energy dissipaters and pipe restraints shall be investigated. Sewers on a 20-percent or greater shall be anchored securely with concrete anchors. Suggested minimum anchorage spacing is as follows:
 - Not over 36-feet center-to-center on grades of 20 to 35-percent.
 - Not over 24-feet center-to-center on grades of 35 to 50-percent
 - Not over 16-feet center-to-center on grades of 50-percent or more
8. Sewer mains should be installed with a minimum of 4-feet of cover. If a sewer main must have less than 4-feet of cover then the need for structural protection shall be investigated.
9. Sewer mains over 15-feet deep shall be constructed out of SDR26 PVC (including all fittings). C-900 PVC and ductile iron can be used, but SDR26 PVC is preferable as the fixtures and joints are more conducive for use as sewer main material. The entire main from manhole to manhole shall be the same material. Private sewer service lines over 15-feet deep shall also be constructed of the same material, then transition to regular sewer piping material (SDR35) above 15-feet.
10. Deep sewer mains that terminate at a manhole (or pipe extensions out of "deep" manholes), shall have long stubs installed out of them to provide for future development. This is a safety matter, as exposing only one side of a deep manhole can result in collapse.
11. A minimum horizontal separation of ten-feet shall be maintained between water mains and sewer mains and service lines. Water mains should cross over the top of sewer mains with a minimum vertical separation of 18-inches. Any crossing with a vertical separation of less than 18" or any crossing in which the water main crosses below the sewer main shall be in accordance with Washington State Department of Ecology standards (sewer lines shall be constructed of water-class pipe, crossing pipes shall be centered so that the ends are equidistant from one another, intersections of pipes shall be encased in concrete, etc.). Pressurized sewer mains shall NOT cross over potable water mains in any case. If a minimum vertical separation of 12" cannot be maintained between mainline pipes, CDF or concrete shall be used as backfill in place of native soils or gravel.

12. Sewer mains that are installed beneath irrigation canals, railroad tracks, State highways, building structures, etc. shall be encased in a continuous steel casing and provided with casing spacers in accordance with City Standards & Details.
13. Sewer mains that are stubbed for future extension shall have a manhole or standard cleanout at the end of the stub. Capped sewer mainlines are not allowed.
14. Sanitary sewer cleanouts (and domestic watermain blow-offs) shall be installed at least 20-feet from the curb & gutter line in cul-de-sacs so as to minimize their conflict with the concrete curb & gutter machine.
15. Manholes or cleanouts outside of paved areas shall have a concrete collar around them in the following dimensions: 30" x 30" x 8" thick.
16. Sewer mains shall be extended to all adjacent properties, 10-feet past the end of pavement. The sewer main may need to be extended further if it is deep, and/or if the native soils are prone to sloughing or caving. This is needed to keep from undermining the roadway when the main is extended in the future.

C. STORM DRAINAGE COLLECTION SYSTEMS

1. All submittals shall contain an erosion and sedimentation control plan (ESC) indicating how existing downstream storm systems and properties will be protected from storm runoff.
2. The applicant's project may require coverage under the Washington State General NPDES Permit for Construction projects. The Developer shall be responsible for compliance with the State stormwater permit conditions. The City has adopted revised standards affecting the construction of new stormwater facilities in order to comply with conditions of its NPDES General Stormwater Permit program. This project, and each phase thereof, shall comply with the requirements of the City's stormwater program in place at the time each phase is engineered.
3. All public storm drainage systems shall be designed following the core elements defined in the latest edition of the Stormwater Management Manual for Eastern Washington. The Hydrologic Analysis and Design shall be completed based on the following criteria: Washington, Region 2, Benton County; SCS Type 1A – 24 Hour storm for storm volume with a 25-year return period. The applicant's design shall provide runoff protection to downstream property owners.
4. The flow-rate of the public storm drainage system shall be designed using the 2-Year, 3-Hour short duration Eastern Washington storm for pipe and inlet sizing using SCS or Santa Barbara method; no modifying or adding time of concentration; no surcharging of pipes or structures allowed. Calculations shall be stamped by a registered professional engineer and shall include a profile of the system showing the hydraulic grade line. The calculations should include a 50-foot wide strip behind each right of way line to represent drainage from private property into the City system. Of that area, 50% shall be considered pervious and 50% impervious. Calculations shall include a profile for the design showing the hydraulic grade line for the system. Passing the storm downhill to an existing system will require a downstream storm system capable of accepting the water without being overwhelmed.
5. For privately-owned & maintained commercial sites the on-site storm drainage system shall be designed following the core elements defined in the latest edition of the Stormwater Management Manual for Eastern Washington. The Hydrologic Analysis and Design shall be completed based on the following criteria: Washington, Region 2, Benton County; SCS Type 1A – 24 Hour storm for storm volume with a 25-year return period. Calculations shall be stamped by a registered professional Civil Engineer. Prior to discharging any storm drainage waters from paved surfaces into drainage ditches, groundwater or a public system, an oil/water separator must be installed. The applicant's design shall provide runoff protection to downstream property owners.
6. All construction projects that don't meet the exemption requirements outlined in Richland Municipal Code, Section 16.06 shall comply with the requirements of the Washington State Department of Ecology issued Eastern Washington NPDES Phase II Municipal Stormwater Permit. All construction activities subject to this title shall be required to comply with the standards and requirements set forth

in the Stormwater Management Manual for Eastern Washington (SWMMEW) and prepare a Stormwater Site Plan. In addition a Stormwater Pollution Prevention Plan (SWPPP) or submission of a completed erosivity waiver certification is required at the time of plan submittal.

7. For commercial sites the proposed storm drainage and grading of all areas within the proposed development shall be shown on the plans (most grading and drainage plans must be prepared by a licensed civil engineer). If the site contains at least 1,000 sq.ft. of new impervious surfaces, and/or contains 30% or more impervious surfaces, storm drainage calculations from a licensed civil engineer are required. Stormwater shall be kept on-site (on the developing property that generated it). Stormwater shall not be flowed onto adjacent properties, or to the public Right-of-Way, without first obtaining written permission.
8. If any existing storm drainage or ground water seepage empties onto the proposed site, said storm drainage shall be considered an existing condition, and it shall be the responsibility of the property developer to design a system to contain or treat and release the off-site storm drainage.
9. If there are any natural drainage ways across the proposed pre-plat, the engineered construction plans shall address it in accordance with Richland Municipal code 24.16.170 ("Easements-watercourses").
10. The City may require that the public storm drainage system be extended to the adjacent, undeveloped property, 10-feet past the end of pavement.
11. All public storm drainage pipes or culverts shall be 12-inches diameter or larger.
12. Pipes shall have a minimum slope of 0.5% and a minimum velocity of 3-feet per second. Pipes shall be sized so that they do not surcharge under design storm conditions.
13. Reference the most current City of Richland Materials List for acceptable materials.
14. Storm mains shall be constructed out of SDR35 PVC.
15. Manholes are required at all angle points and all changes in slope. Curved or deflected storm drainage lines are not allowed. The length of pipe between manholes shall not exceed a distance of 400-feet for 12" mains, and shall not exceed 600-feet for mains larger than 12".
16. All storm manholes with solid lids shall have a channeled base and all catch basin manholes shall have a "sump" in the bottom of them in accordance with the approved standard details.
17. The need for storm drain manholes to be 48-inches instead of a 24-inch barrel is a judgment call based on the following criteria:
 - Are there 2 or more catch basins upstream of the fixture in question?
 - Is the depth to invert 3-feet or deeper?
 - Is the number of laterals penetrating the barrel more than 2?
 - If the angle of the laterals where they enter the fixture are close together, then the structural integrity of the catch basin could be compromised, therefore a 48" manhole may be needed.
18. Catch basins and inlets shall be spaced at appropriate locations to catch all of the storm water within the contributing area. The spacing shall be based on inlet capacity and curb line grade and shall not exceed 500-feet between inlet structures. At all low points & sag curves two times the required inlet capacity shall be provided. Curb-line spread of the storm water shall not pond into the travelled way. Curb inlet structures or additional catch basins will be considered for use on curb line profiles exceeding 10% to improve inlet capacity.
19. Storm water flow shall be kept in the gutter, and shall not be allowed to flow across intersections (i.e.; "valley gutters"). Catch basins shall be installed at appropriate locations so as to prevent this. Catch basin "bubbler" type installations are not allowed.

20. Catch basins and inlets shall be located at the ends of curb returns or at property lines between lots. Catch basins and inlets shall not be located within driveways, driveway transitions or pedestrian ramps.
21. In locations where deviations are allowed from the standard crowned street, additional structures will be required so that surface stormwater flow does not transition from one side of the street to the other.
22. A "spill control" separator is required prior to discharging any storm drainage waters from paved surfaces into drainage ditches, ground water or a public drainage collection system. These structures are not required if the stormwater is sheet-flowed into a grassy swale or pond.
23. If the City storm pond slopes are greater than 25%, then a fence will be required around the perimeter of the pond with a minimum 12-foot wide gate for maintenance vehicles. A maintenance road to the bottom of the pond from the City Right of Way will also be needed. The city's maintenance of the pond in the future will consist of trimming weeds to keep them below 6-inches and maintaining the pond for functionality. If the developer wishes for the pond to be landscaped and visually appealing, then the developer or homeowners association should be considered for maintenance responsibilities. This will require an irrigation meter and sprinkler system (and a power source), and responsibility for mowing grass (see section below pertaining to basins).
24. For commercial projects; the designing engineer shall provide both the total square footage of the entire commercial property under review, and the total square footage of all impervious surfaces, including but not limited to; the proposed building, any concrete or asphalt paving, sidewalk, and roof surface, etc. (after addition is complete). Please provide this information in a table form on the cover sheet, or on the site plan sheet. This information is required of all new commercial development (or of any structure undergoing modification or addition).

D. STORMWATER RETENTION AND DETENTION BASINS / FLOW CONTROL DESIGN

1. Stormwater off of City Right-of-Ways is typically collected into a central collection basin (storm pond). Drywells are only allowed in limited applications, and are not normally allowed except in extreme circumstances where a central collection basin will not function.
2. All Best Management Practices used for stormwater treatment or flow control shall meet the requirements of the latest edition of the Stormwater Management Manual for Eastern Washington except for where criteria are amended by these guidelines.
3. A Spill Control Separator is required prior to discharging stormwater into landscaped ponds (infiltration, evaporation, detention, etc.) This structure is in addition to any best management practice required for runoff treatment or flow control per the Stormwater Management Manual for Eastern Washington. This structure shall not be used as a surface inlet.
4. Surface water from a pollution-generating source shall not be collected directly into a subsurface infiltration BMP, but shall first be collected in an inlet, swale or some other means for separating the suspended solids.
5. Basins designed as infiltration facilities shall require a percolation test of the native soils that will comprise the base of the basin to confirm the effectiveness of the design. The test shall be supervised by a professional engineer or geologist using a minimum safety factor of 2. The pond should drain within 72 hours of a storm event.
6. Basins designed with the potential for water depth greater than 24-inches shall be either fenced or have side slopes no steeper than 4h:1v. Basins designed with maximum water depth less than 24-inches shall have side slopes no steeper than 4h:1v.
7. The designer should consider the long-term appearance of the basin, particularly if it will occupy a prominent location in the development. City maintenance practices involve only semi-annual vegetation trimming and silt and debris removal. Basins designed as detention and evaporative

basins need to include plantings that will tolerate or thrive on standing water in the basin. Planting designs for areas not routinely exposed to water shall include plants that will thrive without irrigation.

8. The developer shall be responsible for the plantings for a period of 12 months from the date of final acceptance. The developer shall replace all plantings that have failed to survive this period. The developer shall also perform trimmings required to control weeds in excess of 18-inches in height for the 12 months following the date of final acceptance.
9. Developers proposing landscape improvements that require frequent maintenance, such as turf grass, shrubs, and/or trees shall provide for ongoing maintenance of the improvements through a local association binding on its members. The maintenance responsibility shall be noted on the final plat.
10. Basins shall include a maintenance vehicular access road to the basin bottom sloped at no greater than a 12% slope. The road shall be a minimum of 12-feet wide and shall be surfaced with 2" of crushed top course rock, minimum.
11. Fenced basins shall include a gate with a minimum opening of 12-feet at the vehicular entrance point.
12. The developer of a basin shall be responsible for the maintenance of the basin for a period of 12 months from the date of final acceptance. At 11 months after the final acceptance date the developer shall clean the storm system and basin of all accumulated oil, sediment, and debris. After this maintenance is completed and inspected the City will begin routine maintenance of the system and basin.
13. The parcel occupied by a stormwater basin shall be identified as a separate parcel or tract on the final plat and shall be dedicated to the City stormwater utility.

E. STREETS

1. Dead end cul-de-sac streets shall not be longer than 400-feet.
2. Cul-de-sacs shall have a minimum right-of-way radius of 54-feet and a minimum curb radius of 45-feet.
3. Curb returns and the adjoining Right-of-Way at all minor intersections shall have a minimum radius of 25-feet. Curb returns at major intersections and the adjoining Right-of-Way should have minimum radius of 30-feet but should be evaluated on a case by case basis.
4. Horizontal curves on streets classified as "local streets" shall have a minimum centerline radius of 100-feet. All other street classifications shall meet AASHTO standards for a normal crown section on low speed urban streets.
5. The minimum centerline grade for all streets is 0.50%. Grades should be designed as flat as possible while matching as close as practical to the natural terrain. Per Municipal Code the maximum grade for minor ("local") streets is 10% (unless approved by the City Engineer). AASHTO requirements for sight-distance and grades shall apply to all other streets.
6. All streets shall have a minimum cross-slope from crown to gutter of 2%.
7. All vertical curves shall be designed to provide adequate stopping sight distance. A "K" value of 20 shall be used for local streets. The design speed for local streets is 25 mph.
8. Standard local residential streets shall have a 54-foot wide right-of-way and a 34-foot wide street from face of curb to face of curb. Private streets will be evaluated on a case-by-case basis.
9. Local streets shall be constructed with 2-inches of asphalt on 2-inches of crushed rock top course on 6-inches of crushed rock base course on compacted subgrade. Other street classifications shall be constructed in accordance with the appropriate standard detail. Reference the City standard details for the latest road section.

10. Sidewalks in areas zoned C-2, C-3 and "CBD" areas shall have a minimum width of 8-feet per Municipal code. Sidewalks in all other areas shall have a minimum width of 5-feet.
11. Residential driveways shall have a minimum width of 10-feet and a maximum width of 35-feet. Non-residential one-way driveways shall have a minimum width of 15-feet and a maximum width of 20-feet. Non-residential two-way driveways shall have a standard width of 40-feet but may be reduced to a minimum width of 35-feet if approved by the City, or may be increased to a maximum width of 60-feet if approved by the City Engineer.
12. The site obstruction triangle at street intersections and driveway access points shall be kept clear of obstructions between two feet and ten feet above the top of curb.
13. Concrete pedestrian ramps shall be installed at the time of plat or project construction. Truncated domes shall be installed at all sidewalk pedestrian ramps per the standard details.
14. Pedestrian ramps shall be designed to City standard details and A.D.A. guidelines. The "Type 2B" is the required ramp for new development (reference City standard detail ST5). Pedestrian ramps located adjacent to roadways with centerline grades steeper than 2% shall be individually designed. Detailed design information shall be provided by the designing engineer, including dimensions and elevations at top and bottom of landing at both the front and the back of sidewalk, as well as curb ramp transition lengths. No transition ramps shall be steeper than 7.5% with a maximum length of 15 feet as measured from the back of sidewalk, and no landing shall have any cross-slopes steeper than 1.5% in any direction.
When constructing a Type 1 ramp the Type 1B is the preferred ramp (reference City standard detail ST4). Pedestrian ramps located adjacent to roadways with centerline grades steeper than 2% shall be individually designed. Ped ramp designs shall show elevations at all four corners of the landing behind the ramp. Please ensure that there will be enough Right-of-Way at the corner to allow for at least 1-foot of ROW behind the ped. ramp landing.
15. Pedestrian ramps shall be provided at all sides of a tee intersection (4 at a tee intersection). Pedestrian ramps shall be kept separate from residential driveways and shall be installed directly across the street from one another.
16. Crosswalks between pedestrian ramps shall be designed to City standard details and A.D.A. guidelines and shall have cross-slopes less than 2%. The road profile shall be designed to accommodate this.
17. Street name signs and regulatory signs on minor streets will be located and installed by City crews at the developers expense, as will striping. Regulatory signs on major streets will be evaluated on a case by case basis.
18. If the City Fire Marshal requires a secondary emergency vehicle access, it shall be included in the construction plan set and be designed to the following standards:
 - A. 2-inches compacted gravel, minimum (temp. SEVA only).
 - B. 2% cross-slope, maximum.
 - C. 5% slope, maximum. Any access road steeper than 5% shall be paved or be approved by the Fire Marshal.
 - D. Be 20-feet in width.
 - E. Have radii that are accommodating with those needed for City Fire apparatus.

Secondary emergency vehicles accesses (SEVA's) shall be 20-feet wide, as noted. Longer secondary accesses can be built to 12-feet wide with the approval of the City of Richland Fire Marshal, however turn-outs are required at a spacing acceptable to the Fire Dept. Temporary SEVA's shall be constructed with 2-inches of compacted gravel, at a minimum. Permanent SEVA's shall be paved with 2-inches of asphalt over 4-inches of gravel, at a minimum.

F. SURVEYING

1. SURVEY MONUMENT DESTRUCTION

- A. No survey monument shall be removed or destroyed (*the physical disturbance or covering of a monument such that the survey point is no longer visible or readily accessible*) before a permit is obtained from the Department of Natural Resources (DNR). WAC 332-120-030(2) states "It shall be the responsibility of the governmental agency or others performing construction work or other activity (including road or street resurfacing projects) to adequately search the records and the physical area of the proposed construction work or other activity for the purpose of locating and referencing any known or existing survey monuments." (RCW 58.09.130).
- B. Any person, corporation, association, department, or subdivision of the state, county or municipality responsible for an activity that may cause a survey monument to be removed or destroyed shall be responsible for ensuring that the original survey point is perpetuated. (WAC 332-120-030(2)).
- C. Survey monuments are those monuments marking local control points, geodetic control points, and land boundary survey corners. (WAC 332-120-030(3)).

When a monument must be removed during an activity that might disturb or destroy it, a licensed Engineer or Land Surveyor must complete, sign, seal and file a permit with the DNR. If many monuments are in danger along a proposed construction route, one permit can be issued for the entire project with location and description details outlined for each monument. The permit will alert others that may encounter the construction or maintenance project and location information will be protected until a new monument is placed. In most cases, ***an agency official must be in responsible charge of protecting monuments during maintenance and construction activities within their jurisdiction.***

2. The survey benchmark used for the project needs to be noted. The benchmark shall be on City of Richland datum (NGVD '88).
3. All permanent survey monuments existing on the project site shall be protected. If any monuments are destroyed by the proposed construction, the applicant shall retain a professional land surveyor to replace the monuments and file a copy of the record survey with the City.

G. STREET LIGHTING

1. A street light design shall be supplied for each phase using the criteria for the new LED standards. A table shall be provided showing the roadway classifications within the project (arterial, neighborhood collector or local), the spacing for the lights, and the number of required lights. Please reference the Richland Lighting Standards Summary and the City of Richland Public Works Material Specification for Street Lighting.
2. Street lights shall be located 2-feet behind the back of sidewalk to the face of equipment where the sidewalk is adjacent to the curb and 6-feet behind the back of curb where the sidewalk is not adjacent to the curb.
3. Two street lights are required at each intersection.
4. Typical street light locations are at the outside of curves, the outside of tee intersections, always perpendicular to the curblines, and not "angled" over intersections.
5. Street lights shall be located at the ends of curb returns or at 2-feet off of the property corners between residential lots. Street lights shall not be located within driveways, driveway transitions or pedestrian ramps.
6. As-built record drawings shall indicate which exact model of light was installed.

7. Street lighting locations shall be approved by Public Works Engineering, and the lighting circuit design shall be in accordance with the City of Richland Electrical Engineering requirements.

SECTION 4 - TYPICAL GENERAL CONSTRUCTION NOTES

The following notes shall be used when they are applicable to the project. Additional notes shall be added by the design engineer or may be required by the City to address specific concerns for each project.

1. All materials and workmanship shall be in conformance with the latest revision of the City of Richland Standard Specifications and Details and the current edition of the State of Washington Standard Specifications for Road, Bridge, and Municipal Construction. Please confirm that you have the latest set of standard specs and details by visiting the City's web page.
2. Any work within the public right-of-way, utility easement, or involving the construction of public infrastructure will require the applicant to obtain a right-of-way permit prior to construction. A plan review and inspection fee in the amount equal to 5% of the construction costs of the work that will be accepted as public infrastructure or is within the Right-of-Way or easement will be collected at the time the permit is issued. A stamped, itemized Engineers estimate (Opinion of probable cost) shall be used to calculate the 5% fee.
3. Once the plans have been accepted by this Department, a pre-construction conference will be required prior to the start of any work within the public right-of-way or easement. Contact the Civil and Utility Engineering Division at 942-7500 or 942-7742 to schedule a pre-construction conference.
4. When the construction is substantially complete a paper set of "record drawings" shall be prepared by a licensed surveyor and include all changes and deviations. Please reference the Public Works document "RECORD DRAWING REQUIREMENTS & PROCEDURES" for a complete description of the record drawing process. After approval by the City of the paper copy, a mylar copy of the record drawings shall be submitted along with a CAD copy of them.
5. No work on this project shall commence until a City of Richland right-of-way construction permit has been issued.
6. All traffic control devices shall be in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways."
7. The contractor and all sub-contractors shall be licensed by the State of Washington and be bonded to do work in the public right-of-way. The contractor shall provide the City a certificate of insurance prior to issuance of the Right-Of-Way Construction Permit. The minimum coverages shall comply with the City's Insurance Requirements.
8. The contractor and all sub-contractors shall have a current City of Richland business license.
9. The contractor shall be responsible for any and all construction deficiencies for a period of one-year from the date of acceptance by the City of Richland.
10. The contractor shall be required to call 1-800-424-5555 or "811" a minimum of two working days prior to commencing any excavation activities to determine field locations of all underground utilities.
11. Any changes or modifications to the project plans shall first be approved by the City Engineer or his representative.
12. The locations of all existing underground utilities as shown on these plans are approximate only. The contractor shall determine the exact locations of all existing utilities before commencing work and agrees to be fully responsible for any and all damages which might be associated with the failure to exactly locate and preserve any and all underground utilities.
13. The face of curb shall be stamped at all utility crossings, main lines and service lines as follows:

| | | |
|----------------------|------------------|-------------------|
| "S" – Sanitary Sewer | "I" – Irrigation | "G" – Gas |
| "W" – Water | "C" – Conduits | "D" – Storm Drain |

14. All fire hydrants and guard posts shall be painted OSHA Safety Yellow, quickset enamel no. 3472 hydrant yellow as manufactured by Farwest Paint Manufacturing Company or approved equal.
15. Fire hydrants and street lights shall be installed at 2-feet behind the back of sidewalk to the face of equipment where the sidewalk is adjacent to the curb and 6-feet behind the back of curb where the sidewalk is not adjacent to the curb unless otherwise noted on the plans.
16. Any damaged or badly deteriorated concrete curb, gutter and sidewalk within public right of way shall be removed and replaced. This includes any curb damaged by construction equipment during the project.
17. 2-inches of crushed gravel shall be placed and compacted beneath all sidewalks prior to placement of concrete.
18. All storm drainage manholes with a grated lid shall be constructed with a "sump" in the bottom of them, in accordance with the standard details.
19. Irrigation valve boxes or lids within the roadway or public Right-of-Way need to be per City of Richland spec: "Rich 931" cast iron lid shall have "Irr" cast into top.
20. A minimum horizontal separation of ten-feet shall be maintained between water mains and sewer mains and service lines. Water mains should cross over the top of sewer mains with a minimum vertical separation of 18-inches. Any crossing with a vertical separation of less than 18" or any crossing in which the water main crosses below the sewer main shall be in accordance with Washington State Department of Ecology standards. Pressurized sewer mains shall NOT cross over potable water mains in any case. If a minimum vertical separation of 12" cannot be maintained between mainline pipes, CDF or concrete shall be used as backfill in place of native soils or gravel.
21. Residential sewer services shall be 4-inches in diameter and shall extend 10-feet beyond the right-of-way into the lot. The end shall be marked with a marker post installed in accordance with City standard details.
22. Residential water services shall be 1-inch in diameter and shall extend 1-foot beyond the back of sidewalk through the curb stop. The end shall be marked with a blue marker post installed in accordance with City standard details.
23. The contractor shall take any necessary means to keep from tracking mud and debris out onto the existing streets, and shall also keep mud and any other debris from his site from entering the existing public storm drainage system.
24. The contractor shall supply a dust control plan prior to starting work in accordance with RMC chapter 9.16.046, section J.
25. All disturbed areas shall be hydro-seeded at the completion of the project.
26. The contractor shall take care to prevent construction site runoff from the entering into the City's stormwater system, in accordance with RMC Chapter 16.05. Construction materials that may introduce sediment into the stormwater system may not be stockpiled in the street. Such materials may include but not be limited to: construction materials, soil, sand, gravels, etc.

CITY OF RICHLAND
STANDARD SPECIAL PROVISIONS

Updated April 2016

INTRODUCTION TO THE SPECIAL PROVISIONS

DIVISION 1

GENERAL REQUIREMENTS

Definitions ----- SP-2

Definitions (Richland) ----- SP-3

BID PROCEDURES AND CONDITIONS ----- SP-5

Prequalification of Bidders ----- SP-5

Plans and Specifications ----- SP-5

Proposal Forms ----- SP-5

Bid Deposit ----- SP-6

Delivery of Proposal ----- SP-6

Withdrawing, Revising, or Supplementing Proposal ----- SP-7

Irregular Proposals ----- SP-7

Disqualification of Bidders ----- SP-8

Pre Award Information ----- SP-11

AWARD AND EXECUTION OF CONTRACT ----- SP-11

Consideration of Bids ----- SP-11

Execution of Contract ----- SP-12

Contract Bond ----- SP-12

Judicial Review ----- SP-13

SCOPE OF WORK ----- SP-13

Intent of the Contract ----- SP-13

Coordination of Contract Documents, Plans, Special Provisions, Specifications, ----- SP-13

Pre-Bid Site Inspection ----- SP-13

CONTROL OF WORK ----- SP-14

Conformity With and Deviations from Plans and Stakes ----- SP-14

Removal of Defective and Unauthorized Work ----- SP-15

Final Inspection ----- SP-16

Final Acceptance ----- SP-17

Superintendents, Labor and Equipment of Contractor ----- SP-18

Cooperation With Other Contractors ----- SP-18

Method of Serving Notices ----- SP-18

Water and Power ----- SP-18

CONTROL OF MATERIAL ----- SP-19

Approval of Materials Prior to Use ----- SP-19

Acceptance of Materials ----- SP-19

LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC ----- SP-20

Laws to be Observed ----- SP-20

| | |
|---|--------------|
| State Sales Tax----- | SP-20 |
| Sanitation----- | SP-21 |
| Permits And Licenses----- | SP-21 |
| Protection and Restoration of Property----- | SP-22 |
| Utilities And Similar Facilities----- | SP-22 |
| Public Liability and Property Damage Insurance----- | SP-23 |
| Insurance----- | SP-23 |
| Indemnification / Hold Harmless----- | SP-26 |
| Public Convenience And Safety----- | SP-26 |
| Rights Of Way----- | SP-27 |
| PROSECUTION AND PROGRESS----- | SP-28 |
| Preliminary Matters----- | SP-28 |
| Subcontracting----- | SP-29 |
| Progress Schedule----- | SP-29 |
| Time For Completion----- | SP-30 |
| MEASUREMENT AND PAYMENT----- | SP-30 |
| Payments----- | SP-30 |
| TEMPORARY TRAFFIC CONTROL----- | SP-32 |
| Traffic Control Management----- | SP-32 |

**DIVISION 2
EARTHWORK**

| | |
|--|--------------|
| CLEARING, GRUBBING, AND ROADSIDE CLEANUP----- | SP-34 |
| Disposal of Usable Materials and Debris----- | SP-34 |
| REMOVAL OF STRUCTURES AND OBSTRUCTIONS----- | SP-34 |
| Construction Requirements----- | SP-34 |
| ROADWAY EXCAVATION AND EMBANKMENT----- | SP-35 |
| Construction Requirements----- | SP-35 |
| Measurement----- | SP-35 |
| Payment----- | SP-35 |
| WATERING----- | SP-36 |
| Construction Water Meter----- | SP-36 |
| Construction Requirements----- | SP-36 |

DIVISION 4

BASES

BALLAST AND CRUSHED SURFACING-----SP-37
Measurement-----SP-37
Payment-----SP-37

DIVISION 5

SURFACE TREATMENTS AND PAVEMENTS

HOT MIX ASPHALT-----SP-38
Materials-----SP-38
Construction Requirements-----SP-38
Measurement-----SP-40
Payment-----SP-40

DIVISION 6

STRUCTURES

Concrete Structures-----SP-41
Construction Requirements-----SP-41

DIVISION 7

**DRAINAGE STRUCTURES, STORM SEWERS, SANITARY
SEWERS, WATER MAINS, AND CONDUITS**

STORM SEWERS-----SP-42
Materials-----SP-42
Construction Requirements-----SP-42
Payments-----SP-42
MANHOLES, INLETS, CATCH BASINS AND DRYWELLS-----SP-42
Materials-----SP-42
Construction Requirements-----SP-43
Measurement-----SP-43
GENERAL PIPE INSTALLATION REQUIREMENTS-----SP-43
Materials-----SP-43
Construction Requirements-----SP-43
Measurement-----SP-45
Payment-----SP-45
WATER MAINS-----SP-46
Materials-----SP-46
Construction Requirements-----SP-46

| | |
|---------------------------------|-------|
| Measurement ----- | SP-50 |
| Payment ----- | SP-51 |
| VALVES FOR WATER MAINS----- | SP-51 |
| Materials ----- | SP-51 |
| Construction Requirements ----- | SP-51 |
| HYDRANTS----- | SP-52 |
| Construction Requirements ----- | SP-52 |
| SERVICE CONNECTIONS----- | SP-52 |
| Construction Requirements ----- | SP-52 |
| Payment ----- | SP-53 |
| SANITARY SEWERS ----- | SP-54 |
| Materials ----- | SP-54 |
| Construction Requirements ----- | SP-54 |
| Payment ----- | SP-55 |
| SIDE SEWERS----- | SP-56 |
| Construction Requirements ----- | SP-56 |
| SEWER CLEANOUTS ----- | SP-56 |
| Payment ----- | SP-56 |

DIVISION 8

MISCELLANEOUS CONSTRUCTION

| | |
|---|-------|
| EROSION CONTROL AND WATER POLLUTION CONTROL ----- | SP-57 |
| Construction Requirements ----- | SP-57 |
| ROADSIDE RESTORATION----- | SP-58 |
| Construction Requirements ----- | SP-58 |
| Payment ----- | SP-59 |
| CURBS, GUTTER, AND SPILLWAYS ----- | SP-59 |
| Construction Requirements ----- | SP-59 |
| CEMENT CONCRETE SIDEWALKS ----- | SP-60 |
| Construction Requirements ----- | SP-60 |
| TEMPORARY PAVEMENT MARKINGS ----- | SP-60 |
| Payments ----- | SP-60 |
| PERMANENT SIGNING ----- | SP-60 |
| Construction Requirements ----- | SP-60 |
| BOLLARDS ----- | SP-60 |

DIVISION 9
MATERIALS

| | |
|-----------------------------------|-------|
| AGGREGATES ----- | SP-62 |
| Gravel Backfill ----- | SP-62 |
| MASONRY UNITS ----- | SP-62 |
| Ladder Rungs ----- | SP-62 |
| WATER DISTRIBUTION MATERIALS----- | SP-62 |
| Pipe ----- | SP-62 |
| Fittings----- | SP-62 |
| Valves----- | SP-63 |

CITY OF RICHLAND, WASHINGTON

STANDARD SPECIAL PROVISIONS

The following Special Provisions are made a part of this contract and supersede any conflicting provisions of the **2016** Standard Specifications for Road, Bridge and Municipal Construction, and the foregoing Amendments to the Standard Specifications.

INTRODUCTION TO THE STANDARD SPECIAL PROVISIONS

(August 14, 2013 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction, 2016* edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by the Amendments to the Standard Specifications and these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The project-specific Special Provisions are not labeled as such. The GSPs are labeled under the headers of each GSP, with the effective date of the GSP and its source. For example:

- (March 8, 2013 APWA GSP)**
- (April 1, 2013 WSDOT GSP)**
- (May 1, 2013 Richland GSP)**

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA, current edition
- Richland Standard Plans
- Richland Material Lists
- City of Richland Standard Special Provisions

Contractor shall obtain copies of these publications, at Contractor's own expense.

**DIVISION 1
GENERAL REQUIREMENTS**

1-01 DEFINITIONS AND TERMS

1-01.3 Definitions

(January 4, 2016 APWA GSP)

Delete the heading **Completion Dates** and the three paragraphs that follow it, and replace them with the following:

Dates

Bid Opening Date

The date on which the Contracting Agency publicly opens and reads the Bids.

Award Date

The date of the formal decision of the Contracting Agency to accept the lowest responsible and responsive Bidder for the Work.

Contract Execution Date

The date the Contracting Agency officially binds the Agency to the Contract.

Notice to Proceed Date

The date stated in the Notice to Proceed on which the Contract time begins.

Substantial Completion Date

The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date

The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date

The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the Contract and required by law must be furnished by the Contractor before establishment of this date.

Final Acceptance Date

The date on which the Contracting Agency accepts the Work as complete.

Supplement this Section with the following:

All references in the Standard Specifications, Amendments, or WSDOT General Special Provisions, to the terms "Department of Transportation", "Washington State Transportation Commission", "Commission", "Secretary of Transportation", "Secretary", "Headquarters", and "State Treasurer" shall be revised to read "Contracting Agency".

All references to the terms "State" or "state" shall be revised to read "Contracting Agency" unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.

All references to "State Materials Laboratory" shall be revised to read "Contracting Agency designated location".

All references to “final contract voucher certification” shall be interpreted to mean the Contracting Agency form(s) by which final payment is authorized, and final completion and acceptance granted.

Additive

A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, which may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

Alternate

One of two or more units of work or groups of bid items, identified separately in the Bid Proposal, from which the Contracting Agency may make a choice between different methods or material of construction for performing the same work.

Business Day

A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

Contract Bond

The definition in the Standard Specifications for “Contract Bond” applies to whatever bond form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond.

Contract Documents

See definition for “Contract”.

Contract Time

The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

Notice of Award

The written notice from the Contracting Agency to the successful Bidder signifying the Contracting Agency’s acceptance of the Bid Proposal.

Notice to Proceed

The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

Traffic

Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

Supplement this Section with the following:
(November 10, 2009 Richland GSP)

Definitions (Richland)

The following terms have the meanings indicated which are applicable to both the singular and plural thereof:

Agreement

The written Agreement between the City and Contractor covering the Work to be performed; other parts of the Contract Manual are attached to and part of the Agreement.

Application for Payment

The form furnished by the Engineer which is to be used in requesting progress payments and an affidavit of Contractor that progress payments theretofore received because of the Work have been applied by Contractor to discharge in full all of Contractor's obligations reflected in prior Applications for Payment.

Bonds

Bid, Performance, Payment Bonds, and other instruments of security, furnished by the Contractor and his surety in accordance with the Contract Manual.

Change Order

A written order to the Contractor signed by the City authorizing an addition, deletion, or revision in the Work, or an adjustment in the Contract Price or the Contract Time issued after execution of the Agreement.

The City

The City of Richland, a public body, acting through its legally constituted officials, officers, or employees.

Contract Manual

The Agreement, Addenda, Instructions to Bidders, Contractor's Bid, Proposal, the Bonds, the Notice of Award, General Conditions, the Special Conditions, the Specifications, Drawings, City of Richland Standards (latest revision), and Modifications.

Contract Price

The total moneys payable to the Contractor under the Contract Manual, not including any applicable taxes.

Day

A calendar day of twenty-four (24) hours measured from midnight to the next midnight.

Drawings

The Drawings which show the character and scope of the Work to be performed and which have been prepared or approved by the City and are referred to in the Contract Manual.

Engineer

The City Engineer.

Field Order

A Field Order is a written direction of minor changes or alterations in the work given by the Engineer to avoid undue delay in project work. Field Orders and associated documentation will be used in the preparation of change orders.

Modification

(a) a written amendment to the Contract Manual signed by both parties; (b) a Change Order; (c) a written clarification or interpretation issued by the Engineer in accordance with Section 1-02.4 or (d) a written order for minor change or alteration in the Work issued by the Engineer pursuant to Section 1-04.4. A Modification may only be issued after execution of the Agreement.

Project

The entire construction to be performed as provided in the Contract Manual.

Resident Project Representative or Inspector

An authorized representative of the City, acting through the Engineer, who is assigned to the Project site or any part thereof.

Shop Drawings

All drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by the Contractor, a Subcontractor, manufacturer, supplier, or distributor which illustrate the equipment, material or some portion of the Work.

Substantial Completion

A project is considered Substantially Complete when the following items, as applicable, are complete and operational with un-obstructed access to all valves and structures: curb, gutter, sidewalk, HMA, storm drainage systems, water, sanitary sewer, street lights, traffic signals, landscaping, irrigation systems, communication conduits, electrical conduits, and other items as listed in the bid proposal.

Working Day

Calculated / defined by Section 1-08.5.

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders

1-02.1 Qualifications of Bidder

Delete this Section and replace it with the following:
(January 24, 2011 APWA GSP)

1-02.1 Qualifications of Bidder

Before award of a public works contract, a bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be awarded a public works project.

1-02.2 Plans and Specifications

Delete this section and replace it with the following:
(June 27, 2011 APWA GSP)

Information as to where Bid Documents can be obtained or reviewed can be found in the Call for Bids (Advertisement for Bids) for the work.

After award of the contract, plans and specifications will be issued to the Contractor at no cost as detailed below:

| To Prime Contractor | No. of Sets | Basis of Distribution |
|-------------------------------|--------------------|-------------------------------------|
| Reduced plans (11" x 17") | 5 | Furnished automatically upon award. |
| Contract Provisions | 2 | Furnished automatically upon award. |
| Large plans (e.g., 22" x 34") | 5 | Furnished only upon request. |

Additional plans and Contract Provisions may be obtained by the Contractor from the source stated in the Call for Bids, at the Contractor's own expense.

1-02.5 Proposal Forms

Delete this section and replace it with the following:
(June 27, 2011 APWA GSP)

The Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder's name, address, telephone number, and signature; the bidder's D/M/WBE commitment, if applicable; a State of Washington Contractor's Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

1-02.7 Bid Deposit (March 8, 2013 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

1. Contracting Agency-assigned number for the project;
2. Name of the project;
3. The Contracting Agency named as obligee;
4. The amount of the bid bond stated either as a dollar figure or as a percentage which represents five percent of the maximum bid amount that could be awarded;
5. Signature of the bidder's officer empowered to sign official statements. The signature of the person authorized to submit the bid should agree with the signature on the bond, and the title of the person must accompany the said signature;
6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

If so stated in the Contract Provisions, bidder must use the bond form included in the Contract Provisions.

If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.

1-02.9 Delivery of Proposal

Delete this section and replace it with the following:
(August 15, 2012 APWA GSP, Option A)

Each proposal shall be submitted in a sealed envelope, with the Project Name and Project Number as stated in the Call for Bids clearly marked on the outside of the envelope, or as otherwise required in the Bid Documents, to ensure proper handling and delivery.

If the project has FHWA funding and requires DBE Written Confirmation Documents or Good Faith Effort Documentation, then to be considered responsive, the Bidder shall submit with their Bid Proposal, written Confirmation Documentation from each DBE firm listed on the Bidder's completed DBE Utilization Certification, form 272-056A EF, as required by Section 1-02.6.

The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other than that specified in the Call for Bids.

Supplement this Section with the following:
(November 10, 2009 Richland GSP)

Bids must be submitted in sealed envelopes bearing on the outside, the name and address of the bidder, the name of the project, for which the bid is submitted, and the time and date of the bid opening. Bids are to be delivered to the City of Richland, Purchasing Division, City Shops Building 100, 2700 Duportail Street. If bid is forwarded by mail, the sealed envelope containing the bid and marked as directed above, must be enclosed in another envelope addressed to the City Shops Complex, Purchasing Department, 2700 Duportail Street, Building 100, Richland, Washington 99352.

1-02.10 Withdrawing, Revising, or Supplementing Proposal

Delete this section, and replace it with the following:
(July 23, 2015 APWA GSP)

After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and
2. The Contracting Agency receives the request before the time set for receipt of Bid Proposals, and
3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.

If the Bidder's request to withdraw, revise, or supplement its Bid Proposal is received before the time set for receipt of Bid Proposals, the Contracting Agency will return the unopened Proposal package to the Bidder. The Bidder must then submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Contracting Agency and returned unopened. Mailed, emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

1-02.13 Irregular Proposals

(January 4, 2016 APWA GSP)

Delete this section and replace it with the following:

1. A proposal will be considered irregular and will be rejected if:
 - a. The Bidder is not prequalified when so required;
 - b. The authorized proposal form furnished by the Contracting Agency is not used or is altered;
 - c. The completed proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
 - d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
 - e. A price per unit cannot be determined from the Bid Proposal;
 - f. The Proposal form is not properly executed;
 - g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;
 - h. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification, if applicable, as required in Section 1-02.6;
 - i. The Bidder fails to submit written confirmation from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with

- the bidders DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
 - j. The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;
 - k. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
 - l. More than one proposal is submitted for the same project from a Bidder under the same or different names.
2. A Proposal may be considered irregular and may be rejected if:
- a. The Proposal does not include a unit price for every Bid item;
 - b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
 - c. Receipt of Addenda is not acknowledged;
 - d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
 - e. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders

Delete this Section and replace it with the following:
(March 8, 2013 APWA GSP, Option B)

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or does not meet the following Supplemental Criteria:

1. Delinquent State Taxes

- A. Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.
- B. Documentation: The Bidder shall not be listed on the Washington State Department of Revenue's "Delinquent Taxpayer List" website: <http://dor.wa.gov/content/fileandpaytaxes/latefiling/dtlwest.aspx> , or if they are so listed, they must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency by the deadline listed below.

2. Federal Debarment

- A. Criterion: The Bidder shall not currently be debarred or suspended by the Federal government.
- B. Documentation: The Bidder shall not be listed as having an "active exclusion" on the U.S. government's "System for Award Management" database (www.sam.gov).

3. Subcontractor Responsibility

- A. Criterion: The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that

each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also “responsible” subcontractors as defined by RCW 39.06.020.

- B. Documentation: The Bidder, if and when required as detailed below, shall submit a copy of its standard subcontract form for review by the Contracting Agency, and a written description of its procedure for validating the responsibility of subcontractors with which it contracts.

4. Prevailing Wages

- A. Criterion: The Bidder shall not have a record of prevailing wage violations as determined by WA Labor & Industries in the five years prior to the bid submittal date, that demonstrates a pattern of failing to pay workers prevailing wages, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.
- B. Documentation: The Bidder, if and when required as detailed below, shall submit a list of all prevailing wage violations in the five years prior to the bid submittal date, along with an explanation of each violation and how it was resolved. The Contracting Agency will evaluate these explanations and the resolution of each complaint to determine whether the violation demonstrate a pattern of failing to pay its workers prevailing wages as required.

5. Claims Against Retainage and Bonds

- A. Criterion: The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the three years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.
- B. Documentation: The Bidder, if and when required as detailed below, shall submit a list of the public works projects completed in the three years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:
- Name of project
 - The owner and contact information for the owner;
 - A list of claims filed against the retainage and/or payment bond for any of the projects listed;
 - A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

6. Public Bidding Crime

- A. Criterion: The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the five years prior to the bid submittal date.
- B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

7. Termination for Cause / Termination for Default

- A. Criterion: The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.
- B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances. .

8. Lawsuits

- A. Criterion: The Bidder shall not have lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency
- B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit. The Contracting Agency shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet of terms of construction related contracts

As evidence that the Bidder meets the mandatory and supplemental responsibility criteria stated above, the apparent two lowest Bidders must submit to the Contracting Agency by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets all of the mandatory and supplemental criteria together with supporting documentation including but not limited to that detailed above (sufficient in the sole judgment of the Contracting Agency) demonstrating compliance with all mandatory and supplemental responsibility criteria. The Contracting Agency reserves the right to request such documentation from other Bidders as well, and to request further documentation as needed to assess Bidder responsibility. The Contracting Agency also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Contracting Agency may (but is not required to) consider mitigating factors in determining whether the Bidder complies with the requirements of the supplemental criteria.

The basis for evaluation of Bidder compliance with these mandatory and supplemental criteria shall include any documents or facts obtained by Contracting Agency (whether from the Bidder or third parties) including but not limited to: (i) financial, historical, or operational data from the Bidder; (ii) information obtained directly by the Contracting Agency from others for whom the Bidder has worked, or other public agencies or private enterprises; and (iii) any additional information obtained by the Contracting Agency which is believed to be relevant to the matter.

If the Contracting Agency determines the Bidder does not meet the bidder responsibility criteria above and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees

with this determination, it may appeal the determination within two (2) business days of the Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency's final determination.

Request to Change Supplemental Bidder Responsibility Criteria Prior To Bid: Bidders with concerns about the relevancy or restrictiveness of the Supplemental Bidder Responsibility Criteria may make or submit requests to the Contracting Agency to modify the criteria. Such requests shall be in writing, describe the nature of the concerns, and propose specific modifications to the criteria. Bidders shall submit such requests to the Contracting Agency no later than five (5) business days prior to the bid submittal deadline and address the request to the Project Engineer or such other person designated by the Contracting Agency in the Bid Documents.

1-02.15 Pre Award Information

Revise this section to read:

(August 14, 2013 APWA GSP)

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids

Revise the first paragraph to read:

(January 23, 2006 APWA GSP)

After opening and reading proposals, the Contracting Agency will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder's unit or lump sum price is less than the minimum specified amount, the Contracting Agency will unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Contracting Agency, will be used by the Contracting Agency for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

1-03.3 Execution of Contract

Revise this Section to read:

(October 1, 2005 APWA GSP)

Copies of the Contract Provisions, including the unsigned Form of Contract, will be available for signature by the successful bidder on the first business day following award. The number of copies to be executed by the Contractor will be determined by the Contracting Agency.

Within 10 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency nor shall any work begin within the project limits or within Contracting Agency-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of 10 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

1-03.4 Contract Bond

Delete the first paragraph and replace it with the following:

(July 23, 2015 APWA GSP)

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
 - a. Is registered with the Washington State Insurance Commissioner, and
 - b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
 - a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
 - b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of

the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

1-03.7 Judicial Review

Revise this section to read:

(July 23, 2015 APWA GSP)

Any decision made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.05 shall control venue and jurisdiction.

1-04 SCOPE OF WORK

1-04.1 Intent of the Contract

1-04.1(2) Bid Items Not Included in the Proposal

Replace this Section with the following:

(November 10, 2009 Richland GSP)

All labor, equipment and materials required for the manufacturing and installation of this project shall be incorporated into the bid items as provided in the bid proposal. Payment for general construction items that are not listed in the bid proposal are indicative of the fact that the items of work not listed are considered as incidental to the bid items listed in the proposal, even though the Standard Specifications may call for a separate measurement and payment. Unless the work to be performed is specifically called out in the proposal, measurement and payment for such work shall be included in other applicable items of the proposal.

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda

Revise the second paragraph to read:

(March 13, 2012 APWA GSP)

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

1. Addenda,
2. Proposal Form,
3. Special Provisions,
4. Contract Plans,
5. Amendments to the Standard Specifications,
6. Standard Specifications,
7. Contracting Agency's Standard Plans or Details (if any), and
8. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

1-04.3 Pre-Bid Site Inspection

Section 1-04.3 is added as follows:

(March 19, 2012 Richland GSP)

The Contractor is encouraged to inspect the project site prior to submitting a bid.

1-05 CONTROL OF WORK

1-05.4 Conformity With and Deviations from Plans and Stakes

Add the following four new sub-sections:

(December 1, 2015 Richland GSP)

1-05.4(1) Roadway and Utility Surveys

Construction surveying will be provided by the City on City funded Capital Improvement Project. The City will furnish to the Contractor one time only all principal lines, grades and measurements the Engineer, deems necessary for completion of the work per the design drawings. At a minimum, these shall consist of:

1. Slope stakes on 100 foot intervals, or alignment changes, or at grade breaks. If Global Positioning Satellite (GPS) Machine Controls are used to provide grade control, then slope stakes may be omitted at the discretion of the Contractor.
2. Sub-grade hub for center line shall be placed at 50 foot intervals on tangents and at alignment changes and on 25 foot intervals in curves. If GPS Machine controls are used to provide grade control, then roadbed and surfacing stakes may be omitted at the discretion of the Contractor.
3. Curb grade stakes shall be placed at 50 foot intervals on tangents and at alignment changes and on 25 foot intervals in curves. Curb returns will be staked with a radius point, PC, Mid-point and PT, and at catch basins and grade breaks. **Said stakes shall be in reference to Top back of Curb.**
4. Top of base course and top course hub with chasers will be placed at 50 foot intervals on tangents and at alignment changes and at 25 foot intervals on curves as needed, at the centerline of roads up to 36 feet in width. Quarter crown points **may be required** on wider road sections.
5. Hubs at offset points to establish line and grade for underground utilities shall be placed on 50 foot intervals on tangents and at alignment changes and at 25 intervals on curves as needed.

The following requirements must be met for all survey work:

1. A minimum of 48 hours notice must be given to the project inspector for scheduling all survey work.
2. The entire section of roadway must be smooth, compacted and within 0.15 +/- of design grade being staked.
3. The Contractor shall provide all necessary traffic control including a flagger or spotter if requested. The area to be surveyed shall also be free from Contractor equipment traffic.

1-05.4(2) Bridge and Structure Surveys

For all structural work such as bridges and retaining walls, the Contractor shall retain as a part of Contractor's organization an experienced team of surveyors.

The Contractor shall provide all surveys required to complete the structure, except when a Capital Improvement Project is administered by the City, the City will provide the following primary survey control:

1. Centerline or offsets to centerline of the structure.
2. Stations of abutments and pier centerlines.
3. A sufficient number of bench marks for levels to enable the Contractor to set grades at reasonably short distances.
4. Control points as shown in the Plans.

The Contractor shall establish all secondary survey controls, both horizontal and vertical, as necessary to assure proper placement of all project elements based on the primary control points provided by the Engineer. Survey work shall be within the following tolerances:

| | |
|---------------------------|---|
| Stationing | +/- 0.10 foot |
| Alignment | +/- 0.10 foot (between successive points) |
| Superstructure Elevations | +/- 0.05 foot (from plan elevations) |
| Substructure Elevations | +/- 0.05 foot (from plan elevations) |

During the progress of the work, the Contractor shall make available to the Engineer all field books including survey information, footing elevations, cross sections and quantities.

The Contractor shall be fully responsible for the close coordination of field locations and measurements with appropriate dimensions of structural members being fabricated.

1-05.4(3) Surveying Grade Staking Tolerances

The Contractor shall ensure a surveying accuracy within the following tolerances:

| | <u>Vertical</u> | <u>Horizontal</u> |
|--------------------|-----------------|-------------------|
| Slope Stakes | +/- 0.10' | +/- 0.10' |
| Subgrade Stakes | +/- 0.05' | +/- 0.10' |
| Base Course Stakes | +/- 0.05' | +/- 0.10' |
| Top Course Stakes | +/- 0.05' | +/- 0.10' |
| Curb Stakes | +/- 0.05' | +/- 0.10' |

1-05.4(4) Land Corner and Control Monuments

All existing land corner and survey control monuments shall be carefully preserved. Before disturbing any existing monuments, the Contractor shall request, through the Inspector, with no less than three (3) days notice that reference stakes be set beyond the limits of the work. The Contracting Agency shall set reference points only once and the Contractor shall take necessary care to preserve said reference stakes. The Contracting Agency will deduct from payments due the Contractor all costs to replace such stakes, marks and monuments carelessly or willfully damaged or destroyed by the Contractor's operation.

1-05.7 Removal of Defective and Unauthorized Work

Supplement this Section with the following:

(October 1, 2005 APWA GSP)

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer, or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Contracting Agency forces or by such other means as the Contracting Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or

to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

No adjustment in contract time or compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency's rights provided by this Section.

The rights exercised under the provisions of this Section shall not diminish the Contracting Agency's right to pursue any other avenue for additional remedy or damages with respect to the Contractor's failure to perform the work as required.

1-05.11 Final Inspection

Delete this Section and replace it with the following:

(October 1, 2005 APWA GSP)

1-05.11 Final Inspections and Operational Testing

1-05.11(1) Substantial Completion Date

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date. The Contractor's request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons therefore.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

1-05.11(2) Final Inspection and Physical Completion Date

When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.

The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting Agency, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the contract, but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

1-05.11(3) Operational Testing

It is the intent of the Contracting Agency to have at the Physical Completion Date a complete and operable system. Therefore when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer's guaranties or warranties furnished under the terms of the contract.

1-05.12 Final Acceptance

1-05.12(1) One-year Guarantee Period

Section 1-05.12(1) is added as follows:

(March 8, 2013 APWAGSP)

The Contractor shall return to the project and repair or replace all defects in workmanship and material discovered within one year after Final Acceptance of the Work. The Contractor shall start work to remedy any such defects within 7 calendar days of receiving Contracting Agency's written notice of a defect, and shall complete such work within the time stated in the Contracting Agency's notice. In case of an emergency, where damage may result from delay or where loss of services may result, such corrections may be made by the Contracting Agency's own forces or another contractor, in which case the cost of corrections shall be paid by the Contractor. In the event the Contractor does not accomplish corrections within the time specified, the work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

When corrections of defects are made, the Contractor shall then be responsible for correcting all defects in workmanship and materials in the corrected work for one year after acceptance of the corrections by Contracting Agency.

This guarantee is supplemental to and does not limit or affect the requirements that the Contractor's work comply with the requirements of the Contract or any other legal rights or remedies of the Contracting Agency.

1-05.12(2) Record Drawings

Section 1-05.12(2) is added as follows:

(November 10, 2009 Richland GSP)

The Contractor shall be responsible for maintaining accurate on-site "Record Drawings" during construction. Changes or deviations from the project drawings shall be noted and updated on a daily basis. Upon completion of construction, the Contractor shall submit his "Record Drawings" to the Engineer for incorporation into the final completed project drawings.

Costs for all labor, materials, tools and equipment necessary to provide record drawings shall be considered incidental to the project. Physical Completion will not be granted until the Record Drawings have been submitted to the Engineer.

1-05.13 Superintendents, Labor and Equipment of Contractor

Delete the sixth and seventh paragraphs of this section.

(August 14, 2013 APWA GSP)

1-05.14 Cooperation With Other Contractors

Supplement this Section with the following:

(November 10, 2009 Richland GSP)

No additional compensation will be given to the Contractor for any coordination or delays caused by other nearby construction projects.

1-05.15 Method of Serving Notices

Revise the second paragraph to read:

(March 25, 2009 APWA GSP)

All correspondence from the Contractor shall be directed to the Project Engineer. All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under the Contract, must be in paper format, hand delivered or sent via mail delivery service to the Project Engineer's office. Electronic copies such as e-mails or electronically delivered copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.

1-05.16 Water and Power

Section 1-05.16 is added as follows:

(October 1, 2005 APWA GSP)

The Contractor shall make necessary arrangements, and shall bear the costs for power and water necessary for the performance of the work, unless the contract includes power and water as a pay item.

Supplement this Section with the following:
(November 10, 2009 Richland GSP)

When a Capital Improvement Project is administered by the City, the City will provide a water source for dust control, compaction, placement of crushed surfacing, pipe line installation, flushing and testing, etc. at available fire hydrant locations, within the construction area only. The Contractor shall pay a \$750.00 meter deposit to be refunded at the end of the project if the meter is returned undamaged.

1-06 CONTROL OF MATERIAL

1-06.1 Approval of Materials Prior to Use

Revise the first paragraph to read:

(May 6, 2014 Richland GSP)

Prior to use, the Contractor shall notify the Engineer of all proposed materials. The Contractor shall use the City of Richland Materials List or the Request for Approval of Material (RAM) form. Materials included in the Qualified Products List (QPL) but not on the City's Material List will be taken under consideration by use of the RAM form.

The Contractor shall note all deviations from the governing specifications and/or drawings and shall reference the appropriate paragraph of the section or page of the drawing. If the reason for the deviation from the specifications is not readily apparent, a written explanation shall be included.

The Engineer's review of the Contractor's submittals shall not relieve the Contractor of the entire responsibility for the correctness of details and dimension. The Contractor shall assume all responsibility and risk for any misfits due to any errors in information submitted by the Contractor. Any fabrications or other work performed in advance of the receipt of approved submittals shall be entirely at the Contractor's risk and expense. The Contractor shall be responsible for the dimensions and the design of adequate connections and details.

1-06.2 Acceptance of Materials

1-06.2(2) Statistical Evaluation of Materials for Acceptance

This Section is deleted in its' entirety.

(November 10, 2009 Richland GSP)

1-06.6 Recycled Materials

(January 4, 2016 APWA GSP)

Delete this section, including its subsections, and replace it with the following:

The Contractor shall make their best effort to utilize recycled materials in the construction of the project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT form 350-075 Recycled Materials Reporting.

1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed

Supplement this Section with the following:
(October 1, 2005 APWA GSP)

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

1-07.2 State Taxes

Delete this section, including its sub-sections, in its entirety and replace it with the following:
(June 27, 2011 APWA GSP)

1-07.2 State Sales Tax

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

1-07.2(1) State Sales Tax — Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.

1-07.2(2) State Sales Tax — Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

1-07.4 Sanitation

1-07.4(2) Health Hazards

Supplement this Section with the following:
(November 10, 2009 Richland GSP)

The Contractor and all Subcontractors shall comply with WAC 296-809 for confined spaces and provide any required hazard protection for employees.

1-07.6 Permits And Licenses

Supplement this Section with the following:
(November 10, 2009 Richland GSP)

The Contractor shall obtain a City of Richland right-of-way permit for all work within this contract prior to the start of work. On Capital Improvement Projects administered by the City, the City will wave the permit fee.

The Richland City Council has passed ordinances requiring that a Contractor have a City Business License. In accordance with these ordinances, a City of Richland Business License is required prior to conducting business within the City limits.

1-07.16 Protection and Restoration of Property

Supplement this Section with the following:

(December 15, 2010 Richland GSP)

The Contractor shall notify the adjacent property owners of the construction activities prior to commencing work. Method of notification shall be submitted to the Engineer for approval. Additional notifications may be required as the work progresses.

1-07.17 Utilities and Similar Facilities

Supplement this Section with the following:

(April 2, 2007 WSDOT GSP)

Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification.

The following addresses and telephone numbers of utility companies known or suspected of having facilities within the project limits are supplied for the Contractor's convenience:

| | | |
|---------------------------------------|---------------|-----------------------|
| City of Richland – Water Department | Scott Siefken | (509) 531-7915 |
| City of Richland – Sewer / Storm Dept | Vern McGraw | (509) 942-7483 |
| City of Richland – Streets Department | Dave Pardini | (509) 942-7524 |
| City of Richland – Energy Services | Clint Whitney | (509) 531-9759 |
| Charter Communications | Bill Lutz | (509) 572-0537 |
| Frontier Communications NW | Gary Taylor | (509) 378-5172 |
| Cascade Natural Gas | Zach Smith | (509) 438-7836 |
| Call Before You Dig | | 1-800-424-5555 |

1-07.17(3) Underground Utility Crossings – Marked and Unmarked

Section 1-07.17(3) is added as follows:

(December 15, 2010 Richland GSP)

Utility crossings are common during pipe laying and boring construction and unexpected utility crossings are probable. The utilities identified on the plans were identified in accordance with available information.

Service lines are difficult to locate precisely. The Contractor shall use surface features and other evidence as well as locate marks in determining the approximate locations prior to excavation.

When excavating or boring in the vicinity of fiber optic cable, telephone lines, electrical power lines or gas lines, the Contractor shall exercise extreme caution to prevent damage to the utilities or danger to worker and/or nearby citizens. If such utilities are uncovered, the Contractor shall contact representatives of the owning utility to examine the facilities before they are backfilled.

During mainline installation the Contractor shall hand dig to expose existing utilities. For water line construction, the Contractor shall uncover all marked utilities a minimum of 100' ahead of water line placement. A new water main may require additional depth of bury, beyond the typical 48" minimum cover depth. For all other utility lines, the Contractor shall uncover all utilities between each mainline structure prior to placing pipe. Any utility conflicts identified shall be brought to the attention of the Engineer. During boring operations the

Contractor shall uncover utilities for depth verification as needed or identified by the Engineer.

Any underground utility line of any size with less than a 6" horizontal separation from another underground line shall be considered a single utility crossing up to 24".

Any underground utility line damaged by the Contractor shall be restored to its' original condition. Crossing above an existing underground utility shall not be considered a utility crossing. Irrigation lines under 2" in diameter shall not be considered a utility crossing.

If a utility is determined to be abandoned and the Engineer approves, the utility may be cut and removed for the crossing. All costs to cut, remove, and plug the abandoned line are the sole responsibility of the Contractor.

"Underground Utility Crossings – Marked and Unmarked" per each.

The unit contract price per each shall be full payment for furnishing all labor, materials, equipment and supervision necessary to identify, uncover, protect and restore, cut and plug, and cross an underground utility.

1-07.18 Public Liability and Property Damage Insurance

Delete this section in its entirety, and replace it with the following:

1-07.18 Insurance

(January 4, 2016 APWA GSP)

1-07.18(1) General Requirements

- A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.
- B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor's Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.
- C. If any insurance policy is written on a claims made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made, and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.
- D. The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting Agency shall be excess of the Contractor's insurance and shall not contribute with it.
- E. The Contractor shall provide the Contracting Agency and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.

- G. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency
- H. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.
- I. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

1-07.18(2) Additional Insured

All insurance policies, with the exception of Workers Compensation, and of Professional Liability and Builder's Risk (if required by this Contract) shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- the Contracting Agency and its officers, elected officials, employees, agents, and volunteers
- \$\$1\$\$
- \$\$2\$\$
- \$\$3\$\$

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

For Commercial General Liability insurance coverage, the required additional insured endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

1-07.18(3) Subcontractors

The Contractor shall cause each Subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by Subcontractors.

The Contractor shall ensure that all Subcontractors of every tier add all entities listed in 1-07.18(2) as additional insureds, and provide proof of such on the policies as required by that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency evidence of insurance and copies of the additional insured endorsements of each Subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
3. Any other amendatory endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least three years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:

| | |
|-------------|---|
| \$1,000,000 | Each Occurrence |
| \$2,000,000 | General Aggregate |
| \$2,000,000 | Products & Completed Operations Aggregate |
| \$1,000,000 | Personal & Advertising Injury each offence |
| \$1,000,000 | Stop Gap / Employers' Liability each accident |

1-07.18(5)B Automobile Liability

Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48 endorsements.

Such policy must provide the following minimum limit:

\$1,000,000 Combined single limit each accident

1-07.18(5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

1-07.18 Insurance

Supplement this section with the following:

(December 15, 2010 Richland GSP)

Indemnification / Hold Harmless

The Contractor shall defend, indemnify and hold the City, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or in connection with the performance of this Agreement, except for injuries and damages caused by the sole negligence of the City.

Should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Contractor and the City, its officers, officials, employees and, volunteers, the Contractor's liability hereunder shall be only to the extent of the Contractor's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Contractor's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this Section shall survive the expiration or termination of this Agreement.

1-07.23 Public Convenience And Safety

1-07.23(1) Construction Under Traffic

Supplement this Section with the following:

(May 6, 2014 Richland GSP)

6. Maintain existing sidewalk and path routes, keeping them open through the project limits by placing gravel or temporary ramps in sidewalk removal areas. No drop off greater than 1 inch will be allowed along the route with temporary ramps not to exceed a 12:1 slope.
7. Sidewalks, pathways, driveways, and ramps which have been removed shall be replaced to their final configuration within 14 calendar days.
8. Trenching for utilities within the right of way shall be restored as soon as possible. The trench shall be restored to be flush with adjacent road surface with a finished temporary surface containing a minimum of 2" of crushed surfacing top course. Trenches in a travel lane running with the direction of travel and all perpendicular road crossings that will not be restored with the final HMA patching within 48 hours shall be treated with a magnesium chloride soil stabilization product.

Supplement this Section with the following:

(January 2, 2012 WSDOT GSP)

Work Zone Clear Zone

The Work Zone Clear Zone (WZCZ) applies during working and nonworking hours. The WZCZ applies only to temporary roadside objects introduced by the Contractor's operations and does not apply to preexisting conditions or permanent Work. Those work operations that are actively in progress shall be in accordance with adopted and approved Traffic Control Plans, and other contract requirements.

During nonworking hours equipment or materials shall not be within the WZCZ unless they are protected by permanent guardrail or temporary concrete barrier. The use of temporary concrete barrier shall be permitted only if the Engineer approves the installation and location.

During actual hours of work, unless protected as described above, only materials absolutely necessary to construction shall be within the WZCZ and only construction vehicles absolutely necessary to construction shall be allowed within the WZCZ or allowed to stop or park on the shoulder of the roadway.

The Contractor's nonessential vehicles and employees private vehicles shall not be permitted to park within the WZCZ at any time unless protected as described above.

Deviation from the above requirements shall not occur unless the Contractor has requested the deviation in writing and the Engineer has provided written approval.

Minimum WZCZ distances are measured from the edge of traveled way and will be determined as follows:

| Regulatory Posted Speed | Distance From Traveled Way (Feet) |
|--------------------------------|--|
| 35 mph or less | 10 * |
| 40 mph | 15 |
| 45 to 55 mph | 20 |
| 60 mph or greater | 30 |

* or 2-feet beyond the outside edge of sidewalk

Minimum Work Zone Clear Zone Distance

1-07.24 Rights of Way

Delete this section and replace it with the following:

(July 23, 2015 APWA GSP)

Street Right of Way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor's construction activities shall be confined within these limits, unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that

the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

Each property owner shall be given 48 hours notice prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the Contracting Agency, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

1-08 PROSECUTION AND PROGRESS

Add the following new Section:

(May 25, 2006 APWA GSP)

1-08.0 Preliminary Matters

1-08.0(1) Preconstruction Conference

Section 1-08.0(1) is added as follows:

(October 10, 2008 APWA GSP)

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer and such other interested parties as may be invited.

The purpose of the preconstruction conference will be:

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
4. To establish normal working hours for the work;
5. To review safety standards and traffic control; and
6. To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit at the preconstruction conference the following:

1. A breakdown of all lump sum items;
2. A preliminary schedule of working drawing submittals; and
3. A list of material sources for approval if applicable.

1-08.0(2) Hours of Work

Section 1-08.0(2) is added as follows:

(December 8, 2014 APWA GSP)

Except in the case of emergency or unless otherwise approved by the Engineer, the normal working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m.

and 6:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires different than the normal working hours stated above, the request must be submitted in writing prior to the preconstruction conference, subject to the provisions below. The working hours for the Contract shall be established at or prior to the preconstruction conference.

All working hours and days are also subject to local permit and ordinance conditions (such as noise ordinances).

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than 48-hours prior to the day(s) the Contractor is requesting to change the hours.

If the Contracting Agency approves such a deviation, such approval may be subject to certain other conditions, which will be detailed in writing. For example:

- On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)
- Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.
- Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.
- If a 4-10 work schedule is requested and approved the non working day for the week will be charged as a working day.
- If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll

1-08.0(4) Submittals

Section 1-08.0(4) is added as follows:
(April 3, 2013 Richland GSP)

Contractor shall have three (3) hard copy sets and one (1) pdf of submittals for review and comment by the City.

1-08.1 Subcontracting

Delete the eighth paragraph and replace it with the following:
(July 23, 2015 APWA GSP)

On all projects funded with federal assistance the Contractor shall submit "Quarterly Report of Amounts Credited as DBE Participation" (form 422-102 EF) on a quarterly basis, in which DBE Work is accomplished, for every quarter in which the Contract is active or upon completion of the project, as appropriate. The quarterly reports are due on the 20th of April, July, October, and January for the four respective quarters.

1-08.3 Progress Schedule

1-08.3(1) General Requirements

Section 1-08.3(1) is supplemented as follows:

(October 16, 2013 Richland GSP)

Weekly Meeting

A weekly meeting between representatives of the City (inspector and/or engineer) and contractor (foreman, supervisor, and/or project manager) shall be held at the project site or in the Developmental Services Building at a pre-determined time. This meeting is to go over current project status, project schedule, and address problems that have arisen.

1-08.3(2)A Type A Progress Schedule

Revise this section to read:

(March 13, 2012 APWA GSP)

The Contractor shall submit 10 hard copies and one pdf of a Type A Progress Schedule no later than at the preconstruction conference, or some other mutually agreed upon submittal time. The schedule may be a critical path method (CPM) schedule, bar chart, or other standard schedule format. Regardless of which format used, the schedule shall identify the critical path. The Engineer will evaluate the Type A Progress Schedule and approve or return the schedule for corrections within 15 calendar days of receiving the submittal.

1-08.5 Time For Completion

Supplement this Section with the following:

(November 10, 2009 Richland GSP)

If the Contractor elects to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

The third sentence is supplemented with the following:

(October 16, 2013 Richland GSP)

Christmas Eve shall be counted as a non-working day on all projects. The third Monday of January shall count as a working day on non-federal aid projects.

Supplement the fifth paragraph with the following:

(November 10, 2009 Richland GSP)

Physical Completion will not be granted until the Record Drawings have been submitted to the Engineer.

Supplement the sixth paragraph to read:

(November 10, 2009 Richland GSP)

- e. Property owner releases per Section 1-07.24

1-09 MEASUREMENT AND PAYMENT

1-09.9 Payments

Delete the first four paragraphs and replace them with the following:

(March 13, 2012 APWA GSP)

The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work

performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payments. The progress estimates are subject to change at any time prior to the calculation of the final payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
2. The amount of progress payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

1-09.9 Payments

Supplement paragraph 3 with the following:
(December 15, 2010 Richland GSP)

Progress payments will be made on a monthly basis. The City is able to make payments during any week of the month; payment may be made at any time during the month convenient to the Contractor and acceptable to the City. The cut-off date for progress payments will be decided at the pre-construction conference. Progress payments will be made based on Contractor submitted and Engineer verified pay requests. Pay requests shall include the quantities completed for each bid item on a form approved by the Engineer.

1-09.11(3) Time Limitation and Jurisdiction

Revise this section to read:

(July 23, 2015 APWA GSP)

For the convenience of the parties to the Contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that any such claims or causes of action shall be brought only in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.05 shall control venue and jurisdiction. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to any records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13(3)A Administration of Arbitration

Revise the third paragraph to read:

(July 23, 2015 APWA GSP)

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.05 shall control venue and jurisdiction of the Superior Court. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

1-10 TEMPORARY TRAFFIC CONTROL

1-10.2 Traffic Control Management

1-10.2(1) General

Section 1-10.2(1) is supplemented with the following:

(December 1, 2008 WSDOT GSP)

Only training with WSDOT TCS card and WSDOT training curriculum is recognized in the State of Washington. The Traffic Control Supervisor shall be certified by one of the following:

The Northwest Laborers-Employers Training Trust
27055 Ohio Ave.
Kingston, WA 98346
(360) 297-3035

Evergreen Safety Council
401 Pontius Ave. N.
Seattle, WA 98109
1-800-521-0778 or
(206) 382-4090

The American Traffic Safety Services Association
15 Riverside Parkway, Suite 100
Fredericksburg, Virginia 22406-1022

1-10.2(2) Traffic Control Plans

Section 1-10.2(2) is supplemented with the following:
(November 30, 2015 Richland GSP)

A traffic control plan shall be required for any lane closure on an arterial or collector street or for any permanent signing changes within the City of Richland. A TCP, when required, shall be submitted for review no less than three days prior to the closure/work taking place. It may be hand or CAD drawn on letter size or larger paper and should clearly show the following items:

1. **The name of the project.** For example: South 212th Street grocery store; PSE service connection; etc.
2. **The reason for working within the public right-of-way.** For example: water main repair; sanitary sewer extension; street improvement; natural gas service connection; telecommunications cable installation; etc.
3. **The work area location, including the placement of protecting vehicles, pavement cuts, etc.**
4. **All streets and cross-streets (with streets labeled) in the traffic control zone and within 300 feet in all directions from the outer edge of the traffic control zone.**
5. **All driveways, alleys and access tracts affected within the traffic control zone.**
6. **The dimensions of the work zone (in feet), where the work zone will be in relation to the traffic lanes, and show sidewalks affected by your work zone.**
7. **Show travel lanes, shoulders, if present (both paved and unpaved width) and pedestrian travel path (shoulder or sidewalk).** Show how travel paths will be provided for pedestrians as well as for vehicles.
8. **A vicinity map with a north arrow.**
9. **The distance between all traffic control signs, and all other traffic control devices, and the lengths of all transition tapers in feet.** *The use of tables or equations in lieu of providing specific distances is not acceptable.*
10. **The location of the Flagger in relation to the installed traffic control signs and to other traffic control devices.**
11. **The name, 24-hour telephone number, certification number, and e-mail address of the Owner/Contractor's Traffic Control Supervisor/Responsible person for the traffic control set-up, operation and tear down.**
12. **The name, telephone number and e-mail address of the person who prepared the TCP.**
13. **Any permanent signs which need to be removed and what signing will be put up in its place.**

Once approved, the TCP must be on-site for the duration that the lane closure or traffic control is in place.

**DIVISION 2
EARTHWORK**

2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

2-01.2 Disposal of Usable Materials and Debris

Section 2-01.2 is supplemented with the following:
(November 10, 2009 Richland GSP)

Disposal of burnable and non-burnable materials on private property will not be allowed without the written permission of the property owner.

2-01.2(1) Disposal Method No. 1 – Open Burning

Section 2-01.2(1) is supplemented with the following:
(November 10, 2009 Richland GSP)

All vegetation not retained for replanting or other uses, and all burnable litter within the clearing area, may be burned in an area approved by the Engineer and the ashes buried or disposed of at an approved waste site. Contractor shall obtain and comply with the requirements of burning permits including conditions which may be required by the Benton Franklin Air Pollution Control Board.

2-01.2(2) Disposal Method No. 2 – Waste Site

Section 2-01.2(2) is supplemented with the following:
(November 10, 2009 Richland GSP)

It shall be the Contractor's responsibility to locate approved waste sites for the disposal of all materials designated to be waste. The Contractor shall provide written approval from the property owner for private waste sites. All expenses incurred in securing both public and private waste sites will be the responsibility of the Contractor and considered incidental to the contract prices. The Contractor will be held liable for any and all damages resulting from the disposal of waste materials on privately owned waste sites. The Contractor may dispose of waste materials at the City of Richland Landfill located at the intersection of Grosscup Road and State Highway 240.

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.3 Construction Requirements

Section 2-02.3 is supplemented with the following:
(February 17, 1998 WSDOT GSP)

Removal of Obstructions

The following items shall be removed, disposed of or reset as directed by the Engineer in accordance with the requirements of Section 2-02 of the Standard Specifications:

Sign Posts and Foundations
Curbing
Bollards

All other items encountered, which are not covered by Section 2-01 of the Standard Specification (Clearing and Grubbing) shall be considered incidental to the bid item "Removal of Structures and Obstructions".

Section 2-02.3 is supplemented with the following:

(November 10, 2009 Richland GSP)

Written permission shall be provided to The City of Richland from property owners of any waste site prior to its use.

2-03 ROADWAY EXCAVATION AND EMBANKMENT

2-03.3 Construction Requirements

Section 2-03.3 is supplemented with the following:

(November 10, 2009 Richland GSP)

Sawcutting

Contractor shall sawcut existing asphalt and concrete as detailed in the plans. Sawcutting shall produce a straight and vertical cut line to the full depth of the existing surface.

2-03.3(14) Embankment Construction

2-03.3(14)C Compacting Earth Embankments

Section 2-03.3(14)C is supplemented with the following:

(November 10, 2009 Richland GSP)

Compacting embankments and excavations shall be by Method "C" as specified under Section 2-03.3(14)C of the Standard Specifications.

2-03.4 Measurement

Section 2-03.4 is supplemented with the following:

(March 13, 1995 WSDOT GSP)

Only one determination of the original ground elevation will be made on this project. Measurement for roadway excavation and embankment will be based on the original ground elevations recorded previous to the award of this contract. Control stakes will be set during construction to provide the Contractor with all essential information for the construction of excavation and embankments.

If discrepancies are discovered in the ground elevations which will materially affect the quantities of earthwork, the original computations of earthwork quantities will be adjusted accordingly.

Earthwork quantities will be computed, either manually or by means of electronic data processing equipment, by use of the average end area method or by the finite element analysis method utilizing digital terrain modeling techniques.

Copies of the ground cross-section notes will be available for the bidder's inspection, before the opening of bids, at the Project Engineer's office and at the Region office.

Upon award of the contract, copies of the original ground cross-sections will be furnished to the successful bidder on request to the Project Engineer.

2-03.5 Payment

Section 2-03.5 of the Standard Specifications is supplemented with the following:

(March 19, 2012 Richland GSP)

No measurement or payment will be made for "Sawcutting". It is considered incidental to other bid items.

2-07 WATERING

2-07.2 Construction Water Meter

Section 2-07.2 is added as follows:

(November 10, 2009 Richland GSP)

Water for dust control, compaction, placement of crushed surfacing, pipe line installation, flushing and testing, etc. will be available at fire hydrant locations, within the construction area only. The Contractor shall secure a fire hydrant meter from the City. The Contractor shall pay a \$750.00 meter deposit to be refunded at the end of the project if the meter is returned undamaged.

2-07.3 Construction Requirements

Section 2-07.3 is supplemented with the following:

(November 10, 2009 Richland GSP)

The Contractor shall be solely responsible for dust control on this project and shall protect the motoring public, adjacent homes, orchards and crops from damage due to dust, by whatever means necessary. The Contractor shall be responsible for any claims for damages and shall protect the City from any and all such claims.

When directed by the Engineer, the Contractor shall provide water for dust control within two hours of such order and have equipment and manpower available at all times including weekends and holidays to respond to orders for dust control measures.

If City forces are required to respond to a dust control problem, the Contractor shall be charged liquidated damages to offset City expenditures. For each time that the City is required to provide dust control measures, the Contractor shall be assessed damages in the amount of \$500.00.

**DIVISION 4
BASES**

4-04 BALLAST AND CRUSHED SURFACING

4-04.3(5) Shaping And Compaction

Section 4-04.3(5) is supplemented with the following:
(November 10, 2009 Richland GSP)

The Contractor shall be responsible for all damages or claims resulting from the use of vibratory compactors.

No successive course of crushed rock shall be spread until the preceding course is approved by the Engineer.

4-04.4 Measurement

Section 4-04.4 is deleted and replaced with the following:
(September 20, 2013 Richland GSP)

Crushed surfacing top course placed under HMA, cement concrete sidewalks, ramps and driveways identified in Section 8-04, 8-06 and 8-14 will be measured by the cubic yard to the neat lines (in-place) as detailed in the plans. Crushed surfacing specified and used at all other locations is considered incidental to the applicable pay item.

For Material verification, the Contractor shall deliver truck tickets to the Engineer within four (4) hours of delivery of material to the job site or at the time of delivery when the Engineer is present.

4-04.5 Payment

Section 4-04.5 is supplemented with the following:
(December 15, 2010 Richland GSP)

Payment shall be made at the unit price as stated in the Contractor's bid proposal. Payment shall constitute full compensation for all labor, materials, and equipment to furnish and install crushed rock, complete.

**DIVISION 5
SURFACE TREATMENTS AND PAVEMENTS**

5-04 HOT MIX ASPHALT

APRIL 4, 2016 AMENDMENT
(April 11, 2016 Richland GSP)

The April 4, 2016 5-04 - Hot Mix Asphalt Amendment is deleted. The 2016 Standard Specifications are applicable with the following modifications.

5-04.2 Materials

Section 5-04.2 is supplemented with the following:
(November 10, 2009 Richland GSP)

HMA used for pathway paving shall utilize the 3/8-inch aggregate gradation and mix criteria.

5-04.3 Construction Requirements

5-04.3(7)A2 Statistical or Nonstatistical Evaluation

Delete this section and replace it with the following;
(November 20, 2013 APWA GSP)

5-04.3(7)A2 Nonstatistical and Commercial Evaluation

Mix designs for HMA accepted by Nonstatistical or Commercial evaluation shall;

- Be submitted to the Project Engineer on WSDOT Form 350-042
- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2) and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with WSDOT Test Method T 718 or based on historic anti-strip and aggregate source compatibility from WSDOT lab testing. Anti-strip evaluation of HMA mix designs utilized that include RAP will be completed without the inclusion of the RAP.

At or prior to the preconstruction meeting, the contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The proposed mix design indicated on a WSDOT mix design/anti-strip report that is within one year of the approval date
- The proposed HMA mix design submittal (Form 350-042) with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- The proposed mix design by a qualified City or County laboratory mix design report that is within one year of the approval date.

The mix design will be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO Material Reference Laboratory (AMRL) program.

At the discretion of the Engineer, agencies may accept mix designs verified beyond the one year verification period with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

Evaluation of anti-strip additives are to be provided as part of the mix design acceptance criteria. Acceptable anti-strip evaluations include 1.) a WSDOT validated mix design showing

the validated anti-strip additive and dosage 2.) an historic anti-strip determination from WSDOT not greater than two (2) calendar years old or 3.) a passing TSR test at the anti-strip dosage proposed by the Contractor.

No paving shall begin prior to Contracting Agency approval of the Contractor provided mix design.

5-04.3(8)A1, General

Delete this section and replace it with the following:

(November 20, 2013 APWA GSP)

5-04.3(8)A1, General

Acceptance of HMA shall be as defined under nonstatistical or commercial evaluation.

Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the contract documents.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Project Engineer and must be made in accordance with Section 9-03.8(7).

Commercial evaluation may be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. Commercial HMA can be accepted by a contractor certificate of compliance letter stating the material meets the HMA requirements defined in the contract.

5-04.3(8)A4, Definition of Sampling Lot and Sublot

Section 5-04.3(8)A4 is supplemented with the following:

For HMA in a structural application, sampling and testing for total project quantities less than 400 tons is at the discretion of the engineer. For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed:

- i. If test results are found to be within specification requirements, additional testing will be at the engineers discretion.
- ii. If test results are found not to be within specification requirements, additional testing as needed to determine a CPF shall be performed.

5-04.3(8)A5 Test Results

The first paragraph of this section is deleted.

(November 20, 2013 APWA GSP)

5-04.3(8)A6 Test Methods

Delete this section and replace it with the following;

(November 20, 2013 APWA GSP)

5-04.3(8)A6 Test Methods

Testing of HMA for compliance of Va will be at the option of the Contracting Agency. If tested, compliance of Va will be use WSDOT Standard Operating Procedure SOP 731. Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308. Testing for compliance of gradation will be by WAQTC FOP for AASHTO T 27/T 11.

5-03.3(11) Reject Work

Supplement this Section with the following:
(November 10, 2009 Richland GSP)

Hot mix asphalt that is rejected on new roadway construction and overlays shall require the replacement of that half of the roadway that is rejected, a minimum of 100 feet longitudinally, either side of the rejected area. Hot mix asphalt that is rejected for trench patching shall require the replacement of the entire patch width, a minimum of 100 feet longitudinally, either side of the rejected area. If two rejected areas are within 200 feet from outer edges of each other, the replacement will extend between the areas.

5-04.4 Measurement

Section 5-04.4 is supplemented with the following:
(November 10, 2009 Richland GSP)

Asphalt concrete sidewalks will be measured by the square yard of finished surface.

Asphalt Patching (_ In. HMA and _ In. CSTC) will be measured by the square yard. Limits of measurement will be as depicted on the Trench Detail or as approved by the Engineer. Additional areas may be identified by the Engineer during construction.

5-04.5 Payment

Section 5-04.5 is supplemented with the following:
(December 15, 2010 Richland GSP)

“Asphalt Conc. Sidewalk”, per square yard.

The unit price per square yard for “Asphalt Conc. Sidewalk” shall be full payment for all costs incurred to perform the Work as specified.

“Asphalt Patching (_ In. HMA and _ In. CSTC)”, per square yard

The unit price for “Asphalt Patching (_ In. HMA and _ In. CSTC)”, per square yard shall be full compensation for furnishing all labor, materials, tools and equipment necessary to furnish, haul, place and compact surfacing materials to the grade as shown on the plans (or matching existing grade in field). It includes applying asphalt tack coat to adjacent existing asphalt and concrete surfaces, removal and disposal of the existing asphalt and surfacing within the pay limits, sawcutting the existing asphalt along the final match point and all other incidentals necessary to complete the asphalt surfacing complete in every detail.

5-04.5(1)A Price Adjustments for Quality of HMA Mixture

Section 5-04.5(1)A is supplemented with the following:
(November 5, 2015 Richland GSP)

Delete the Constituent and Pay Factor for “Air Voids (Va)” in the Table of Price Adjustments Factors.

Delete the last paragraph of section 5-04.5(1)A.

5-04.5(1)B Price Adjustments for Quality of HMA Compaction

Delete this section and replace it with the following:
(January 16, 2014 APWA GSP)

The maximum CPF of a compaction lot is 1.00.

For each compaction lot of HMA when the CPF is less than 1.00, a Nonconforming Compaction Factor (NCCF) will be determined. THE NCCF equals the algebraic difference of CPF minus

1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of the NCCF, the quantity of HMA in the lot in tons and the unit contract price per ton of the mix.

DIVISION 6 STRUCTURES

6-02 CONCRETE STRUCTURES

6-02.3 Construction Requirements

6-02.3(2) Proportioning Materials

Section 6-02.3(2) Notification:

(March 19, 2012 Richland GSP)

The City will enforce this specification. Please note the appropriate cementitious material content in your material submittals.

**DIVISION 7
DRAINAGE STRUCTURES, STORM SEWERS, SANITARY
SEWERS, WATER MAINS, AND CONDUITS**

7-04 STORM SEWERS

7-04.2 Materials

Section 7-04.2 is supplemented with the following:
(November 10, 2009 Richland GSP)

Unless otherwise specified in the Special Provisions or on the plans, all storm sewers shall be solid wall PVC.

Materials shall meet the requirements of the City of Richland Materials List and Standard Details.

7-04.3 Construction Requirements

Section 7-04.3 is supplemented with the following:
(November 10, 2009 Richland GSP)

Installation of storm drain pipe with less than 18 inch cover to finished grade, the Contractor has the option of using PVC C905 pipe as specified in Section 9-30.1(5)A or covering pipe and trench with controlled density fill (CDF) per 2-09.3(1)E.

7-04.3(1) Cleaning and Testing

7-04.3(1)A General

Section 7-04.3(1)A is supplemented with the following:
(November 10, 2009 Richland GSP)

The requirements of Section 7-17.3(2)H shall apply to storm sewers.

7-04.5 Payment

Section 7-04.5 is supplemented with the following:
(September 23, 2013 Richland GSP)

Revise the second paragraph to read:

The unit Contract price per linear foot for storm sewer pipe of the kind and size specified shall be full pay for furnishing, hauling and assembling in place the completed installation including all wyes, tees, special fittings, joint materials, cleaning and debris removal, testing, bedding material, backfill material and adjustment of inverts to manholes for the completion of the installation to the required lines and grades.

Delete the following:

Testing Storm Sewer Pipe, per linear foot.

7-05 MANHOLES, INLETS, CATCH BASINS AND DRYWELLS

7-05.2 Materials

Section 7-05.2 is supplemented with the following:
(November 10, 2009 Richland GSP)

Ladder rungs 9-12.4

7-05.3 Construction Requirements

Section 7-05.3, paragraph four is replaced with the following:
(November 10, 2009 Richland GSP)

Channels shall be made to conform accurately to the sewer grade and shall be brought together smoothly with well-rounded junctions, satisfactory to the Engineer. Channel sides shall be carried up vertically to the crown elevation of the various pipes, and the concrete shelf between channels shall be smoothly finished and warped evenly with slopes to drain.

Section 7-05.3, paragraph five is supplemented with the following:
(November 10, 2009 Richland GSP)

Ladder rungs to be installed only on sanitary sewer manholes per City Standard Details unless stated otherwise on the plans or in the Special Provisions.

Section 7-05.3, paragraph seven is replaced with the following:
(November 10, 2009 Richland GSP)

The ends of pipes shall be trimmed flush with the inside walls on sewer manholes and storm catch basins as shown on standard details. The ends of pipes on storm drain manholes shall extend into the manhole as shown on the standard details unless otherwise noted on the plans or in the special provisions.

7-05.3(3) Connections to Existing Manholes

Section 7-05.3(3) is supplemented with the following:
(November 10, 2009 Richland GSP)

New pipe connections to existing catch basins or manholes shall be core drilled and grouted. Mortar shall conform to the requirements of Section 9-04.3.

7-05.3(4) Drop Manhole Connection

Section 7-05.3(4) is replaced with the following:
(November 10, 2009 Richland GSP)

Drop manhole connections shall be constructed per City Standard Details or as shown on the plans.

7-05.4 Measurement

Section 7-05.4 is supplemented with the following:
(September 20, 2013 Richland GSP)

Structure excavation Class B and structure excavation Class B, including haul, shall be included as part of the applicable unit or lump sum bid item.

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

7-08.2 Materials

Section 7-08.2 is supplemented with the following:
(May 7, 2015 Richland GSP)

| | |
|-------------------------------------|----------------------------------|
| Alternate Trench Foundation Class B | 9-03.17 |
| Imported Pipe Zone Bedding | 9-03.12(3), 9-03.9(3)-Top Course |
| Imported Pipe Zone Backfill | 9-03.12(3), 9-03.9(3)-Top Course |

7-08.3 Construction Requirements

7-08.3(1) Excavation and Preparation of Trench

7-08.3(1)A Trenches

Section 7-08.3(1)A is supplemented with the following:
(December 15, 2010 Richland GSP)

Section 7-09.3(7)A Dewatering of Trench and Section 7-09.3(7)B Rock Excavation shall apply to section 7-08, General Pipe Installation Requirements.

The Contractor shall neatly saw cut all areas of existing ACP/BST within the trench excavation area, then remove and haul all waste materials from the project and dispose of at an approved site provided by the Contractor. Should any undermining occur on adjacent ACP/BST, the Contractor shall neatly cut the ACP/BST 6 inches beyond the undermined area.

In wet ground / groundwater installation or at the direction of the Engineer, the Contractor shall install new sewer or storm pipe per the City's Ground Water Trench Detail.

The requirements of section 7-09.3(7)A and 7-09.3(7)B shall apply to storm sewers and sewer mains.

7-08.3(1)B Shoring

Section 7-08.3(1)B is supplemented with the following:
(November 10, 2009 Richland GSP)

All trench excavations shall have adequate safety systems for the trench excavation that meet the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW. The Contractor shall be fully responsible for providing the necessary back sloping, cribbing, trench boxes, etc., as required to meet the specified safety requirements for the trench. When City crews will be making the main line taps or other work in the trench, the Contractor shall provide all trench safety measures, prior to City personnel entering the trench.

7-08.3(2) Laying Pipe

7-08.3(2)B Pipe Laying - General

Section 7-08.3(2)B is supplemented with the following:
(November 10, 2009 Richland GSP)

The Contractor shall be responsible for locating and protecting existing utilities as per Section 1-07.17. The Contractor shall make any advance explorations as necessary (even though not specifically identified on the drawings) in order to verify connection requirements, properly plan the installation of the pipe to the design line and grade, and achieve a uniform grade and horizontal alignment.

Sewer and storm drain mains are typically shown in profile as well as on the plan view. Other utilities are typically shown in plan view only except at crossings. Some omissions and inaccuracies should be expected. Critical locations shall be field located ahead of time and Call-Before-You-Dig procedures should be implemented in all cases. Any discrepancies shall be reported to the Engineer prior to commencing with the work.

The Plans may identify locations requiring "Dig and Verify." Where specially called for on the Plans, or as directed by the Engineer the Contractor shall "Dig and Verify" existing utilities, connection points and existing inverts. All required "Dig and Verify" shall be completed prior to any Contractor activities at each improvement location. Any discrepancies found as the result of the "Dig and Verify" shall be immediately reported to the Engineer. Unless otherwise

directed to the Engineer, the Contractor shall backfill and compact location where the ‘Dig and Verify’ was completed.

7-08.3(2)J Transition Couplings

Section 7-08.3(2)J is added with the following:
(November 10, 2009 Richland GSP)

When non-rigid transition couplings (i.e. Fernco couplings) are used for connections to existing sewer or storm pipe, the inclusion of controlled density fill will be required to prevent excessive settlement. Use of rigid transition couplings (i.e. Romac) in similar connection locations will not require use of controlled density fill unless installation (of CDF) is directed by the Engineer or noted on the plans.

7-08.4 Measurement

Section 7-08.4 is supplemented with the following:
(April 21, 2014 Richland GSP)

Trench safety shall be measured per linear foot of installed pipe.

All trench excavation shall be unclassified and a separate measurement will not be made for any excavation, cement concrete and asphalt pavement sawing, removal and disposal, dewatering, and backfill for pipelines. All cost for excavation, cement concrete and asphalt pavement sawing, removal and disposal, and backfill for pipelines and fittings including detectable marking tape and tracer wire shall be incidental to the pipe installation except as follows:

Dig and verify will be measured on a per each basis for those identified in the Plans or as directed by the Engineer.

Imported pipe zone bedding will be measured by the linear foot of imported and placed bedding.

Imported pipe zone backfill will be measured by the linear foot of imported and placed bedding.

7-08.5 Payment

Section 7-08.5 is supplemented with the following:
(April 21, 2014 Richland GSP)

“Trench safety”, per linear foot.

“Dig and Verify”, per each.

The unit contract price per each for “Dig and Verify” shall be pay to furnish all labor, materials and equipment for performing the work and when required to backfill and compact the dig and verify location.

“Imported Pipe Zone Bedding”, per linear foot.

The unit contract price per linear foot for “Imported Pipe Zone Bedding” shall be full pay to provide all labor, materials and equipment for completing the work as specified. Payment shall include removing the unsuitable materials the imported bedding replaced.

“Imported Pipe Zone Backfill”, per linear foot.

The unit contract price per linear foot for “Imported Pipe Zone Backfill” shall be full pay to provide all labor, materials and equipment for completing the work as specified. Payment shall include removing the unsuitable materials the imported backfill replaced.

All costs associated with constructing the City's Ground Water Detail shall be included in the following bid items:

- "Imported Pipe Zone Bedding"
- "Gravel Backfill for Foundations Class B"
- "Construction Geotextile"

All costs associated with de-watering shall be included in the unit contract price for "Gravel Backfill for Foundations Class B".

7-09 WATER MAINS

7-09.2 Materials

Section 7-09.2 is supplemented with the following:
(November 10, 2009 Richland GSP)

Unless otherwise specified in the Special Provisions or on the plans, all water mains to be ductile iron except for residential water mains 10 inches and smaller can either be PVC or ductile iron pipe.

Materials shall meet the requirements of the City of Richland Materials List and Standard Details.

7-09.3 Construction Requirements

7-09.3(5) Grade and Alignment

The first sentence of the third paragraph of Section 7-09.3(5) is deleted and replaced with the following:
(November 10, 2009 Richland GSP)

The depth of trenching for water mains shall be such as to give a minimum cover of 48-inches over the top of the pipe unless otherwise specified in the Special Provisions or on the plans.

7-09.3(7) Trench Excavation

Section 7-09.3(7) is supplemented with the following:
(December 15, 2010 Richland GSP)

The Contractor shall neatly saw cut all areas of existing ACP/BST within the trench excavation area, then remove and haul all waste materials from the project and dispose of at an approved site provided by the Contractor. Should any undermining occur on adjacent ACP/BST, the Contractor shall neatly cut the ACP/BST 6 inches beyond the undermined area.

All trench excavations shall have adequate safety systems for the trench excavation that meet the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW. The Contractor shall be fully responsible for providing the necessary back sloping, cribbing, trench boxes, etc., as required to meet the specified safety requirements for the trench. When City crews will be making the main line taps or other work in the trench, the Contractor shall provide all trench safety measures, prior to City personnel entering the trench.

7-09.3(12) General Pipe Installation

Section 7-09.3(12) is supplemented as follows:
(November 10, 2009 Richland GSP)

The Contractor shall be responsible for locating and protecting existing utilities as per Section 1-07.17. The Contractor shall make any advance explorations as necessary (even though not specifically identified on the drawings) in order to verify connection requirements, properly plan the installation of the pipe to the design line and grade, and achieve a uniform grade and horizontal alignment.

Sewer and storm drain mains are typically shown in profile as well as on the plan view. Other utilities are typically shown in plan view only except at crossings. Some omissions and inaccuracies should be expected. Critical locations shall be field located ahead of time and Call-Before-You-Dig procedures should be implemented in all cases. Any discrepancies shall be reported to the Engineer prior to commencing with the work.

The Plans may identify locations requiring "Dig and Verify." Where specially called for on the Plans, or as directed by the Engineer the Contractor shall "Dig and Verify" existing utilities, connection points and existing inverts. All required "Dig and Verify" shall be completed prior to any Contractor activities at each water line improvement location. Any discrepancies found as the result of the "Dig and Verify" shall be immediately reported to the Engineer. Unless otherwise directed to the Engineer, the Contractor shall backfill and compact location where the "Dig and Verify" was completed.

Pipe tracer wire shall be installed with all PVC pipe used for water mains as per City Standard Detail.

7-09.3(12)A Mechanical Couplings

Section 7-09.3(12)A is added as follows:

(November 10, 2009 Richland GSP)

Before coupling, clean each pipe end a distance of at least eight (8) inches back from the end to provide a seat for the coupling gaskets. The pipe coating need not be removed if it presents a smooth surface and is securely bonded to the pipe.

Install couplings in accordance with the manufacturer's instructions. Wipe gaskets clean before installation. If necessary, lubrication may be used to install the gaskets onto the end of the pipe.

Tighten coupling bolts progressively and evenly on both sides to assure uniform seating of the gaskets.

7-09.3(15) Laying of Pipe on Curves

Section 7-09.3(15) is supplemented with the following:

(November 10, 2009 Richland GSP)

The amount of deflection in each pipe joint when pipe is laid on a horizontal or vertical curve shall not exceed 50% of the manufacturer's printed recommended deflections.

7-09.3(19) Connections

7-09.3(19)A Connections to Existing Mains

Section 7-09.3(19)A is supplemented with the following:

(May 6, 2014 Richland GSP)

No new water mains 10" in diameter and smaller will be allowed to connect to the existing mains until all testing required in 7-09.3(23) and 7-09.3(24) is completed and accepted. The City Engineer can waive this requirement on a case by case basis where proposed extensions are short, of a smaller diameter or are at a location that would adversely affect traffic.

All connections to existing water mains shall be performed by the City water division maintenance personnel. The Engineer shall direct the Contractor in the procedure taken for such water main connections and disconnections. The Contractor shall supply all fittings, couplings and adapters that may be required for all connections to the existing mains in addition to adequate de-watering pump(s) and trench shoring. The Contractor shall be responsible for all installation work, including locating, excavating, shoring, backfilling and installing thrust blocks at each point of connection.

At connection points to existing mains the Contractor shall have installed, sterilized, flushed and tested, per the Standard Specifications, the new main a minimum of 10 feet, up to a maximum of 18 feet within the connection point to the existing main. The pipe used to complete the connections shall be swabbed and bagged per the Standard Specifications. The Contractor shall dig and verify the pipe material type, size, location and elevation of the tie-in prior to installing the new water line. The new pipe should be installed at a location and elevation per the Standard Specifications to facilitate a smooth transition to the existing line.

The anticipated schedule for the tie-ins shall be discussed and scheduled at the pre-construction conference, and indicated on the weekly schedule for actual execution. The City reserves the right to adjust the schedule of the tie-ins, as required, subject to a minimum of 24 hour notice of schedule change to the Contractor. **NO TIE-INS WILL BE SCHEDULED FOR THE FIRST WORKING DAY AFTER A WEEKEND OR HOLIDAY.**

7-09.3(21) Concrete Thrust Blocking

Section 7-09.3(21) is supplemented with the following:
(November 10, 2009 Richland GSP)

No bag concrete mix will be allowed for concrete thrust blocks.

7-09.3(21)A Joint Harness

Section 7-09.3(21)A is added as follows:
(November 10, 2009 Richland GSP)

Install joint harness or thrust ties where indicated and as directed by the Engineer. Thrust tie bolts, nuts, and lugs shall be coated with hot coal-tar enamel or Koppers Bitumastic No. 505, as specified for mechanical couplings. Joint harnesses of adequate strength may be used instead of concrete thrust blocks if approved by the Engineer.

7-09.3(22) Blowoff Assemblies

Section 7-9.3(22) is supplemented to read as follows:
(November 10, 2009 Richland GSP)

Temporary blowoff assemblies shall be constructed as required for flushing and testing of water mains and in accordance with the standard plan.

7-09.3(23) Hydrostatic Pressure Test

The first sentence of the first paragraph of Section 7-09.3(23) is deleted and replaced with the following:
(November 10, 2009 Richland GSP)

Water main appurtenances and service connection to the meter setter shall be tested in section of convenient length under a hydrostatic pressure of 150 PSI (gage).

The first sentence of the fifth paragraph of Section 7-09.3(23) is deleted and replaced with the following:

(November 10, 2009 Richland GSP)

The test shall be accomplished by pumping the main up to 150 PSI, stopping the pump for 1 hour (60 minutes), and then pumping the main up to 150 PSI again.

7-09.3(23)D Building Fire Line Test Procedures

Section 7-09.3(23)D is added as follows:

(November 10, 2009 Richland GSP)

1. Pressure Test – Test for 2 hours at 200 psi. If a loss, refer to allowable leakage description on Contractor's Material and Test Certificate for underground piping form as required by the latest edition of the NFPA Standard.
2. Flush – After the underground fire line passes the pressure test the flushing of the pipe from the main to the flange can be scheduled.
All debris that is in the underground pipe must be flushed clear, a burlap bag will be required to collect debris from the pipe.
3. Flow test – When all debris has been flushed and the pipe is flowing clear, flow test must be taken to assure the pipe is flowing the minimum gallons per minute.
4" Pipe – 390 GPM
6" Pipe – 880 GPM
8" Pipe – 1560 GPM

Flow from the flange must be directed in a safe manner as not to flood the surrounding area. The Contractor will conduct the flow test with a City representative present. The Contractor shall supply a pedo gauge and measure the flow.

If the flushing can be completed without reducing the pipe size and the P.I. valve opened completely, then gauging the flow fore GPM will not be required.

4. Health Sample – The Contractor shall obtain a health sample per the requirements of City Standard Specifications.
5. Soft Seat Check Valve – If a soft seat check valve is required, contract the City's Cross Connection Specialist to inspect the valve prior to installation.

7-09.3(24) Disinfection of Water Mains

Section 7-09.3(24) is supplemented with the following:

(December 15, 2010 Richland GSP)

The City of Richland uses AWWA Standard C651 as a guideline for disinfecting water mains.

7-09.3(24)A Flushing

Section 7-09.3(24)A is supplemented with the following:

(May 29, 2014 Richland GSP)

Water needed for flushing shall be provided through a water transporting device or temporary connection to the existing water system. All materials and equipment necessary to complete this work shall be provided by the Contractor. Proper backflow prevention practices shall be implemented (certified and tested double check valves, equipment with appropriate air gap).

Temporary blow offs used for flushing shall be a minimum of 2 inch for mains less than 12 inch, 4 inch for a 12 inch main and 6 inch for a 24 inch main or as required to meet the 2.5 feet per second velocity required.

City of Richland's Domestic water main into service procedure:

1. Main Pre-flush via existing water source (i.e. fire hydrant)
2. Chlorinate main using continuous feed method
3. Flush lines via existing water source (i.e. fire hydrant)
4. 1st Health Sample
5. 24 hour period after sample
6. Pressure Test
7. Flush lines
8. 24 hour period after flushing
9. 2nd Health Sample
10. Tie-ins can begin after second sample is returned with positive result

All tie-ins (connection to existing water system) on mains 12" and smaller will only be allowed after water service procedure is completed to the engineer's satisfaction. Tie-in sequence for larger (distribution) mains will be determined on a project basis.

All costs associated with loading, flushing, testing, and health samples (including temporary service taps if needed) as considered incidental to the installation of the water main.

7-09.3(24)D Dry Calcium Hypochlorite

Section 7-09.3(24)D is supplemented as follows:
(May 14, 2014 Richland GSP)

Dry calcium hypochlorite is not allowed.

7-09.3(24)N Final Flushing and Testing

Section 7-09.3(24)N is supplemented with the following:
(November 10, 2009 Richland GSP)

After flushing has been accomplished to the satisfaction of the Engineer, a bacteriological test will be performed by City forces. Should the initial treatment result in an unsatisfactory bacteriological test, the chlorination procedure shall be repeated by the Contractor until satisfactory results are obtained.

After a satisfactory bacteriological test is confirmed, the hydrostatic test can be performed.

7-09.4 Measurement

Section 7-09.4 is supplemented with the following:
(November 10, 2009 Richland GSP)

All trench excavation (except with use of Alternative Trench Section) shall be unclassified and a separate measurement will not be made for any excavation, cement concrete and asphalt pavement sawing, removal and disposal, and backfill for pipelines.

Alternative Trench Foundation Class B will be measured by the linear foot.

Dig and verify will be measured on a per each basis for those identified in the Plans or as directed by the Engineer.

Trench safety systems will be measured per linear foot of pipe installed.

Imported pipe zone bedding will be measured by the linear foot of placed bedding.

Fittings of the type and size listed on the bid proposal schedule will be measured per each furnished and installed.

Connect to existing water main per each.

7-09.5 Payment

Section 7-09.5 is supplemented with the following:

(December 15, 2010 Richland GSP)

All costs for excavation, cement concrete and asphalt pavement sawing, removal and disposal, and backfill for pipelines and fittings including detectable marking tape and tracer wire shall be incidental to the pipe installation except as follows:

“_____ Pipe for Water Main _____ In. Diam. With Restrained Joint”, per lineal foot.

The unit contract price for “_____ Pipe for Water Main _____ In. Diam. With Restrained Joint” shall be full pay for all work to complete the installation of the water main including but not limited to trench excavation, bedding, laying and jointing pipe, backfilling, testing, flushing, disinfecting the pipeline, and cleanup.

Fittings (bends, tees, crosses, caps, plugs, couplings, etc.) shall be per each.

The unit contract price shall be full pay for all work to complete the installation of the specified fittings including but not limited to excavation, bedding, laying and jointing pipe and fittings, backfilling, testing, flushing, disinfecting the pipeline, specified thrust restraint and cleanup.

“Dig and Verify”, per each.

The unit contract price per each for “Dig and Verify” shall be pay to furnish all labor, materials and equipment for performing the work and when required to backfill and compact the dig and verify location.

“Imported Pipe Zone Bedding”, per linear foot.

The unit contract price per linear foot for “Imported Pipe Zone Bedding” shall be full pay to provide all labor, materials and equipment for completing the work as specified. Payment shall include removing the unsuitable materials the imported bedding replaced.

“Trench safety”, per linear foot.

“Connect to Existing Water Main _ In.”, per each.

The unit contract price per each for “Connect to Existing Water Main” shall be full pay for furnishing all labor, materials and equipment necessary to make the connections, including miscellaneous fittings.

7-12 VALVES FOR WATER MAINS

7-12.2 Materials

Section 7-12.2 is amended as follows:

(November 10, 2009 Richland GSP)

Unless otherwise specified in the Special Provisions or on the plans, all valves 8 inch and smaller shall be gate valves and all valves 10 inches and larger shall be butterfly valves.

Materials shall meet the requirements of the City of Richland Materials List and Standard Details.

7-12.3 Construction Requirements

Section 7-12.3 is supplemented with the following:

(December 15, 2010 Richland GSP)

All valves shown on the plans adjacent to tees, crosses or similar fittings shall be flanged to such fittings.

Misaligned valve boxes shall be excavated, plumbed, and backfilled at the Contractor's expense.

Blow off valves shall be installed per City Standard Detail for Construction _ In Blow-off Installation or Permanent 2 In Blow-off Installation.

7-14 HYDRANTS

7-14.3 Construction Requirements

7-14.3(1) Setting Hydrants

Section 7-14.3(1) is supplemented with the following:

(November 10, 2009 Richland GSP)

Set all hydrants plumb and nozzles parallel with, or at right angles to, the curb, with the pumper nozzle facing the curb. Set hydrants so that middle of traffic flange is 2 inches to 6 inches above finished ground or sidewalk level to clear bolts and nuts, and as directed. Hydrants shall be ordered with the bury depth required to meet the above specification. No extensions will be allowed.

When placed behind the curb, set hydrant behind the back of curb as shown on the standard detail. When set in lawn space between curb and sidewalk, or between sidewalk and property line, let no portion of the hydrant or nozzle cap be within 8 inches of the sidewalk.

City to install Contractor supplied Storz adapter.

7-15 SERVICE CONNECTIONS

7-15.3 Construction Requirements

Section 7-15.3 is supplemented as follows:

(November 10, 2009 Richland GSP)

All new meter boxes shall be set square with the roadway and level with the adjacent sidewalk and/or lawn. The finished box grade shall be set by two each 2" x 4" x 24" grade adjustment boards set on compacted soil at the 36" depth. As indicated in the Special Provisions and as directed by the Engineer new meter boxes located in a position to receive vehicular traffic shall have traffic rated metal lids.

Existing Water Connections

The service connection shall conform to the City's Water Service Connection Standard Detail.

The Contractor shall thread existing galvanized service line to facilitate connections. Plumber's paste shall be used on all threaded connections. If condition of existing pipe is not conducive to threading, the Engineer on a case-by-case basis will consider a pack joint for iron pipe coupling.

The new house service line shall be connected so that all existing meter setter fittings are eliminated. The new house service line shall be swept into the tie-in locations with adequate pipe length to allow for expansion/contraction of the HDPE. Equivalent elbow

fittings will be considered by the Engineer on a case-by-case basis to reduce impacts to existing improvements.

The Contractor shall make a mark on the HDPE house service line one foot from the end of the pipe prior to installing the house service assembly couplings. No couplings will be allowed beneath concrete or asphalt areas.

Section 7-15.3, end of second paragraph, is supplemented as follows:
(February 4, 2013 Richland GSP)

Missile or Boring is the preferred method of service line installation under existing roadways, curbs and sidewalks. The Engineer will consider the use of a small backhoe for installation of service lines on a case by case basis. Where boring is used the house service line shall not be used to connect the air source to the missile and the 4" wide locate tape will not be required.

7-15.3(2) Connection to Water Main

Section 7-15.3(2) is added as follows:
(November 10, 2009 Richland GSP)

Do not place saddle within one (1) foot of pipe joint, couplings, or other clamps without approval from the Engineer.

7-15.3(3) New Water Service Connection

Section 7-15.3(3) is added as follows:
(November 10, 2009 Richland GSP)

The Contractor shall, prior to backfilling the piping and in the presence of the Engineer, pressure-test the new line at system pressure to assure no leakage and shall flush the new water service line a minimum of 30 seconds prior to the connection being made. Once the connection is made, the Contractor shall have the property owner open outside hose bibs and unscreened inside faucets to assure any sediment removal, and to assure proper flow and pressure at each location.

The shutdown time for each new water service connection shall be minimized by the Contractor, having the meter setter and all of the service line installed to the point of connection prior to the shutting down of water service. At the completion of each service connection, the Contractor shall verify with the property owner that all plumbing fixtures and irrigation systems are working properly. The Contractor shall repair any deficiency promptly.

7-15.5 Payment

Section 7-15.5 is replaced by the following:
(November 10, 2009 Richland GSP)

Payment will be made in accordance with Section 1-04.1, for the following bid items that are included in the proposal:

"__ In. Street Service Assembly", per each

The unit contract price per each for "__ In. Street Service Assembly" shall be full pay for all work to install the street service assembly including the service saddle, corporation stop, curb stop, service valve box and any pipe couplings, insert stiffeners and adaptors necessary for the installation of the new street service lines from the service saddle to the curb stop as shown in the City Standard Detail.

“1 In. Street Service Line (Type K Copper)”, per linear foot
“2 In. Street Service Line (HDPE)” per linear foot.

The unit contract price per linear foot for “1 In. Street Service Line (Type K Copper)” and “2 In. Street Service Line (HDPE)” shall be full pay for all work to install the Type K copper piping or HDPE pipe, trench excavation and backfill, pipe bedding, and 4” wide locate tape necessary for the street service line installation as shown on the plans.

“__ In. Meter Assembly”, per each

The unit contract price per each for “__ In. Meter Assembly” shall be full pay for all work to install the include the meter setter (supplied by City with jumper or meter (see detail), meter boxes, grade adjustment boards and all copper tubing and fittings as shown in the details “1” Meter Setter and 1 ½” & 2” Meter Setter” including excavation and backfill, and the removal and disposal of the existing water meter installation (boxes and setter). The existing water meter shall be removed from the existing meter box, wrapped in a plastic bag and placed in the new meter assembly boxes.

“__ In. House Service Assembly”, per each

The unit contract price per each for “__ In. House Service Assembly” shall be full pay for all work including all labor, equipment and materials needed for the installation of the water service lines, compression couplings, insert stiffeners and materials necessary for the capping and abandonment of the existing water service lines.

“__ In. House Service Line”, per linear foot

The unit contract price per linear foot for “__ In. House Service Line” shall be full pay for the installation of the service line including the HDPE piping, trench excavation and backfill, piping bedding and locate tape necessary for the service line installations shown on the plans.

7-17 SANITARY SEWERS

7-17.2 Materials

Section 7-17.2 is supplemented with the following:
(December 15, 2010 Richland GSP)

Unless otherwise specified in the Special Provisions or noted on the plans all sewer pipe 15 inch diameter or smaller and with less than 15 feet of cover shall be polyvinyl chloride (PVC), ASTM D3034, SDR 35. All sewer mains 18 inch diameter to 48 inch diameter or with more than 15 feet of cover shall be ASTM F 679, 115 psi min. pipe unless an alternate material is specified or approved by the City.

| | |
|-------------------------|------------|
| ASTM D3034, SDR 35 | 9-05.12(1) |
| ASTM F 679, 115 psi min | 9-05.12(1) |

7-17.3 Construction Requirements

7-17.3(2) Cleaning and Testing

7-17.3(2)A General

Section 7-17.3(2)A is supplemented with the following:
(September 23, 2013 Richland GSP)

Revise the 1st sentence of the 1st paragraph of Section 7-17.3(2)A to read:

Sewers and appurtenances shall be cleaned and any installation where there is a pipe joint shall be tested after backfilling by the low pressure air method, except where the ground water table is such that the Engineer may require the infiltration test.

Insert the following:

Cleaning shall consist of hydro pressure jetting of lines (jet truck). Material/debris shall be caught and removed at each structure.

7-17.3(2)H Television Inspection

Section 7-17.3(2)H is supplemented with the following:

(November 10, 2009 Richland GSP)

1. Sewer/Storm collection system main and service line installation shall be completed prior to TV video inspection.
2. Insure all sewer/storm lines are clean prior to the City TV crew starting inspections. TV inspection work stoppage due to an obstruction in a line may result in rescheduling for TV inspection completion at a future unspecified date/time and may incur a cost to the Contractor. Cleaning shall consist of hydro pressure jetting of lines (jet truck). Material / debris shall be caught and removed at each structure.
3. After cleaning of lines by jetting, water will be dumped into all endpoints for sewer/storm to ensure flow arrives at the lowest point of the new system. This will be done no more than 24 hours in advance of scheduled inspection.
4. Job site access for the City TV inspection van/truck shall be a road following the sewer/storm main lines, made of compact sub-grade media or gravel. A delay in performing TV inspections due to poor or no vehicle access may result in rescheduling for TV inspection completion at a future unspecified date/time and may incur cost to the Contractor.
5. During construction a plug shall be placed at the lowest possible point in the new storm or sewer system to prevent infiltration into the existing system. Plug(s) will be attached to the top ladder rung in sewer manholes by a rope. Plug(s) will be removed only after acceptance of project by City.
6. Contractor will supply, as needed, a person to assist TV crew in the field.

7-17.5 Payment

Section 7-17.5 is supplemented with the following:

(September 23, 2013 Richland GSP)

Revise the second paragraph to read:

The unit Contract price per linear foot for sewer pipe of the kind and size specified shall be full pay for furnishing, hauling and assembling in place the completed installation including all wyes, tees, special fittings, joint materials, cleaning and debris removal, testing, bedding material, backfill material and adjustment of inverts to manholes for the completion of the installation to the required lines and grades.

Delete the following:

Testing Sewer Pipe, per linear foot.

7-18 SIDE SEWERS

7-18.3 Construction Requirements

7-18.3(5) End Pipe Marker

Section 7-18.3(5) is replaced with the following:

(November 10, 2009 Richland GSP)

End pipe marker shall be per Sewer Service Marker Post Standard Detail or as shown on the plans.

7-19 SEWER CLEANOUTS

7-19.5 Payment

Section 7-19.5 is supplemented with the following:

(November 10, 2009 Richland GSP)

“__ In Sewer Cleanout”, per each.

**DIVISION 8
MISCELLANEOUS CONSTRUCTION**

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

8-01.3 Construction Requirements

8-01.3(2) Seeding, Fertilizing, and Mulching

8-01.3(2)B Seeding and Fertilizing

Section 8-01.3(2)B is supplemented with the following:
(December 4, 2006 WSDOT GSP)

Grass seed, of the following composition, proportion, and quality shall be applied at the rates shown below on all areas requiring roadside seeding within the project:

| Kind and Variety of Seed in Mixture by Common Name and (Botanical name) | Pounds Pure Live Seed (PLS) Per Acre |
|--|---|
| Thick spike Wheatgrass | 11.4 |
| Blue bunch Wheatgrass | 10.8 |
| Great Basin Wildrye | 5.7 |
| Sandberg Bluegrass | 5.7 |
| Sherman Big Bluegrass | 11.4 |
| Idaho Fescue | 10.8 |
| Weed Seed | 0.6(max) |
| Inert and Other Crop | <u>3.6</u> (max) |
| Total Pounds PLS Per Acre | 60.0 |

Seeds shall be certified "Weed Free," indicating there are no noxious or nuisance weeds in the seed.

(January 3, 2006 WSDOT GSP)

Sufficient quantities of fertilizer shall be applied to supply the following amounts of nutrients:

Total Nitrogen as N - *** 67 *** pounds per acre.

Available Phosphoric Acid as P₂O₅ - *** 67 *** pounds per acre.

Soluble Potash as K₂O - *** 67 *** pounds per acre.

*** forty *** pounds of nitrogen applied per acre shall be derived from isobutylidene diurea (IBDU), cyclo-di-urea (CDU), or a time release, polyurethane coated source with a minimum release time of 6 months. The remainder may be derived from any source.

The fertilizer formulation and application rate shall be approved by the Engineer before use.

8-01.3(2)D Mulching

Section 8-01.3(2)D is supplemented with the following:

(November 10, 2009 Richland GSP)

Initial Application

*** Wood Cellulose fiber with guar-based tackifier *** mulch shall be applied at a rate of *** 1200 (WCF) and 50 (tackifier) *** pounds per acre. Mulch shall be applied to completed slopes within 7 days.

Final Application

*** Wood Cellulose fiber with guar-based tackifier *** mulch shall be applied at a rate of *** 1500 (WCF) and 50 (tackifier) *** pounds per acre.

8-01.3(17) Temporary Water and Pollution/Erosion Control

Section 8-01.3(17) is added as follows:

(November 10, 2009 Richland GSP)

The Contractor shall be responsible for preventing objectionable materials and sediments from entering and clogging all new or existing catch basin curb inlets, grates and underground piping. Prior to construction, the Contractor shall supply, install and maintain effective protective sediment filtering devices. Sediment filtering devices such as straw bale barriers, sediment barriers and/or filter fabric on inlet structures shall be in place at all times during construction.

The Contractor shall be responsible to regularly inspect sediment-filtering devices to insure that they do not become ineffective or cause localized flooding. Upon completion of construction activities, the Contractor shall remove sediment-filtering devices from all catch basins and clean catch basin sumps and underground piping which have become contaminated with sediment and debris.

Payment for catch basin protection including all labor, equipment and materials as required shall be considered incidental to the associated contract bid items.

8-02 ROADSIDE RESTORATION

8-02.3 Construction Requirements

8-02.3(17) Tree Trimming

Section 8-02.3(17) is added as follows:

(November 10, 2009 Richland GSP)

The Contractor shall trim all existing tree limbs within 2 feet of the edge of the sidewalk or pathway to provide 8 feet of vertical clearance from the surface of the sidewalk or pathway to the bottom of the tree limb.

8-02.3(18) Site Restoration

Section 8-02.3(18) is added as follows:

(November 10, 2009 Richland GSP)

Site restoration shall consist of the restoration of all disturbed site improvements, including fences, sprinkler valves, sprinkler lines, heads, and lawn and landscaping materials. The property owner shall be notified prior to the removal of any plants or shrubs. The existing plants and shrubs shall be set aside and re-planted or replaced after trenching is completed.

All disturbed lawn areas shall be cut with a sod cutter or other method approved by the Engineer, and replaced. During trenching the top 4" of topsoil shall be segregated and replaced prior to sod installation. All damaged sod shall be replaced with grass sod, from an off-site source, and placed on four inches of topsoil. All sod shall be watered daily by the Contractor for a three-week period, at which time any dead or browned sod shall be removed and replaced. The replaced areas will again require a three-week watering period. The Contractor shall provide a water source and all equipment required to maintain the sod. Use of the property owner's water and/or hoses shall be approved in writing by the property owner prior to its use. At any yard where the underground sprinkling system is disturbed (either piping or heads), the Contractor shall verify with the resident that the system has been restored to satisfactory operating condition.

All site restoration (except for concrete and/or asphalt patching) shall be completed within 14 calendar days after the adjacent construction has taken place. All construction debris shall be removed and properly disposed of.

If existing topsoil is not segregated for reuse, then topsoil from an off-site source shall be provided. Topsoil shall be a sandy loam silt material free of sticks, rocks, wood, vegetable material and other deleterious material, and shall contain 30% silt or clay. Minimum thickness placed shall be four inches. The seed specifications for grass sod and/or hydro-seed will be submitted to the Engineer for approval prior to placement.

In areas where landscaping rock and/or gravel exist, the Contractor shall remove and replace rock and landscaping materials to match existing types or better. In gravel areas without fabric the Contractor shall apply a weed sterilant to the finished gravel surface as approved by the Engineer.

8-02.5 Payment

Section 8-02.5 is supplemented with the following:

(November 10, 2009 Richland GSP)

"Tree Trimming", lump sum.

All costs for trimming, removing, and hauling off tree trimmings shall be included in the lump sum price for "Tree Trimming".

"Site Restoration", lump sum.

The lump sum contract payment shall include all labor, equipment and materials necessary for the restoration of all disturbed site improvements, other than those specifically listed in the bid proposal.

8-04 CURBS, GUTTER, AND SPILLWAYS

8-04.3 Construction Requirements

8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways

Section 8-04.3(1) is supplemented with the following:

(November 10, 2009 Richland GSP)

At each location where a water service or water main crosses under a concrete curb the curb shall be stamped with a "W" to indicate the location.

At each location where a sewer service or sewer main crosses under a concrete curb the curb shall be stamped with an "S" to indicate the location.

Section 8-04.3(1) the first sentence of the first paragraph is revised to read:

(March 19, 2012 Richland GSP)

All cement concrete curb, curb and gutter, gutter, and spillway shall be constructed with air entrained concrete Class 4000 conforming to the requirements of Section 6-02.

8-14 CEMENT CONCRETE SIDEWALKS

8-14.3 Construction Requirements

Section 8-14.3 is supplemented with the following:

(November 10, 2009 Richland GSP)

Detectable Warning Strip

Where shown in the Plans, the Contractor shall install a detectable warning pattern having truncated dome shape shown in the Standard Plans. The Contractor shall use 1 of the detectable warning pattern products listed in the Qualified Products List or submit another manufacturer's product for approval by the Engineer. The warning pattern shall be capable of being bonded to an existing cement or asphalt concrete surface.

8-23 TEMPORARY PAVEMENT MARKINGS

8-23.5 Payment

Section 8-23.5 the second sentence of the third paragraph is revised to read:

(March 19, 2012 Richland GSP)

Unless a Bid Item has been included in the Proposal to pay for removal of temporary pavement markings, City crews will remove the lines during installation of the permanent pavement markings.

8-21 PERMANENT SIGNING

8-21.3 Construction Requirements

Section 8-21.3 is supplemented with the following:

(November 30, 2015 Richland GSP)

All existing and permanent signing shall be removed, replaced and/or reset by the City. Contractor shall notify the Engineer 2 days in advance when signing is to be removed as shown on the plans and/or as needed during construction operations. The Contractor shall install all necessary temporary signing while permanent signing is not in place. The Contractor shall notify the Engineer 2 days in advance when signing is to be reset or installed.

BOLLARDS

(April 4, 2011 WSDOT GSP)

Description

This work shall consist of furnishing and installing steel bollards in accordance with the Plans, Standard Plans, and these Specifications, at the locations shown in the Plans or as staked by the Engineer.

Materials

Posts and Hardware

Type 1 and Type 2 bollard posts shall be ASTM A 53, NPS 3 (3" Nom.) schedule 80 steel pipe. Post sleeves shall be ASTM A 53, NPS 4 (4"Nom.) schedule 40 steel pipe.

Type 3 bollard posts shall be steel structural tubing per ASTM A 500 Gr B.

Steel plate shall be per ASTM A 36.

All steel parts shall be hot-dip galvanized after fabrication in accordance with AASHTO M 111.

Reflective Tape

Reflective tape shall be one of the following or an approved equal:

Scotchlite High Intensity Grade Series 2870

Reflexite AP-1000

Scotchlite Diamond Grade LDP Series 3970

T-6500 High Intensity (Type IV)

Concrete

Footings shall be constructed using concrete Class 3000.

Construction Requirements

Bollards shall be constructed in accordance with the Standard Plans.

Bollards shall not vary more than 1/2 inch in 30 inches from a vertical plane.

Bollard posts and the exposed parts of the base assembly shall be painted in accordance with Section 6-07.3(11) for galvanized surfaces. The top coat shall match Federal Standard 595, Color No. 33538 Traffic Signal Yellow.

Measurement

Measurement for bollards will be by the unit for each type of bollard furnished and installed.

Payment

Payment will be made in accordance with Section 1-04.1, for the following bid items:

"Bollard Type ___", per each.

**DIVISION 9
MATERIALS**

9-03 AGGREGATES

9-03.12 Gravel Backfill

9-03.12(3) Gravel Backfill for Pipe Zone Bedding

Section 9-03.8 is supplemented as follows:

(May 7, 2015 Richland GSP)

Sand for Bedding and Backfill

Sand shall be clean, hard, sound material, either naturally occurring sand or crushed fines. Blending sand shall meet the following quality requirement:

| | |
|-----------------|------------|
| Sand Equivalent | 30 Minimum |
|-----------------|------------|

9-12 MASONRY UNITS

9-12.4 Ladder Rungs

Section 9-12.4 is added as follows:

(February 4, 2012 Richland GSP)

Ladder Rungs (steps) shall be 316 stainless steel or polypropylene conforming to the requirements of ASTM C 478 or an acceptable alternative. Steps shall have integral restraints to prevent side slipping of feet. Ladder rungs shall be installed only in sanitary sewer manholes.

9-30 WATER DISTRIBUTION MATERIALS

9-30.1 Pipe

9-30.1(7) Joint Lubricant

Section 9-30.1(7) Joint Lubricant is added

(November 10, 2009 Richland GSP)

Joint lubricant shall be furnished with the pipe, in the amount and type recommended by the pipe manufacturer. The lubricant shall be a water-soluble, nontoxic, vegetable soap compound conforming to United States Pharmacopoeia No. P39.

9-30.2 Fittings

9-30.2(6) Restrained Joints

Section 9-30.2(6) is supplemented as follows:

(November 10, 2009 Richland GSP)

1. Thrust Ties

Joint harness shall be used where thrust ties are indicated, and consist of galvanized steel tie-bolts extending across the pipe joints to lugs shop welded to the pipe barrel. Thrust tie assembly shall conform to AWWA M 11 Steel Pipe Manual.

2. Retainer Gland

Ductile iron retainer glands for mechanical joint pipe and fittings shall be constructed with matching bolt holes for standard joint and provided with a series of set screws to bear on the pipe barrel and provide holding power against joint separation due to internal pressure.

9-30.2(12) Pipe Couplings

Section 9-30.2(12) Pipe Couplings is added:
(November 10, 2009 Richland GSP)

Pipe couplings shall be wrought steel or cast iron capable of withstanding the designated internal pressure without leakage or overstressing. Diameter of the coupling shall be compatible with the outside diameter of the pipe on which the coupling is installed. Steel style pipe couplings shall be used in the pipeline or to connect the pipeline to existing steel pipelines. Cast style pipe couplings shall be used in the pipeline or to connect the pipeline to existing cast or ductile iron pipelines.

Couplings middle ring dimensions shall be as recommended by the manufacturer or as approved. Gaskets shall be standard or equivalent as approved. Corrosion protection for middle ring and follower rings shall be hot-dip or electro-galvanizing or bonded vinyl plastic coating.

Furnish all joint accessories with pipe couplings. Remove center stops if required for installation. It shall be the Contractor's responsibility to verify dimensions of all existing pipelines in the field before ordering couplings.

9-30.3 Valves

9-30.3(1) Gate Valves (3-inches to 16 inches)

Section 9-30.3(1) is supplemented as follows:
(November 10, 2009 Richland GSP)

The ductile Iron Gate valve wedge or gate member shall be fully encapsulated in synthetic rubber. All seating surfaces within the valve body shall be inclined to the vertical, the valve stem shall be sealed by a minimum of two (2) O-rings and all stem seals shall be replaceable with the valve wide open and subjected to full rated pressure.

Joint materials for mechanical joint or push-on joint for cast iron pipe shall conform to AWWA C111. Joint materials for flanged joints shall consist of one-eighth (1/8) inch thick, full-face, one-piece, cloth inserted rubber gaskets conforming to Section 7 of AWWA C207. Bolts and nuts shall conform to Section 8 of AWWA C207.

9-30.3(8) Tapping Sleeve and Valve Assembly

Section 9-30.3(8) is supplemented as follows:
(November 10, 2009 Richland GSP)

Tapping valves are required with all tapping sleeves 12" diameter and larger along with all size on size taps.

9-30.6(4) Service Fittings

Section 9-30.6(4), third paragraph is replaced with the following:
(November 10, 2009 Richland GSP)

All connection to polyethylene tubing shall be Ford Pack Joint type fittings.



Hydrant Installation & Fire Flow

Standard

International Fire Code 2003 Section 508
Richland Municipal Code Title 20 Chapter 20.02.051

Practice

GENERAL HYDRANT INSTALLATION

- Fire hydrants shall be accessible to the fire department apparatus by roads meeting the requirement of IFC Section 503
- Hydrants shall be adequately protected against vehicular damage where required. See fire protection detail sheet
- Hydrants shall be not more than 10 feet or less than 6 feet from back of curb.
- Hydrants shall be installed and approved before the accumulation of combustible materials on site.
- A looped water system shall be installed unless otherwise approved.
- Hydrants shall be equipped with a florescent orange steamer port cap or bagged when such hydrants are not operable. The Fire and Emergency Services Department shall also be notified of hydrants placed out of service.
- Hydrant installation and water mains shall conform to City standards. See fire protection detail sheet.
- The installer shall see that all fire hydrants are painted high visibility yellow, as per City specifications.

- The fire hydrant pumper connection shall be a “Storz” fitting; compatible with a 5” Storz hose coupling that meets the current NFPA-Fire Hose Connection Standard.
- The installer shall see that a recessed blue reflective hydrant marker is installed in the street in accordance with City standards. See fire protection detail sheet.

PLACEMENT OF HYDRANTS

- The general lateral spacing of fire hydrants shall be approved by the Fire Chief or designee and shall be predicated on the hydrants being placed at street intersections. Hydrants may be placed up to 50 feet from the intersections.
- The maximum distance between hydrants shall not exceed 600-foot intervals along streets or fire apparatus access roads in residential (one- and two-family units) areas.
- The maximum distance between hydrants shall not exceed 300-foot intervals along streets or fire apparatus access roads in non-residential (including, but not limited to, multi-family, commercial, educational, institutional, assembly, storage and industrial) areas.
- Hydrants shall be within 200 feet travel distance of every new commercial building and within 600 feet travel distance of every new residential (one- and two-family units) building.
- Cul-de-sacs that are greater than 200 feet in length as measured from the main street entrance to the bulb, shall have hydrant placed before the curb return entering the turn around.
- Cul-de-sacs over 300 feet shall have hydrants at the entrance and at the end.
- Hydrants may be required for both sides of a street, if in the opinion of the Fire Chief or designee, circumstances are such that fire-fighting operations would be severely hampered without such hydrants being installed.
- Hydrants shall be located no closer than 40 feet from the structure unless otherwise approved.
- Hydrants shall be maintained so that the hydrant has not less than a radius of 36 inches of clear area around the **circumference of a hydrant** without any growth exceeding 12 inches within 5 feet of the hydrant. Trees or signs shall not be planted/installed within 10 feet of a hydrant.
- Hydrant steamer ports shall normally face the street or access road. Where streets or access roadways cannot be determined, the installer shall contact the Fire Department for placement.

- Plans for fire hydrant installations shall be submitted to the Chief or designee for approval.

FIRE FLOWS

- Fire flows shall be determined by the Fire Department using the International Fire Code, Appendix B.
- The following shall be used in determining the number of hydrants required for non-residential (one- and two-family units) buildings:

REQUIRED FIRE FLOW

1. Up to 2000 GPM
2. 2000 to 3000 GPM
3. 3000 to 4000 GPM
4. 5000 to 7000 GPM
5. 7000 to 9000 GPM

REQUIRED HYDRANT

- 1 within 200 feet travel distance
- 1 within 200 feet and 1 within 600 feet
- 2 within 200 feet and 1 within 600 feet
- 2 within 200 feet and 2 within 600 feet
- 2 within 200 feet and 3 within 600 feet

Exceptions:

When the required fire flow is less than 750 GPM, and in the opinion of the Chief or designee, the structure does not pose an unusual risk, the distance to the nearest hydrant may be increased to approximately 600 feet.

U occupancies may be exempted from these requirements if, in the opinion of the Chief or designee, the structure does not pose an unusual risk.

An NFPA approved sprinkler system may mitigate some of the above requirements with the approval of the Chief or designee.

2"x4" PRESSURE TREATED WOOD.
 LENGTH AS REQUIRED.
 SET PLUMB AND BACKFILL.
 PAINT PRESSURE TREATED WOOD BLUE.

MARKER POST SHALL BE PLACED
 IMMEDIATELY ADJACENT TO CURB STOP.

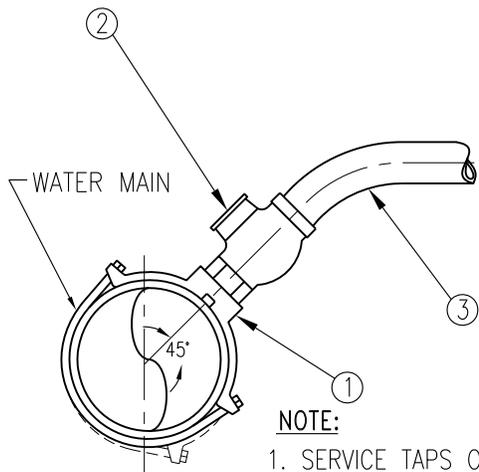
4' MIN.
 (CUT AT SUBGRADE
 IF UNDER ACP)

FINISHED GROUND

WOOD

42" MIN. TO
 48" MAX. BURY

MATCH SERVICE
 BOX DEPTH



NOTE:

1. SERVICE TAPS ON PVC WATER MAIN SHALL BE SPACED A MINIMUM OF 36" IF TAPPED ON THE SAME SIDE AND 18" IF STAGGERED. TAP SHALL BE NO CLOSER THAN 24" FROM PIPE BELL.

| MATERIAL LIST | | |
|---------------|-----------|---|
| ITEM NO. | NO. REQ'D | DESCRIPTION |
| 1 | 1 | SERVICE SADDLE |
| 2 | 1 | CORPORATION STOP |
| 3 | 1 | 1" "K-TYPE" COPPER TUBING—CONTINUOUS, NO JOINTS ALLOWED |
| 4 | 1 | CURB STOP |
| 5 | 1 | SERVICE BOX |



1" STREET SERVICE ASSEMBLY

| | |
|-----------------------------|-------------|
| CIVIL & UTILITY ENGINEERING | |
| APPR. BY: PKR | DATE: 09.13 |
| DRAWN BY: LD | DWG: W1 |
| CAD FILE: 2013_W1_09_2013 | |

2"x4" PRESSURE TREATED WOOD.
 LENGTH AS REQUIRED.
 SET PLUMB AND BACKFILL.
 PAINT PRESSURE TREATED WOOD BLUE.

4' MIN.
 (CUT AT SUBGRADE
 IF UNDER ACP)

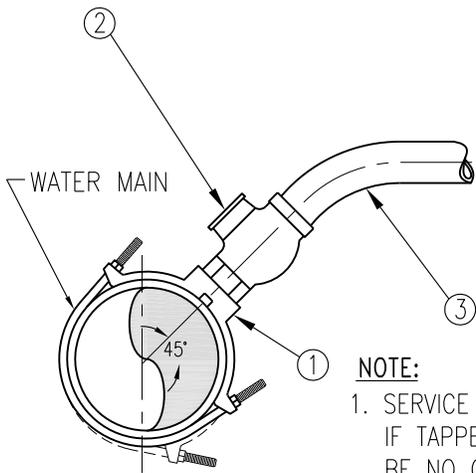
MARKER POST SHALL BE PLACED
 IMMEDIATELY ADJACENT TO CURB STOP.

FINISHED GROUND

WOOD

42" MIN. TO
 48" MAX. BURY

MATCH SERVICE
 BOX DEPTH



NOTE:

1. SERVICE TAPS ON PVC WATER MAIN SHALL BE SPACED A MINIMUM OF 36" IF TAPPED ON THE SAME SIDE AND 18" IF STAGGERED. TAP SHALL BE NO CLOSER THAN 24" FROM PIPE BELL.

| MATERIAL LIST | | |
|---------------|-----------|---------------------------------------|
| ITEM NO. | NO. REQ'D | DESCRIPTION |
| 1 | 1 | SERVICE SADDLE |
| 2 | 1 | CORPORATION STOP |
| 3 | 1 | 2" HDPE CTS TUBING, NO JOINTS ALLOWED |
| 4 | 1 | CURB STOP |
| 5 | 1 | SERVICE BOX |



2" STREET SERVICE ASSEMBLY

CIVIL & UTILITY ENGINEERING

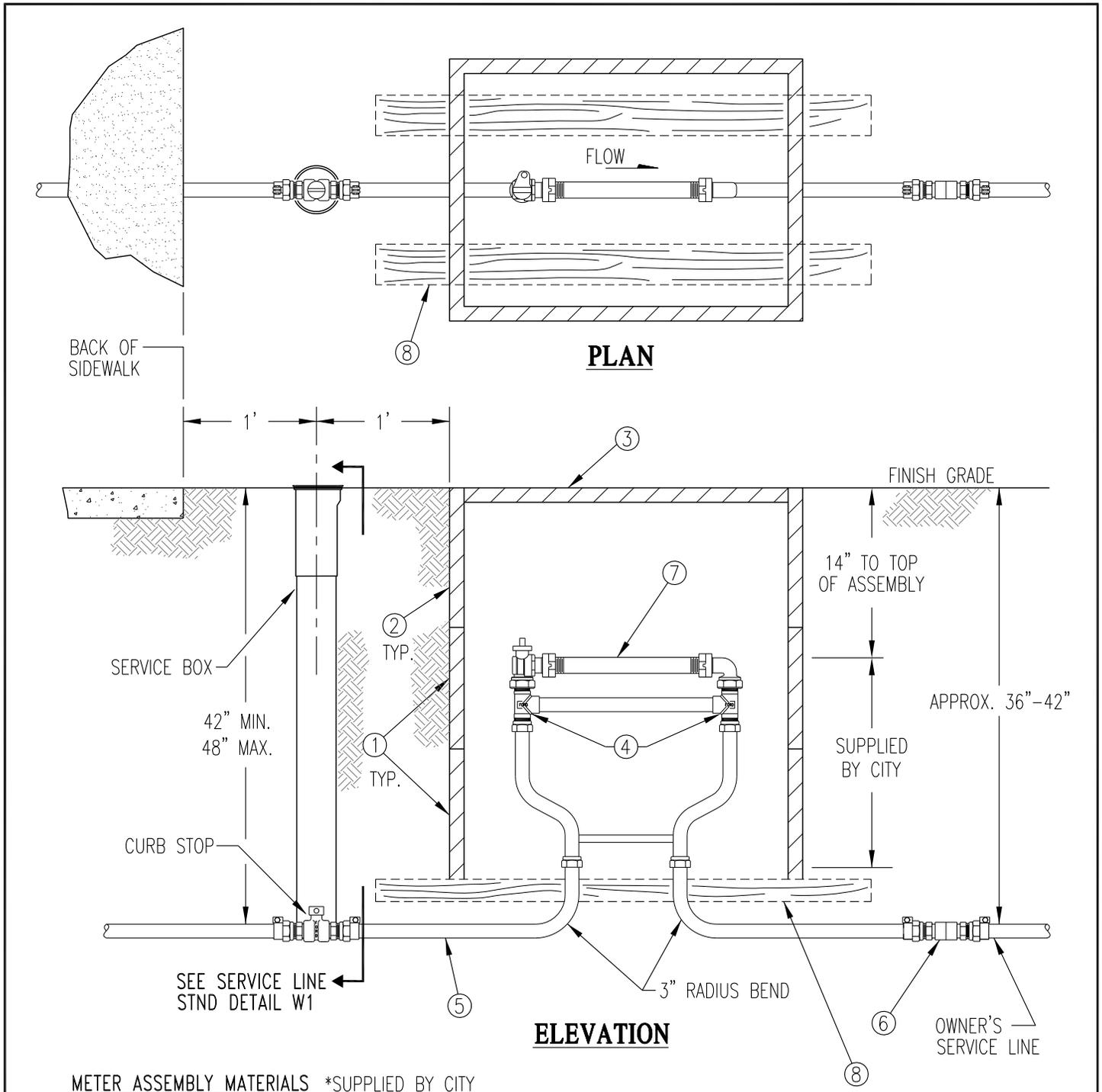
APPR. BY: PKR

DATE: 09.13

DRAWN BY: LD

DWG: W2

CAD FILE: 2013_W2_09_2013



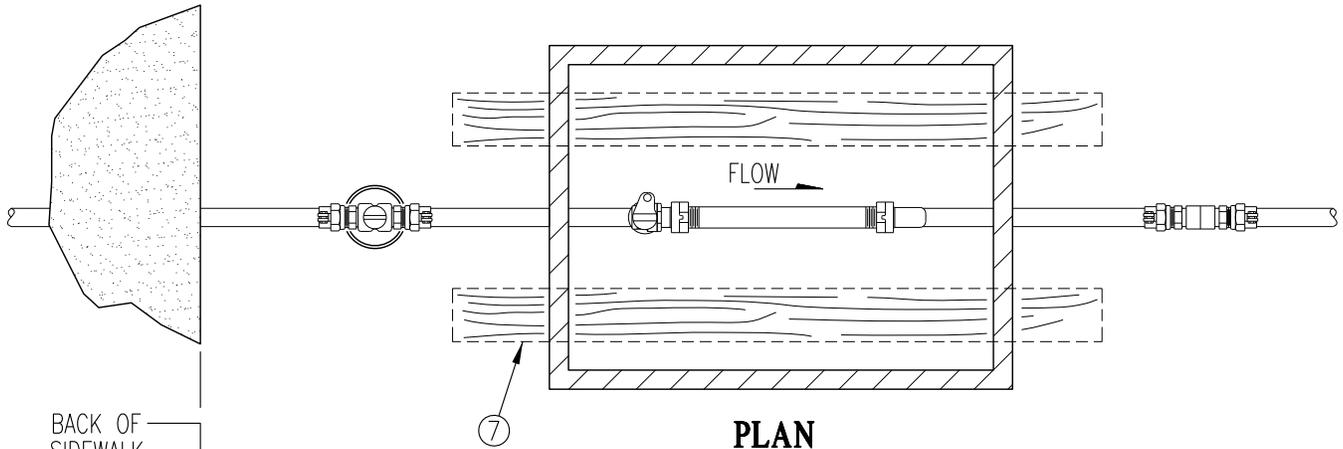
METER ASSEMBLY MATERIALS *SUPPLIED BY CITY

- 1. 2 EA. METER BOX, 12", MIDDLE SECTION,
- 2. 1 EA. METER BOX, 12". TOP SECTION,
- 3. 1 EA. METER BOX COVER, W/CAST IRON LID, TOP OF METER BOX TO BE LEVEL WITH SURROUNDING SURFACE.
- *4. 1" METER SETTER
- 5. 5' TUBING, COPPER, 1" TYPE K, SOFT-ROLLED.
- 6. 1" COUPLING
- *7. 1" METER JUMPER
- 8. 2 EA. PRESSURE TREATED 2" X 4" X 4' LONG.

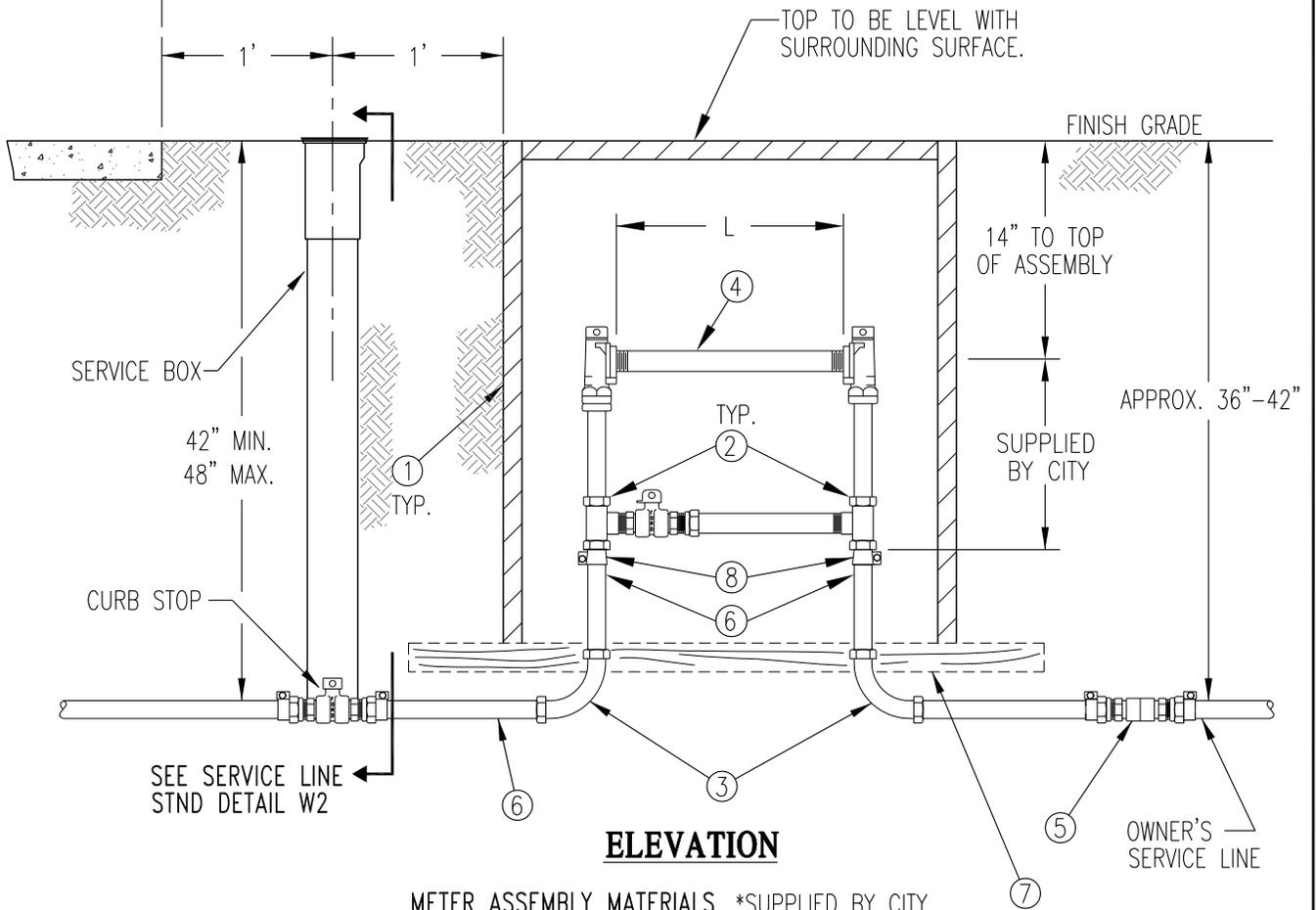


**WATER METER ASSEMBLY
FOR 1" METERS**

| | |
|-----------------------------|-------------|
| CIVIL & UTILITY ENGINEERING | |
| APPR. BY: PKR | DATE: 09.13 |
| DRAWN BY: LD | DWG: W3 |
| CAD FILE: 2013_W3_09_2013 | |



PLAN



ELEVATION

METER ASSEMBLY MATERIALS *SUPPLIED BY CITY

2" METER

- 1. METER BOX (CONCRETE) (1-TOP SECTION, 2-MIDDLE SECTIONS & 1-LID).
- * 2. 2" METER SETTER (WITH VERTICAL CONNECTION TEES).
- 3. 2" x 90° COMPRESSION ELL.

- * 4. 2" GALV. STEEL METER JUMPER
- 5. 2" COUPLING.
- 6. 2" TYPE "L" COPPER TUBING.
- 7. 2 EA. PRESSURE TREATED 2" x 4" x 4' LONG.
- 8. COUPLING.



**WATER METER ASSEMBLY
FOR 2" METERS**

CIVIL & UTILITY ENGINEERING

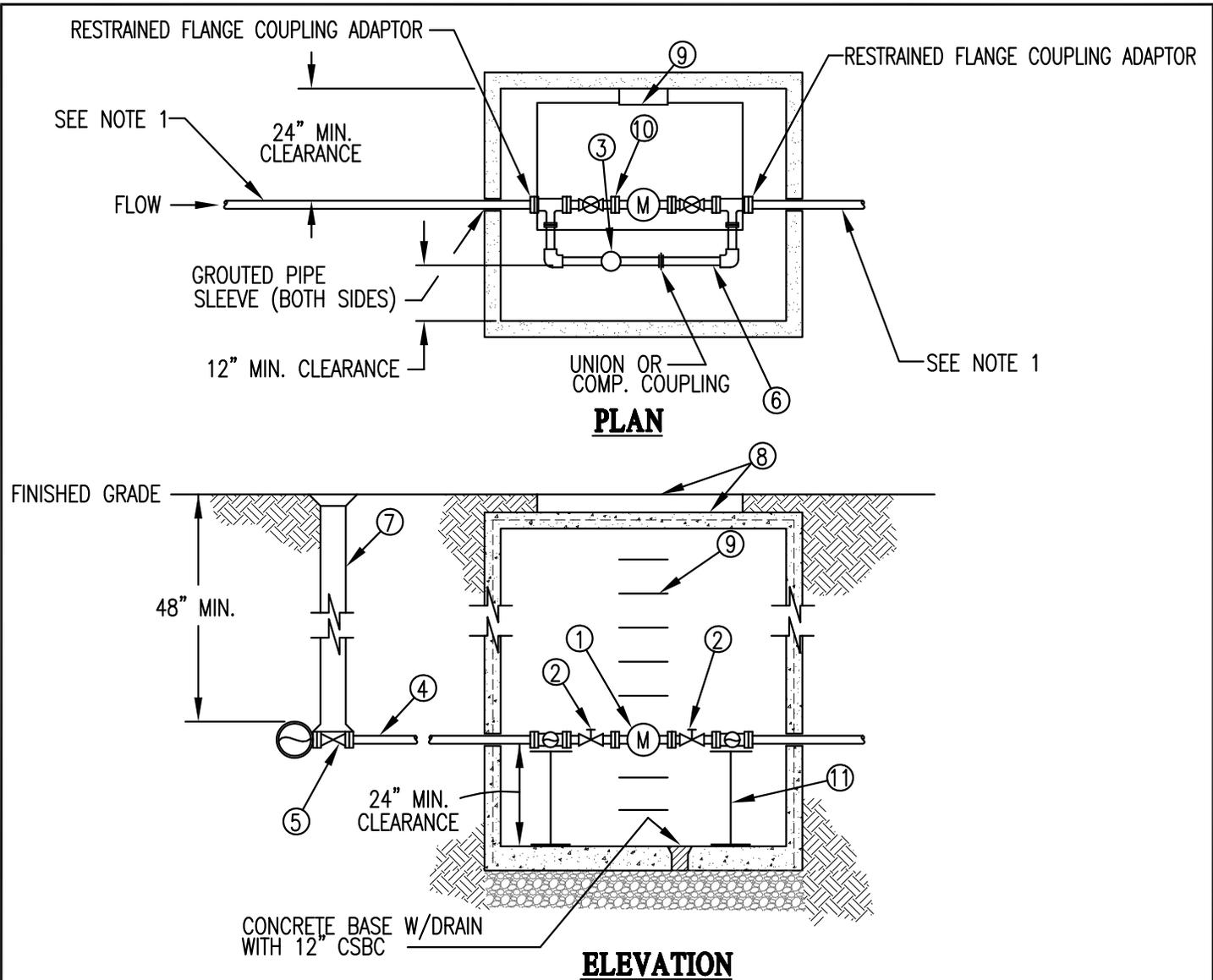
APPR. BY: PKR

DATE: 09.13

DRAWN BY: LD

DWG: W4

CAD FILE: 2013_W4_09_2013



MATERIALS:

- ① WATER METER, SUPPLIED BY CITY (METER LAY LENGTH PROVIDED BY CITY)
- ② GATE VALVE, W/HANDWHEEL.
- ③ BALL VALVE W/LOCKING CAP
- ④ SERVICE LINE, CLASS 50 DUCTILE IRON.
- ⑤ GATE VALVE FL x MJ, W/2" SQUARE OPERATING NUT.
- ⑥ 2" TYPE-L COPPER.
- ⑦ VALVE BOX
- ⑧ REINFORCED PRE-CAST CONCRETE VAULT (SEE CHART FOR VAULT SIZE)
- ⑨ VAULT STEPS AT 12" SPACING.
- ⑩ DISMANTLING JOINT
- ⑪ 4 EA.- ADJUSTABLE STANDS

| METER SIZE | VAULT SIZE |
|------------|--|
| 3" | 7' x 4' x 8' TALL W/ 3' x 3' ALUMINUM ACCESS DOOR |
| 4" | 9' x 5' x 7'-2" TALL W/ 36" x 72" ALUMINUM ACCESS DOOR |
| 6" | 11'-2" x 5'-8" x 7'-2" TALL W/ 36" x 72" ALUMINUM ACCESS DOOR |

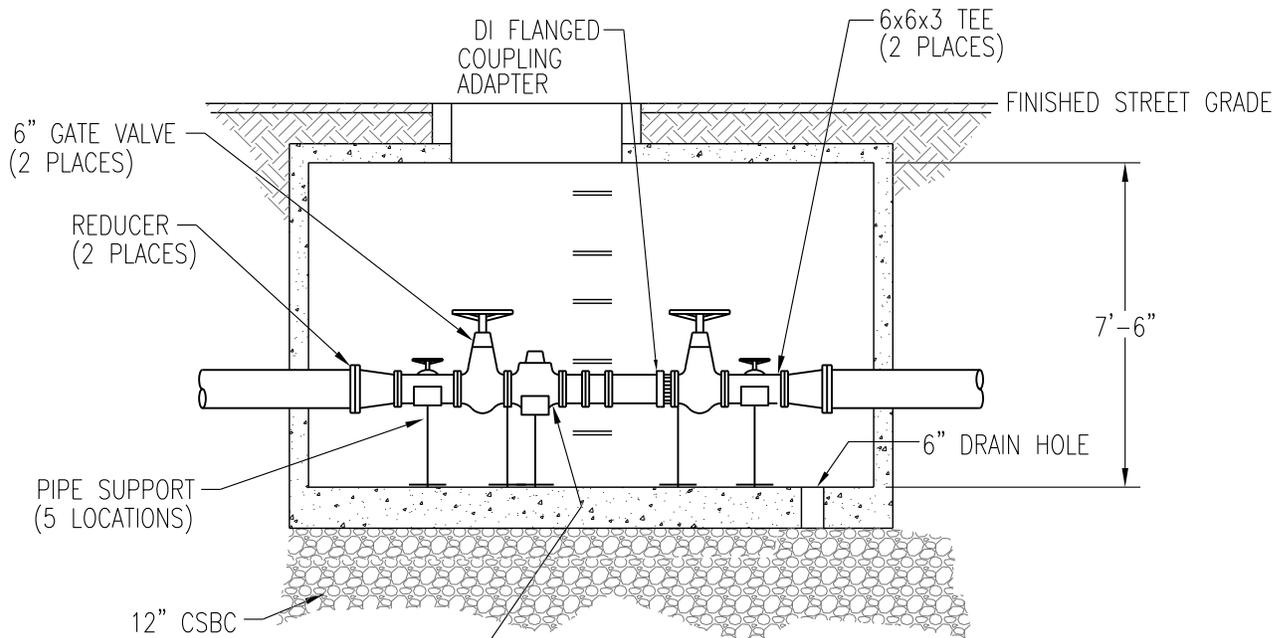
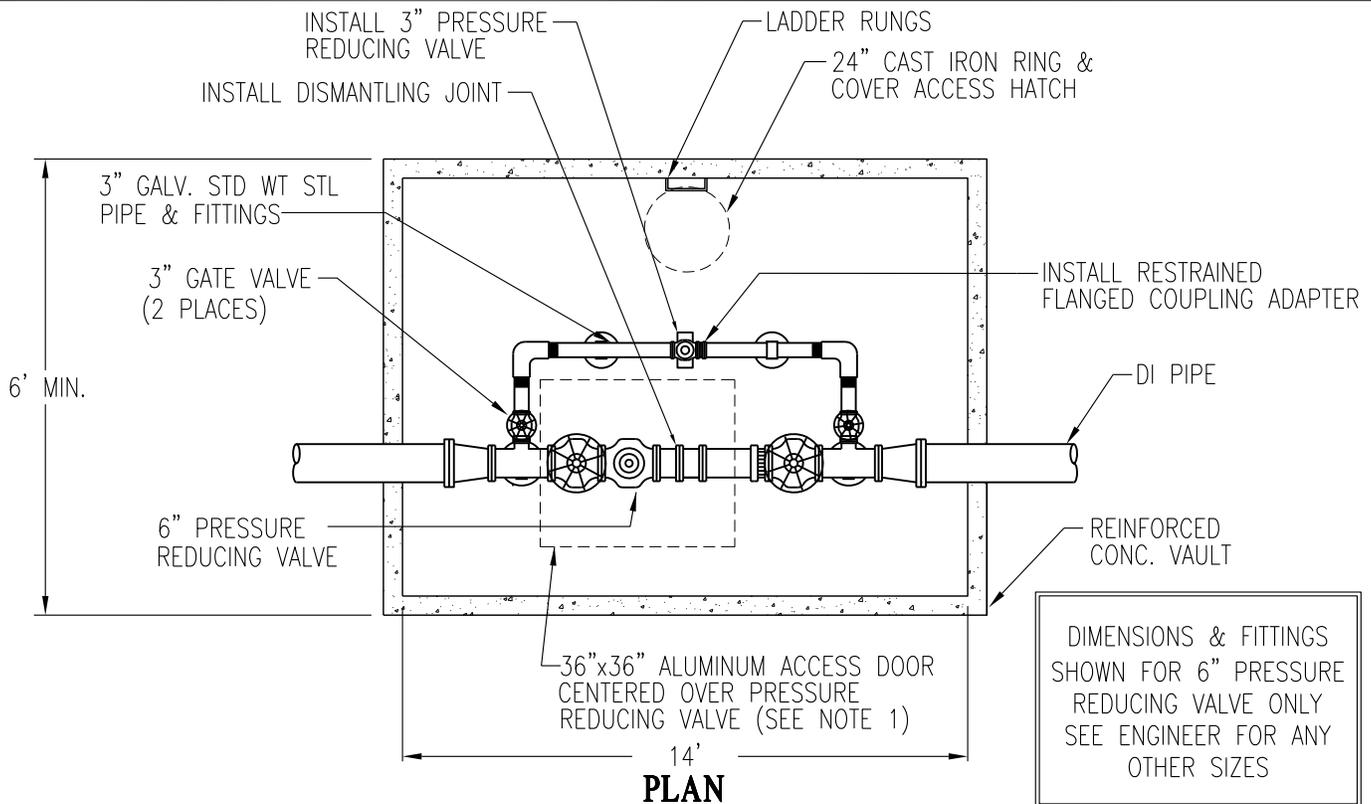
NOTES:

- 1. ALL RESTRAINED JOINT FITTINGS 60' EACH SIDE OF VAULT.



**COMMERCIAL
WATER
METER**

| | |
|--|---------------|
| CIVIL & UTILITY ENGINEERING | |
| APPR. BY: PKR | DATE: 03.2012 |
| DRAWN BY: JKS | DWG: W5 |
| CAD FILE: 2012_W5_03_2012 | |



INSTALL 6" PRESSURE REDUCING VALVE, PIPE SPOOL, FITTINGS & FLANGED COUPLING ADAPTER AS REQUIRED

NOTES:

1. ALUMINUM ACCESS DOOR VAULTS LOCATED IN TRAFFIC AREAS SHALL HAVE TRAFFIC RATED DOORS.
2. ALL RESTRAINED JOINTS 60' EACH SIDE OF VAULT.
3. GROUT ALL PENETRATIONS



WATER PRESSURE REDUCING ASSEMBLY

CIVIL & UTILITY ENGINEERING

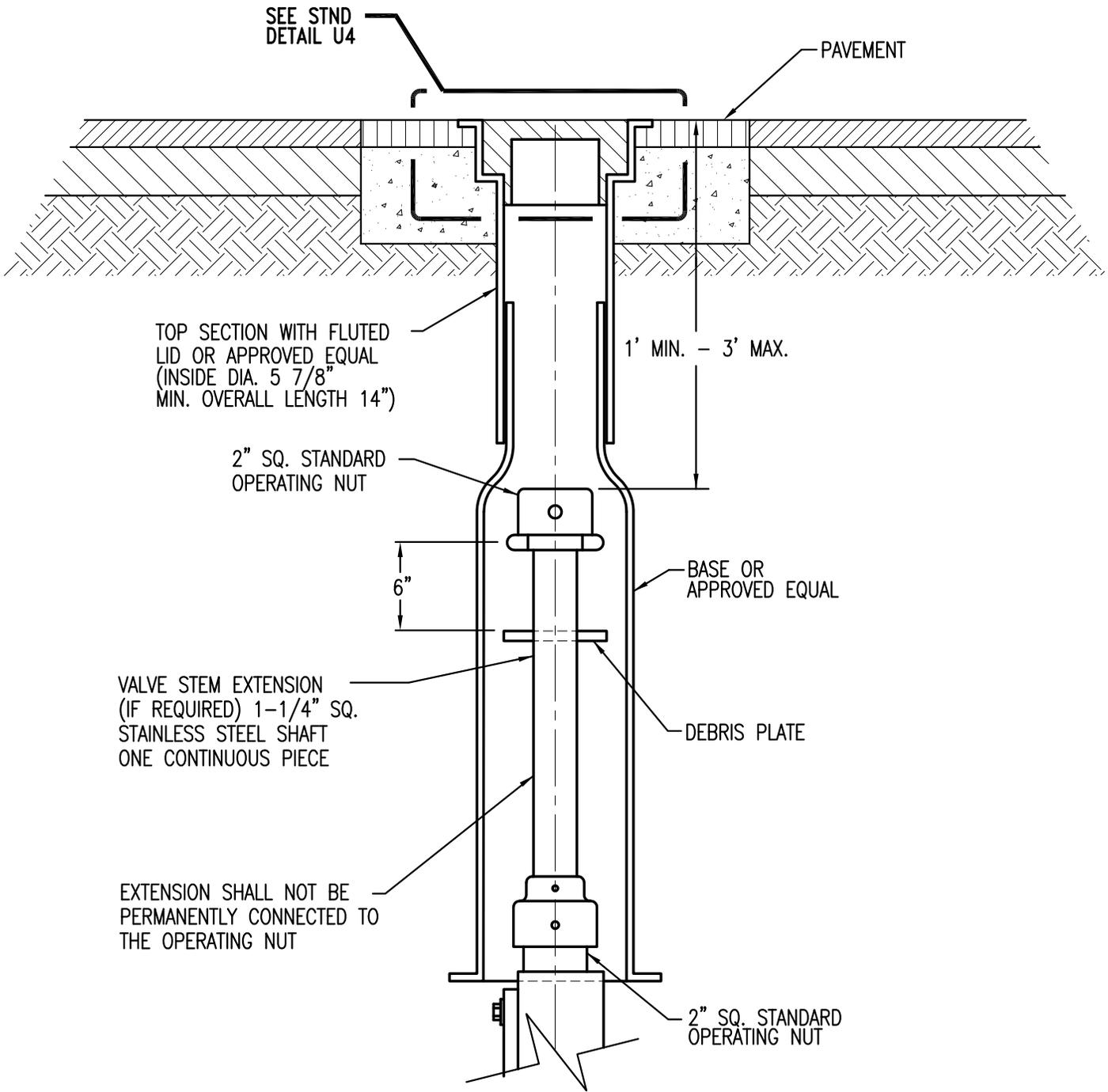
APPR. BY: PKR

DATE: 09.13

DRAWN BY: LD

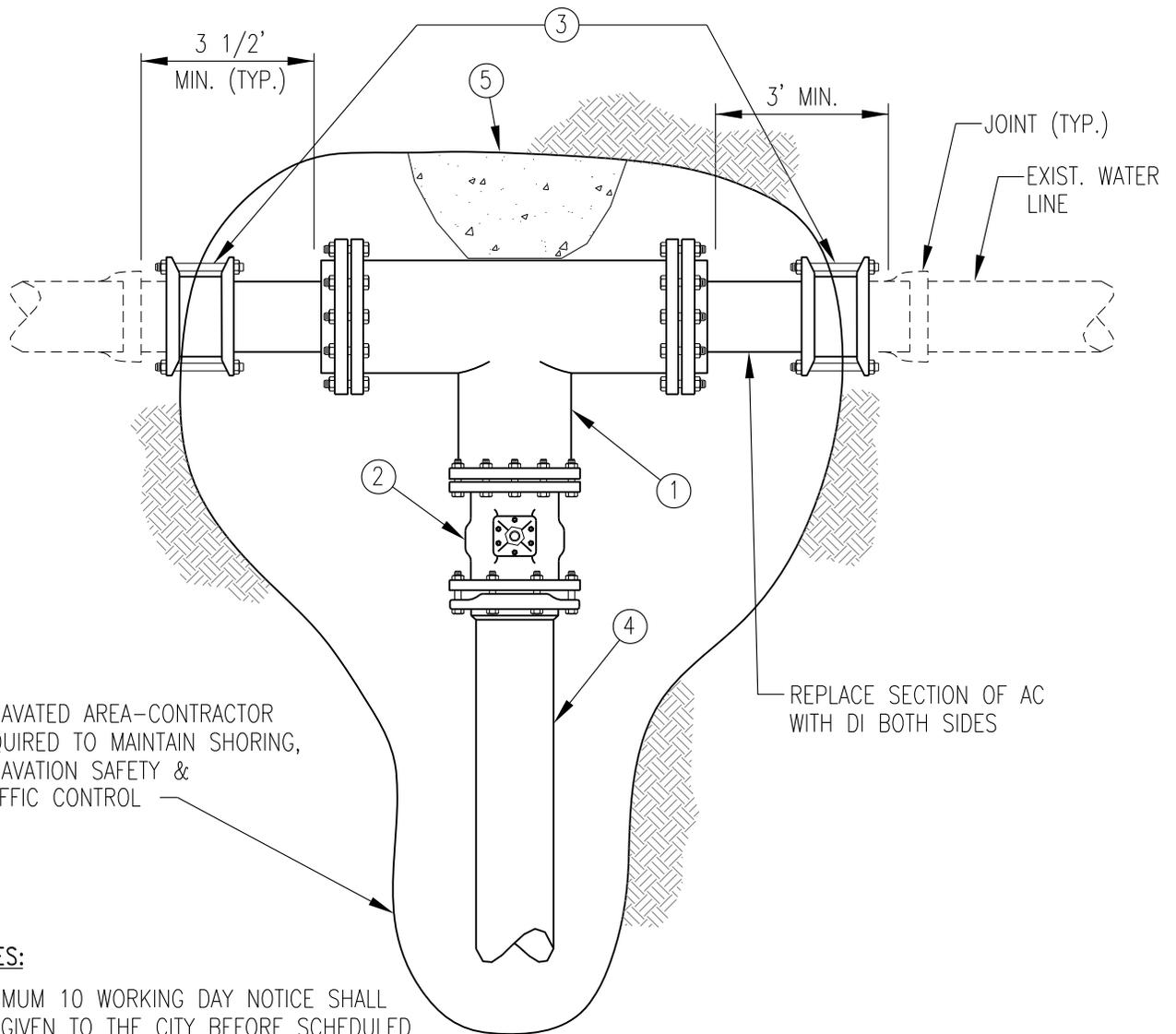
DWG: W8

CAD FILE: 2013_W8_09_2013



WATER VALVE BOX

| | |
|-----------------------------|---------------|
| CIVIL & UTILITY ENGINEERING | |
| APPR. BY: PKR | DATE: 12.2010 |
| DRAWN BY: SC NYBY | DWG: W9 |
| CAD FILE: 2012_W9_12_2010 | |



NOTES:

1. MINIMUM 10 WORKING DAY NOTICE SHALL BE GIVEN TO THE CITY BEFORE SCHEDULED CUT-IN TO THE EXISTING WATERLINE. (CONSTRUCTION PLANS MUST BE APPROVED BY CITY ENGINEER PRIOR TO THIS NOTICE).
2. CONTRACTOR IS TO FURNISH ALL MATERIALS AS REQUIRED & HAVE LOCATION EXCAVATED WITH MINIMUM OF 2' CLEARANCE OUTSIDE OF ALL NEW FITTINGS AS SHOWN & 18" CLEARANCE UNDER PIPE. PIPE & FITTINGS TO BE "SWABBED & BAGGED" 24 HOURS BEFORE CUT-IN.
3. AFTER THE CUT-IN BY CITY, CONTRACTOR SHALL INSTALL THRUST BLOCK & VALVE BOX, BACKFILL EXCAVATED AREA & PROVIDE APPROPRIATE STREET PATCH IF NECESSARY.

MATERIALS BY CONTRACTOR

- ① ALL-FLANGE TEE
- ② MJ x FL GATE VALVE W/ STANDARD CONC. PIER BLOCK
- ③ 2-FLANGE COUPLING ADAPTORS FOR DI/PVC
2-TRANSITION COUPLINGS FOR AC
- ④ NEW WATER LINE
- ⑤ THRUST BLOCK



**CUT-IN TO
EXISTING
WATER LINE**

CIVIL & UTILITY ENGINEERING

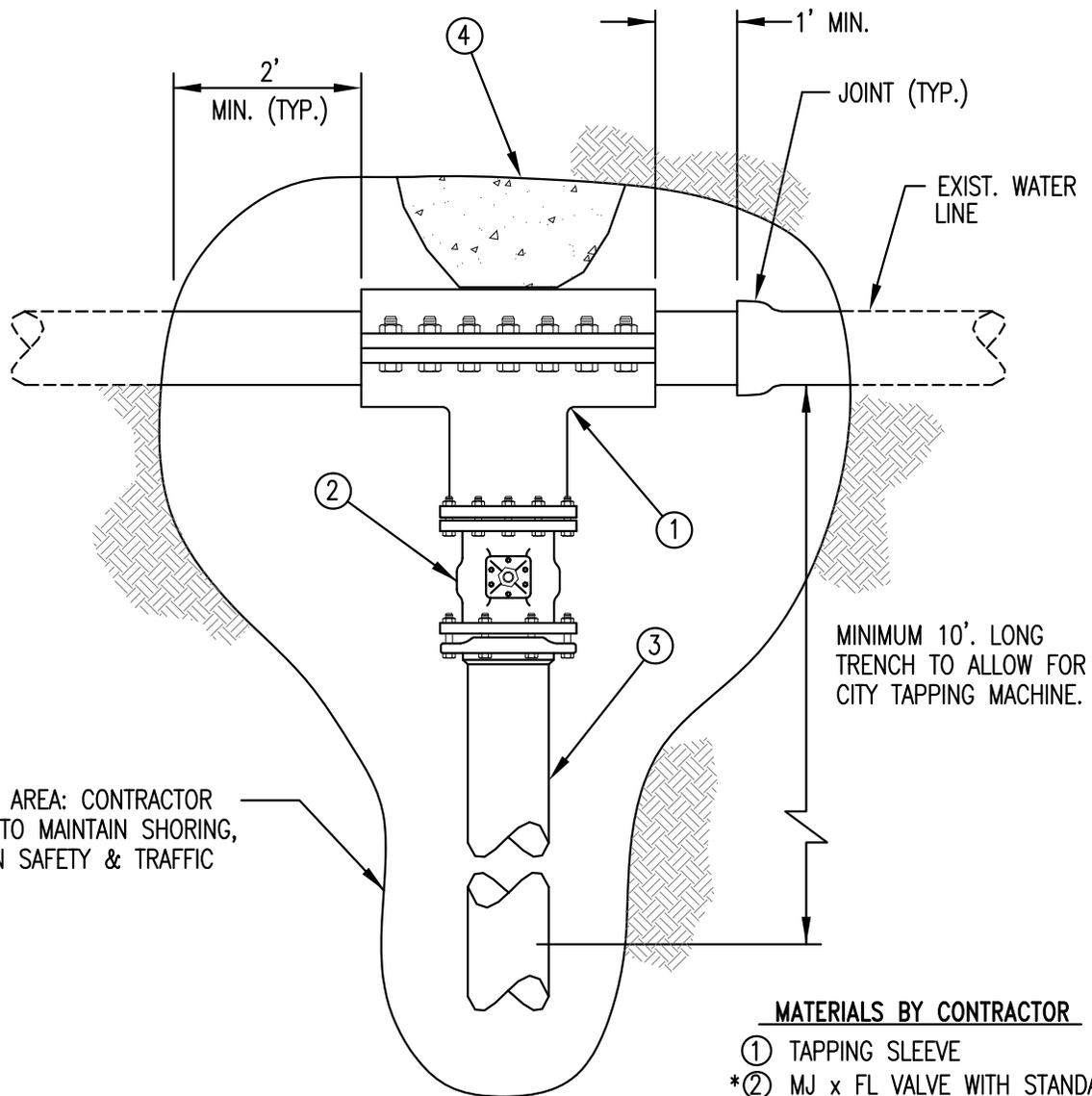
APPR. BY: PKR

DATE: 05.14

DRAWN BY: LD

DWG: W10

CAD FILE: 2014_W10_05_2014



EXCAVATED AREA: CONTRACTOR REQUIRED TO MAINTAIN SHORING, EXCAVATION SAFETY & TRAFFIC CONTROL

MINIMUM 10' LONG TRENCH TO ALLOW FOR CITY TAPPING MACHINE.

MATERIALS BY CONTRACTOR

- ① TAPPING SLEEVE
- *② MJ x FL VALVE WITH STANDARD CONCRETE PIER BLOCK
- ③ NEW WATER LINE EXTENSION
- ④ THRUST BLOCK

NOTES:

1. MINIMUM 10 WORKING DAY NOTICE SHALL BE GIVEN TO THE CITY BEFORE SCHEDULED TAP TO THE EXISTING WATER LINE. (CONSTRUCTION PLANS MUST BE APPROVED BY CITY ENGINEER PRIOR TO THIS NOTICE).
2. CONTRACTOR IS TO FURNISH ALL MATERIALS AS REQUIRED AND HAVE LOCATION EXCAVATED WITH MINIMUM OF 2' CLEARANCE OUTSIDE OF ALL NEW FITTINGS AS SHOWN AND 18" CLEARANCE UNDER PIPE.

* TAPPING VALVES ARE REQUIRED ON 12 INCH DIAMETER AND LARGER AND ALL SIZE ON SIZE TAPS.

3. AFTER THE TAP BY CITY, CONTRACTOR SHALL INSTALL THRUST BLOCK AND VALVE BOX, BACKFILL EXCAVATED AREA AND PROVIDE APPROPRIATE STREET PATCH IF NECESSARY.



**TAP ON EXISTING
WATER LINE**

CIVIL & UTILITY ENGINEERING

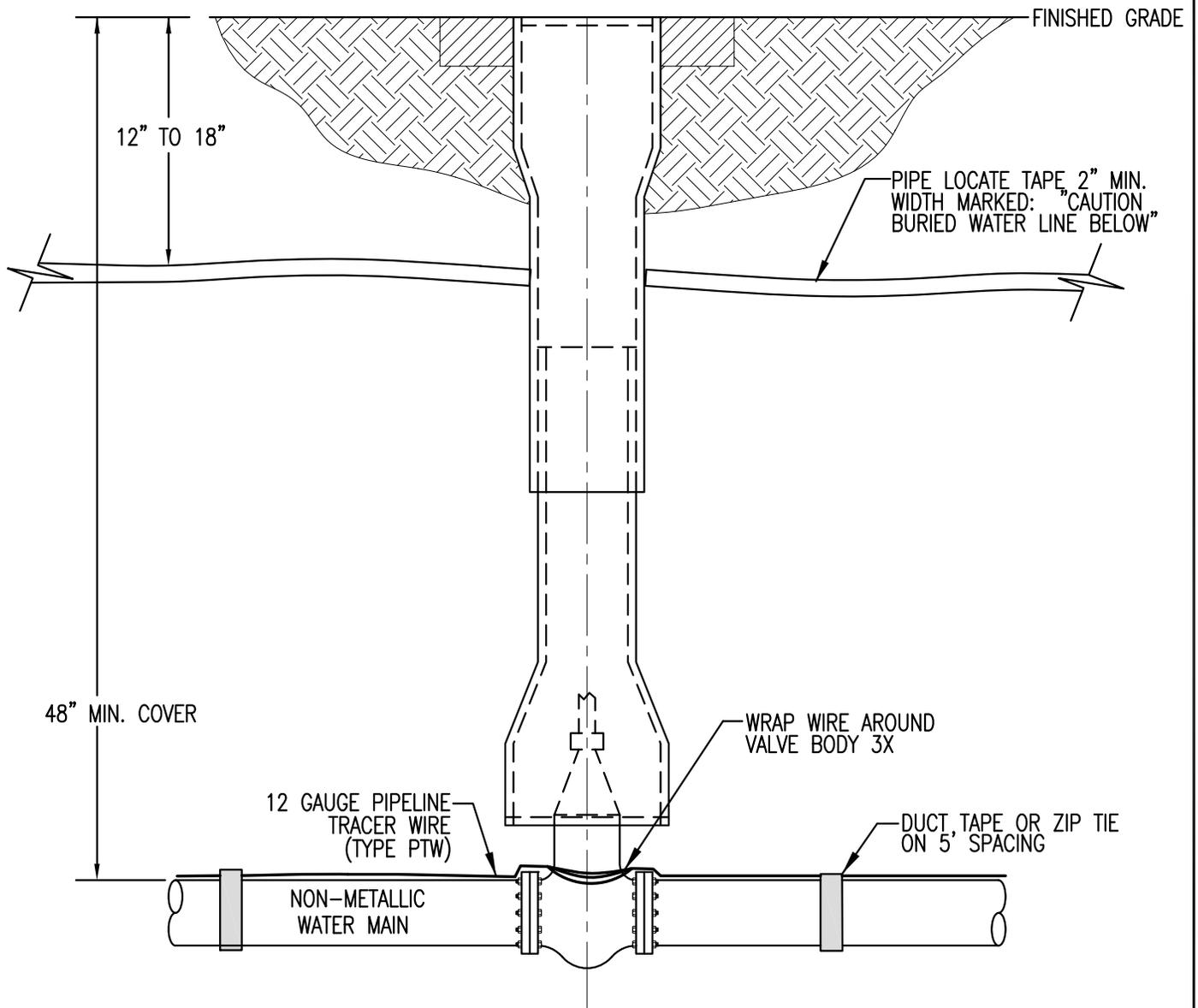
APPR. BY: PKR

DATE: 12.2010

DRAWN BY: SC NYBY

DWG: W11

CAD FILE: 2012_W11_12_2010



NOTES:

1. TEST WIRE PRIOR TO PAVING
2. INSTALL ELECTRICAL WATER TIGHT CONNECTORS (GEL PACKS) THAT SNAP TOGETHER AFTER TRACER WIRE HAS BEEN SPLICED.



**TRACER WIRE
INSTALLATION (NON-
METALLIC WATER MAINS)**

CIVIL & UTILITY ENGINEERING

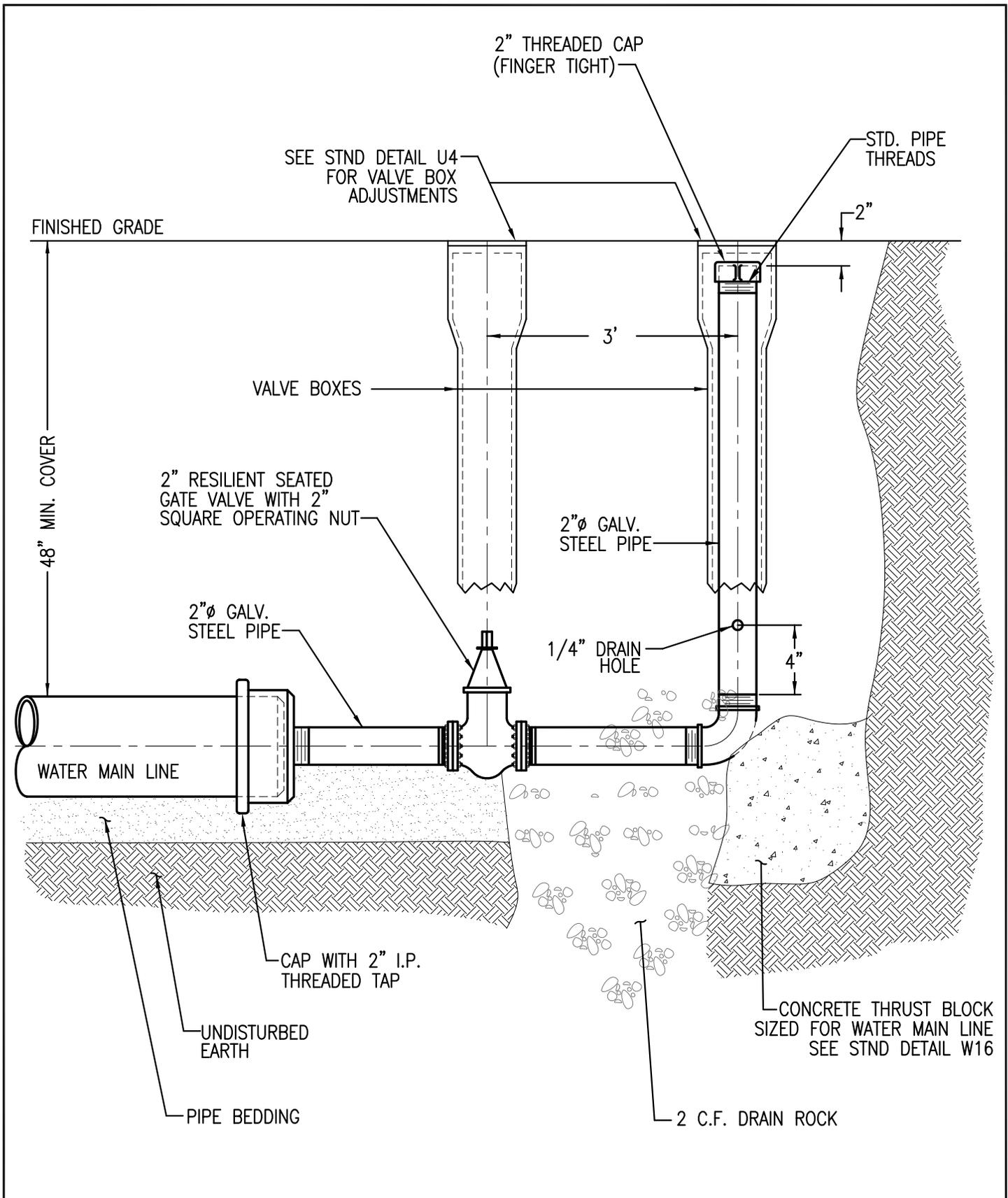
APPR. BY: PKR

DATE: 12.2010

DRAWN BY: SC NYBY

DWG: W12

CAD FILE: 2012_W12_12_2010



TEMPORARY BLOW-OFF ASSEMBLY

CIVIL & UTILITY ENGINEERING

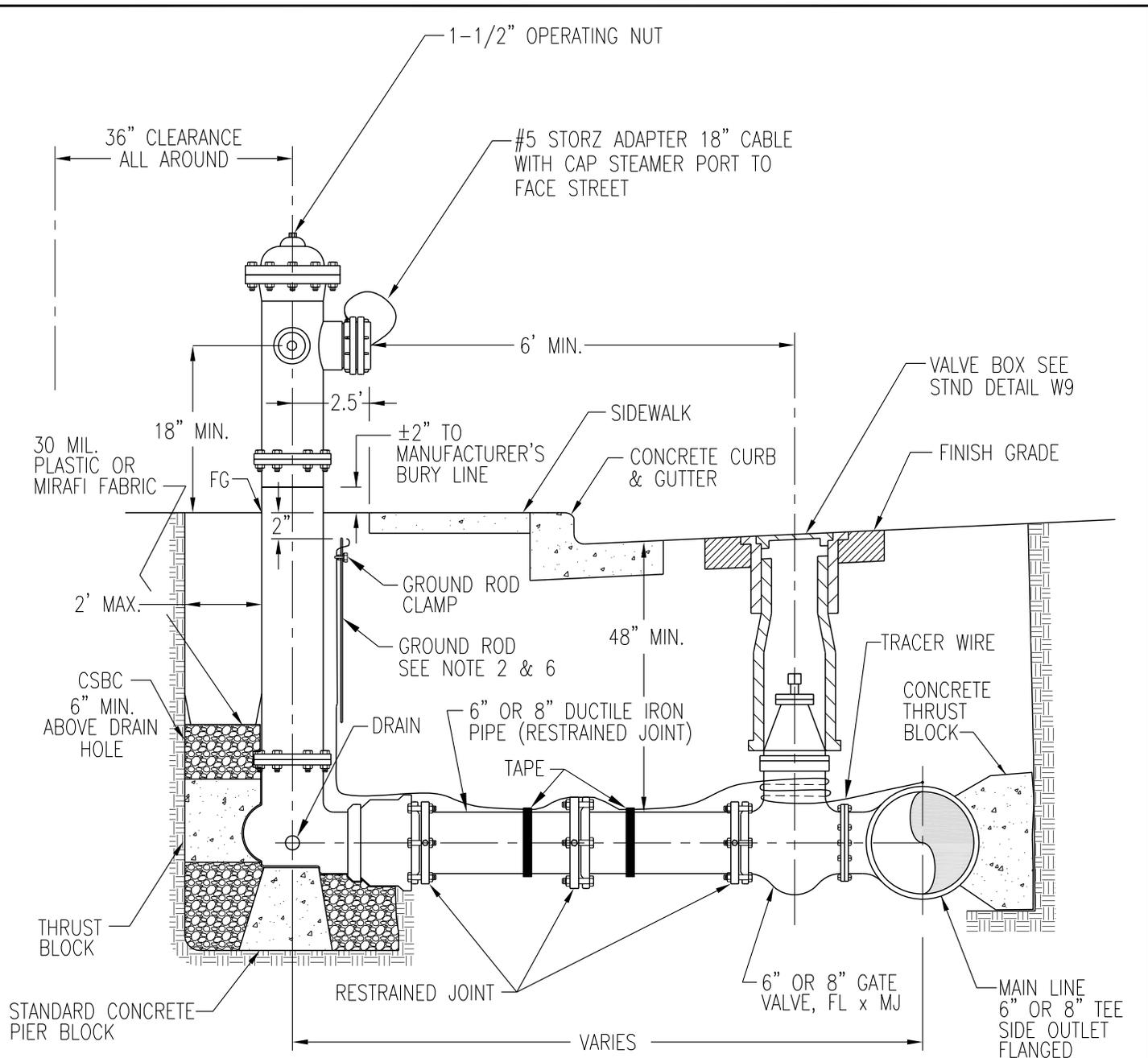
APPR. BY: PKR

DATE: 03.2012

DRAWN BY: JKS

DWG: W13A

CAD FILE: 2012_W13A_03_2012



NOTES:

1. SEE STANDARD DETAIL W15 FOR BOLLARD POST REQUIREMENTS. CONTACT ENGINEER FOR PLACEMENT LOCATION. 5'x10' CONCRETE SIDEWALK TO BE PLACED AROUND HYDRANT AS DIRECTED BY ENGINEER.
2. USE 2' GROUND ROD WHEN MAINLINE PIPE IS NON-METALLIC.
3. IF FIRE HYDRANT IS MORE THAN 50' AWAY FROM THE WATER MAIN, INSTALL 8" LINE & VALVE WITH 8" X 6" REDUCER AT HYDRANT.
4. LOCATE FIRE HYDRANT 2' BEHIND CURB WHERE NO SIDEWALK IS PRESENT.
5. NO EXTENSIONS ALLOWED ON NEW INSTALLATIONS.
6. IF FIRE HYDRANT IS INSTALLED WITHIN CONCRETE, GROUND ROD SHALL BE EXTENDED 2" ABOVE CONCRETE, TRACER WIRE TO BE CLAMPED BELOW CONCRETE.



FIRE HYDRANT DETAIL

CIVIL & UTILITY ENGINEERING

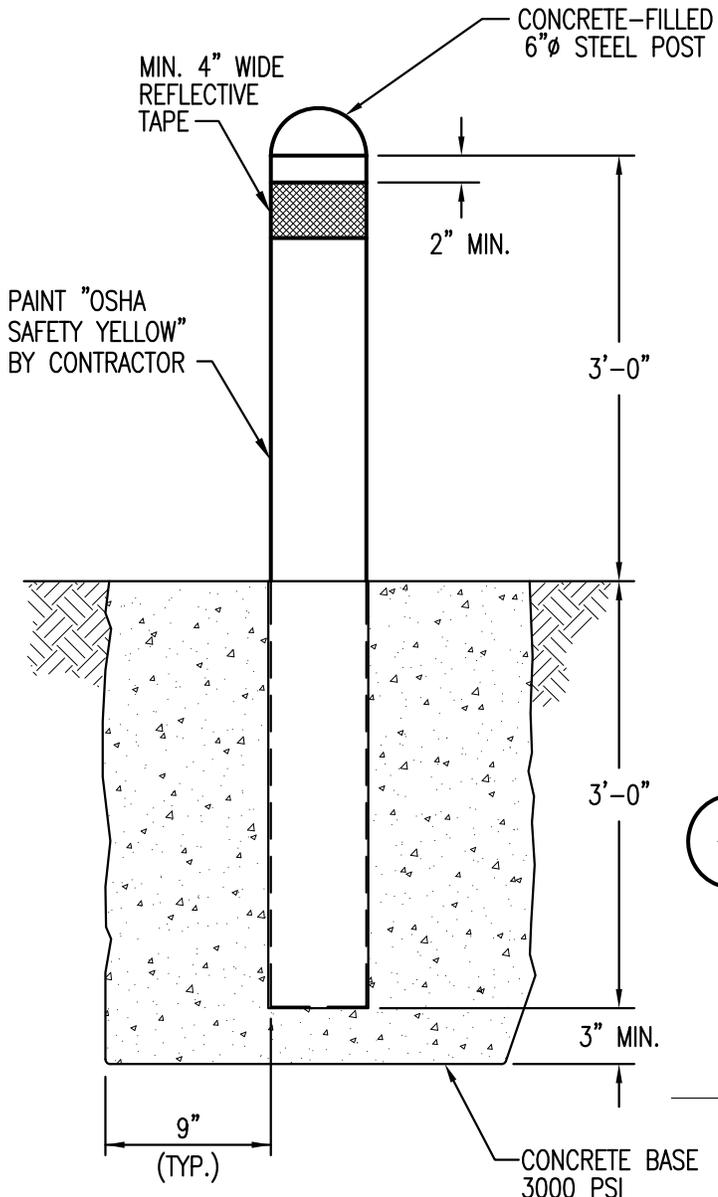
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DATE: 05.14

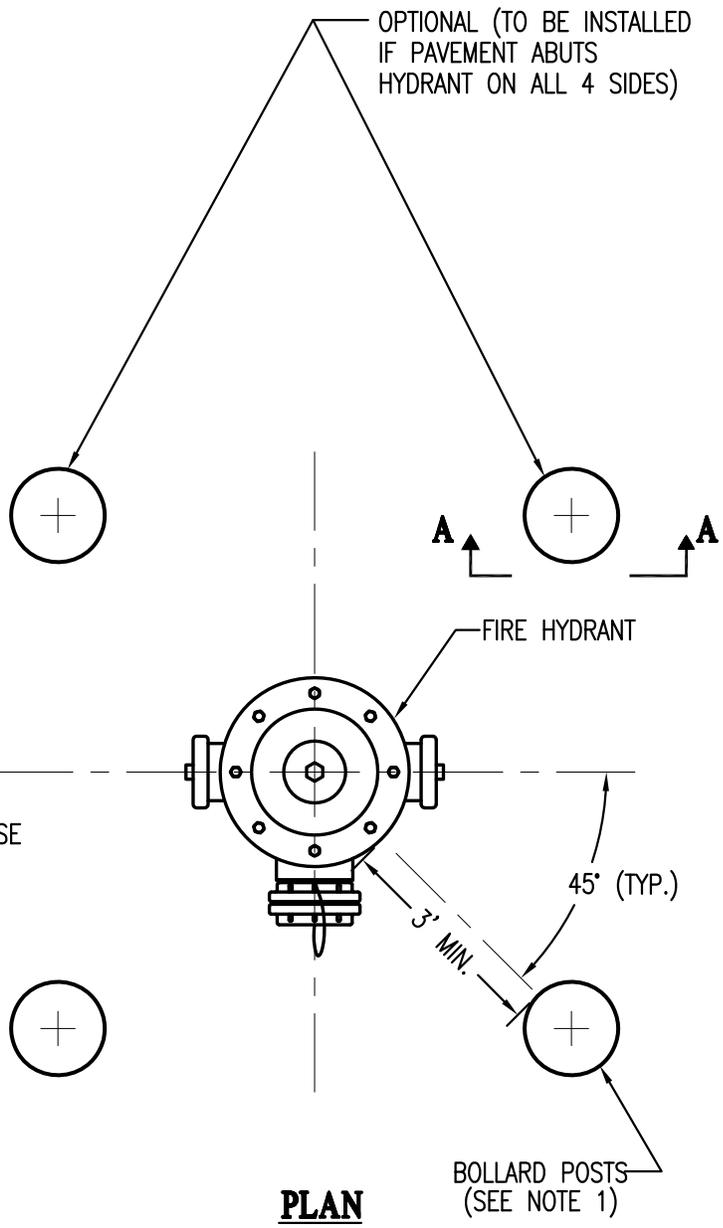
DRAWN BY: LD

DWG: W14

CAD FILE: 2014_W14_05_2014



SECTION A-A



PLAN

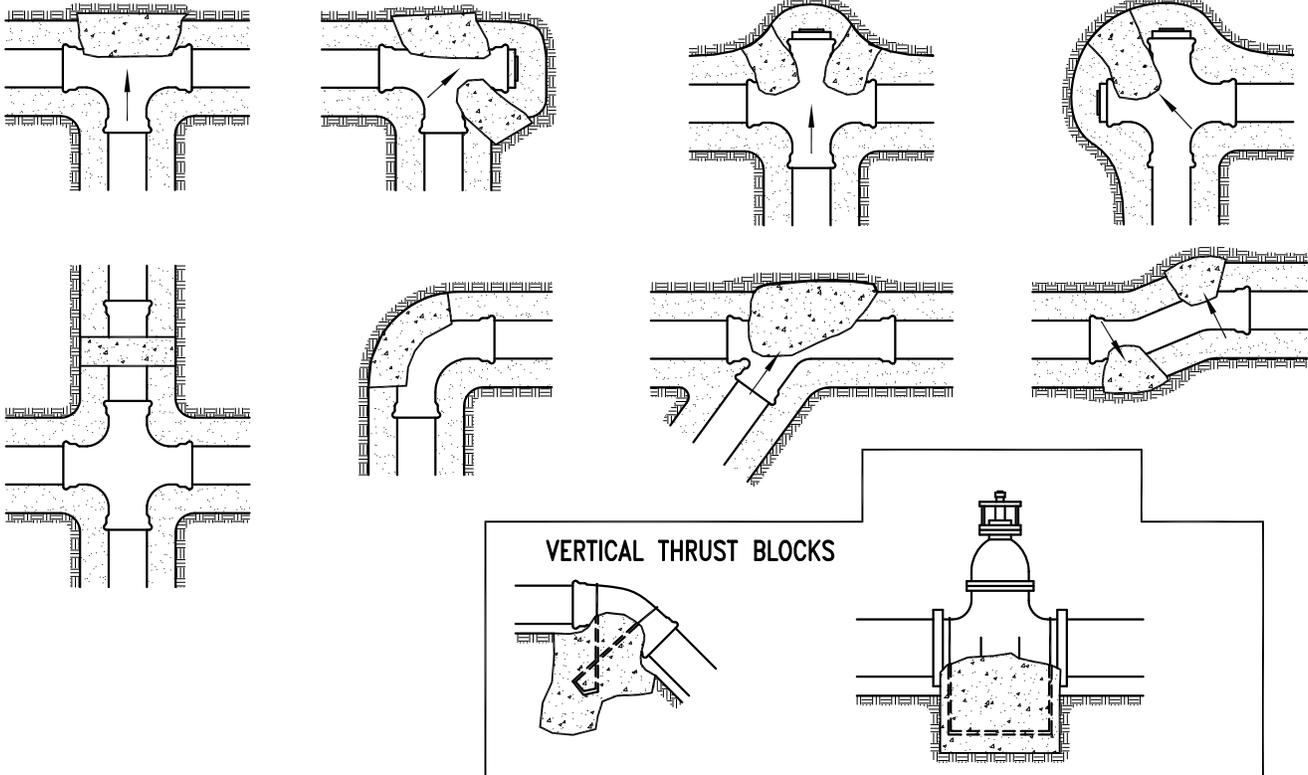
NOTE:

1. WHERE CONCRETE CURBING IS NOT INSTALLED, BOLLARD POSTS (2 EA. MIN) SHALL BE INSTALLED ON SIDE FACING PAVED SURFACE.



BOLLARD POSTS

| | |
|-----------------------------|---------------|
| CIVIL & UTILITY ENGINEERING | |
| APPR. BY: PKR | DATE: 12.2010 |
| DRAWN BY: SC NYBY | DWG: W15 |
| CAD FILE: 2012_W15_12_2010 | |



| Pipe Size in Inches | HORIZONTAL THRUST BLOCKS | | | | VERTICAL THRUST BLOCKS | | |
|---------------------------|------------------------------|-------------|-------------|----------------------------|-------------------------|----------------------------------|---------------------|
| | Tees, Wyes & Dead Ends | 90° Bend | 45° Bend | 11 1/4° 22 1/2° Bend | 45° Vertical Bend | 11-1/4° 22-1/2° Vert. Bend | Restrained Valve |
| 4 & Smaller | 1.41 | 2.00 | 1.08 | 0.56 | 0.56 | 0.29 | 0.72 |
| 6 | 3.18 | 4.50 | 2.43 | 1.25 | 1.25 | 0.63 | 1.62 |
| 8 | 5.66 | 8.00 | 4.34 | 2.21 | 2.21 | 1.13 | 2.90 |
| 10 | 8.84 | 12.50 | 6.77 | 3.45 | 3.45 | 1.76 | 4.52 |
| 12 | 12.72 | 18.00 | 9.74 | 4.97 | 4.98 | 2.54 | 6.50 |
| 14 | 17.33 | 24.50 | 13.26 | 6.75 | * | * | 8.85 |
| 16 | 22.62 | 32.00 | 17.31 | 8.82 | * | * | 11.55 |
| 18 | 28.64 | 40.50 | 21.92 | 11.18 | * | * | 14.63 |
| 20 | 35.34 | 50.00 | 27.05 | 13.79 | * | * | 18.06 |
| 24 | 50.90 | 72.00 | 38.96 | 19.86 | * | * | 26.00 |

NOTES:

1. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2. KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES.
3. ABOVE BEARING AREA AND VOLUMES ARE CALCULATED AT A SOIL BEARING CAPACITY OF 2000 PSF AND A TEST PRESSURE OF 225 PSI.
4. 6 MIL. PLASTIC TO BE PLACED BETWEEN THRUST BLOCK AND FITTINGS.
5. VALVES SHALL HAVE CONCRETE RESTRAINT BLOCKS AS SPECIFIED ABOVE UNLESS THE VALVE IS FLANGED TO A TEE, CROSS OR SIMILAR FITTING OR ANOTHER METHOD OF RESTRAINT IS PROVIDED.

*NO VERTICAL BENDS WITHOUT SPECIFIC APPROVAL BY THE ENGINEER.



THRUST BLOCKING DETAILS

CIVIL & UTILITY ENGINEERING

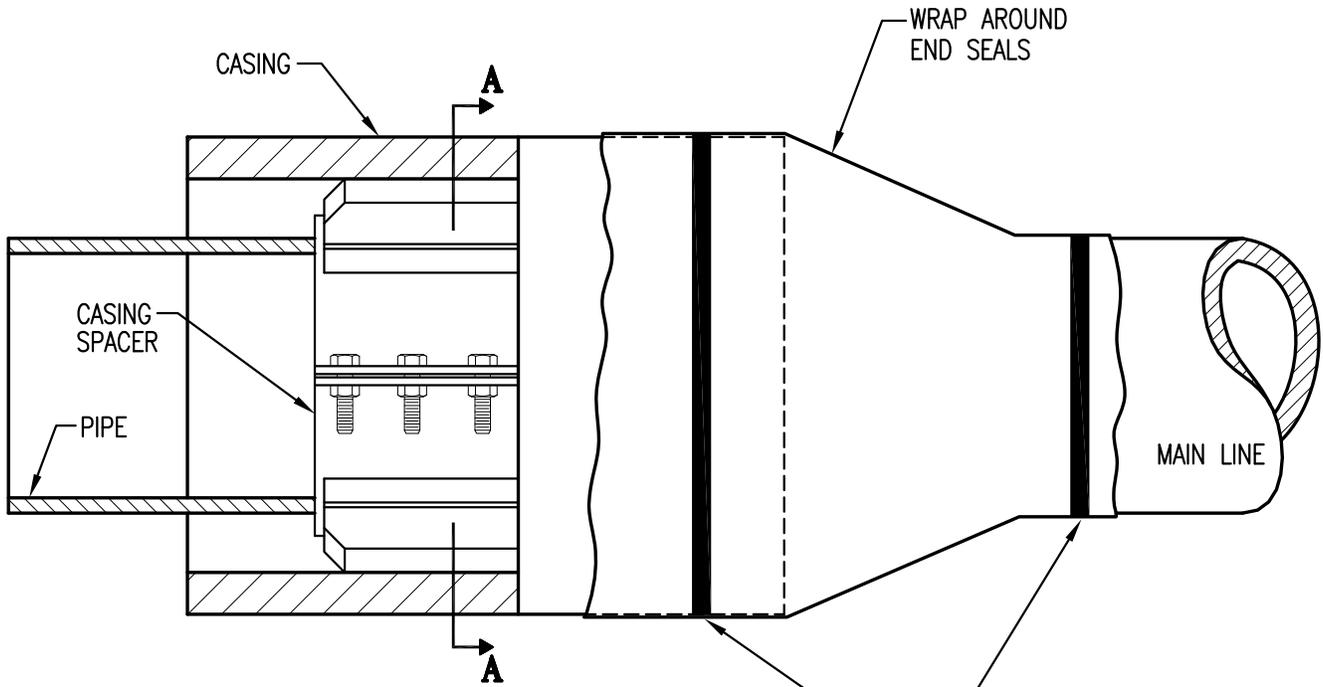
APPR. BY: PKR

DATE: 12.2010

DRAWN BY: SC NYBY

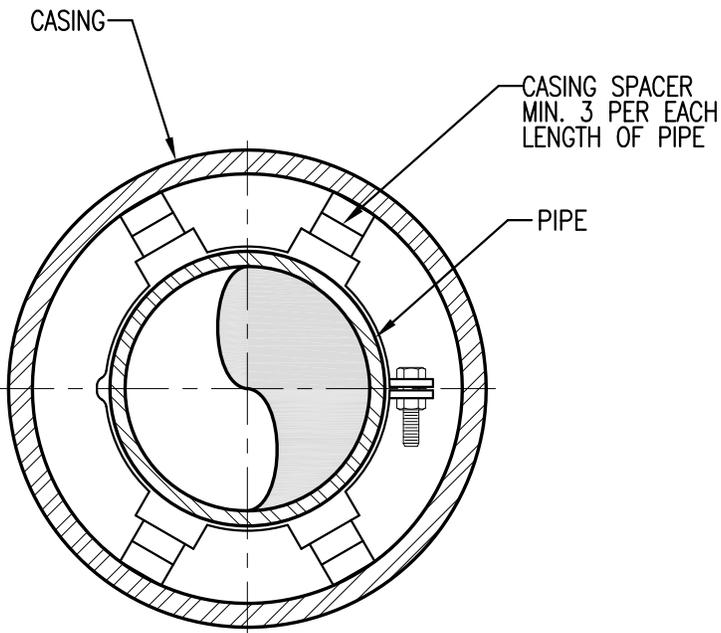
DWG: W16

CAD FILE: 2012_W16_12_2010



CASING SPACER

1/2" WIDE (MIN.)
STAINLESS STEEL BANDS
TIGHTEN AS REQUIRED



SECTION A-A

NOTES:

1. CASING SPACERS SHALL BE MANUFACTURED GALVANIZED OR STAINLESS STEEL, SIZED FOR THE TYPE OF PIPE & CASING SIZE PER THE MANUFACTURERS RECOMMENDATION.
2. CASING TO BE SIZED TO PROVIDE MINIMUM 2" CLEARANCE FOR THE TYPE OF JOINT APPROVED BY THE CITY ENGINEER.
3. PIPE JOINTS WITHIN CASING TO BE RESTRAINED JOINT AS APPROVED BY THE CITY ENGINEER.
4. FOR PIPES 12" AND SMALLER, 2 SPACERS PER JOINT OF 13' SEWER, 4 SPACERS PER JOINT OF 18' OR 20' WATER.
5. MINIMUM 3/8" THICK STEEL CASINGS MAY BE REQUIRED BY THE RAILROAD OR IRRIGATION UTILITY.



CASING SPACER

CIVIL & UTILITY ENGINEERING

APPR. BY: PKR

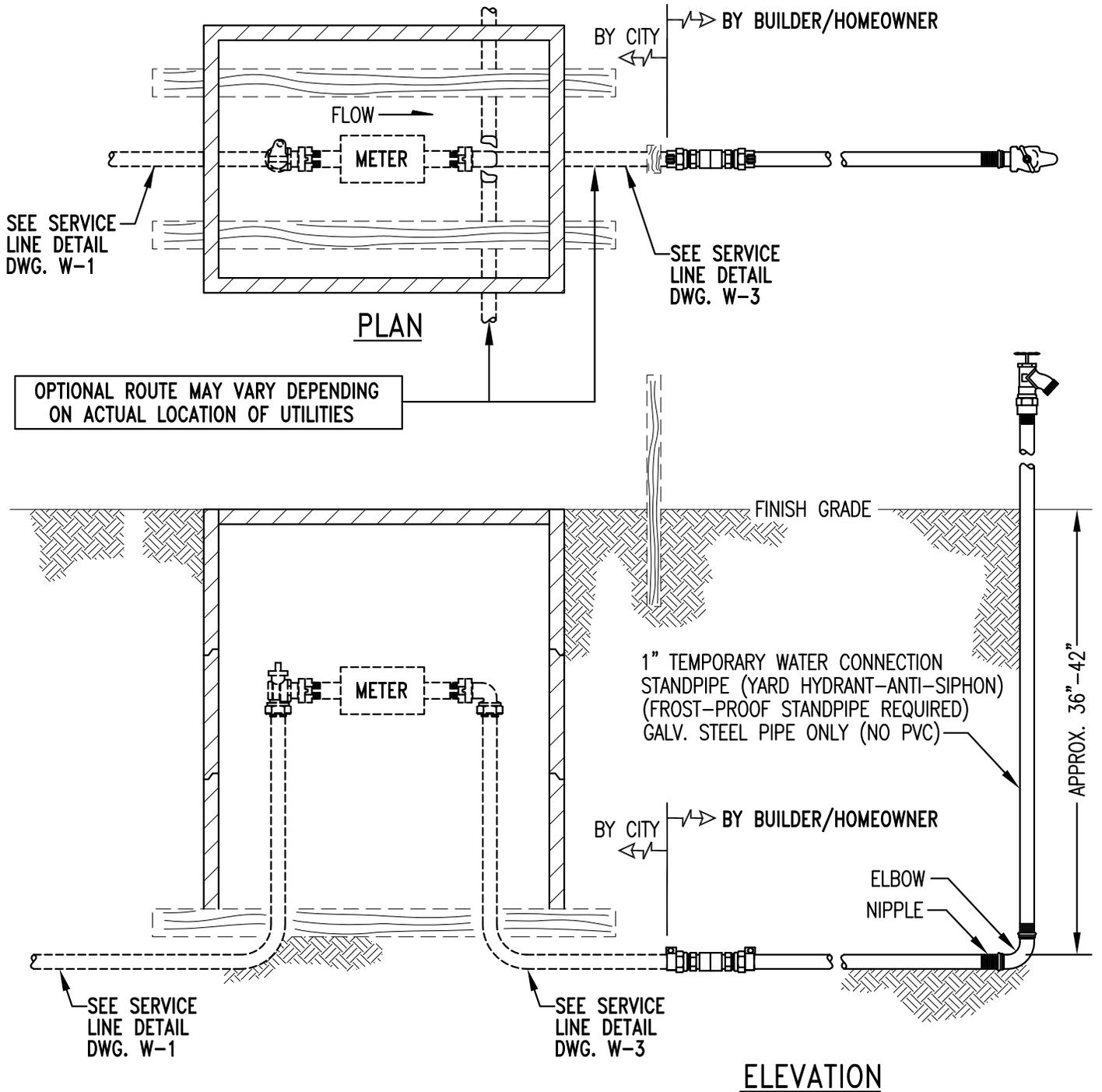
DATE: 12.2010

DRAWN BY: SC NYBY

DWG: W17

CAD FILE: 2012_W17_12_2010

**BUILDER IS RESPONSIBLE FOR THE WATER SERVICE IF DAMAGED -
 A \$300.00 MINIMUM FEE WILL BE CHARGED. * ADDITIONAL
 FEES MAY BE CHARGED FOR EXTENSIVE DAMAGE OVER \$300.00.**



**WATER SERVICE
 CONNECTION FOR
 NEW RESIDENTIAL LOT**

CIVIL & UTILITY ENGINEERING

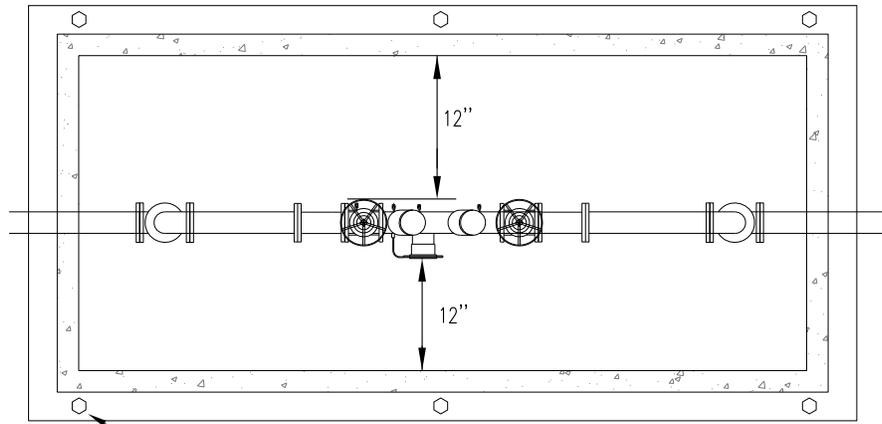
APPR. BY: PKR

DATE: 03.2012

DRAWN BY: SC NYBY

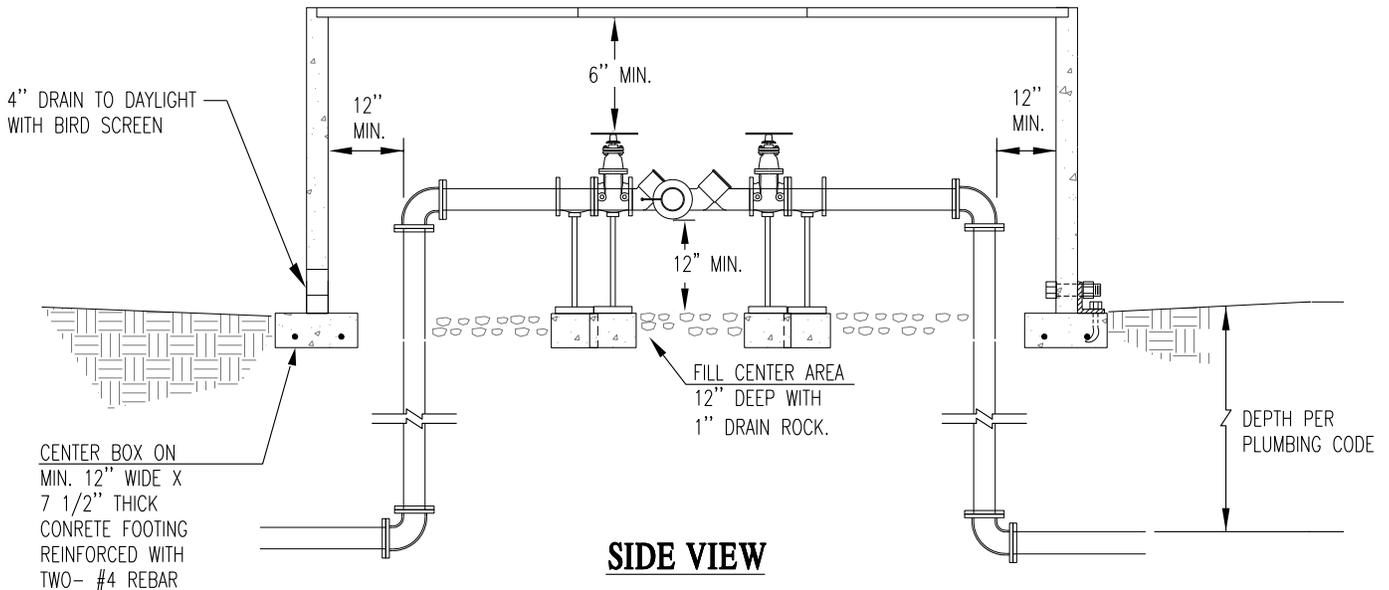
DWG: W18

CAD FILE: 2012_W18_03_2012



BOLT BOX TO CONCRETE PAD WITH 3/8 INCH ANCHOR BOLTS, WASHERS AND BRACKETS MIN. SIX LOCATIONS.

TOP VIEW



SIDE VIEW

NOTES:

1. MUST BE ON THE LATEST WASHINGTON DEPARTMENT OF HEALTH APPROVED LIST OF BACKFLOW PREVENTION ASSEMBLIES.
2. MUST BE INSTALLED ABOVE GROUND MINIMUM 12 INCHES.
3. MUST BE PROTECTED FROM FREEZING CONDITIONS. INSTALL HEAT TAPE FOR FREEZE PROTECTION.
4. DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
5. THE BACKFLOW DEVICE SHALL BE TESTED UPON INSTALLATION BY A QUALIFIED BACKFLOW ASSEMBLY TESTER (B.A.T.) AND TEST RESULTS SENT TO THE CITY OF RICHLAND WATER QUALITY COORDINATOR, THEN RETESTED ANNUALLY THEREAFTER.
6. OWNER SHALL FURNISH, INSTALL AND MAINTAIN THE BACKFLOW DEVICE AND ALL PIPING AND APPURTENANCES SHOWN ON THIS PLAN.
7. THE BACKFLOW DEVICE SHALL BE INSTALLED DIRECTLY DOWNSTREAM OF THE CITY WATER METER.
8. THE BACKFLOW DEVICE SHALL ONLY BE INSTALLED IN THE ORIENTATION FOR WHICH THEY ARE APPROVED.



**REDUCED PRESSURE
BACKFLOW ASSEMBLY
DEVICES 2" AND SMALLER**

CIVIL & UTILITY ENGINEERING

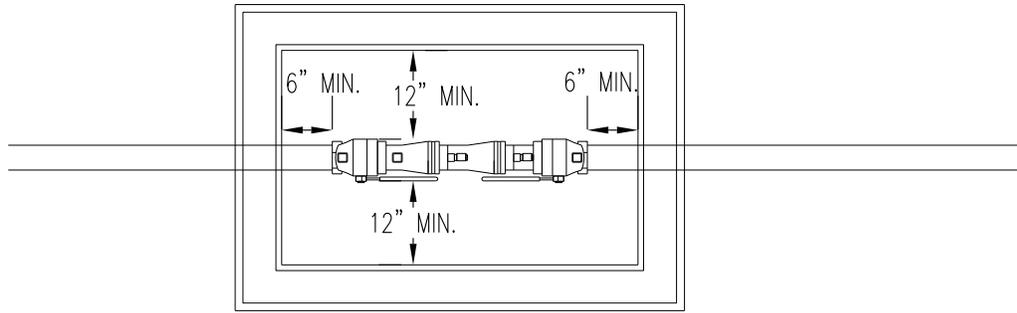
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DATE: 09.13

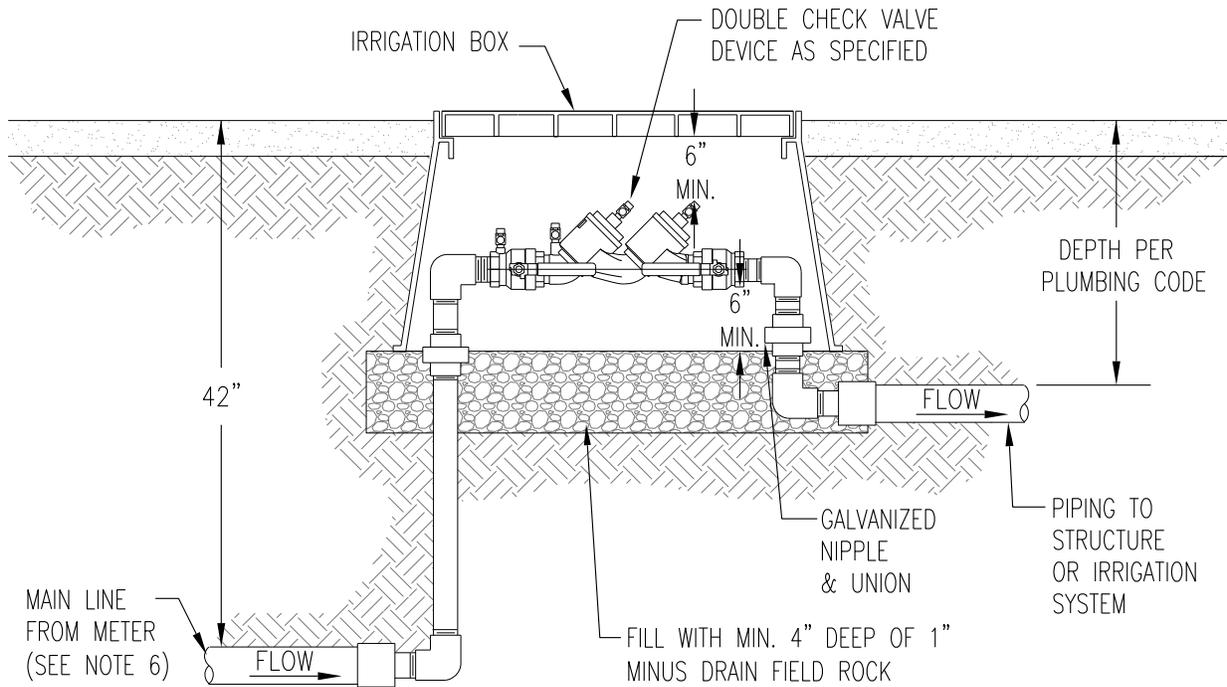
DRAWN BY: LD

DWG: W19

CAD FILE: 2013_W19_09_2013



PLAN VIEW



SIDE VIEW

NOTES:

1. MUST BE ON THE LATEST WASHINGTON STATE DEPARTMENT OF HEALTH APPROVED LIST OF BACKFLOW PREVENTION ASSEMBLIES.
2. MAY BE INSTALLED BELOW GROUND IN APPROVED VAULT.
3. THE BACKFLOW DEVICE SHALL BE TESTED UPON INSTALLATION BY A QUALIFIED BACKFLOW ASSEMBLY TESTER (B.A.T.) AND TEST RESULTS SENT TO THE CITY OF RICHLAND WATER QUALITY COORDINATOR, AND THEN RETESTED ANNUALLY THEREAFTER.
4. FREEZE PROTECTION IS THE RESPONSIBILITY OF THE OWNER.
5. RISERS AND ALL PIPE IN BOX TO BE GALVANIZED.
6. THE BACKFLOW DEVICE SHALL BE INSTALLED DIRECTLY DOWNSTREAM OF THE CITY WATER METER.
7. THE BACKFLOW DEVICE SHALL ONLY BE INSTALLED IN THE ORIENTATION FOR WHICH THEY ARE APPROVED.
8. OWNER SHALL FURNISH, INSTALL AND MAINTAIN THE BACKFLOW DEVICE, ALL PIPING AND APPURTENANCES SHOWN ON THIS PLAN.



**DOUBLE CHECK
VALVE ASSEMBLY
DEVICES 2" OR SMALLER**

CIVIL & UTILITY ENGINEERING

APPR. BY: PKR

DATE: 09.13

DRAWN BY: LD

DWG: W20

CAD FILE: 2013_W20_09_2013