



CITY OF RICHLAND

PUBLIC WORKS 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 along with a PDF version 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. That Department will dictate the appropriate number of copies needed for plan submittal.
2. The applicant shall pay a plan review fee based on a cost-per-sheet of engineering infrastructure plans. This public infrastructure plan review fee shall apply each time a project is submitted for review. This fee will be different for commercial projects versus subdivision projects. Please visit the Public Works Private Development page on the City's webpage to find the current per-sheet fee. This fee only applies to the pertinent civil infrastructure sheets and is due at the time of the consecutive submittal of plans for review (e.g., the fee for the first review is due when the second review is dropped off).
3. The first plan set package submitted for review shall contain:
 - Completed "Private Development Cost Estimating Tool";
 - Completed "Right-of-way Construction Application & Submittal Checklist".Plan submittals not accompanied by those two items will be deemed incomplete and the plan review "clock" will not be started until they are received.
4. 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.
5. One copy of stamped storm drainage calculations and any other supporting 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.
6. If required, a State Stormwater Permit shall be obtained prior to the pre-con meeting and the Right-of-Way Construction Permit issuance. See requirements below and on the City of Richland Public Works webpage.

7. After the construction plans are approved a minimum of 9 full-size stapled paper copies are required (unless stated differently) along with a PDF copy. The contractor shall also provide all material submittals and an insurance certificate naming the City as insured prior to the pre-con meeting. All paper construction sets will be stamped (and redlined, if necessary) by the City Engineer and 5 of the paper 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 water division
- 1 copy to the City streets division
- 1 copy to Richland Energy Services

3 of the paper copies will be stamped and given back to the contractor & project developer.

8. 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 an amount equal to 3% of the public infrastructure construction cost will be collected when the construction permit is issued. This permit may also include other fees such as street signage and water tapping fees that are also required for the project. This fee shall be calculated using the City's Infrastructure Cost Estimating Tool which is available on the Public Works webpage.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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.

15. 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.
16. 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.
17. 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 it is a long run, it intersects other piping, and/or there are substantial grade changes involved. Check with the City Engineer first before assuming a profile is not needed.
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. Vertical bends need to be noted in the plan view, and horizontal bends need to be noted in the profile.
4. 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.
5. The finished ground elevation shall be provided at the location of all new fire hydrants.
6. 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.
2. Horizontal bends need to be noted in the profile

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.
1. Location, size, number designation, rim elevation and grate elevation of all manholes, inlets and catch basins.
2. 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.
3. Centerline elevation at all ends of curves, intersection points, angle points and changes of slope.
4. Super-elevated roadways shall include a 2 (or 3) -line profile.
5. Submittals constructing new curb & gutter adjacent to an existing rural-section roadway need to include surveyed spot elevations at:
 - edge of asphalt
 - existing centerline
 - designed flowline of gutter

6. 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. Include all street signage on street lighting sheet. This is needed as often the street light poles can be used as signage poles.
3. 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. All water mains shall be installed with 4-feet of cover. Legitimate conflicts that arise during design or in the field can force the water main to be installed shallower or deeper than this. Under no circumstances shall the amount of cover over a water main be less than 30-inches or greater than 66-inches. The water main shall return to 48-inches of cover immediately beyond the conflict.
4. Water service lines shall not be located within driveways or driveway transitions.
5. 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.

6. Water meters should be installed within 2-feet of the property corner, but shall not be installed so close as to be in conflict with other utilities installed at that corner.
7. Longer water services (longer than 50-feet) shall be upsized to 2-inches to reduce pressure loss due to friction. Long service lines shall have no couplings and shall be a continuous piece of pipe.
8. 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. See standard details.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. A minimum of 2 valves are required at a tee. A minimum of 3 valves are required at a cross.
15. Valves 8-inches and smaller shall be gate valves. Valves 10-inches and larger shall be butterfly valves.
16. 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.
17. All PVC water mains shall have a locate wire installed over them per city standard details. If a ductile iron water main will have more than 48-inches of cover, it too shall have a locate wire over it.
18. 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.

19. The above-ground portion of any required ARVs shall be piped to the nearest lot corner.
20. 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.
21. A minimum horizontal separation of ten-feet shall be maintained between water mains and sewer mains and service lines when running parallel. 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.
22. 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.
23. Fire hydrants shall be located at the ends of curb returns or at property lines between lots.
24. Fire hydrants shall not be located within driveways, driveway transitions or handicap ramps. Keep hydrants 5-feet from driveways whenever possible, or protect with bollards.
25. 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.
26. All fire hydrant runs shall be restrained ductile iron pipe with thrust blocks.
27. The finished grade around the base of the new hydrant shall be noted on the plans. Extensions are not allowed on new hydrant installations.
28. 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.
29. 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
30. No bends are allowed in fire hydrant runs. If a bend can't be avoided, the fittings shall be "mega-lugged" and all-threaded.
31. Dead end fire hydrant runs that are 50-feet or longer shall be 8-inch diameter pipe, minimum.
32. 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.
33. If a new utility line crosses under an existing asbestos cement (AC) water pipe, a section of the asbestos cement water pipe shall be replaced with ductile iron pipe prior to the undermining. This replacement shall be completed by the City at the developer's expense.
34. 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. See standard details.
35. Watermains shall be extended to all adjacent properties, 10-feet past the end of pavement.

36. City standards state that watermains can only be deflected to 50% of the manufacturers recommendation. Bending the pipe is strictly prohibited.
37. City of Richland ordinance RMC Chapter 18.13 pertains to 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.
38. The City of Richland has a 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.
39. 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.
40. 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.
41. 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 Barbra 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. A State Stormwater Permit shall be obtained prior to Right-of-Way construction permit issuance.
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 pipe 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 with curb inlets shall be located at the ends of curb returns or at property lines between lots. Catch basins without curb inlets do not have to be installed at property lines.
21. Catch basins and inlets shall not be located within driveways or pedestrian ramps.
22. 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.
23. 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.
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.
4. 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).
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. A maintenance road to the bottom of the pond from the City Right of Way will be needed. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. Fenced basins shall include a gate with a minimum opening of 12-feet at the vehicular entrance point.
13. 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.

14. 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.
15. 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.

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.
9. Private streets are currently not allowed, per RMC.
10. 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.
11. 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.
12. 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. One way driveways shall be signed as such, and shall also have painted arrows on the pavement directing the flow of cars.
13. The site obstruction triangle at street intersections and driveway access points shall be kept clear of obstructions as noted in municipal code.

14. The vision-clearance triangle needs to be shown on all corner lots on both the construction plans and the final plat document, in accordance with RMC Chapter 12.11.020. If the intersection is in a curve, it will have to be evaluated per AASHTO guidelines. This information may need to be designed by the engineer of record and supplied to the surveyor of record for inclusion into the final plat document.
15. 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.
16. 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.
17. 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.
18. 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.
19. 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.
20. Street name signs and regulatory signs on minor streets will be located and installed by City crews at the developer's expense, as will striping. Regulatory signs on major streets will be evaluated on a case by case basis.
21. 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. The street light layout needs to be designed using the American National Standard Practice for Roadway Lighting, IES RP-8-14. Please use it to design the street light intersection layout, which calls for providing a luminaire approximately 20-feet ahead of the pedestrian crossing locations on both sides of the non-stop-controlled street. Once the intersection and ped. crossing layouts are designed the rest of the light locations can then be designed around them.
- 2. 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.
- 3. 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.
- 4. Two street lights are required at each intersection, placed 20-feet before the pedestrian crosswalks on the non-stop-controlled roadway.
- 5. 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.
- 6. 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.
- 7. Include all street signage on street lighting sheet. This is needed as often the street light poles can be used as signage poles.

8. As-built record drawings shall indicate which exact model of light was installed.
9. 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.
10. Street lights shall not be installed in a location that will cause conflict with another utility.

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 Public Works 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, and all storm manholes with solid lids shall have channeled bases, 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.