Coeur d'Alene

CITY COUNCIL MEETING

March 17, 2009

MEMBERS OF THE CITY COUNCIL:
Sandi Bloem, Mayor
Councilmen Edinger, Goodlander, McEvers, Bruning, Hassell, Kennedy

CONSENT CALENDAR

MINUTES OF A REGULAR MEETING OF THE CITY COUNCIL OF THE CITY OF COEUR D'ALENE, IDAHO, HELD AT THE LIBRARY COMMUNITY ROOM MARCH 3, 2009

The Mayor and Council of the City of Coeur d'Alene met in a regular session of said Council at the Coeur d'Alene City Library Community Room March 3, 2009 at 6:00 p.m., there being present upon roll call the following members:

Sandi Bloem, Mayor

John Bruning	)	Members of Council Present
A. J. Al Hassell, III	)	
Deanna Goodlander	)	
Mike Kennedy	)	
Woody McEvers	)	
Loren Ron Edinger	)	

CALL TO ORDER: The meeting was called to order by Mayor Bloem.

INVOCATION was led by Youth Pastor Joe Tuttle, Heart of the City Church.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was led by Councilman Bruning.

PRESENTATIONS

STUDENT ATHLETE RECOGNITION: School Superintendent Hazel Bauman introduced the vice-principals for the two high schools. She announced the athletic teams that have had 100% participation in the drug testing program. Tonight the following teams were recognized: Coeur d'Alene High School 2008-2009 Boys Varsity, Junior Varsity, and Freshman Basketball teams and the Varsity Cheerleaders and Junior Varsity Cheerleaders; Coeur d'Alene High School 2008-2009 Girls Junior Varsity, Sophomore, and Freshman Basketball teams; Coeur d'Alene High School 2008 Girls Junior Varsity Soccer; Coeur d'Alene High School Girls Varsity and Junior Varsity Volleyball teams, Coeur d'Alene High School Freshmen Wrestling team; and, Lake City High School Varsity Cheerleaders.

TECHNICAL RESCUE TEAM: Deputy Fire Chief Jim Washko presented an overview of the new Technical Rescue Team that has been organized using Federal grant funds. The City has one of the three task forces for Collapse Search and Rescue Teams within the State. Their goal is to treat this the same way as the Hazmat Teams for deployment of large incidents. He reported on the progress of this group, which includes identifying the teams, training and procurement of equipment.

PUBLIC COMMENTS:

Kathryn Kinsel, 621 Foster, voiced her concerns regarding the 4th Street project and the closure of that street during construction impacting the traffic flow on the side

streets in residential areas. She requested that speed bumps be placed on all residential streets parallel to 4th Street to control the speed of vehicles during the construction of 4th Street.

Harold Hocker, 1413 E. Spokane Ave. commented that speed bumps mean nothing to motorists. He noted that speed bumps are also a bad situation for emergency vehicles. He had called 15th "little I-90" as motorists travel 50 miles per hour and turn corners on two-wheels because of the speed at which they are traveling. He also commented that the MC 13 gang is taking over all the other gangs and if those gangs don't join them they kill them.

Jim Brannon, 1310 Bering, commented that LCDC has polarized this town more than anything else. He noted that the Council was elected to provide oversight of LCDC and asked the Council exercise that oversight to assure ethics in government.

Susan Snedaker, 821 Hastings, asked the Council to tape and televise Officer Mark Todd's presentation on gangs.

Dan Gookin, 714 W. Empire Avenue, commented on the lease renewal for the University of Idaho. He opposed the city leasing the space for $10.00 per year when Lewis Clark State College, the State Forensic Lab and other entities pay several thousand dollars a year to University of Idaho to sublease portions of Harbor Center.

Mary Souza, 4153 W. Fairway Drive, Coeur d'Alene, commented that LCDC member Charlie Nipp failed to file a disclosure form declaring a conflict of interest with the City regarding the property he owns within the LCDC district and that he serves on the Board of Mountain West Bank. She commented that only when the City received a request for information, did the City scramble to get the disclosure documents signed. She stated that she is not here to complain about Mr. Nipp's disregard in filing the disclosure form, but believes that the Mayor and Council need to remove Mr. Nipp from the LCDC board immediately because the Mayor and Council are responsible for the public's trust.

Councilman Goodlander said she has served on the LCDC Board for the past 7 years and she has never witnessed Mr. Nipp do anything but what was best for the community. She finds the character assassination and the continual attacks by a small group of people offensive. She stated that she can no longer sit quietly by and let this small group of people including Jim Brannon and Mary Souza continually attack those citizens that try to serve for the betterment of their community.

CONSENT CALENDAR: Motion by Kennedy, seconded by Bruning to approve the Consent Calendar as presented.

1. Approval of minutes for February 17, 2009.
2. Setting the General Services Committee and the Public Works Committee meetings for Monday, March 9th at Noon and 4:00 p.m. respectively.

3. RESOLUTION 09-011: A RESOLUTION OF THE CITY OF COEUR D'ALENE, KOOTENAI COUNTY, IDAHO AUTHORIZING THE BELOW MENTIONED CONTRACTS AND OTHER ACTIONS OF THE CITY OF COEUR D'ALENE INCLUDING APPROVAL OF A LEASE AGREEMENT EXTENSION FOR MEMORIAL FIELD CONCESSION; APPROVAL OF A LEASE RENEWAL WITH THE UNIVERSITY OF IDAHO FOR HARBOR CENTER; APPROVAL OF A WAIVER OF OPPOSITION TO ANNEXATION AGREEMENT WITH CORY AND JUANITA TRAPP; APPROVAL OF A PROFESSIONAL SERVICES AGREEMENT WITH WELCH COMER ASSOCIATES FOR RIGHT-OF-WAY PLAN DEVELOPMENT FOR THE GOVERNMENT WAY PROJECT; APPROVAL OF A INTERGOVERNMENTAL AGREEMENT FOR SHARING LAW ENFORCEMENT INFORMATION AND BID AWARD AND APPROVAL OF A CONTRACT WITH SHANNON INDUSTRIAL CONTRACTORS, INC. FOR THE 2009 WWTP – STORMWATER LIFT STATION UPGRADE.
4. Approval of maintenance and management of Prairie Trail.
5. Approval of cemetery lot repurchase from Susan Mallory.

STAFF REPORT: City Administrator Wendy Gabriel reported that over the past 10 years, a group of interested citizens have been working toward providing access for higher education to the community. Today, the agreement now includes North Idaho College (NIC), Lake City Development Corporation LCDC), Stimson Lumber Company, Burlington Northern/Santa Fe Railway, Bureau of Land Management, Lewis and Clark State College (LCSC), the City, and the University of Idaho. She noted that the University of Idaho approached this group about opening a facility close to NIC. The city saw this as a continued collaboration with the University of Idaho, NIC and LCSC. She noted that as part of this lease the University of Idaho pays for the maintenance of the facility at Harbor Center which totals approximately $200,000 a year including $30,000 set aside for future maintenance of Harbor Center. The four universities that use this facility (LCSC, University of Idaho, Boise State College and Idaho State College) employee in excess of 60 employees. These four institutions serve over 1,600 students. Additionally, the University of Idaho provides training to city staff. Overall they have provided over 300 hours of training to City staff. For example, five employees are either currently taking or have completed the GIS program which is a total of 15 credits per person at a rate of $35/credit. The University of Idaho also provides a city employee their Executive MBA program which is a $35,000 cost. She noted that as we face stricter water quality standards the University of Idaho is looking for a multi-million dollar grant for a state of the art research and education opportunity with the City's wastewater treatment plant. On a final note, she believes this partnership is a great opportunity to the residents of our community to be able to receive university level training at a local site.

Mayor Bloem commented that Mr. Gookin had suggested that the City make reasonable and justifiable decisions and she believes that the City Administrator showed that the city is doing just that. Councilman Kennedy noted that not all city programs may pencil out in a business formula, but some projects such as the education corridor bring much more value to the residents of the city than just dollars.

Councilman Goodlander also noted that although the city has been criticized about placing the universities next to the WWTP, it is more of a partnership between the City and the University of Idaho and the university wants to use the plant for university level education. Councilman McEvers noted that for him the biggest benefit of having the universities here is that children in the community have an opportunity to attend a university whom might not otherwise be able to do so. Councilman Bruning commented that other cities would "kill" to have the universities in their community and we are very fortunate to have them in ours. He also noted that with the cost of education going up it helps that the students can stay at home while attending higher education facilities.

ROLL CALL: Kennedy, Aye; McEvers, Aye; Bruning, Aye; Edinger, Aye; Hassell, Aye; Goodland, Aye. Motion carried.

RE-APPOINTMENT – SIGN BOARD: Motion by Hassell, seconded by Edinger to re-appoint Jeff Connaway to the Sign Board. Motion carried.

ADMINISTRATOR'S REPORT: City Administrator Wendy Gabriel announced that the City held its first Health Fair today with 25 vendors from several businesses. She gave a special thanks to the members of the Citifit Committee that put on this event. City The Water Department is looking for volunteers to allow us to conduct coliform bacteria testing at their homes and/or businesses. If anyone is interested in participating they are asked to contact the Water Department at 769-2210. The Kootenai Metropolitan Planning Organization is doing a transit center location study with a focus on operational efficiencies and transfer connectivity. The study is anticipated to be completed by July. Ironman is looking for volunteers for the July 21st event. The Kootenai County Environmental Alliance announced that Jim Markley was given this year's President Award for his water conservation efforts. Dirk Kempthorne will be speaking at a luncheon on March 5th. The city received a grant from Gametime Equipment for Northshire Park and as soon as the snow melts the new equipment will be installed. The Chamber of Commerce is sponsoring a You-tube contest with North Idaho College and Lewis and Clark State College in which the contestant will produce a video on "How to get to higher education in the areas of professional technical programs". The deadline is March 23rd for any submittals. Coeur d'Alene was ranked No. 2 in "Best Cities" in the Greenstreet Real Estate Partners for 2008. The March 10th Upbeat Breakfast guest speaker will be Steve Griffitts from Jobs Plus who will be addressing the value of economic growth. Congratulations to Tom Hiltenbrand who was selected as the Fire Department's employee of the year. There will be a Town Hall meeting on March 14th between 8:30 – 10:00 a.m. in the Library Community room. Our local legislators will be here to comment on this year's legislative session. McKenzie River Pizza collected $3,000 at their grand opening for the Specialized Needs Recreation Program. Also, Mrs. Gabriel announced that the Specialized Needs Recreation Board needs members, so if anyone is interested in serving on that board to please call City Hall. This year's Parks Day Celebration will be held on June 11th and we still looking for volunteers. The Arbor Day button contest deadline is Friday March 6th. The annual Library Writers Competition's deadline is March 31st. Entry forms are available at the Library or through

their website. Mrs. Gabriel also announced that the Library has access to tax forms through their website . The City Council will be meeting with the Planning Commission and Mark Hinshaw regarding the design of East Sherman Avenue. The public is invited to attend this workshop to learn about the proposal. Regarding the 4th Street Improvement Project, Mrs. Gabriel noted that there be one lane open at all times during construction. She also noted that the US 95 construction project is not a road construction project but rather a fiber optic installation project that does not entail disruption to the roadway. There will be a Midtown Open House from 4:00 – 7:00 p.m. on Wednesday, March 4th and it will be held in the old Council chambers at City Hall. March 14th is the annual St. Patrick's Day Parade beginning 4:00 p.m. Entries can be obtained from the Downtown Association.

GUIDED TOURS AND KAYAKING – TUBBS HILL: Councilman Edinger presented a proposal from Peter Grubb, owner of ROW Adventures, to provide commercial guided tours of Tubbs Hill and kayaking around Tubbs Hill. Councilman Edinger noted that the Parks Department and associated volunteers have provided guided tours around Tubbs Hill in the past and upon request if personnel were available. Usually volunteers were called upon to do the tours. The City does not provide kayaking services as there is a vendor at Independence Point that rents kayaks. The tours are not provided with the rental service. The walking tour would end at 11th Street where the tourists would get their kayak and continue the tour. He noted that an RFQ would allow the City to invite qualified firms to an interview and have that firm share how they would approach this venture and to explain to them what our expectations would be with regard to access, clean-up, staging, etc.

Councilman Hassell asked if the City was going to look at other types of walking ventures other than guided tours. Councilman Edinger noted that he and Councilman Bruning had concerns about having kayaks unloading on the west side of Tubbs Hill due to the current traffic and congestion on that side of the Hill.

Parks Director Doug Eastwood commented that he believes that the idea has some merit since this is an opportunity for residents and visitors alike to visit this hill in a guided tour setting and kayaking is becoming a more popular sport. This does have the opportunity to generate some revenue which could go to the Tubbs Hill Improvement Fund. He also noted that if the City does not manage the commercial venues using Tubbs Hill, there could be conflict with noncommercial users of the Hill. Mr. Eastwood outlined the routes of the guided tour on Tubbs Hill and the kayaking tour. Additionally, he noted that the City could regulate the size of the tour groups.

Councilman Kennedy commented that he is torn between keeping Tubbs Hill as a public space and possible conflicts in using Tubbs Hill for commercial activities. Mr. Eastwood responded that he has never heard of or witnessed any conflicts between the public and commercial activities. He believes that guided tours to educate the public on the sensitivity of the Hill would allow the public to gain a better appreciation for the Hill.

Councilman Edinger reiterated his concern of the kayakers going onto the west side of the Hill and would prefer they turn around at the point and return to 11th Street. Mayor Bloem noted that the City currently has for profit activities at Phippeny Park, scuba diving lessons being taught from City Park, and believes that this would open up a can of worms and believes that the City needs to look at all the public spaces being used for commercial uses and then develop a consistent policy for all public spaces. Mr. Eastwood responded that commercial activity is currently not allowed in City parks; however, the City does not have the staff to police every park all hours of every day. Councilman Bruning noted that the Parks and Recreation Commission is currently looking at the entire public waterfront property for commercial usage.

Motion by Edinger, seconded by Bruning to authorize staff to solicit for Request for Quotes (RFQ's) to consider the idea of providing a guided hiking and kayaking service on Tubbs hill and along the shoreline of Lake Coeur d'Alene. Motion carried with McEvers voting no.

ADJOURNMENT: Motion by Edinger, seconded by Kennedy to recess this meeting to March 17, 2009 at 12:00 noon in the Council Chambers for a joint City Council/Planning Commission workshop regarding East Sherman Gateway Zoning District. Motion carried.

The meeting adjourned at 8:05 p.m.

_____
Sandi Bloem, Mayor

ATTEST:

_____
Susan K. Weathers, CMC
City Clerk

RESOLUTION NO. 09-012

A RESOLUTION OF THE CITY OF COEUR D'ALENE, KOOTENAI COUNTY, IDAHO AUTHORIZING THE BELOW MENTIONED CONTRACTS AND OTHER ACTIONS OF THE CITY OF COEUR D'ALENE INCLUDING APPROVAL OF AN AGREEMENT WITH THE COEUR D' ALENE TRIBE / CITYLINK FOR DONOR-FUNDED BUS STOP BENCHES; APPROVAL OF A CONTRACT WITH GEOENGINEERS FOR FACILITATOR BY DISCHARGES FOR TMDL; APPROVAL OF A LETTER OF AGREEMENT FOR THE KOOTENAI COUNTY PUBLIC TRANSPORTATION 2009-2010 BUDGET; APPROVAL OF A ONE-MONTH EXTENSION TO THE LEASE AGREEMENT WITH THE SALVATION ARMY FOR THE OLD LIBRARY BUILDING AND BID AWARD AND APPROVAL OF A CONTRACT WITH SHANNON INDUSTRIALS CONTRACTORS, INC. FOR THE WWTP PHASE 5A – AMMONIA REDUCTION IMPROVEMENT PROJECT.

WHEREAS, it has been recommended that the City of Coeur d'Alene enter into the contract(s), agreement(s) or other actions listed below pursuant to the terms and conditions set forth in the contract(s), agreement(s) and other action(s) documents attached hereto as Exhibits "1 through 5" and by reference made a part hereof as summarized as follows:

1) Approval of an Agreement with the Coeur d' Alene Tribe / Citylink for donor-funded bus stop benches;

2) Approval of a Contract with GeoEngineers for Facilitator by Discharges for TMDL;

3) Approval of a Letter of Agreement for the Kootenai County Public Transportation 2009-2010 Budget;

4) Approval of a one-month extension to the Lease Agreement with the Salvation Army for the Old Library Building;

5) Bid Award and approval of a Contract with Shannon Industrials Contractors, Inc. for the WWTP Phase 5A – Ammonia Reduction Improvement Project;

AND;

WHEREAS, it is deemed to be in the best interests of the City of Coeur d'Alene and the citizens thereof to enter into such agreements or other actions; NOW, THEREFORE,

BE IT RESOLVED, by the Mayor and City Council of the City of Coeur d'Alene that the City enter into agreements or other actions for the subject matter, as set forth in substantially the form attached hereto as Exhibits "1 through 5" and incorporated herein by reference with the provision that the Mayor, City Administrator, and City Attorney are hereby authorized to modify

said agreements or other actions so long as the substantive provisions of the agreements or other actions remain intact.

BE IT FURTHER RESOLVED, that the Mayor and City Clerk be and they are hereby authorized to execute such agreements or other actions on behalf of the City.

DATED this 17th day of March, 2009.

_____
Sandi Bloem, Mayor

ATTEST

_____
Susan K. Weathers, City Clerk

Motion by _____, Seconded by _____, to adopt the foregoing resolution.

ROLL CALL:

COUNCIL MEMBER BRUNING Voted _____

COUNCIL MEMBER GOODLANDER Voted _____

COUNCIL MEMBER MCEVERS Voted _____

COUNCIL MEMBER HASSELL Voted _____

COUNCIL MEMBER KENNEDY Voted _____

COUNCIL MEMBER EDINGER Voted _____

_____ was absent. Motion _____.

PUBLIC WORKS
STAFF REPORT

DATE: March 9, 2008
FROM: Jon Ingalls, Deputy Administrator

SUBJECT: BENCHES FOR BUS STOPS INITIATIVE

DECISION POINT:
Whether the City Council should approve the attached license agreement with Citylink that would enable donor-funded bus stops maintained by Citylink to be placed in City public right of way for the purposes of providing a place for persons using public transportation a better place to wait a bus.

HISTORY:
An ongoing "Benches for Bus Stops" initiative was presented to the City Council on February 3, 2009. It was pointed out that Citylink ridership continues to grow significantly and that Citylink riders have expressed interest in the installation of benches to be placed at certain key bus stops as an amenity while they are waiting to catch a bus. A community service club (Craig Wilcox/Idaho Panhandle Kiwanis & Public Transportation Roundtable) has been working with the Coeur d'Alene Tribe, Citylink, Spokane Regional Transit Council/Kootenai Metropolitan Planning Organization (KMPO), Knock Marketing, City of Post Falls, and the Disability Action Center Northwest on this initiative with the goal of raising funds to have simple, sturdy benches placed initially at priority bus stop locations (a list of initial locations is attached to the agreement). It is envisioned that these bus stops would be built and places by volunteers, so keeping them simple is important.

FINANCIAL ANALYSIS:
It is envisioned that the proposed benches would be provided at no cost to the city through the efforts of a service club working with community donors who may wish to pay for one or more individual benches. Since this is for a community effort, Council may wish to enable all of the bus stops in Coeur d'Alene to be permitted under a single $100 permit.

PERFORMANCE ANALYSIS:
The attached license agreement defines the installation, maintenance, signage, and indemnification requirements. As for signage, per city code, there would be no advertizing allowed on the benches, however our sign code allows for a recognition in the form of a contributor placard that can be affixed to the bench (no more than 25% of the bench area and only the contributor's name or business name (no phone numbers or addresses). Individual installation of the benches would be through encroachment permits, one for each site that will trigger inspection.

DECISION POINT/RECOMMENDATION:
It is recommended that the attached license agreement with Citylink be approved as discussed above.

Attachment: (1) License Agreement (with Exhibit "A" attached defining locations)

LICENSE AGREEMENT

The **City of Coeur d' Alene**, Kootenai County, Idaho, a political subdivision of the state of Idaho, hereinafter referred to as the "City" or "Licensor," hereby grants a license to the **Coeur d'Alene Tribe**, hereinafter referred to as the "Licensee", to encroach into the public right of way as described below. The Coeur d'Alene Tribe operates Citylink, the fixed route public transit provider for Kootenai County, whose address is 27068 South Highway 95, Worley, Idaho 83876-0236.

This license is subject to the following terms and conditions:

1. This license to encroach is granted to allow the Licensee to install a bench or benches within the public right of way for the purpose of providing a place for persons using the public transportation system to wait for the bus. The location of the licensed premises is depicted on **Exhibit "A"** attached hereto and incorporated herein by reference.

2. The bench installation must comply with the all of the following design and installation criteria:

   a. The benches must conform to Americans with Disabilities Act (ADA) Standards and be constructed of materials that will withstand the inclement weather that Coeur d' Alene experiences, without rusting, warping, splintering or fading. The design and materials for the benches must be approved by the City prior to installation.

   b. The benches must be affixed to the ground in a manner that will allow them to remain in place during normal usage, but will separate from the ground if hit by a motor vehicle.

   c. Any signage on the benches must be approved by the City and comply with the Coeur d' Alene Sign Code and any subsequent amendments thereto.

3. The City shall have the right to terminate this license for any reasons upon thirty (30) days written notice to the Licensee, addressed to the Transportation Manager - Citylink Transit, of its intention to terminate the license. The Licensee shall be deemed to have received such written

notice three (3) days after such notice addressed to the Licensee at the location hereinbefore described is deposited in the United States mail so addressed, with proper postage affixed thereto or upon delivery if the notice is hand-delivered to any one of the Licensee. The Licensee shall remove such encroachment within thirty (30) days of receiving such notice. Should the Licensee fail to remove the encroachment, at Licensee' cost, within such time, the City may remove the same at the expense of the Licensee.

4. In the event that the encroachment becomes an immediate hazard to the public, the City shall have the right to terminate this license without prior notice to the Licensee and to remove the encroachment at the expense of the Licensee.

5. Nothing herein contained shall imply or import a covenant on the part of the Licensor for quiet enjoyment of the real estate upon which the encroachment is constructed. The City may remove and replace or request that the benches be relocated to a different location to accommodate their infrastructure needs. Any required relocation would be performed at the licensee's expense.

6. LICENSEE shall indemnify and hold harmless the CITY for any and all liability and damages for personal injuries, property damage or for loss of life or property resulting from, or in any way connected with, the condition or the use of the premises covered by this license, or any means of ingress thereto or egress therefrom, except liability for personal injuries, property damages or loss of life or property caused solely by the negligence or other fault of the CITY other than those damages caused by snow plowing or other road and utility maintenance activities.

7. LICENSEE agrees to incorporate the licensed premises into the property covered by its general liability insurance policy and to provide CITY with proof of such coverage. Coverage shall name the City of Coeur d' Alene as an additional insured and shall be maintained in a coverage amount no less than $500,000/occurrence. Licensee's insurer shall notify City of a change in coverage at least 30 days before the coverage change is effective.

8. All costs for said encroachment including but not limited to maintenance, use or operation during the term of the license shall be borne by Licensee. LICENSEE shall maintain the license property as well as the benches installed pursuant to this license in good condition and repair, keeping them free from garbage, paper and other debris, keeping the grass, weeds and bushes thereon cut and trimmed so that the same shall not become unsightly or a fire hazard. *The responsibility for clearing the snow off the sidewalk remains with the adjacent property owner.*

9. It is understood by the Licensee that Licensee shall hold the City harmless from liability from damages from any lack of authority or jurisdiction to grant this license.

10. Licensee agrees that Licensee will not encroach beyond the maximum limits allowed herein and that said encroachment is allowed only for the purposes set forth herein and shall not be expanded without prior written consent of the City.

11. Licensee agrees and acknowledges that this license is not an easement and does not convey any real property interest in the land to Licensee nor does it run with the land. It is specific to the Licensee and may not be assigned by the Licensee to a third party, nor does it enure to the benefit of the Licensee's heirs.

12. The CITY does not warrant or represent that the premises are safe, healthful or suitable for the purposes for which they are permitted to be used under the terms of this License. This License shall convey no interest in said land to the LICENSEE. The LICENSEE further agrees that it does not now and shall never assert a claim to any interest to said property and recognizes the CITY to be the owner thereof, and the LICENSEE'S use and occupancy of said property is merely permissive.

13. If the City is required to bring action to enforce the terms or provisions of this license, or to enforce the agreement, or to collect damages for breach of the agreement, the City shall be

entitled to recover from the Licensee reasonable attorney fees together with costs authorized by law.

IN WITNESS WHEREOF, the parties hereto have executed this License Agreement on this 17th day of March, 2009.

LICENSOR	LICENSEE
CITY OF COEUR D' ALENE	COEUR D'ALENE TRIBE
By_____	By_____
Sandi Bloem, Mayor	Chief J. Allan, Chairman

ATTEST:

_____
Susan Weathers, City Clerk

****

STATE OF IDAHO)
) ss.
County of Kootenai)

On this 17th day of March, 2009, before me, a Notary Public, personally appeared **Sandi Bloem** and **Susan K. Weathers**, known to me to be the Mayor and City Clerk, respectively, of the City of Coeur d'Alene that executed the foregoing instrument and acknowledged to me that said City of Coeur d'Alene executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certificate first above written.

_____
Notary Public for Idaho
Residing at _____
My Commission expires: _____

STATE OF IDAHO)
) ss.
County of Kootenai)

On this _____ day of March , 2009, before me, a Notary Public, personally appeared **Chief J. Allan,** known to me to be the **Chairman**, of **Citilink**, and the persons who executed the foregoing instrument on behalf of said corporation, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certificate first above written.

_____
Notary Public for Idaho
Residing at
My Commission Expires:

Exhibit "A"

Citylink Bus Stop – Coeur d'Alene Locations

Government /Hanley	Both sides of the street north of Hanley Avenue.
Government/Dalton	Both sides of the street north of Dalton Avenue.
Government /Neider	Both sides of the street north of Neider Avenue.
College/Garden	North Idaho College – Student Union Building.
Front/2nd	Coeur d'Alene Resort. – south side of the street.
Mullan/8th	New Coeur d'Alene Library – south side of the street.
Mullan/11th	1102 East Mullan Avenue - south side of the street.
Mullan/19th	Beehive Homes – south side only.
Sherman/22nd	Japan Suites Motel – both sides of the street.
Sherman/Lilac	Lake Villa in Fernan – both sides of the street.
Sherman/15th	Shell Petrol Station - north side of street.
Sherman/11th	Ace Hardware store - north side of the street.
Sherman/7th	Zips - north side of the street.
Sherman/4th	Iron Horse Pub - north side of the street.
4th/Foster	Across from Computer shop – east side of the street.
4th/Miller	Across from Safeway – east side of the street.
Ironwood/95	Kootenai Medical Center – emergency room; north side of the street.
Riverstone	Transfer Point – Beebe Street, behind the parking garage.
Seltice/Grand Mill	Opposite US Bank Call Center – both sides of street.
Wilbur/Mineral	Behind Best Buy store - across from the Eastline electronics factory
Pinegrove/Sycamore	Opposite the condos – west side only.
Hanley/Ramsey	Across from the Methodist Church – north side only.
Ramsey/Dalton	Right opposite the State Street mobile park entrance – west side only.
Ramsey/Kathleen	Across from the Coeur d'Alene city shop – west side only.
Ramsey/Appleway	Just north of Goodies Conoco station – west side only.

Public Works Committee
Staff Report

To: Public Works Committee
From: H. Sid Fredrickson, Wastewater Supt.
Date: March 9, 2009
Subj: Contract for Facilitator by Dischargers for TMDL

DECISION POINT: The council may choose to enter into a contract, along with the other stakeholders, with GeoEngineers for facilitation services to assist the stakeholders in the ongoing negotiations with EPA and the Washington Department of Ecology. The cost is not to exceed $10,000. (Contract attached.)

HISTORY: EPA has decided to take a bi-state approach to water quality modeling that will lead to a Washington State Total Maximum Daily Load (TMDL) for dissolved oxygen. This modeling work will also be used by EPA to prepare new discharge permits for the Idaho dischargers (Coeur d'Alene, Post Falls & Hayden Area Regional Sewer Board [HARSB]).

The stakeholders are: Avista, Spokane County, City of Spokane, HARSB, Coeur d'Alene, Post Falls, Liberty Lake Water & Sewer District, Kaiser Aluminum, and Inland Empire Paper, This group has been meeting regularly with each other and with the regulators of both states and the EPA to try and reach agreement on what scenarios and conditions that we would like to see EPA incorporate in the modeling. These endeavors require a lot of time and effort by the staff of the stakeholders. It was apparent early on that it would be a benefit to have and independent facilitator to assist us. Sarah Hubbard-Gray of GeoEngineers was chosen from three firms that submitted qualifications

It was agreed that the stakeholders would share the costs equally. The total not-to-exceed is $90,000. This means each stakeholder will be responsible for $10,000. Avista will be the lead agency and will bill the other stakeholders.

FINANCIAL ANALYSIS: The current budget has a line item called "Permit Renewal Planning" and is set at $200,000. This line item would be used to fund this project.

PERFORMANCE ANALYSIS: It is imperative that we stakeholders and engage in all levels of discussion with the regulatory agencies during this critical period of TMDL development and water quality modeling. Simply put, the stakes and potential risk are incredibly high. We need a facilitator that will keep us focused and on track without putting unrealistic demands on our staffs.

DECISION POINT: The council may choose to enter into a contract, along with the other stakeholders, with GeoEngineers for facilitation services to assist the stakeholders in the ongoing negotiations with EPA and the Washington Department of Ecology. The cost is not to exceed $10,000. (Contract attached.)

Memorandum of Agreement
Spokane River Total Maximum Daily Load ("TMDL") Review
Spokane River Project

This Memorandum of Agreement ("MOA"), effective February 9, 2009, is entered into between the Cities of Coeur d'Alene, Post Falls and Spokane, Spokane County, Kaiser Aluminum Fabricated Products, LLC, Avista Corporation dba Avista Utilities ("Avista"), Hayden Area Regional Sewer Board, Inland Empire Paper Company, the Liberty Lake Sewer and Water District (collectively, the "Stakeholders") and GeoEngineers, Inc. ("Consultant"); collectively referred to as the "Parties".

Background and Purpose: Avista, on behalf of the Stakeholders, agreed to enter into an agreement (Avista Contract No. R-36053) with GeoEngineers ("Consultant") to provide consulting services to assist in the Spokane River TMDL review (the "Services") subject to the Stakeholders agreeing to pay their proportionate share of the compensation applicable under that Agreement. Any actions permitted under Avista Contract No. R-36053 shall require prior Stakeholder approval, evidenced by an e-mail to Avista's Authorized Representative, Meghan Lunney, from an authorized representative of each Stakeholder.

Therefore, the Parties agree as follows:

1. The Stakeholders are third-party beneficiaries to Avista Contract No. R-36053. As third-party beneficiaries, all information contained in the documents generated by Consultant shall be jointly owned by the Stakeholders and may be used by the Stakeholders in negotiations relating to issuance of permits to discharge effluent into the Spokane River. As third party beneficiaries, the Stakeholders may rely on the information contained in the documents for the purposes identified in this Section 1, subject to any limitations contained in such documents and the specific scope of services and limitations in Avista Contract No. R-36053.

2. Based on the benefit received by the Stakeholders from the work performed and made available to the Stakeholders by the Consultant, the Stakeholders agree to share in the costs of the work performed by the Consultant as set forth in Section 3 below. The Stakeholders acknowledge that the value of the benefit that each receives from the work performed by the Consultant is equal and is directly related to the end product(s) they will receive from Consultant.

3. Consultant shall submit a monthly invoice to each Stakeholder for an equal share ($1/9^{th)}$ of the compensation ("Compensation") applicable under Avista Contract No. R-36053 (a copy of which is attached to this MOA for ease of reference) in an amount not to exceed $10,000 per Stakeholder, for the value of the benefit received by each Stakeholder from the work performed by the Consultant on behalf of the Stakeholder and the end product(s) provided to the Stakeholder. If a Stakeholder fails to pay to Consultant the entire undisputed amount of any bill within 30 days following the mailing date of such bill (the "Due Date"), Consultant shall have the right to charge a late fee of 1-1/2% per month on the unpaid balance from the Due Date, until paid in full. Stakeholders shall notify Consultant within 20 days of the mailing day of an invoice of any billing disputes.

4. Consultant shall submit invoices to the attention of the contact person designated by each of the Stakeholders, as set forth on the attached "Facilitator Contract Signatures" document which has been incorporated into Avista Contract No R-36053 as Exhibit F. Consultant shall place the purchase order number (if any) assigned by a Stakeholder on all invoices.

5. Stakeholders shall pay each of Consultant's undisputed invoices within 30 days after receipt and verification of such invoices.

6. This MOA shall be governed by the laws of either the State of Washington or the State of Idaho, depending upon the location of the respective Stakeholder's legal address, excluding any choice of law rules which may direct the application of laws of another jurisdiction.

7. This MOA may be signed in any number of counterparts, each of which when signed, shall be an original, but all such counterparts shall constitute one and the same instrument. The term "counterparts" shall include full copies of such signed instruments delivered by facsimile transmission, as well as photocopies.

This MOA has been signed by each of the Parties' authorized representatives as set forth below.

Avista Corporation dba Avista Utilities

By _____

Its: _____

Spokane County

By _____

Its: _____

City of Spokane

By _____

Its: _____

City of Coeur d'Alene

By _____

Its: _____

City of Post Falls

By _____

Its: _____

Liberty Lake Sewer and Water District

By _____

Its: _____

Kaiser Aluminum Fabricated Products, LLC

By _____

Its: _____

Inland Empire Paper Company

By _____

Its: _____

Hayden Area Regional Sewer Board

By _____

Its: _____

GeoEngineers, Inc.

By _____

Its: _____

Staff Report to Mayor and Council

Date: March 17, 2009
From: Troy Tymesen, Finance Director
Subject: Public Transportation Agreement

Decision Point:
To approve the agreement and funding for the City's portion of the public transportation within the urbanized area of Kootenai County.

History:
The 2000 census designated the cities of Coeur d'Alene, Post Falls, Hayden, Huetter and Dalton Gardens to be an urbanized area within Kootenai County. These cities have partnered over the past three years in conjunction with Kootenai County and Panhandle Area Council (PAC) to provide public transportation, administration and planning. The exact same agreement was signed last year. The fiscal year for this Agreement is April 1, 2009 through March 31, 2010.

Financial Analysis:
The City is being asked to fund $43,983.00, the exact same as last year. The money is in the financial plan. Last year's agreement was signed in December 2008, which is why this looks very familiar. The City's portion is based on its population within the urbanized area. This money is being used as a match for funds from the Federal Transit Administration (FTA) Section 5307 funds. The total budget for the fiscal year is $1,694,586.00 and the portion funded by the FTA is $1,008,932.00 (60%).

Performance Analysis:
The funding of the requested $43,983.00 is just 3.0% of the total budget. This is an exceptional value to the constituents of the City of Coeur d'Alene. The City also provides the service of the Specialized Needs Recreation Van that was acquired with grant funds.

Quality of Life Analysis:
This expenditure will assist to enhance the public transportation in our City. This program continues to expand because of positive partnerships throughout the area. It is anticipated that there will be a passenger count of over 400,000 people boarding public transportation vehicles in Kootenai County in the next twelve months

Decision Point/Recommendation:
To approve the agreement and funding for the City's portion of the public transportation within the urbanized area of Kootenai County.

LETTER OF AGREEMENT

THIS AGREEMENT is entered into between the county of Kootenai, hereinafter "COUNTY" and the city of Coeur d'Alene, hereinafter "CITY", and shall be effective on the date all parties have affixed their signatures to this Agreement.

WHEREAS, the Urbanized Area of Kootenai County has been designated to include lands within the cities of Coeur d'Alene, Post Falls, Hayden, Dalton Gardens and Huetter; and

WHEREAS, federal funds under a Federal Transit Administration (FTA) Section 5307 grant are available to provide public transportation services, including public transportation administration and planning, within the Urbanized Area; and

WHEREAS, the COUNTY has been designated by the Governor of the state of Idaho as the grantee for Federal Transit Administration (FTA) Section 5307 funds; and

WHEREAS, having access to public transportation is a benefit to the citizens within the Urbanized Area; and

WHEREAS, municipalities are authorized to participate in the funding of public transportation;

NOW THEREFORE, It is agreed as follows:

1. The COUNTY shall be responsible for contracting with a public transportation service provider, providing for transportation planning and administration and for the distribution of the Section 5307 grant monies in order to provide for public transportation within the Urbanized Area of Kootenai County.

2. The CITY agrees to provide funding in the amount of $43,983 (Forty-three Thousand, Nine Hundred and Eighty-three Dollars) as part of the match that is required for the Section 5307 grant for the grant year beginning on April 1, 2009 and ending on March 31, 2010. The CITY further agrees to provide one-half said funding on or before the 30th day of June, 2009, with the balance due no later than the 31st day of October 2009.

3. The City also agrees to provide the services of their Senior Recreation Van, obtained via their match for FTA 5307 funds, to all residents within the urbanized area of Kootenai County, upon coordination with the other public transit providers of the COUNTY.

4. The proposed FTA budget is attached as Table 1 and is incorporated into this Agreement by this reference.

IN WITNESS WHEREOF, the parties hereto have affixed the signature of their duly authorized official.

Rick Currie, Chairman
Kootenai County Commissioners

2-24-09
Date

CLERK OF 1ST DISTRICT-KOOTENAI COUNTY JUDICIAL DISTRICT
OFFICE AUDITOR AND RECORDER
ATTEST
IDAHO

Dan English, County Clerk by Deputy clerk

Sandi Bloem, Mayor
City of Coeur d'Alene, Idaho

Date

Susan Weathers, City Clerk

Kootenai County Public Transportation
FTA 5307 Budget FY 2009-2010 (Approved by KMPO Feb. 5, 2009)

EXPENDITURES:	Service	% FTA	Contract Amount	Total FTA 5307	Local Match
Demand Response:					
KATS	Operating	50%	$ 278,300	$ 139,150	$ 139,150
KATS	Capital - Bus	80%	78,800	63,040	15,760
KATS	Capital -Fac.	80%	17,900	14,320	3,580
KATS	Prev. Maint.	80%	24,420	19,536	4,884
	TOTAL KATS		**$ 399,420**	**$ 236,046**	**$ 163,374**
KMC	Operating	50%	157,500	78,750	78,750
KMC	Capital - Bus	80%	19,750	15,800	3,950
KMC	Prev. Maint.	80%	12,000	9,600	2,400
	TOTAL KMC		**$ 189,250**	**$ 104,150**	**$ 85,100**
	TOTAL DEMAND RESPONSE		**$ 588,670**	**$ 340,196**	**$ 248,474**
Fixed Route:					
CDA Tribe	Operating	50%	$ 694,988	$ 347,494	$ 347,494
CDA Tribe	Capital - Bus	80%	195,700	156,560	39,140
CDA Tribe	Capital -Fac.	80%	28,447	22,758	5,689
CDA Tribe	Prev. Maint.	80%	101,781	81,424	20,357
	TOTAL FIXED ROUTE		**$ 1,020,916**	**$ 608,236**	**$ 412,680**
Other:					
PAC	Grant Admin.	50%	$ 25,000	$ 12,500	$ 12,500
PAC	Planning	80%	60,000	48,000	12,000
	TOTAL OTHER		**$ 85,000**	**$ 60,500**	**$ 24,500**
	TOTAL		**$ 1,694,586**	**$ 1,008,932**	**$ 685,654**
Plus: 5307 Funds Allocated for Tribe's Rural Routes				**$ 96,699**	
REVENUES:					
FTA 5307			$ 1,008,932	$ 1,008,932	
Match (In-Kind):					
PAC			$ 12,000		$ 12,000
Match (Cash):					
CDA Tribe (1)			$ 429,190		
KMC			157,600		
KMPO Cities (please see below)			86,864		$ 673,654
	TOTAL		**$ 1,694,586**	**$ 1,008,932**	**$ 685,654**
Cities Share (2):					
City of Coeur d'Alene			$ 43,983		
City of Post Falls			21,950		
City of Hayden			11,696		
City of Rathdrum			6,166		
City of Dalton Gardens			2,904		
City of Huetter			165		
	Total City Funding		**$ 86,864**		

Cities Share of Cost:
$0.16 per Boarding.
(Please See Page 2)

(1) Includes Tribe match of $16,510 for KATS'/KMC's complimentary paratransit operation.
(2) Same funding level as the prior year, to fund KATS/KMC complimentary paratransit.

Kootenai County Public Transportation
Cost By Function and Year

CODE	FUNCTION	%	TOTAL	FTA 5307	LOCAL
10732	Operating	50%	$ 1,155,788	$ 577,894	$ 577,894
10759	Capital - Bus	80%	294,250	235,400	58,850
10760	Capital - Facility	80%	46,347	37,078	9,269
10758	Preventative Maint.	80%	138,201	110,560	27,641
10761	Planning	80%	60,000	48,000	12,000
	Subtotal		$ 1,694,586	$ 1,008,932	$ 685,654
T-120	To Rural 5311			96,699	
	TOTAL			$ 1,105,631	

Left From 2008-09	$ 358,996
From 2009-10	746,635
Total FTA	$ 1,105,631
Total Amount Available	1,272,879
Left for FY 2010-11	$ 167,248

City Funding: Cost Per Boarding 2007 - 2009

	2007	2008	Projected 2009
Funding:			
City of Coeur d'Alene	$ 40,945	$ 43,983	$ 43,983
City of Post Falls	20,434	21,950	21,950
City of Hayden	10,888	11,696	11,696
City of Rathdrum	5,740	6,166	6,166
City of Dalton Gardens	2,703	2,904	2,904
City of Huetter	154	165	165
Total Cities Match	$ 80,864	$ 86,864	$ 86,864
Boardings in the Period			
CityLink	221,500	432,000	468,000
KATS	60,595	61,000	61,000
KMC (Estimated)	11,000	11,000	11,000
Total Boardings	293,095	504,000	540,000
City Match: Cost per Boarding	$ 0.28	$ 0.17	$ 0.16
Decrease in Cost Per Boarding over Prior Y	15.2%	37.5%	6.7%
Decrease Over Two Years			55.9%

Staff Report

DATE: March 17, 2009

FROM: TROY TYMESEN, FINANCE DIRECTOR

RE: ONE MONTH EXTENSION OF THE SHORT TERM LEASE OF CITY OWNED PROPERTY AT 201 HARRISON AVENUE

DECISION POINT: To authorize a one month extension of the eleven month lease agreement with The Salvation Army Corporation. The original lease began June 1, 2008.

HISTORY: The City of Coeur d'Alene owns the structure at 201 Harrison Avenue, which was the previous location of the Public Library. The Salvation Army and the City of Coeur d'Alene have been in an satisfactorily executed lease agreement for eleven months that meets the needs of both parties. The Salvation Army wishes to extend the lease by just one month. The building has been used for professional office space as they hire and train new staff for the Ray and Joan Kroc Corps Community Center. The one month extension is to accommodate their move into the Ray and Joan Kroc Corps Community Center at Ramsey and Golf Course Road.

FINANCIAL ANALYSIS: The lease payment is set at $1,500.00, with the Leasee responsibly for the utility payments.

PERFORMANCE ANALYSIS: Leasing this space has provided income to the City, and the Leasee is responsible for utility payments. Additionally, the Kroc Center is a great community benefit and providing a space for staff to be trained will allow the center to open its doors with well-trained personnel.

DECISION POINT/RECOMMENDATION: To authorize a one month extension of the eleven month lease agreement with The Salvation Army Corporation. The original lease began June 1, 2008.

AMENDMENT 1
TO
LEASE AGREEMENT BETWEEN
CITY OF COEUR D'ALENE AND THE SALVATION ARMY FOR THE BUILDING LOCATED AT 201 EAST HARRISON AVENUE

WHEREAS, The above parties entered into an Lease Agreement on May 6, 2008, adopted pursuant to Resolution No. 08-026, for use of the building and real property located at 201 East Harrison Avenue; and

WHEREAS, the Lease Agreement had a term of eleven months ending on April 30, 2009; and

WHEREAS, The Salvation Army as Lessee has requested that the lease term be extended by one month; and

WHEREAS, it is in the City's interest to extend the Lease Agreement as requested.

THEREFORE, the parties mutually agree to amend the Lease Agreement as follows:

1. Section 1(b):

Section 1(b) is hereby amended to read as follows:

Term: The lease term shall be twelve (12) months commencing on June 1, 2008 and ending on May 31, 2009.

2. No Further Modification of the Lease Agreement:

The parties agree that the Lease Agreement, as herein amended, remains in full force and effect and that this amendment to the Lease Agreement between the parties does not amend or alter any other right or obligation of either party under the Lease Agreement.

IN WITNESS WHEREOF, the City of Coeur d'Alene has caused this agreement to be executed by its Mayor and City Clerk, and the Owners have caused the same to be executed.

DATED THIS 17th day of March, 2009.

LESSOR:	**LESSEE:**
City of Coeur d'Alene	**The Salvation Army, a California**
Kootenai County, Idaho	**Corporation**
By: _____	**By**: _____
Sandi Bloem, Mayor	**Its: _____**
ATTEST:	**ATTEST:**
_____	_____
Susan K. Weathers, City Clerk	**By: _____**

ACKNOWLEDGMENTS

STATE OF IDAHO)
) ss.
County of Kootenai)

On this 17th, day of March, 2009, before me, a Notary Public, personally appeared **Sandi Bloem** and **Susan K. Weathers**, known to me to be the Mayor and City Clerk, respectively, of the City of Coeur d'Alene that executed the foregoing instrument and acknowledged to me that said City of Coeur d'Alene executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certificate first above written.

_____
Notary Public for Idaho
Residing at _____
My Commission expires: _____

~~~~~~

STATE OF _____)
) ss.
County of _____)

On this ____ day of _____, 2009, before me, a Notary Public, personally appeared _____, known to me to be the _____, of **The Salvation Army, a California Corporation**, and the persons who executed the foregoing instrument on behalf of said corporation, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certificate first above written.

_____
Notary Public for _____
Residing at _____
My Commission Expires: _____
~~~~~~

CITY COUNCIL
STAFF REPORT

DATE: March 17, 2009

FROM: David E. Shults, Capital Program Manager DES

SUBJECT: Agreement with Shannon Industrial Contractors for Installation of WWTP Phase 5A Ammonia Reduction Improvements

==========

DECISION POINT:
Council approval is requested to accept the bid and to enter into agreement with Shannon Industrial Contractors, Inc. to construct and install the treatment plant improvements according to specifications titled "Phase 5A-Ammonia Reduction Improvements" for a cost of $194,706.00.

HISTORY:
The City's wastewater engineering consultant, HDR Engineering, has recommended several interim ammonia control process improvements that will assist the treatment plant in meeting the existing discharge permit limit until future Phase 5C can be constructed in approximately seven years. The interim measures include retrofit of existing tanks with five additional ammonia control modules designed to improve biological breakdown of ammonia. Another measure includes use of a new type of sludge thickener that improves performance of many of the interrelated processes and will reduce the amount of ammonia requiring treatment. Prepurchase of additional ammonia control modules and a rotary screen thickener by the wastewater utility is already underway to allow earliest installation and use during next summer's permit period of required ammonia control. The installation and construction specifications for these facilities were approved by the City Council for solicitation of contractor bids. The engineer's estimate for the installation work was expressed as a range from $180,000 to $210,000. Four bids were received, that ranged from $194,706 to $324,505. Shannon Industrial Contractors submitted the low bid. HDR and staff reviewed their bid and qualifications and determined that Shannon's low bid of $194,706 is the lowest responsive and responsible bid, and that Shannon should be awarded the work.

FINANCIAL ANALYSIS:

Cost Estimate for Phase 5A Ammonia Control Improvements		
Advertising and Permits		10,000
Engineering		158,951
Prepurchase of Rotary Screen Thickener		58,741
Prepurchase of Additional Entex Modules		246,901
Prepurchase of Volgelsang Pump		10,000
Contractor Installation & Construction		194,706
	Subtotal	679,299
	Contingency 3%	20,379
	Total	699,678

Funding: The current city financial plan anticipates $4.5 million expenditure for Phase 5A design and construction.

DISCUSSION:

Until completion of the future Phase 5C liquid stream advanced treatment improvements, the treatment plant requires earlier measures to control ammonia to acceptable levels. Several different measures are planned in Phase 5A, all of which are needed as soon as possible. Approval of the agreement with Shannon Industrial for installation and construction of the Phase 5A improvements will lead to operation of these new facilities by the summer of 2009.

DECISION POINT/RECOMMENDATION:

Council approval is requested to accept the bid and to enter into agreement with Shannon Industrial Contractors, Inc. to construct and install the treatment plant improvements according to specifications titled "Phase 5A-Ammonia Reduction Improvements" for a cost of $194,706.00.

des1283

SECTION 00500
AGREEMENT

THIS AGREEMENT, made and entered into this 17th day of March, 2009, between the **CITY OF COEUR D'ALENE**, Kootenai County, Idaho, a municipal corporation duly organized and existing under and by virtue of the laws of the State of Idaho, hereinafter referred to as the **"CITY",** and **SHANNON INDUSTRIAL CONTRACTORS, INC.**, a corporation duly organized and existing under and by virtue of the laws of the state of Washington, with its principal place of business at P.O. Box 3886, Coeur d' Alene, Idaho 83816, hereinafter referred to as "**CONTRACTOR**",

W I T N E S S E T H:

THAT, **WHEREAS**, the said **CONTRACTOR** has been awarded the contract for: **Phase 5A - Ammonia Reduction Improvements**, according to Contract Documents on file in the office of the City Clerk of said city, which documents are entitled: **"Phase 5A - Ammonia Reduction Improvements"** and are incorporated herein by reference.

IT IS AGREED that for and in consideration of the covenants and agreements to be made and performed by the **CITY OF COEUR D'ALENE,** as hereinafter set forth, the **CONTRACTOR** shall make improvements in said City, furnishing all labor and materials therefor according to said Contract Documents and under the penalties expressed in the performance bond bearing even date herewith, and which bond with said Contract Documents are hereby declared and accepted as parts of this Agreement. All material shall be of the high standard required by the said Contract Documents and approved by the Engineer, and all labor performed shall be of first-class workmanship.

The **CONTRACTOR** shall employ appropriate means to prevent accidents and shall save the city harmless from all claims for injury to person or property resulting from the **CONTRACTOR'S** actions or omissions in performance of this agreement. The **CONTRACTOR** shall purchase and maintain insurance of the type and the amount specified in the Contract Documents. Certificates of insurance providing at least thirty (30) days written notice to the City prior to cancellation of the policies shall be filed in the office of the City Clerk.

The **CONTRACTOR** agrees to maintain Workers' Compensation coverage on all employees, including employees of subcontractors, during the term of this contract as required by Idaho Code Sections 72-101 through 72-806. Should the **CONTRACTOR** fail to maintain such insurance during the entire term hereof, the **CONTRACTOR** shall indemnify the **CITY** against any loss resulting to the **CITY** from such failure, either by way of compensation or additional premium liability. The **CONTRACTOR** shall furnish to the **CITY**, prior to commencement of the work, such evidence as the **CITY** may require guaranteeing contributions which will come due under the Employment Security Law including, at the option of the **CITY**, a surety bond in an amount sufficient to make such payments.

The **CONTRACTOR** shall furnish the **CITY** certificates of the insurance coverage's required herein, which certificates must be approved by the City Attorney.

The **CITY** shall pay to the **CONTRACTOR** for the work, services and materials herein provided to be done and furnished by it, the sum of **One Hundred Ninety-Four Thousand Seven Hundred Six Dollars and No/100 ($194,706.00),** as hereinafter provided. Partial payment shall be made on the third Tuesday of each calendar month on a duly certified estimate of the work completed in the previous calendar month less five percent (5%). Final payment shall be made thirty (30) days after completion of all work and acceptance by the City Council, provided that the **CITY** has obtained from the Idaho State Tax Commission a release of liability for taxes (Form 10-248-79). Payment shall be made by the City Treasurer.

The **CONTRACTOR** shall complete all Work within **seventy-four (74) calendar days** of the commencement date given in the Notice to Proceed issued by the **CITY**.

The **CITY** and the **CONTRACTOR** recognize that time is of the essence and failure of the **CONTRACTOR** to complete the work within the time allowed shall result in damages being sustained by the **CITY**. Such damages are and will continue to be impractical and extremely difficult to determine. Therefore, in the event the **CONTRACTOR** shall fail to complete the work within the above time limit, the **CONTRACTOR** shall pay to the **CITY** or have withheld from moneys due, **liquidated damages** at the rate of $500.00 per calendar day, which sums shall not be construed as a penalty.

CONTRACTOR shall submit applications for payment in accordance with the General Conditions.

The **CONTRACTOR** further agrees: In consideration of securing the business of constructing the work to be constructed under this contract, recognizing the business in which he is engaged is of a transitory character and that in the pursuit thereof, his property used therein may be without the state of Idaho when taxes, excises or license fees to which he is liable become payable, agrees:

1. To pay promptly when due all taxes (other than on real property), excises and license fees due to the State of Idaho, its subdivisions, and municipal and quasi-municipal corporations therein, accrued or accruing during the term of this contract, whether or not the same shall be payable at the end of such term.

2. That if the said taxes, excises and license fees are not payable at the end of said term but liability for said payment thereof exists, even though the same constitutes liens upon his property, to secure the same to the satisfaction of the respective officers charged with the collection thereof.

3. That in the event of his default in the payment or securing of such taxes, excises and license fees, to consent that the department, officer, board or taxing unit entering into this contract may withhold from any payment due him thereunder the estimated amount of such accrued and accruing taxes, excises and license fees for the benefit of all taxing units to which said **CONTRACTOR** is liable.

For the faithful performance of this agreement in accordance with the Contract Documents and payment for all labor and materials, the **CONTRACTOR** shall execute good and sufficient performance bond and payment bond each in the amount of one hundred percent (100%) of the total amount of the bid as herein before stated, said bonds to be executed by a surety company authorized to do business in the state of Idaho.

The terms "Project Manual" and "Contract Documents" are defined in Section 00700 of the Project Manual, entitled "Standard General Conditions of the Construction Contract".

THIS AGREEMENT, with all of its forms, specifications and stipulations, shall be binding upon the parties hereto, their successors and assigns.

IN WITNESS WHEREOF, the Mayor and City Clerk of the **CITY OF COEUR D'ALENE** have executed this contract on behalf of said city, the City Clerk has affixed the seal of said city hereto, and the **CONTRACTOR** has caused the same to be signed by its President, and its seal to be affixed hereto, the day and year first above written.

CITY OF COEUR D'ALENE, KOOTENAI COUNTY, IDAHO	CONTRACTOR: SHANNON INDUSTRIAL CONTRACTORS, INC.
By:_____ Sandi Bloem, Mayor	By:_____ Title:_____
ATTEST:	ATTEST:
By:_____ Susan K. Weathers, CMC City Clerk	By:_____ Title:_____

STATE OF IDAHO)
) ss.
County of Kootenai)

On this 17th day of March, 2009, before me, a Notary Public, personally appeared **Sandi Bloem and Susan K. Weathers**, known to me to be the Mayor and City Clerk, respectively, of the City of Coeur d'Alene that executed the foregoing instrument and acknowledged to me that said City of Coeur d'Alene executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certificate first above written.

_____

Notary Public for _____

Residing at _____

My Commission expires: _____

~~~~~~

STATE OF _____)
) ss.
County of _____)

On this ____ day of March, 2009, before me, a Notary Public, personally appeared _____, known to me to be the _____, of **Shannon Industrial ContractorS, Inc.**, and the persons who executed the foregoing instrument on behalf of said corporation, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certificate first above written.

_____

Notary Public for _____

Residing at _____

My Commission expires: _____
~~~~~~

RESOLUTION NO. 09-013

A RESOLUTION OF THE CITY OF COEUR D'ALENE, KOOTENAI COUNTY, IDAHO AUTHORIZING THE SIGNATURES OF SANDI BLOEM, VONNIE L. JENSEN, TROY TYMESEN AND LOREN RON EDINGER.

BE IT RESOLVED, by the Mayor and City Council of the City of Coeur d'Alene that the following named persons whose signatures are set forth after their names be and they are hereby authorized to withdraw funds and to endorse and receive payment of financial accounts of the City of Coeur d'Alene regarding the handling of notes and bills payable to the City, and financial institutions are hereby authorized to recognize any of such signatures subscribed below in the payment of funds or the transaction of any business for accounts of the City of Coeur d'Alene.

Sandi Bloem, Mayor, _____

Troy Tymesen, Treasurer/Finance Director, _____

Loren Ron Edinger , Council President, _____

Vonnie L. Jensen, Deputy Finance Director, _____

DATED this 17th day of March, 2009.

_____
Sandi Bloem, Mayor

ATTEST:

_____
Susan K. Weathers, City Clerk

Motion by _____, Seconded by _____, to adopt the foregoing resolution.

ROLL CALL:

COUNCIL MEMBER EDINGER Voted _____

COUNCIL MEMBER BRUNING Voted _____

COUNCIL MEMBER KENNEDY Voted _____

COUNCIL MEMBER GOODLANDER Voted _____

COUNCIL MEMBER HASSELL Voted _____

COUNCIL MEMBER MCEVERS Voted _____

_____ was absent. Motion _____.

PUBLIC WORKS COMMITTEE
STAFF REPORT

DATE: March 9, 2009
FROM: Terry W. Pickel, Assistant Superintendent, Water Department
SUBJECT: **Adoption of revised Water Department Construction Standards**

==========

DECISION POINT:
Staff requests that City Council consider adoption of the 2009 revision of the Water Department Construction Standards designed to augment the Idaho Standards for Public Works Construction (ISPWC).

HISTORY:
The Water Department previously had a set of construction standards that were never formally adopted by City Council. For the past 3 plus years, staff has been working with the Engineering Department, contractors and suppliers attempting to answer their respective questions relating to the particulars of water system construction methods and materials not completely covered by the basic language contained in the ISPWC. We have assembled a comprehensive document that has been reviewed and edited numerous times and we believe will be beneficial to all involved.

FINANCIAL ANALYSIS:
Staff believes that adoption and provision of these construction standards to design engineers will enable the engineers to produce a more exact set of construction plans and supporting documentation. The contractors and suppliers bidding and performing water system related construction will have in hand the most comprehensive information we can provide to help reduce errors and omissions in the bidding process and construction phase of water system improvement and expansion projects, thus helping to reduce overall construction costs. By visually helping the contractors to reduce mistakes, eventually less time will be required with City personnel for inspections and correction of disapproved or defective work as well as having to walk them through the proper procedures.

PERFORMANCE ANALYSIS:
This revision of the Water Department Construction Standards has included the most comprehensive changes in over 25 years. As previously stated, staff has attempted to generate the most informative and user friendly construction document with detailed information and support documentation, step by step procedures and the related revision to the construction standard drawings. We have attempted to address the most common mistakes encountered with engineers, suppliers and contractors so that on-site revisions and/or repeat work is not necessary.

QUALITY OF LIFE ANALYSIS:
The exacting detail of these proposed construction standards and the previous revisions last year to the standard construction drawings will help to ensure that new and replacement water infrastructure, from large subdivisions down to the smallest service installation, is properly installed, tested and approved per a rigid set of City standards. By meeting these standards, the Water Department can ensure that every customer affected will have a clean and sanitary potable water supply.

DECISION POINT/RECOMMENDATION:
Staff requests that the Public Works Committee recommend that City Council adopt the Water Department Construction Standards as submitted.

RESOLUTION NO. 09-014

A RESOLUTION OF THE CITY OF COEUR D'ALENE, KOOTENAI COUNTY, IDAHO ADOPTING REVISED WATER DEPARTMENT CONSTRUCTION STANDARDS

WHEREAS, the need for citywide standards regarding Water Department Construction Standards has been deemed necessary; and

WHEREAS, Municipal Code Section 13.04.140 authorized the City Council to adopt rules and regulations for the Water Department by resolution of the City Council; and

WHEREAS, the Water Department has proposed standards regarding these issues, and the same were discussed at the Public Works Committee meeting March 9th, 2009; and

WHEREAS, it is deemed to be in the best interests of the City of Coeur d'Alene and the citizens thereof that such standards be adopted; NOW, THEREFORE,

BE IT RESOLVED, by the Mayor and City Council of the City of Coeur d'Alene that the standards attached hereto as Exhibit "A" be and is hereby adopted.

DATED this 17th day of March, 2009

_____
Sandi Bloem, Mayor

ATTEST:

_____
Susan K. Weathers, City Clerk

Motion by _____, Seconded by _____, to adopt the foregoing resolution.

ROLL CALL:

COUNCIL MEMBER KENNEDY Voted _____

COUNCIL MEMBER HASSELL Voted _____

COUNCIL MEMBER MCEVERS Voted _____

COUNCIL MEMBER GOODLANDER Voted _____

COUNCIL MEMBER BRUNING Voted _____

COUNCIL MEMBER EDINGER Voted _____

_____ was absent. Motion _____.

CITY OF COEUR d'ALENE

WATER DEPARTMENT

WATER FACILITY

CONSTRUCTION STANDARDS

REVISION DATE: MARCH 2009

AUTHORED BY: TERRY W. PICKEL

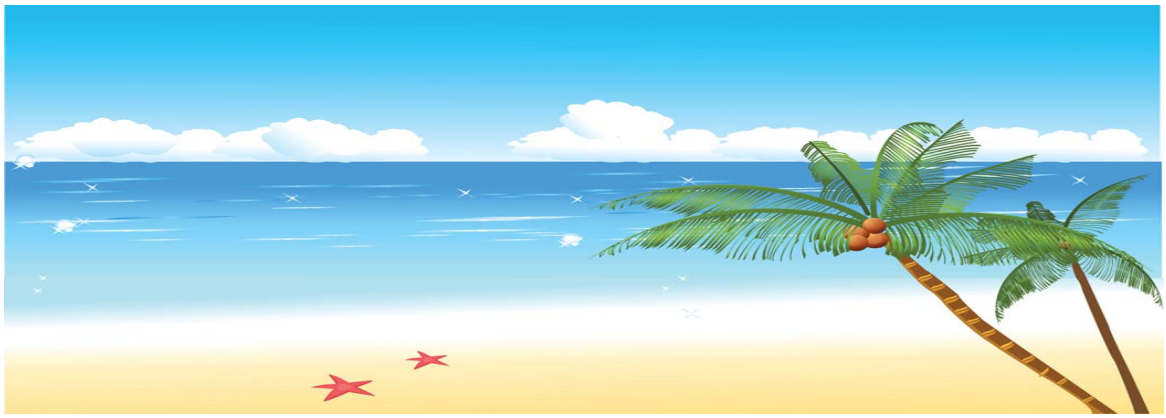
EDITED BY: ROBIN RICKS

REVIEWED BY: JIM MARKLEY, P.E.

GORDON DOBLER, P.E.

JON INGALLS

WARREN WILSON



APPROVED BY CITY COUNCIL:

MAYOR: SANDI BLOEM

COUNCILMAN:	**MIKE KENNEDY**
COUNCILMAN:	**JOHN BRUNING**
COUNCILMAN:	**AL HASSELL**
COUNCILMAN:	**WOODY McEVERS**
COUNCILMAN:	**DEANNA GOODLANDER**
COUNCILMAN:	**RON EDINGER**

THIS 17th DAY OF MARCH, 2009

BY RESOLUTION NO. 09-014

INTRODUCTION

The City of Coeur d'Alene Water Department recognizes the **Idaho Standards for Public Works Construction** and the City of Coeur d'Alene Standard Drawings as the primary construction standards and specifications for all work regarding infrastructure installation, repairs and maintenance. The following information is intended as the Water Department's additional standard construction practices. If there is a conflict of construction methods or standards, the **Idaho Standards for Public Works Construction and the City of Coeur d'Alene Standard Drawings shall be the prevailing rule.**

These construction standards also provide references to other construction standards recognized by the State of Idaho and as referenced in the ISPWC such as IDAPA, ANSI and AWWA as well as manufacturer's specifications where certain brand name items and materials are specified.

The following construction standards are intended as an additional informational tool for engineering firms, contractors, and suppliers of construction materials within the City of Coeur d'Alene. The following information and updated construction drawings describe detailed standards in regard to the types of soil conditions inherent to the Coeur d'Alene area, approved installation methods and practices, and approved materials and appurtenances. **The information provided is intended to save both the contractors and the City time and costs by reducing mistakes commonly made in the industry by not meeting our specific requirements for methods and materials.**

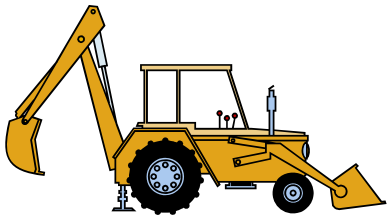
The Contractor **shall not bury any work** to be inspected without such inspections taking place. The Contractor shall notify the Water Dept. twenty four (24) hours in advance and shall use every number available to contact the Field Inspector. If work is covered without the appropriate inspection, the Contractor will dig and expose any appurtenance which requires inspection at his/her own expense.

LIST OF CONTACTS

Name, Department	Cell Numbers	Contact Numbers
City Engineer's Office		(208)769-2283
Water Department Office		(208)769-2210
Jim Markley, P.E., Superintendent		(208)415-0418
Terry Pickel, Assistant Superintendent	cell: (208)755-9727	(208)769-2211
Kyle Marine, Utility Supervisor	cell: (208)755-9728	(208)769-2337
Rob Stark, Utility Supervisor	cell: (208)661-6535	(208)769-2210
Dion Holton, Utility Supervisor	cell: (208)755-9725	(208)769-2210
Robin Ricks, Utility Worker II, Const. Oversight	cell: (208)755-9725	(208)769-2286
Greg Schrempp, Utility Worker II, Cross Connection		(208)676-7408
Gary Nolan, Utility Worker II, BAT, Inspections		(208)818-4818
Street Department Office		(208)769-2233
Terry Leigh, Storm Water management	Desk(208)676-7400	(208)769-2233
Wastewater Department Office		(208)769-2246
City Hall Main Desk		(208)769-2300
Police Department Office		(208)769-2320
Fire Department Office		(208)769-2340
Brian Halvorson, Fire Dept. Inspector	cell: (208)659-8986	(208)769-2245

CALL BEFORE YOU DIG!!!

DIAL "811" ANYTIME AND YOU WILL BE AUTOMATICALLY DIRECTED TO YOUR LOCAL UTILITY LOCATE SERVICE

811  **811**

BEFORE ANY DIGGING OCCURS, THE CONTRACTOR SHALL NOTIFY THE WATER DEPARTMENT AT: 208-769-2210

LOCATE ALL VALVES FOR AREA PRIOR TO DIGGING AS THIS WILL ENSURE THE CONTRACTOR'S ABILITY TO SHUT DOWN THE WATER MAIN IN CASE OF AN EMERGENCY.

IF THE CONTRACTOR FAILS TO CALL 811 FOR LOCATES PRIOR TO DIGGING, OR STARTS DIGGING BEFORE LOCATES ARE PERFORMED, THE CONTRACTOR ASSUMES ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.

LOCATES ARE: *GOOD FOR 21 DAYS MAXIMUM. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE MARKS VISIBLE WITH THE APPLICABLE COLORS DURING THAT PERIOD.*

IF DAMAGE OCCURS TO ANY UTILITY, THE CONTRACTOR SHALL CALL THE RESPECTIVE UTILITY OWNER IMMEDIATELY TO DISCLOSE THE DAMAGE AND RECEIVE INSTRUCTIONS FOR REPAIRS, IF APPLICABLE.

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CHAPTER 1

CONSTRUCTION INFORMATION, DEFINITIONS AND REQUIREMENTS

SECTION 1.1 OVERVIEW, DEFINITIONS AND ABBREVIATIONS

Subsection 1.1.01 OVERVIEW

A. These construction standards are intended to provide a contractor's and supplier's guide for the correct provision of materials and proper installation of transmission/distribution mains, fire hydrants, fire service laterals, domestic and irrigation services in the City of Coeur d'Alene public water system, hereinafter referred to as the City.

Subsection 1.1.02 DEFINITIONS

A. Whenever the words defined in this section, or pronouns used in their stead, occur in these specifications or other related documents, they shall have the meanings here given.

1. **Approval -** Shall be used to certify that all plans, specifications and other contract documents have been properly reviewed, signed and approved for public water facility construction by the City Engineer and/or Superintendent or his/her duly authorized agent.

2. **Appurtenance -** Shall mean any item attached to water facilities enabling it to function as designed, but not necessarily considered an integral component to be identified on plans or construction drawings.

3. **Backflow -** Water that flows back to the distribution system. It is sometimes caused by a loss of pressure in the water system

4. **Backpressure -** A form of cross connection caused by higher pressure on the customer side of the service meter, usually from a boosted pressure, elevation or thermal expansion

5. **Casing** - Lengths of pipe welded or coupled together in a well to form a continuous casing from the surface to the aquifer.

6. **Chlorination** - A method of water disinfection where gaseous, liquid, or dissolved chlorine is added to a water supply system.

7. **Chlorine Demand** - The minimum amount of chlorine needed to react in a water purification system; used as a monitoring measurement by system operators.

8. **City -** Shall mean the City of Coeur d'Alene.

9. **City Engineer -** Shall mean the City of Coeur d'Alene employee having that title, or his/her duly authorized agent.

10. **Column** - The vertical pillar of water formed by water being pumped out of a well.

11. **Compound Meter** – A water meter used in places with high fluctuations in water usage; includes a positive displacement meter and a turbine meter.

12. **Contractor -** Shall mean the person, firm, or corporation that is installing public water facilities for the purpose of replacement or extension into and construction of new public water facilities.

13. **DCVA -** Shall mean a Double Check Valve Assembly utilized to protect potable water systems from low hazard used water. This unit uses two check valves in series to protect against backflow or backpressure.

14. **Design Engineer -** Shall indicate the individual, company, firm or corporation responsible for proposed design plans, easement description, written specifications and other contract documents for the proposed and/or constructed public water facilities.

15. **Developed Area -** Shall describe established subdivisions and other developed property along private or public right-of-way with paved streets and sidewalks where other utility facilities are present and do cross the path of a City proposed route causing major concern and where traffic maintenance is of major concern.

16. **Developer -** Shall indicate any person(s), corporation, partnership, or firm which desires installation of public water facilities for the purpose of developing property for construction and/or sale adjacent to or within the ACI boundaries of the City of Coeur d'Alene.

17. **Distribution System -** Shall mean the network of public water lines generally less than twenty (20") inches in diameter and to provide direct customer municipal water service and which comprise the basic grid of the water system to promote adequate flow.

18. **Dry-barrel fire hydrant** - A freeze-proof fire hydrant with the operating valve located at the bottom of the barrel that keeps the water below the frost line.

19. **Ductile iron** - A type of iron used for water mains that generally has the properties of high strength, ductility, and resistance to impact.

20. **Fire hydrant** - A hydrant used to access water directly from the main, equipped with a fire hose connection for use in the event of a fire.

21. **Fire Line** - Shall mean an unmetered private line leading to and located on private property which shall be utilized for providing water to interior commercial, industrial, and possible residential fire suppression systems only and not for other consumptive purposes.

22. **Flushing hydrant** - A hydrant used to flush the water main, usually installed at the end of a water main. Also called blow-off hydrants.

23. **Gallons Per Minute** - GPM, A unit of measurement used to express the flow of water in a pipe.

24. **IDAPA –** As referenced in this manual shall mean the **ID**aho **A**dministrative **P**rocedures **A**ct providing guidance for design, construction and operation of public water infrastructure as well as specific water quality regulations.

25. **IDEQ –** As referenced in this manual, shall mean the **I**daho **D**epartment of **E**nvironmental **Q**uality. This is the state agency responsible for oversight of the Safe Drinking Water program which governs primary regulations for the public and private water purveyors in the state of Idaho.

26. **Inspector -** Shall infer a designated representative of either the construction engineering entity or a City representative duly authorized to inspect and approve or disapprove the work being done. The individual under this title shall have authorization to stop work and request corrections or further information to be provided by the Project Engineer, City Engineer and/or Superintendent.

27. **Laterals** - The pipes that carry water from the water mains to the customers, also called services.

28. **Main Valves** - Valves installed at tees or crosses where two or more water mains intersect, so that the mains can be isolated for emergency repair or maintenance.

29. **Materials -** Shall mean all necessary parts, fittings, pipe, bedding and backfill, and any other miscellaneous materials necessary for the complete installation of public water facilities.

30. **Municipal Water Service -** Shall mean water service to an industrial, commercial, or residential lot for the purpose of domestic, commercial, recreational or irrigation purposes.

31. **MXU -** Shall mean a Sensus brand radio read meter transceiver unit or Orion bubble up transmitter utilized to remotely read water meters. The MXU receives and transmits a radio signal to a remote reading unit giving the current water usage reading.

32. **Plans -** Shall mean approved engineering prints complete with inserted standard drawings, written specifications and other pertinent materials that constitute the Contract Documents for the specific project.

33. **Private Water Line -** Shall mean any water line that is not owned and/or maintained by the City. Private water lines shall not include water service for multiple lots or buildings where ownership of the mains could be disputed. The City will generally not allow private mains to be constructed without master metering or by other arrangements as specified by the Superintendent or his/her duly authorized agent.

34. **Public Water Facilities -** Shall mean any and all components such as wells, reservoirs, mains, distribution stations, fire hydrants, water services and other appurtenances that comprise the entire public water system.

35. **Public Water Main or Line -** Shall mean a water line owned and maintained by the City.

36. **PVC -** Shall mean Poly Vinyl Chloride pipe, typically referred to as plastic pipe. The polyvinylchloride denotes the materials the pipe is constructed of. PVC pipe is constructed for various uses in the construction industry. It is generally utilized for utilities to convey potable and irrigation water, waste water, storm water, liquid petroleum products, and natural gas.

37. **Remote-read** - A type of water meter that generates a signal, which is read by radio, telephone, or by use of a handheld computer.

38. **Residual** - The amount of chlorine remaining after the initial reaction in a water purification system; used as a monitoring measurement by system operators.

39. **RPBA -** Shall stand for a Reduced Pressure Backflow Assembly also known as a RP. This device incorporates two check valves with an atmospheric break between the check valves to provide an air gap between potable water and used water or other undesirable liquids to prevent cross contamination. RP's are required for high hazard potential situations.

40. **SALVAGE** – Shall mean all cast iron, steel, ductile iron and other miscellaneous water system components removed during repairs or replacement. This will not include PVC or AC pipe.

41. **SELECT MATERIAL -** shall mean compaction material required by the manufacturer of the material being used, consisting of fine dirt, free of rocks larger than 5" in diameter, frozen lumps or other objectionable materials. City shall approve all select materials

42. **Service Line -** Shall mean any pipe carrying potable water from a public water main to a water meter, the edge of public right of way, edge of the water main easement, or other distribution point, also known as laterals.

43. **Service Valves** - Valves used to isolate a single building from the water main; installed on the service line between the water main and the building, usually near the street curb; also called curb stop valves.

44. **Shop Drawings -** Shall mean submitted engineering preliminary prints, manufacturer supplied working drawings, work order drawings, and supplemental sketches submitted to the ENGINEER which show the location, character, dimensions and details of the work and/or materials to be provided either by a subcontractor or vendor.

45. **Site -** Shall indicate the developed or undeveloped area proposed for new construction of public water facilities.

46. **Specifications -** Shall reference a published contract document accompanying the plan drawings for direction of, provisions to, special conditions and/or requirements of the work to be performed.

47. **Superintendent -** Shall mean the Superintendent of the respective City of Coeur d'Alene utility or utilities to be developed, acting either directly or through his duly authorized agents, such agents acting severally within the scope of the particular duties entrusted to them. On all questions concerning the acceptance of materials, machinery, the classifications of material, the execution of work, conflicting interests of the contractors performing related work and the determination of costs, the decision of the Superintendent shall be binding and final upon both parties.

48. **Transmission Main -** Shall indicate a public water main, usually twenty (20") inches and larger, which will not have any domestic, fire or irrigation services along it's length, for the provision of large amounts of water to the respective distribution mains and/or grid.

49. **Turbine Meter** - A water meter used in higher-flow conditions.

50. **Undeveloped Areas -** Shall mean new proposed subdivisions, private or public right-of-way or other areas where other utility facilities and traffic maintenance is not of major concern.

51. **Vacuum** - A condition created in a well when air is not allowed to be displaced between the casing and the pump column.

52. **Valve** - A mechanical device by which the flow of liquid may be started, stopped, or regulated by a movable part that opens, shuts, or partially obstructs one or more ports or passageways.

53. **Vent -** A pipe installed in the well casing to allow for the displacement of air between the casing and the pump column.

54. **Water flow** - The amount of water available in a water supply system.

55. **Water hammer** - An occurrence caused when flowing water in a system is immediately stopped due to a valve or hydrant being closed too quickly, which sends a sudden pressure wave down the water line, shocking the pipes.

56. **Water Main** - A primary pipe used to carry water from the source to storage facilities and to points along the distribution system.

57. **Water meter** - A device used to measure the volumetric flow of water.

58. **Water pressure** - The force of the water available in a water supply system.

59. **Well** - Any opening into the ground used to obtain water, where the depth of the opening is greater than the largest surface dimension.

60. **Well Abandonment** - A process to permanently close a well, which has certain criteria and requirements and that must be followed.

61. **Well caps** - Seals installed on the top of well casings used to prevent any solid material or insects from entering the well.

62. **Wet-barrel hydrant** - A hydrant with the operating valve located at the top so that the entire hydrant contains pressurized water.

63. **Work -** Shall mean all work, specified or unspecified, indicated and/or necessary for completion of all construction as shown on shop drawings, or as required by adopted construction standards for installation of any public water facilities and appurtenances.

Subsection 1.1.03 ABBREVIATIONS

A. Whenever used in these specifications, the following abbreviations shall refer to the agency shown:

1. AWWA American Water Works Association www.awwa.org

2. ASTM American Society for Testing Materials www.astm.org

3. ANSI American National Standards Institute www.ansi.org

4. IDEQ Idaho Department of Environmental Quality www.deq.idaho.gov

5. IDAPA IDaho Adminstrative Procedures Act www.deq.state.id.us

SECTION 1.2 CONSTRUCTION INFORMATION

Subsection 1.2.01 OBSERVED CONSTRUCTION STANDARDS

A. All additions to the City of Coeur d'Alene public water system, including transmission and distribution mains, fire hydrants, fire service laterals, domestic and irrigation services and any other appurtenances, shall conform to all applicable City of Coeur d'Alene Water Department Construction Standards. The Construction Standards recognize the following referenced standards and codes. If any conflict hereinafter is identified, the Idaho Standards for Public Works Construction shall be the prevailing code and standard.

1. IDAPA 58.01.08

2. CDA Water System Design Standards – City Specifications and Standard Drawings, Rev. Date 2009

3. Current adopted Fire Code, where applicable.

B. It is understood that the contractor will hire qualified help, provide the necessary and proper equipment and pursue the work with a good manner of workmanship, using the latest construction methods.

Subsection 1.2.02 PRE-CONSTRUCTION CONFERENCE

A. Prior to work commencing on **any** project, the Contractor shall schedule a pre-construction conference with the City Water Department to inform the Superintendent of the work to be performed. Any necessary contract documentation shall be provided to the City Water Department prior to the pre-construction conference. The Contractor shall attempt to have a representative from all of the Contractor's subs at the meeting, or shall be authorized to speak for them. The Contractor shall provide at the meeting:

1. A complete listing of the Contractor's subcontractors for the project.

2. An approved set of plans with the City Engineer's signature. Any changes, additions or deletions shall be reviewed and signed by the City Engineer prior to construction as well. The Contractor shall have a set of signed plans available at the work site all times which shall be shown to the field inspector.

3. A project schedule which shall be regularly updated and any changes shall be submitted to the City during the project.

4. Proof of insurance, license and bonding if not provided to the City at an earlier date.

B. If construction stops, is delayed longer than thirty (30) days, or there are significant changes with the construction drawings/project, the Contractor shall set an additional pre-construction conference to review the work to be done and any possible changes. Minor drawing detail changes may be accomplished through the normal review process by the City Engineer.

Subsection 1.2.03 DAYS OF WORK

A. Work may only be performed Monday through Friday from 7:00 AM PST until 5:00 PM PST. No work may be done on Saturday, Sunday or any City holiday. Any work deviating from these specifications must have prior approval from the City Engineer and /or Superintendent**. If any work is carried out without the Superintendent's knowledge, the City may require any portion of the work to be uncovered in order that a thorough inspection may be accomplished.** Any portion of the work directly relating to streets, sidewalks, curbs, and any other street/traffic element shall be made available for inspection and approval as directed by the City Engineer. The Contractor may have the option of leaving all work performed uncovered until the City Field Inspector can confirm adequate installation, unless said work is in the street or may present a hazard to the general public. **Any work performed on a weekend or City observed holiday shall require that an inspector from the Engineering firm be on site and shall submit proof of inspections to the Superintendent. In this case, all work in the street requiring cover shall have as-builts including pictures of all mechanical joints and thrust blocks, immediately available to the inspector for the next regularly scheduled workday.**

Subsection 1.2.04 REPORTING DISCREPANCIES

A. If, during the performance of the work, the Contractor discovers any error, conflict, or discrepancy between the construction drawings and project specifications and any applicable construction standards or regulations, the Contractor shall report it to the Superintendent and/or City Engineer immediately. **Work affected by the discrepancy shall not proceed until the discrepancy has been corrected or both parties agree that there is no other viable method to resolve the discrepancy and shall agree on a course of action to remedy the situation.**

Subsection 1.2.05 PLANS

A. The City Engineer and/or Superintendent shall approve all plans, drawings, or sketches showing locations of new facilities to be connected to the City public water system. No work may begin until written approval from the Superintendent and the City Engineer has been received.

Subsection 1.2.06 PRESERVATION OF MONUMENTS

A. The Contractor shall preserve all monuments, bench marks, survey marks and stakes. In case of their removal or destruction by the Contractor or his/her employees or others, the Contractor shall be liable for the cost of their replacement.

Subsection 1.2.07 DATUM PLANE AND MEASUREMENTS

A. All distances and elevations shown on the plans, profiles, or other drawings are in feet; elevations being given above the datum of the U.S. Geological survey unless otherwise noted. All measurements on the plans are horizontal measurements, unless otherwise shown.

SECTION 1.3 PROJECT CONTRACTOR'S RESPONSIBILITIES

Subsection 1.3.01 SAFETY PRECAUTIONS

A. Precautions shall be exercised at all times for the protection of persons and property. The safety provisions and regulations of applicable laws, currently adopted building and construction codes concerning the area of construction shall be observed.

B. The Contractor shall comply with all regulations as specified under the Occupational Safety and Health Act (OSHA) and its amendments.

Subsection 1.3.02 PERSONAL ATTENTION

A. The Contractor shall give his/her personal attention to the performance of the work and shall be present, either in person or by a duly authorized representative, on the site of the work continually during its progress, to coordinate the work and to receive directions and instructions from the Superintendent.

Subsection 1.3.03 CARE AND CUSTODY OF WORK

A. The Contractor shall have full responsibility and custody of the work until acceptance, meaning until the end of the project and all water punch list items and any other related work have been completed. The Contractor will be responsible for all

damage to existing improvements while the work is in his/her charge. The Contractor shall take necessary steps to protect the work from damage and/or trespassers. All damage done to existing improvements, person, property, and/or utility structures **shall be repaired by the Contractor at his/her own expense. This shall include all clean up of the affected area.**

B. The Contractor **shall not bury any work** to be inspected without such inspections taking place. The Contractor shall notify twenty four (24) hours in advanced and shall use every number available to contact the Field Inspector. If work is covered without the appropriate inspection, the Contractor will dig and expose any appurtenance which requires inspection at his/her own expense.

Subsection 1.3.04 MATERIALS

A. All materials furnished shall be new and unused, of the quality defined in these specifications and approved by the Superintendent. The Contractor shall furnish to the Superintendent for test, whenever requested and free of charge, samples of all materials proposed to be used in the work. He/she shall also submit any required detailed drawings of articles or equipment for City approval. Rejected materials must be immediately removed from the site of the work and marked by the Contractor and shall not be brought again upon the work site.

Subsection 1.3.05 RESPONSIBILITY FOR MATERIAL FURNISHED BY THE CITY

A. Material to be furnished by the City shall be examined by the Contractor at the place of delivery. Material which is found to be defective or damaged at the time of delivery shall be rejected by the Contractor and replaced by the City.

B. Material furnished by the City which is found to be defective in manufacture shall be replaced by the City. Material which is accepted by the Contractor and is later found to be damaged shall be replaced by the Contractor**. All defective and/or damaged material found after installation shall be removed and replaced by the Contractor at his/her own expense.**

Subsection 1.3.06 HANDLING OF PIPE AND ACCESSORIES

A. Tools and equipment satisfactory to the Superintendent shall be provided and used by the Contractor for the safe and efficient execution of the work. All pipe, fittings, valves and accessories shall be handled in such a manner as to prevent damage. **The pipe shall not be dropped or thrown into the trench or onto the street surface.** Any pipe which has been dropped shall be thoroughly inspected and rejected at the Contractor's expense if any damage is found. The damaged pipe shall be marked and removed from the work site.

B. ***MATERIAL INSPECTIONS -*** All work and materials furnished under these specifications shall be subject to rigid inspection. All parts and materials shall be

inspected by the City and/or Project Engineer prior to allowing the Contractor to begin excavation work. **It shall be the Contractor's responsibility to notify the City Water Department when materials arrive on the job site to allow adequate time for inspection.**

Subsection 1.3.07 COMPLIANCE WITH LAWS

A. It shall be mandatory upon the Contractor herein and upon all Subcontractors under him/her, to comply with all provisions of the Idaho Standards for Public Works Construction, City Construction Specifications and Labor Code of the State of Idaho.

Subsection 1.3.08 STATE REGULATIONS

A. In any situation where Federal, State or other jurisdiction's regulations are more restrictive than those listed in this document, the more restrictive regulation shall apply unless they are deemed unnecessary or contrary to City approved standards by the City Engineer and/or Superintendent.

Subsection 1.3.09 USE OF PREMISES

A. The Contractor shall confine his/her operations, including plant and the storage of materials, to the rights-of-way or roadways, as shown on the plans. Special care shall be taken to create a minimum of inconvenience and damage to private owners and their improvements.

Subsection 1.3.10 SHUT DOWN POLICY

A. All shut downs shall conform to the policy as adopted by the City Council. All affected customers **shall be notified with a written notice at least forty eight (48) hours prior to the shut down.** Notices shall also be provided to City Hall, the Water Department Office, and the Fire Department forty eight (48) hours prior to shut down. If the shut down is to occur on a Monday, the affected services shall be notified in writing the preceding Friday. If requested by the Contractor, the City may provide the Contractor with a form letter containing the correct contact numbers to use as an official notice. The Contractor shall provide verification to the City that he/she has made every attempt to contact everyone affected.

B. If an emergency shut down is required, the Contractor shall make every effort to immediately notify the affected customers of the incident and expected duration, and **shall immediately notify the City Water Department at (208)769-2210**.

Subsection 1.3.11 WORK TO BE DONE

A. The work to be done consists of furnishing all materials, equipment, labor and all other items of expense necessary for the installation of the completed facility as shown on the

plans and in accordance with the specifications. In some instances, the City may furnish certain materials and services which will be expressly called out on the plans and/or specifications.

B. The City's approval of plans prepared by a private engineer denotes agreement with the plan as prepared and is not an acceptance of responsibility as to accuracy. The private engineer shall be responsible for any errors, coordination with other facilities, and interpretation of the plans. Any changes to the original plans, whether in the field or during design, shall be submitted to the City Engineer and/or Superintendent prior to the changes being made, installed, and placed on as-builts for approval. The intent is that the complete facility shall be in general conformance with the approved plan an in accordance with the requirements of these specifications. All revisions and changes in the plan must be approved by the City Engineer and/or Superintendent.

Subsection 1.3.12 ABANDONMENTS

A. Where gate valves, blow offs, service boxes, or meter pits are to be abandoned, they shall be removed per City specifications and requirements and the street, lot or lawn repaired by the Contractor **to original conditions** and/or the Superintendent's satisfaction. The Superintendent shall specify any other requirement concerning a particular job as the need arises.

Subsection 1.3.13 GUARANTEE

A. The Contractor's guarantee shall be as stipulated under a public works contract with the City or as a specified condition of the development or jobsite work permit.

SECTION 1.4 OWNER'S RESPONSIBILITIES

Subsection 1.4.01 NOTICE OF DEFECTIVE WORK

A. The Contractor shall be notified in writing whenever defective material or workmanship is discovered. The Contractor shall make all repairs at his/her own expense, within five days after receipt of the written notice. Should the Contractor fail to repair the damage within the five days, the City may make the necessary repairs and charge the Contractor with actual cost of the repairs. Where immediate attention is required, the City shall have the right to repair the defect or damage and to charge the Contractor with the actual cost of repairs.

Subsection 1.4.02 FINAL INSPECTION

A. The City shall perform a final inspection with the project engineer or representative on the construction project in order to assist with provision of any punch list items which must be completed prior to final completion and acceptance of the project. The Water

Dept. Inspector shall also be required to sign off on water related projects prior to issuance of the Certificate of Occupancy.

B. The Contractor **shall not bury any work** to be inspected without such inspections taking place. The Contractor shall notify twenty four (24) hours in advanced and shall use every number available to contact the Field Inspector. If work is covered without the appropriate inspection, the Contractor will dig and expose any appurtenance which requires inspection at his/her own expense.

Subsection 1.4.03 MATERIAL AND EQUIPMENT SALVAGE

A. The City shall make it clear and understood that when the Contractor is required to remove portions of old mains or appurtenances from the ground, this shall be considered salvage. **All salvage is the property of the City.** The City reserves the right to request the Contractor to collect and stockpile all salvage in a location safe and free of nuisance to the public **and/or deliver it to the Water Department yard** in the City of Coeur d'Alene, Idaho, or dispose of it as directed by the Superintendent. Backfill, compaction, and surface repair of all excavations for salvage shall be made in accordance with these specifications.

SECTION 1.5 CONSTRUCTION SITE CONDITIONS

Subsection 1.5.01 RIGHTS-OF-WAY AND EASEMENTS

A. Water mains shall be installed in dedicated rights-of-way at all times unless it is absolutely imperative that a main be installed across private property. The Contractor shall be required to prove that this is the only financially feasible alternative to following existing rights of way. When a main is installed across private property, an easement shall be established for water main maintenance and repairs and legal documentation of said easement shall be furnished to the City prior to acceptance of water mains. The standard right-of-way / easement for water mains shall be twenty (20') feet centered on the completed pipeline. **All utility easements where active mains may cross private property shall be kept accessible to the City maintenance crews at all times for maintenance, locating and repairs. The City will reserve final approval of all proposed water line easements in regards to accessibility and grades.**

1. **Per existing City Water Department policy, no temporary or permanent buildings and/or structures shall be built within a water main utility easement or right-of-way. No structural wall shall be built within 10' of a water main including concrete footings and retaining walls. Any cover materials other than grass or asphalt shall be the responsibility of the property owner to replace should excavation for repairs and maintenance become necessary.**

Subsection 1.5.02 OBSERVE MINIMUM UTILITY SEPARATIONS

A. A minimum of five (5') feet horizontal separation shall be maintained from other utilities such as gas, power, phone and TV cable. Public utilities wishing to install lines within a public utility easement shall require written permission from the City for access. The City shall retain the right to require the other utility to vacate the easement should any conflicts exist.

B. The standard minimum of ten (10') feet from any non potable line shall be maintained. **No other utilities shall be laid in or over the same trench as the water main and shall observe the minimum five (5') foot horizontal separation requirements.**

Subsection 1.5.03 PUBLIC CONVENIENCE

A. ***PUBLIC TRAFFIC*** - The Contractor shall at all times conduct his operations in a manner affecting the minimum obstruction and inconvenience to public traffic. Any planned interruptions in normal traffic flow shall have prior approval in the form of an approved encroachment permit received from the City of Coeur d'Alene Engineering Services Department. **A permit to work within the right-of-way must be obtained from the City Engineer prior to beginning any work in the public right-of-way.** The Contractor shall provide a traffic control plan for approval by the City Engineer and/or Superintendent when such work will impede or require any diversion of local traffic. The Contractor shall have under construction only that amount of work he/she can execute properly within the limits of all safety regulations and the rights and convenience of the public. **Utility work in the public street or right of way shall not be left open over night. The Contractor must fill in the work to finished grade or supply traffic rated plating if the Contractor has prior approval from the City Engineer and/or Superintendent.** All public and private driveways impacted by the work shall be accessible by the end of the work shift.

B. ***WORK CONDITIONS*** - The work shall be carried on with special regard for the rights and convenience of the traveling public, the property owners, and residents along the line of work. All necessary precautions, as approved by the City Engineer, shall be taken wherever necessary to provide for two-way traffic along all traveled streets, unless otherwise approved and/or required by the City Engineer.

C. ***ACCESS TO PRIVATE PROPERTY*** - The Contractor shall provide necessary access to adjoining private property. Residents shall be notified if driveways are to be blocked, allowing removal of cars if desired. Driveways shall not be closed or obstructed longer than is absolutely necessary in the Superintendent's opinion, and means of crossing shall be provided during all stages of work. Work which impairs access to service stations, stores and other business establishments shall be carried on to completion as rapidly as possible and where necessary, steel plates or continuous bridges shall be provided to facilitate travel across the trench. Temporary access shall be made for the full width of affected driveways to facilitate access from either travel direction, including weekends and holidays.

D. ***PUBLIC SAFETY*** - The Contractor shall furnish, erect, and maintain in good order all warning signs, lights, barriers, and other measures designed to protect the traveling public as directed by the City and applicable laws and regulations. This provision shall include weekends and holidays.

E. ***TRAFFIC CONTROL DEVICES*** - All barricades, cones and warning devices shall comply with all MUTCD regulations and shall be plainly marked with the Contractor's name and contact number.

F. ***OTHER HAZARDS*** - The Contractor shall take immediate steps to correct any hazard affecting public safety. Where the Contractor does not take immediate action, the City Engineer or Superintendent may require temporary corrective steps be taken and the Contractor shall be charged for all costs involved. Where the City Engineer or Superintendent has taken temporary corrective steps, the Contractor shall not be relieved of his/her responsibility for public safety or damages to persons or property. **The Contractor shall correct the hazardous condition at the earliest possible time and shall notify the City Engineer that he/she has done so.**

Subsection 1.5.04 DUST ABATEMENT

A. The Contractor shall furnish all labor and equipment to carry out effective measures where necessary to prevent his/her operations from producing dust as directed by the City Engineer. **This includes weekends and holidays**. The Contractor shall be responsible for any damage resulting from dust originating from his/her operations. The Contractor shall not use a fire hydrant as a water supply unless authorized by the Superintendent. If authorized, the Contractor shall obtain any necessary equipment to record the water used and will be subject to any applicable fees and charges.

Subsection 1.5.05 SANITATION

A. The Contractor shall comply with all applicable rules and regulations established by the Idaho Department of Environmental Quality and the City of Coeur d'Alene in regards to keeping the construction site clean and preservation of the material sanitary conditions. All excess construction materials and supplies not intended for use shall be neatly piled or removed from the site on a regular basis. The site shall be thoroughly cleaned and restored to as near original condition prior to final completion of the project and shall be inspected prior to acceptance.

SECTION 1.6 REQUIRED TESTS AND INSPECTIONS

Subsection 1.6.01 PRESSURE TESTS

A. The Contractor shall perform all required pressure tests for all mains, fire hydrants, fire service laterals and service laterals as defined in Chapter 11 in the presence of the Water

Department Field Inspector and related RPR or Field Engineer. The pressure test shall consist of pumping the installation to 160 psi and maintaining said pressure for a minimum of two (2) hours while a pressure recording device is attached. A maximum allowable leak loss shall be calculated per the ISPWC, Section 401 and if the main exceeds the allowable leak loss or loses excessive pressure prior to the time limit, repairs shall be made and the test repeated until the installation passes and has been recorded as such. **(Please see Water Standard Drawing W-35 Approved Pressure Testing Method and Water Standard Drawing W-36 Allowable Leak Loss Table)**

Subsection 1.6.02 DISINFECTION AND BACTERIA SAMPLING

A. The Contractor shall perform water main disinfection as described per Chapter 10 of these construction standards. Procedures for acceptable disinfection methods are outlined and shall be followed. The Contractor shall consult the Water Department Field Inspector as to the amount of flushing to perform and for a determination of the number of required bacteria samples to be extracted after flushing. All test results shall be forwarded to the Water Department for project records.

Subsection 1.6.03 COMPACTION AND OTHER REQUIRED TESTING

A. The Contractor shall have all compaction and other required tests performed as specified by these construction standards and/or the project contract documents. All test results shall be presented to the City for project records.

Subsection 1.6.04 REGULAR PROJECT INSPECTION

A. The Contractor shall notify the Registered Project Representative or Project Engineer **twenty-four (24) hours in advance** of any work to be done which will require inspections, in order that such regular inspections may be provided with a minimum of inconvenience or delay. All fittings, taps, fire hydrants, services, thrust blocks and miscellaneous appurtenances shall be inspected and recorded for project record and as-built purposes. The Contractor shall also notify the Water Department field inspector for the same applications. **For any work done with any area open to public traffic, the Contractor shall also notify the City Engineer.**

B. The Superintendent or his/her designated representative shall at all times have access to the work during its construction and shall be furnished with every reasonable facility for ascertaining that materials and workmanship are in accordance with the requirements of these specifications. **In the event that any work which requires routine inspection as specified is prematurely covered by the Contractor, the Superintendent may require the Contractor to uncover the affected area at his/her expense for proper inspection** such as fittings, thrust blocks, service lateral connections, or any other areas or appurtenances which may require as-built measurements and visual confirmation of compliance with these regulations.

SECTION 1.7 PROJECT COMPLETION

Subsection 1.7.01 COMPLETION OF WORK

A. The work shall be considered complete and acceptable when the Contractor has fulfilled all requirements of the project contract requirements, any additional requirements under field change orders or corrections and any specific requirements in accordance with these standards for installation of public facilities, **has removed all excess materials and equipment,** has swept all paved areas and has restored the site to as good or better condition than it was when he/she found it. The City will dispatch an inspector to ensure all clean up and disposal has been taken care prior to final acceptance.

Subsection 1.7.02 FINAL INSPECTION

A. The Contractor shall notify the Superintendent or his/her representative in writing **twenty-four (24) hours in advance** to schedule. The final inspection may generate a punch list which will be given to the Contractor within a mutually agreed upon date after inspection.

B. Any punch list items identified by the inspector shall be the responsibility of the Contractor to repair in a timely manner prior to receipt of final payment.

Subsection 1.7.03 AS-BUILTS

A. The Contractor and/or Project Engineer shall supply as-builts on the plans provided, indicating the exact locations of all facilities installed before the City will accept the project as completed. The Contractor shall supply the Superintendent with all construction notes which may or may not have been included on the as-builts. **As-builts are due to the City no more than thirty (30) days after substantial completion of the project. If no as-builts are received, the City shall withhold any building permits for the project and/or Certificates of Occupancy. Any and all plan/construction changes shall be included with the final as-builts.** The as-builts shall contain information regarding planned and actual installations, footage measurements for all fittings, tees and valves, detailed information and measurements for any appurtenances removed or replaced during construction, and any information regarding service stubs and their locations.

CHAPTER 2

TRENCHING AND EXCAVATIONS

SECTION 2.1 INFORMATION AND DOCUMENTATION

Subsection 2.1.01 GENERAL INFORMATION

A. The City of Coeur d'Alene Water Department Construction Standards will provide a general description of the correct procedures for utility trenching and excavation work to be performed in City Right-Of-Way and/or easements which may or may not contain existing City, and other utility infrastructure. Contractor's working in and for the City of Coeur d'Alene shall be responsible for reading and understanding these standards in their entirety.

Subsection 2.1.02 REFERENCES

A. IDAPA 58.01.08

B. AWWA/ANSI – C600-99. C602-00, C603-05, C605-94

Subsection 2.1.03 DOCUMENTATION

A. ***CONTRACT DOCUMENTS –*** Shall contain plans and specifications identifying all work to be done on the utility construction project. The Field Engineer and/or Inspector shall be responsible for knowing and understanding the scope of work to be performed. They shall also be responsible for measuring and recording pertinent project information regarding location of valves, tees, elbows, fire hydrants, and crossings with other utilities, etc., for transfer to as-builts and provision to the City field inspector. Measurements for the City's benefit shall be in feet and inches from an identifiable location such as valve box or fire hydrant and not from engineering stations or movable objects such as power poles, trees or buildings.

B. ***SUBMITTALS -*** The Superintendent or his/her designated agents shall approve all plans, drawings, or sketches showing locations of new facilities to be connected to the City water system. No work may begin until written approval from the Superintendent and the City Engineer has been received.

Subsection 2.1.04 DEPARTMENT CONTACT NUMBERS

A. ***City Contact Numbers -*** The following numbers and information should be included in the Contract Documents for immediate availability to the Contractor:

Table 2.1

1.	Water Dept.	**(208)796-2210**
2.	Street Dept.	**(208)769-2233**
3.	Wastewater Dept.	**(208)769-2246**
4.	Engineering	**(208)769-2283**

B. ***Other utility contacts*****:**

Table 2.2

1.	Avista (gas & power)	1(800)992-9137 or (208)769-1342
2.	Kootenai Electric	1(800)240-0459 or (208)765-1200
3.	Time Warner Cable	1(800)683-1000 or (208)667-5521
4.	If not sure who to contact, please call the Water Dept.	(208)769-2210

SECTION 2.2 TRENCHING

Subsection 2.2.01 PRE-CONSTRUCTION CONFERENCE

A. Prior to work commencing on **any** project, the Contractor shall schedule a pre-construction conference with the City Water Department to inform the Superintendent of the work to be performed. Any necessary contract documentation shall be provided to the City Water Department prior to the pre-construction conference. The Contractor shall attempt to have a representative from all of the Contractor's subs at the meeting, or shall be authorized to speak for them. The Contractor shall provide at the meeting:

1. A complete listing of the Contractor's subcontractors for the project.

2. An approved set of plans with the City Engineer's signature. Any changes, additions or deletions shall be reviewed and signed by the City Engineer prior to construction as well. The Contractor shall have a set of signed plans available at the work site at all times which shall be shown to the field inspector.

3. A project schedule which shall be regularly updated and any changes shall be submitted to the City during the project.

4. Proof of insurance, license and bonding if not provided to the City at an earlier date.

B. If construction stops or is delayed longer than thirty (30) days, or there are significant changes with the construction drawings/project, the Contractor shall set an additional pre-construction conference to review the work to be done and any possible changes. . Minor drawing detail changes may be accomplished through the normal review process by the City Engineer.

Subsection 2.2.02 TRENCHES

A. The Contractor shall excavate all trenches to the required grade and alignment as shown on the Contract Documents and/or called for in these standards. The allowable length of open trenches shall be determined by the City Engineer and/or Superintendent when work is started. The trench shall be excavated only so far in advance of pipe installation as the City Engineer will permit. The trench work shall conform to OSHA recognized standard Trench Safety Practices in regards to sloping and/or shoring requirements. **Work may be terminated by City inspectors if they determine that the Contractor has not provided adequate safety for his/her employees.**

B. Utility trenches for water mains and services shall be excavated to a depth sufficient to provide a minimum six (6") inch bedding if so required and a minimum four and one half (4 ½') foot of pipe cover. All excavation work shall be consistent with OSHA approved safe trenching practices or as provided by the CDA Water Department Safety Manual. **No City employee will be expected to enter any trenches they deem to be unsafe by City standards.**

Subsection 2.2.03 TRENCH WIDTHS

A. The Contractor shall provide a minimum trench width for the various sizes of pipe as indicated in **Table 2.3**. This trench width will allow for safe movement of employees and equipment around the pipe laid in the trench.

Table 2.3

Inside Diameter	Width of Trench
4" and 6"	20"
8" and 10"	24"
12" to and including 36"	Outside diameter of pipe plus 12"

Subsection 2.2.04 DEPTH OF PIPE

A. All water mains shall have a minimum cover of **four foot six inches (4' 6") and maximum cover of six feet (6') between the top of the pipe and the finished grade**, unless otherwise approved or directed by the Superintendent. **(Please see Water Standard Drawing W-11 Pipe Bedding and Backfill)**

Subsection 2.2.05 EXCESS EXCAVATION

A. In the event the trench is over excavated without the permission or recommendation of the Engineer, the trench shall be back-filled at the Contractor's expense to six (6") inches below the bottom of the pipe for PVC plastic pipe and ductile iron pipe with approved select backfill material level across the trench. The approved backfill materials shall be properly compacted prior to installation of approved pipe bedding materials. When excavating in soft and unstable soils, the contractor shall undercut the trench to a depth to be approved by the Engineer that will properly support the pipe and related fittings and backfill with a select backfill material approved by the Engineer. The backfill material shall be moistened and placed in uniform layers in accordance with the backfill requirements of these standards. The Contractor shall furnish and install said backfill material per unit payment as specified in the contract documents unless the contractor has created the problem, which then would be at his/her own expense as determined by the Engineer. **(Please see Water Standard Drawing W-11 Pipe Bedding and Backfill)**

Subsection 2.2.06 DEWATERING THE TRENCH

A. All water encountered must be pumped out of the trench and the trench kept dry until the pipe has been installed and the joints closed. Any ground water entering an open pipe shall immediately be removed and the pipe shall be flushed clean of any debris or mud prior to continuing installation**. If the contaminated pipe cannot be readily cleaned by flushing or other acceptable means, the contaminated pipe shall be removed, properly cleaned or replaced as necessary to ensure a clean, uncontaminated installation.**

Subsection 2.2.07 PROTECTION OF EXISTING FACILITIES

A. The Contractor shall be responsible for the care and protection of all existing sewer lines, water lines, gas mains, culverts, or other facilities or structures that may be encountered in the area of his work. Prior to construction, the Contractor shall notify each agency of jurisdiction and make arrangements for the locating of their facilities. This shall include, but not be limited to contacting the Kootenai County One Call utility locating system **by dialing "811" from any phone**. **When an existing facility is damaged or requires special protection due to his/her operation, the contractor shall notify the agency of jurisdiction and the Contractor shall be liable for the cost of repairs or protection**. The Contractor shall not bury **any** damaged and repaired utilities until inspected and approved by the agency of jurisdiction.

Subsection 2.2.08 CHANGES IN LINE OR GRADE

A. The City Engineer and/or Superintendent shall have the authority to order revisions in the line or grade when obstructions are encountered which will require alterations to the plans. The Contractor shall be responsible for determining the fittings required, both

horizontal and vertical, to conform with the new alignment and grade necessary to avoid conflict with existing facilities.

Subsection 2.2.09 TRENCH READY FOR INSTALLATION

A. When the trench is properly prepped and ready for pipe installation, the Contractor shall follow the applicable chapter related to the type of installation to be completed. Once all facets of the installation are completed including all necessary inspections, the Contractor shall follow the final bedding and backfill procedures as outlined in Chapter 8.

Subsection 2.2.10 INSPECTIONS

A. The bedding and initial installation of the main shall be inspected prior to backfilling of the trench. The Contractor shall notify the Field Engineer and Inspector a minimum of twenty four (24) hours prior to work being completed to allow sufficient time to have the inspections completed without delaying the work being done. The final backfill shall be inspected prior to placing of asphalt or concrete.

B. The Contractor **shall not bury any work** to be inspected without such inspections taking place. The Contractor shall notify twenty four (24) hours in advanced and shall use every number available to contact the Field Inspector. If work is covered without the appropriate inspection, the Contractor will dig and expose any appurtenance which requires inspection at his/her own expense.

SECTION 2.3 EXCAVATIONS

Subsection 2.3.01 GENERAL

A. Excavations and utility trenching are commonly confused as one and the same, However, for the purposes of these standards, excavation shall indicate digging on an area wider than a standard two (2') foot plus wide trench whereas the danger of cave ins is significantly reduced to the employee within the excavated area due to the additional space.

B. When utilized for a water related appurtenance, the same provisions as described above for utility trenches will be implied**.**

C. Patching of all trenches shall consist of a minimum of three (3") inches of G-Mix unless otherwise directed on the plans or by the City Engineer. All joints between existing asphalt and new asphalt shall be coated with an approved emulsion tack coating.

CHAPTER 3

WATER PIPE AND RELATED FITTINGS

SECTION 3.1 MATERIAL INFORMATION

Subsection 3.1.01 GENERAL

A. All materials supplied by the Contractor or the City shall be new, clean and shall meet or exceed all City and AWWA guidelines. The material shall be handled in a manner which will protect its integrity and any coatings or special surface preparations it may have.

B. All PVC pipe for water main use shall be Class 150 DR-18 meeting the AWWA standard C-900 for four (4") inch through twelve (12") inch, or C-905 for pipe larger than twelve (12") inch.

C. Ductile iron pipe for water mains shall be cement lined and shall conform to the specifications of ANSI/AWWA C151/A21.51-81 for Class 50 Pressure Pipe, ANSI/AWWA C111/A21.11-85 for rubber gasket joints for ductile iron pressure pipe and fittings, unless otherwise specified on the plans or approved by the Engineer

D. Long term storage of PVC out of doors shall be accomplished with use of **tarps to cover and protect the pipe exterior and especially the sealing ends from ultraviolet degradation caused by direct exposure to sunlight in excess of 6 months.** Pipe stored for longer than this period shall be thoroughly inspected upon delivery and may be rejected by the City. **The supplier shall replace any rejected pipe at no expense to the contractor or the City.**

Subsection 3.1.02 REFERENCES

A. IDAPA 58.01.08

B. AWWA/ANSI C900-97 (4" – 12") & C905-97 (16" – 48")

C. AWWA/ANSI C500-02 through C605-94

Subsection 3.1.03 CERTIFICATE OF MANUFACTURE

A. Every shipment of pipe shall be accompanied by a statement from the manufacturer certifying that each length of pipe has been found to meet the requirements thereof. This certificate shall be filed with the Superintendent prior to the unloading of said material at the job site. All pipe shall be so tagged or marked by the manufacturer as to clearly indicate it has been subject to and meets the City's requirements. Said tags or marks

shall be preserved by the Contractor until inspection and approval by the Superintendent has been obtained.

Subsection 3.1.04 DOCUMENTATION

A. Per the Contract Document requirements, the Field Engineer and/or Inspector shall confirm that all materials utilized on the project meet all recognized standards and materials and installation. They shall also be responsible for measuring and recording pertinent project information regarding location of valves, tees, elbows, fire hydrants, and crossings with other utilities, etc., for transfer to as-builts and provision to the City field inspector. Measurements for the City's benefit shall be in feet and inches from an identifiable location such as valve box or fire hydrant and not from engineering stations or movable objects such as power poles, or buildings.

B. The Contractor and/or Project Engineer shall supply as-builts on the plans provided, indicating the exact locations of all facilities installed before the City will accept the project as completed. The Contractor shall supply the Superintendent with all construction notes which may or may not have been included on the as-builts. **As-builts are due to the City no more than thirty (30) days after substantial completion of the project. If no as-builts are received, the City shall withhold any building permits for the project and/or Certificates of Occupancy. Any and all plan/construction changes shall be included with the final as-builts.** The as-builts shall contain information regarding planned and actual installations, footage measurements for all fittings, tees and valves, detailed information and measurements for any appurtenances removed or replaced during construction, and any information regarding service stubs and their locations.

Subsection 3.1.05 PRE-CONSTRUCTION CONFERENCE

A. Prior to work commencing on **any** project, the Contractor shall schedule a pre-construction conference with the City Water Department to inform the Superintendent of the work to be performed. Any necessary contract documentation shall be provided to the City Water Department prior to the pre-construction conference. The Contractor shall attempt to have a representative from all of the Contractor's subs at the meeting, or shall be authorized to speak for them. The Contractor shall provide at the meeting:

1. A complete listing of the Contractor's subcontractors for the project.

2. An approved set of plans with the City Engineer's signature. Any changes, additions or deletions shall be reviewed and signed by the City Engineer prior to construction as well. The Contractor shall have a set of signed plans available at the work site at all times which shall be shown to the field inspector.

3. A project schedule which shall be regularly updated and any changes shall be submitted to the City during the project.

4. Proof of insurance, license and bonding if not provided to the City at an earlier date.

B. If construction stops or is delayed longer than thirty (30) days, or there are significant changes with the construction drawings/project, -the Contractor shall set an additional pre-construction conference to review the work to be done and any possible changes. Minor drawing detail changes may be accomplished through the normal review process by the City Engineer.

SECTION 3.2 PVC PIPE REQUIREMENTS

Subsection 3.2.01 HANDLING OF PVC PIPE AND ACCESSORIES

A. Tools and equipment designed for use with PVC pipe and satisfactory to the Superintendent shall be provided and used by the Contractor for the safe and efficient execution of the work. All PVC pipe, fittings, valves and accessories shall be handled in such a manner as to prevent damage. **The PVC pipe shall not be dropped or thrown into the trench or onto the street surface.** Any PVC pipe which has been dropped shall be thoroughly inspected and rejected at the Contractor's expense if any damage is found. The damaged PVC pipe shall be marked and removed from the work site**.**

Subsection 3.2.02 BEARING FOR PVC PIPE

A. Bearing for PVC pipe shall be obtained by placing mounds of **Type III bedding material or approved native material** in the middle and near the ends of the pipe. The mounds shall extend across the trench, shall be six (6") inches wide, and shall be high enough to insure a clearance of at least six (6") inches beneath the bottom of the pipe along its entire length. Mounds shall bring the pipe to true line and grade as shown on the plan and profile. The entire length of the pipe shall be bedded with **Type III bedding or approved native material** to the centerline of the pipe, tamped well under and around the pipe, as indicated in the backfill section. Once the initial backfill has been tamped, the pipe shall be covered to a minimum of twelve (12") inches, minimum twenty four (24") inches in rocky soils, above the highest portion of the pipe level across the trench. The bedding material shall then be tamped around the pipe prior to additional lifts of backfill being placed in the trench. If the trench is in a rock base, the trench shall be over excavated at least six (6") inches below the bottom of the pipe and shall have Type III bedding or approved native material placed and evenly distributed prior to pipe installation. **(Please see Water Standard Drawing W-11 Pipe Bedding and Backfill)**

Subsection 3.2.03 CUTTING OF PVC PIPE

A. PVC water main may be cut with a powered chop saw, a PVC hand saw, an approved rotary pipe cutter or a chain style pipe cutter. Cut edges shall be buffed smooth as required. A beveling tool shall be utilized to cut or restore pipe assembly bevels at the spigot end as needed.

B. Cut sections of piping may be utilized to continue the main provided that the cuts are clean and squared with no additional grooves, cracks or divots which may affect pipe integrity.

Subsection 3.2.04 PIPE DEFLECTION

A. The PVC water pipe shall not be deflected along its length or at each bell joint greater than the manufacturer's recommendation. The Contractor shall block or brace the pipe joints to ensure that bending of the C900 PVC pipe does not result in axial deflection in the gasketed or mechanical joint that exceeds the manufacturer's published limits. Excessive axial-joint deflection may result in damage or leaks caused by excessive stress on the joints. Any necessary deflection beyond this point shall be accomplished with the aid of mechanical joint fittings and shall be shown on the construction drawings as necessary. At no time shall the pipe be deflected by the use of any mechanical device greater than a shovel or small pry bar. Please see **Table 3.1** for AWWA recommended PVC pipe deflection radius.

Table 3.1

Allowable Radius for C900 PVC Pipe

Nominal Size		Minimum Bending Radius	
in.	*(mm)*	*ft.*	*(m)*
4	(100)	100	(30.5)
6	(150)	144	(43.9)
8	(200)	189	(57.6)
10	(250)	231	(70.4)
12	(300)	275	(83.8)

ANSI/AWWA C900 PVC pipe with cast iron (CI) outside diameters.

Subsection 3.2.05 PERMEATION

A. Where there may be the likelihood that piping used for mains or services may be exposed to a significant concentration of pollutants including but not limited to low-molecular-weight petroleum products and organic solvents or their vapors, the Project Engineer shall review the material selections or consider protection via casing materials of a permeation resistive nature. Use of polyethylene, polybutylene, or polyvinyl chloride (PVC) have been documented as having been affected by permeation of low-molecular-weight organic solvents and petroleum products.

SECTION 3.3 DUCTILE IRON PIPE

Subsection 3.3.01 HANDLING OF DUCTILE IRON PIPE AND ACCESSORIES

A. Specific tools and equipment designed for use with ductile iron pipe and satisfactory to the Superintendent shall be provided and used by the Contractor for the safe and efficient execution of the work. All ductile iron pipe, fittings, valves and accessories shall be handled in such a manner as to prevent damage. **Ductile iron pipe shall not be dropped or thrown into the trench or onto the street surface.** Any ductile iron pipe which has been dropped shall be thoroughly inspected and rejected at the Contractor's expense if any damage is found including cracked cement mortar linings. The damaged ductile iron pipe shall be marked and removed from the work site**.**

Subsection 3.3.02 BEARING FOR DUCTILE IRON PIPE

A. Bearing for ductile iron pipe, if so required, will be in the preformed in the same application as with PVC pipe. **Type III bedding material or approved native material** in the middle and near the ends of the pipe shall be utilized as approved by the Field Engineer or Inspector. The entire length of the pipe shall be bedded with **Type III bedding or approved native material** to the centerline of the pipe, tamped well under and around the pipe, as indicated in the backfill section. **(Please see Water Standard Drawing W-11 Pipe Bedding and Backfill)**

Subsection 3.3.03 CUTTING OF DUCTILE IRON PIPE

A. Ductile iron water main may be cut with a powered chop saw or a hydraulic compression type pipe cutter. Cut edges shall be ground smooth as required and the lining shall be checked for cracked or missing pieces.

B. Cut sections of piping may be utilized in conjunction with other fittings to continue the main provided that the cuts are clean and squared with no additional grooves, cracks or divots which may affect pipe integrity. They cannot be used in a bell and spigot joint.

Subsection 3.3.04 PIPE DEFLECTION

A. The ductile iron water pipe shall not be deflected along its length. Deflection shall take place at each bell joint or mechanical joint no greater than the manufacturer's recommendation. Any necessary deflection beyond this point shall be accomplished with the aid of mechanical joint fittings and shall be shown on the construction drawings as necessary. At no time shall the pipe be deflected by the use of any mechanical device greater than a shovel or small pry bar. Please see **Table 3.2** for AWWA recommended ductile iron pipe deflection radius for bell and spigot joints.

Table 3.2

Maximum Joint Deflection – Bell and Spigot Joints

Nominal Pipe Size		Deflection Angle-θ	Maximum Offset - S† *in. (m)*		Approx. Radius of Curve - R† Produced by Succession of Joints – *ft. (m)*	
in.	***(mm)***	***deg.***	***Inches per 20 ft.***	***(5.5m)***	***Total Radius w/ 20' stick***	***Total Radius w/5m stick***
4	**(102)**	**5**	**21**	**(0.53)**	**230**	**(70)**
6	**(152)**	**5**	**21**	**(0.53)**	**230**	**(70)**
8	**(203)**	**5**	**21**	**(0.53)**	**230**	**(70)**
10	**(254)**	**5**	**21**	**(0.53)**	**230**	**(70)**
12	**(305)**	**5**	**21**	**(0.53)**	**230**	**(70)**
16	**(406)**	**3**	**12**	**(0.30)**	**380**	**(116)**
18	**(457)**	**3**	**12**	**(0.30)**	**380**	**(116)**
20	**(508)**	**3**	**12**	**(0.30)**	**380**	**(116)**
24	**(610)**	**3**	**12**	**(0.30)**	**380**	**(116)**

For 14-in. and larger push-on joints, maximum deflection angel may be larger then shown above. Consult manufacturer.

B. Joint deflection shall not exceed the previous table unless demonstrated in writing from the material manufacturer and approved by the City Engineer and/or Superintendent.

C. Please see **Table 3.3** for AWWA recommended DI pipe deflection radius for mechanical joints on the following page.

Table 3.3

Maximum Joint Deflection – Mechanical Joint Pipe

Nominal Pipe Size		Deflection Angle-θ	Maximum Offset - S† *in. (m)*		Approx. Radius of Curve - R† Produced by Succession of Joints – *ft. (m)*	
in.	***(mm)***	***deg.***	***Inches per 20 ft.***	***(5.5m)***	***Total Radius w/ 20' stick***	***Total Radius w/5m stick***
4	**(102)**	**8-18**	**35**	**(0.53)**	**140**	**(70)**
6	**(152)**	**7-07**	**30**	**(0.53)**	**160**	**(70)**
8	**(203)**	**5-21**	**22**	**(0.53)**	**220**	**(70)**
10	**(254)**	**5-21**	**22**	**(0.53)**	**220**	**(70)**
12	**(305)**	**5-21**	**22**	**(0.53)**	**220**	**(70)**
16	**(406)**	**3-35**	**15**	**(0.30)**	**320**	**(116)**
18	**(457)**	**3-00**	**12**	**(0.30)**	**380**	**(116)**
20	**(508)**	**3-00**	**12**	**(0.30)**	**380**	**(116)**
24	**(610)**	**2-23**	**10**	**(0.30)**	**500**	**(116)**

SECTION 3.4 ASBESTOS CEMENT (AC) PIPE

Subsection 3.4.01 CUTTING AND TAPPING AC PIPE

A. Cutting of AC pipe shall be performed using a manual or hydraulic snapping tool **only due to the known hazards of airborne asbestos particles contained in the dust** created by powered cut off saws**.**

1. Care shall be taken to prevent the inhalation hazards whenever working with AC pipe. Proper respiratory protection equipment shall be worn at all times during cutting and cleaning of the pipe. Airborne asbestos particles are a known carcinogen and all employees with potential exposure must be protected per OSHA guidelines.

2. The portion of pipe cut out shall not be removed from the trench if at all possible. Once removed from the trench, the pipe is then considered hazardous waste and must be disposed per hazardous waste guidelines by double bagging in approved asbestos bags and sending to an approved disposal site. If left in the trench, the pipe can be mechanically crushed during backfill and compaction and will pose no further threat.

B. Tapping of AC pipe may be done in the normal fashion utilizing a tapping tee or sleeve, gate valve and hydraulic tapping machine. Where two or more domestic taps, two (2") inches or less are to be made, saddles and corp stops will be utilized and shall be placed a minimum of twenty four (24") inches apart on center to prevent cracking of the AC main. Where more than one tap four (4") inch and larger is made, the taps shall be a minimum of five (5') feet apart on center to preserve the structural integrity of the pipe. Any loosened soil under the pipe near a tapping tee or sleeve shall be removed and concrete shall be placed in the void to provide adequate and stable bearing surface. **Care should be taken to avoid undercutting of soil below pipe.**

C. Rough barrel AC pipe has varying wall thickness comparable with other types of pipe. Six (6") inch AC pipe has a three-quarter (3/4") inch wall thickness. Eight (8") inch AC pipe has a wall thickness of one and one-eighth (1 1/8") inches. And twelve (12") inch AC pipe has a one and three-eighths (1 3/8") inch wall thickness.

SECTION 3.5 FITTINGS AND RELATED MATERIALS

Subsection 3.5.01 FITTINGS AND VALVES

A. Fittings shall conform to the latest editions of AWWA Specifications – either C111/A21.11 or C-104. Either of the following types of fittings may be used:

1. Mechanical Joint – The Contractor may use mechanical joint fittings approved for use with ductile iron pipe. Joint restraints shall include meg-a-lug glands and/or thrust blocks. Where gate or butterfly valves connect to the fitting, the fitting shall have a flanged connection, unless otherwise approved by the City.

2. Flanged type for outlet on tees and crosses or as required by the plans.

B. Gate and butterfly valves shall be AWWA approved resilient seated valves and shall meet all requirements as specified in Chapter 4 of these construction standards.

Subsection 3.5.02 DEFECTIVE OR DAMAGED MATERIAL

A. The pipe and couplings shall be carefully inspected for defects. **Material found to be defective or damaged shall be rejected, marked and removed from the work site.** In the event a portion of a length of pipe is damaged, the damaged portion shall be cut off in an approved manner, discarded and the remaining sound portions may be used. The Contractor shall be responsible for any and all damage to material and he/she shall stand the expense of repairing or replacing same. Rubber gaskets shall be stored out of the sun, **inspected and protected from deterioration.**

Section 3.5.03 PLUGS

A. All openings in the pipeline shall be closed with watertight expandable type plugs, a push in plug (or pipe section with cap), or cast iron test plugs at the end of each day's operation**. The use of fabric, plastic, a bucket, wood or other similar temporary plugs will not be permitted.**

SECTION 3.6 INSTALLATION

Subsection 3.6.01 ASSEMBLY AND INSTALLATION

A. PIPE AND FITTINGS -All connecting parts of pipe, gaskets, couplings and fittings shall be thoroughly cleaned before assembly and shall be assembled in a workmanlike manner in accordance with the manufacturer's recommendations or as provided in these specifications. Lubricant shall be as provided or approved by the pipe manufacturer. Excessive use of lubricant will not be permitted.

Subsection 3.6.02 JOINING PVC, DUCTILE IRON AND AC PIPE AND FITTINGS

A. In joining with a rubber gasket type fitting, the length of pipe shall be a maximum of twenty (20') feet and a minimum of one and a half (1 ½) feet. All PVC, AC and ductile iron pipe, four (4") inch and larger shall be joined at tees, valves and other fittings by the use of a mechanical joint. Additional joint restraint, such as EBAA Iron 2000 PV series or a Meg-A-Lug 1100 series shall be installed as part of these construction standards if deemed applicable by the City Engineer and/or Superintendent.

B. Where rubber ring fittings are used, the pipe must have a machined end in accordance with the manufacturer's recommendations. Joining AC pipe to PVC pipe will require the use of Romac couplings when a tee or elbow will not be installed. **All valves shall be bolted to tees and crosses where applicable. Valves may occasionally be used with ninety (90^{o}) degree elbows but shall be bolted to one side of the fitting.**

C. Please see Table 3.4 for applicable bolt torque for all mechanical joint fittings unless otherwise specified by the respective manufacturer.

Table 3.4

Mechanical Joint Bolt Torque

Joint Size		**Bolt size**		**Range of Torque**	
in.	***(mm)***	***in.***	***(mm)***	***ft.lb***	***(N.m)***
4-24	**(102-610)**	**¾"**	**(19)**	**75-90**	**(102-122)**
30-36	**(762-914)**	**1"**	**(25)**	**100-120**	**(136-163)**
42-48	**(1067-1219)**	**1 ¼"**	**(32)**	**120-150**	**(163-203)**

Subsection 3.6.03 **JOINT RESTRAINT**

A. All mechanical joint deflection greater than eleven and one-quarter (11 $^{1/4}$) degrees shall be physically restrained with a minimum of a poured concrete thrust or a half (½) concrete ecology block. The poured blocks shall be poured the full depth of the fitting with minimum 4 mil plastic sheeting double wrapped around the fitting. The concrete shall be poured to a perpendicular undisturbed embankment. The ecology block **shall be set square against and centered on the fitting,** at a minimum six (6") inches below the bottom of the fitting, and the space between the embankment and the block shall be filled with a minimum three quarter inch (¾") minus aggregate and compacted to 90% density. **(Please see Water Standard Drawing W-9 Thrust Blocking)**

Subsection 3.6.04 **BLOW OFF ASSEMBLY**

A. A blow off assembly shall be installed in accordance with the City Construction Standards at locations noted on the plans and at such additional locations as required by the City Engineer and/or Superintendent for the removal of water and/or sediment. **All dead end mains and stubs in excess of five (5) feet shall have a blow off assembly installed with applicable valve boxes to finished grade. (Please see Water Standard Drawing W-6 Frost Free Blow Off Assembly**

Subsection 3.6.05 **LOCATING WIRE**

A. All PVC and ductile iron water mains, fire services and fire hydrant laterals shall have a locating wire of not less than 12 ga. single-strand copper with an insulated coating. **The locating wire shall extend from just under the valve box lid down the inside of the valve box top section and outside of the valve box bottom section to the distribution**

main and shall be aligned at and taped to the center top of the pipe. Any connections shall be made with an approved direct bury connection. (Please see Water Standard Drawings W-11 Pipe Bedding and Backfill and W-12 Cast Iron Valve Box – Two Piece)

Subsection 3.6.06 MARKER TAPE

A. All water mains shall have an approved marking tape to be placed approximately twenty four (24") inches below finished grade and level in the trench with all lettering facing up. The tape shall be magnetically detectable and shall indicate "Buried Water Line Below". **(Please see Water Standard Drawing W-11 Pipe Bedding and Backfill)**

Subsection 3.6.07 INSPECTION

A. The bedding and initial installation of the main shall be inspected prior to backfilling of the trench. The Contractor shall notify the Field Engineer and Inspector a minimum of twenty four (24) hours prior to work being completed to allow sufficient time to have the inspections completed without delaying the work being done. The final backfill shall be inspected prior to placing of asphalt or concrete.

B. The Contractor **shall not bury any work** to be inspected without such inspections taking place. The Contractor shall notify twenty four (24) hours in advanced and shall use every number available to contact the Field Inspector. If work is covered without the appropriate inspection, the Contractor will dig and expose any appurtenance which requires inspection at his/her own expense.

SECTION 3.7 CASING FOR RIGHT-OF-WAY CROSSINGS

Subsection 3.7.01 CASING FOR PVC AND DUCTILE IRON PIPE

A. Where it is necessary to install pipe in a casing, such as right-of-way or utility crossings, railroad and interstate crossings as well as waterway crossings, the casing sizes are indicated in **Table 3.5** and shall be utilized with approved wall thickness and the appropriate casing insulators. The casing insulators are available for various pipe sizes in certain casing sizes. The Contractor shall only install approved insulators as specified I the Contract Documents.

1. Casing wall thickness shall be determined dependent on the application it is being installed for. Wall thickness may be greater for unconfined soil placements or extreme traffic loading. The Project Engineer shall review all applicable regulations and construction standards prior to specifying the type and wall thickness of the casing to be used on the project.

Table 3.5

Casing

Pipe Size	Inside Diameter Casing Size
6”	12”
8”	16”
10”	18”
12”	20”
14”	24”
16”	26”
18”	32”
24”	36”

B. If steel casing is used, it shall have a minimum thickness of ¼ inch.

C. ***SEALS AND INSULATORS FOR STEEL CASING PIPE -*** Casing insulators shall be used to electrically isolate the casing pipe from the water main. The insulators shall be equipped with heavy duty fusion bonded epoxy coated stainless steel spacers, with a minimum twelve (12”) inch width, two (2”) inch wide glass reinforced runners, with a minimum of two (2”) bottom runners and two (2”) top runners for pipe four (4”) inches through twelve (12”) inches, and a minimum of four (4”) runners at the bottom and two (2”) runners at the top for fourteen (14”) inch through thirty-six (36”) inch pipe.

D. ***CLOSURE OF CASING AFTER PIPE HAS BEEN INSTALLED -*** Under no circumstances should the ends of the casing be closed or any material installed inside the casing until after the pressure test has been completed and approved by the field inspector in charge. After the test, the ends of the casing should be sealed off. **Closure shall be by manufactured boot, grouting, or insulating foam as approved by the City.**

E. The bedding and initial installation of the main shall be inspected prior to backfilling of the trench. The Contractor shall notify the Field Engineer and Inspector a minimum of twenty four (24) hours prior to work being completed to allow sufficient time to have the inspections completed without delaying the work being done. The final backfill shall be inspected prior to placing of asphalt or concrete.

F. Patching of all trenches shall consist of a minimum of three (3”) inches of G-Mix unless otherwise directed on the plans or by the City Engineer. All joints between existing asphalt and new asphalt shall be coated with an approved emulsion tack coating.

CHAPTER 4

MAIN LINE AND ISOLATION VALVES

SECTION 4.1 INFORMATION AND DOCUMENTATION

Subsection 4.1.01 GENERAL INFORMATION

A. Main line and lateral isolation **v**alves shall be the same size as the mains in which they are to be installed unless otherwise indicated on the plans. Gate valves shall be used to isolate all stubs and mains two (2") inch through eight (8") inch, and shall be bolted to all tees, crosses, and other fittings as established by the engineered drawings, Contract Documents and these Construction Standards or as determined by the City Engineer and/or Superintendent. **Any valves designed near elbows shall be bolted to the elbow by use of flanged fittings or a Foster gland pack adapter.** Butterfly valves will be used for mains twelve (12") inches and larger unless the specific application calls for use of a gate valve such as a tapping sleeve.

Subsection 4.1.02 REFERENCES

A. IDAPA 58.01.08

B. AWWA/ANSI C509-01

C. AWWA/ANSI C504-00

D. AWWA/ANSI C 512-04

Subsection 4.1.03 SUBMITTALS

A. The City Engineer and/or Superintendent shall approve all plans, drawings, or sketches showing locations of new facilities to be connected to the City water system. No work may begin until written approval from the Superintendent and the City Engineer has been received.

Subsection 4.1.04 DOCUMENTATION

A. The Field Engineer and/or Inspector shall have reviewed and understand the scope of the work to be performed according to the Contract Documents prior to work commencing. They shall also be responsible for measuring and recording pertinent project information regarding location of valves, tees, elbows, fire hydrants, and crossings with other utilities, etc., for transfer to as-builts and provision to the City field inspector. Measurements for the City's benefit shall be in feet and inches from an identifiable location such as valve box or fire hydrant and not from engineering stations or movable objects such as power poles, trees or buildings.

B. The Contractor and/or Project Engineer shall supply as-builts on the plans provided, indicating the exact locations of all facilities installed before the City will accept the project as completed. The Contractor shall supply the Superintendent with all construction notes which may or may not have been included on the as-builts. **As-builts are due to the City no more than thirty (30) days after substantial completion of the project. If no as-builts are received, the City shall withhold any building permits for the project and/or Certificates of Occupancy. Any and all plan/construction changes shall be included with the final as-builts.** The as-builts shall contain information regarding planned and actual installations, footage measurements for all fittings, tees and valves, detailed information and measurements for any appurtenances removed or replaced during construction, and any information regarding service stubs and their locations.

Subsection 4.1.05 VALVE LOCATION

A. Straight line runs must have in-line valves at least every **two (2) standard city blocks or 600 feet,** as determined by the City Engineer and/or Superintendent. **All lateral connections will have a valve bolted to the tee or cross.** Where tees are installed, a main line valve shall be required a minimum of every two standard city blocks for possible future control. Valve locations will be closely studied for locations to best suit the future operation of the system and create as little service interruption as possible. **Where designed, valves shall be bolted to elbows by means of flanged fittings or a Foster pack gland adapter.**

B. Butterfly valve operating nuts, when standing on the nearest fitting (tee or cross) and looking away from the fitting, shall be on the left side of the pipe. For in-line valves, they shall conform to the standard as determined by the nearest fitting.

Subsection 4.1.06 PRE-CONSTRUCTION CONFERENCE

A. Prior to work commencing on **any** project, the Contractor shall schedule a pre-construction conference with the City Water Department to inform the Superintendent of the work to be performed. Any necessary contract documentation shall be provided to the City Water Department prior to the pre-construction conference. The Contractor shall attempt to have a representative from all of the Contractor's subs at the meeting, or shall be authorized to speak for them. The Contractor shall provide at the meeting:

1. A complete listing of the Contractor's subcontractors for the project.

2. An approved set of plans with the City Engineer's signature. Any changes, additions or deletions shall be reviewed and signed by the City Engineer prior to construction as well. The Contractor shall have a set of signed plans available at the work site at all times which shall be shown to the field inspector.

3. A project schedule which shall be regularly updated and any changes shall be submitted to the City during the project.

4. Proof of insurance, license and bonding if not provided to the City at an earlier date.

B. If construction stops or is delayed longer than thirty (30) days, or there are significant changes with the construction drawings/project, the Contractor shall set an additional pre-construction conference to review the work to be done and any possible changes. . Minor drawing detail changes may be accomplished through the normal review process by the City Engineer.

SECTION 4.2 MATERIALS AND INSTALLATION

Subsection 4.2.01 MAIN LINE AND LATERAL GATE VALVES

A. Gate valves shall be resilient seated, standard operating with approved exterior coatings, shall comply with AWWA standards C 509-01 (Resilient seat) and C 550 (Epoxy Exterior/Interior Coating) and **shall be American made and assembled**. Butterfly valves may be required for sizes twelve (12") inches and larger and shall conform to the latest revision of AWWA standards C-504-00 (Rubber Seat) and C 550, Resilient Seated Butterfly Valves, except as modified or approved by the Superintendent in these specifications or on the plans. When using butterfly valves where the operating nut is near the center line of the valve, operating nut extensions will be required to bring the valve operating nut to within thirty six (36") below finished grade.

Subsection 4.2.02 VALVE INSTALLATIONS

A. Line and lateral isolation **v**alves shall be the same size as the mains in which they are to be installed unless otherwise indicated on the plans. Valves shall be installed where mains and laterals connect, fire hydrant installations, or fire services are extended. Gate valves shall be used to isolate all stubs and mains two (2") inch through eight (8") inch, and shall be bolted in a vertical position to all tees, crosses, and other fittings via flanged fittings as established by the engineered drawings and specifications or as determined by the City Engineer and/or Superintendent. Butterfly valves shall be used for mains twelve (12") inches and larger unless the specific application calls for use of a gate valve, such as a tapping sleeve. All flanges and gland packs shall be cleaned prior to installation and the proper size and pressure rated gaskets shall be used as specified by the contract documents, (plans and specifications). **Where designed, valves shall be bolted to elbows by means of flanged fittings or a Foster pack gland adapter.**

B. Butterfly valve operating nuts, when standing on the nearest fitting (tee or cross) and looking away from the fitting, shall be on the **left side** of the pipe. For in-line valves, they shall conform to the standard as determined by the nearest fitting. Valves and fittings larger that sixteen (16") inch may require a concrete pad for proper support due to their extreme weight. Any pads required shall be engineered for diameter and thickness so as to provide adequate support.

Subsection 4.2.03 VALVE BOXES

A. Valve boxes shall be cast iron two piece Tyler Series 6855 or approved equal, and equipped with a "WATER" lid which fits properly inside the top of the valve box. **All valve boxes shall be installed with a valve box alignment device as approved by the Water Department.** Valve boxes shall be adjusted to final grade and checked for proper alignment prior to paving over the mains. When replacing the valve box(s), the lower section shall not be broken or cracked and shall be cut square to the grade when adjusting the top section for elevation. The top section shall be in new condition with no cracks or broken. **(Please see Water Standard Drawings W-12 Cast Iron Valve Box – Two Piece)**

B. When valve box extensions are required, use five (5") inch cast iron double hub soil pipe cut to the appropriate length. All valves shall be turned on and the valve boxes shall be cleared of all debris and raised to finished grade at completion of project. **(Please see Water Standard Drawings W-12 Cast Iron Valve Box – Two Piece)**

C. Patching around valve boxes shall consist of a minimum of three (3") inches of G-Mix hot asphalt and all edges shall be tacked with an approved emulsion coating.

Subsection 4.2.04 OPERATING NUT DEPTH

A. Where the actual operating nut of the valve is not approximately thirty six (36") inches below finished grade using the AWWA standard six (6') foot valve key, an approved operating nut extension shall be installed so that the operating nut is at the thirty six (36") inch depth. If after the completion of the installation, the valve operating nut cannot be easily operated, **it shall be the Contractor's responsibility to dig up and adjust the valve box so that the operating nut is centered in the valve box and the valve box is plumb and set to finished grade. (Please see Water Standard Drawing W-29 Valve Operating Nut Extension**)

Subsection 4.2.05 INSPECTION

A. The Contractor shall have his/her field inspector from the engineering firm inspect and prepare as-builts of all installed air release assemblies. The Contractor shall also immediately notify the City Field Inspector to confirm that the assembly is installed per city specifications. **Any damage discovered by the inspector shall be noted and it shall be the Contractor's responsibility to repair or replace the damage items as per the inspector's request.**

CHAPTER 5

FIRE HYDRANTS

SECTION 5.1 REFERENCES AND GENERAL INFORMATION

Subsection 5.1.01 GENERAL INFORMATION

A. **F**ire hydrant assemblies shall be installed and located in accordance with these City Construction Standards. All fire hydrants installed shall be of the **Waterous Pacer or Mueller Centurion models**, dry-barrel type **only,** as specified in these standards. (**Please see Water Standard Drawings W-3 Typical 6" Fire hydrant Setting and W-4 Fire Hydrant Locations)**

Subsection 5.1.02 REFERENCES

A. IDAPA 58.01.08

B. ANSI/AWWA C 503-97

Subsection 5.1.03 DISTRIBUTION

A. Standard fire hydrant spacing shall be at each street intersection with intermediate hydrants where distances between intersections exceed **three hundred (300') feet, five hundred (500') feet maximum** in exclusively one story, single family residential areas). In no case shall the number of hydrants in an area be less than previously described as above, or as required by the City Fire Chief or his designated agent. When any portion of a building or a hazard to be protected is in excess of one hundred fifty (150') feet access from a public street frontage, there shall be provided, when required by the Fire Chief, on–site fire hydrants and mains capable of supplying the required fire flow, or as required by the City Fire Chief or his designated agent.

B. If additional fire flow is required than a single hydrant can supply, the Fire Department may utilize the flow test from the respective fire hydrant to determine the number of additional fire hydrants to be installed to meet the required fire flow.

Subsection 5.1.04 PLANS AND SPECIFICATIONS

A. **All plans and specifications for fire hydrants, laterals, and water main installations shall be submitted to the City Engineer, the City Fire Department and the City Water Department Superintendent for review and approval prior to any construction. Fire hydrants shall not be placed in concrete spillways** and shall be no less than five (5') from any driveway or approach apron. Fire hydrants must have a **minimum of a three (3') foot radius of clear, flat and level spacing around them and shall not be obstructed** from clear view of the street by plants, shrubs or other obstacles.

Subsection 5.1.05 PRIOR TO WOOD STRUCTURE CONSTRUCTION

A. All applicable mains and fire hydrants required for on site fire protection shall be installed and turned on by the developer prior to any wood structure construction. Such facilities including all surface access roads shall be installed, made serviceable, and maintained unobstructed prior to and during the period of building construction.

Subsection 5.1.06 REQUIRED FLOW

A. Water mains and fire hydrant laterals shall be of sufficient size and design to provide the minimum required fire flows as specified by the City Fire Chief or his/her designee. In no case shall any water main or lateral supplying a fire hydrant be of less than six (6") inch inside diameter.

Subsection 5.1.07 FLUSHING MAINS THROUGH FIRE HYDRANTS

A. The only permitted use of fire hydrants by contractors shall be for flushing new main and hydrant installations. Contractors will **no longer use the fire hydrants for bulk water use** such as street cleaning or compaction, even prior to the improvements being accepted.

1. The Contractors shall be required to use either permanent or portable fill stations from which they will be able to purchase bulk water for all uses other than flushing. The Contractor will apply at the Water Dept. Office at 3820 Ramsey Rd. for use of either type of fill station.

B. The fire hydrants are to be operated during flushing procedures with **approved fire hydrant wrenches only. No other general purpose wrench shall be used. The fire hydrants are designed to be fully open or fully closed.** If throttling is required to reduce flow, the contractor shall use a port mounted gate valve to accomplish this. The use of ball valves on fire hydrants is expressly prohibited.

Subsection 5.1.08 PRE-CONSTRUCTION CONFERENCE

A. Prior to work commencing on **any** project, the Contractor shall schedule a pre-construction conference with the City Water Department to inform the Superintendent of the work to be performed. Any necessary contract documentation shall be provided to the City Water Department prior to the pre-construction conference. The Contractor shall attempt to have a representative from all of the Contractor's subs at the meeting, or shall be authorized to speak for them. The Contractor shall provide at the meeting:

1. A complete listing of the Contractor's subcontractors for the project.

2. An approved set of plans with the City Engineer's signature. Any changes, additions or deletions shall be reviewed and signed by the City Engineer prior to construction as well. The Contractor shall have a set of signed plans available at the work site at all times which shall be shown to the field inspector.

3. A project schedule which shall be regularly updated and any changes shall be submitted to the City during the project.

4. Proof of insurance, license and bonding if not provided to the City at an earlier date.

B. If construction stops or is delayed longer than thirty (30) days, or there are significant changes with the construction drawings/project, the Contractor shall set an additional pre-construction conference to review the work to be done and any possible changes. Minor drawing detail changes may be accomplished through the normal review process by the City Engineer.

Subsection 5.1.09 PERMEATION

A. Where there may be the likelihood that a fire hydrant installation may be exposed to a significant concentration of pollutants including but not limited to low-molecular-weight petroleum products and organic solvents or their vapors, the Project Engineer shall review the material selections or consider protection or relocation of the fire hydrant(s) if possible. Use of polyethylene, polybutylene, or polyvinyl chloride (PVC) and rubber joint materials have been documented as having been affected by permeation of low-molecular-weight organic solvents and petroleum products.

SECTION 5.2 FIRE HYDRANT MATERIALS AND INSTALLATION

Subsection 5.2.01 FIRE HYDRANTS

A. All new fire hydrants installed within the City of Coeur d'Alene water service area shall be **Waterous Pacer or Mueller Centurion** dry barrel minimum four and one half (4 ½') foot bury fire hydrants only. The upper barrel and bonnet of the fire hydrants shall be a safety yellow for high visibility. The port caps may be painted per recognized fire code to reflect maximum flow capacity. All port caps will be chained to the upper hydrant barrel. The large (steamer) port shall be equipped with a Storz Coupler for all new and replacement installations. The port caps replaced by the Storz Coupler shall be given to the City. All dirt and debris shall be removed from the exposed top section of the fire hydrant prior to inspection. **(Please see Water Standard Drawing W-3 Typical 6" Fire Hydrant Setting)**

B. ***FITTINGS AND VALVES*** – A tapping sleeve, for single installations, or tees in new main installations shall be utilized to attach the fire hydrant to the mains. A gate valve shall be attached directly to the tee or tapping sleeve to control the fire hydrant lateral. Pipe from the valve to the hydrant may be either C900 PVC or Class 150 ductile iron.

C. Mechanical restraint shall be accomplished with concrete thrust blocks regardless of whether meg-a-lug restraints are used. The fire hydrant shall be set on a twelve (12") inch square by four (4") inch thick patio block for stability. Precast blocks may be allowed per request in lieu of poured thrust blocks with the Engineer's approval. Poured blocks require a minimum 4 mil plastic wrapped around the fittings for protection.

D. When a fire hydrant is located in a grassy swale, a minimum two (2') foot flat and level area shall be supplied around the hydrant and then gently sloped into the swale. If the swale is too narrow to allow gentle sloping, a culvert may be recommended to allow adequate flow behind the hydrant while maintaining an adequate flat area for fire fighters use.

Subsection 5.2.02 FIRE HYDRANT INSTALLATION

A. The fire hydrants shall be installed in accordance with all City standards for main and lateral installations. **The control valve for all fire hydrants shall be located on and bolted directly to the tee or tapping sleeve of the supply main and at no time shall ever be allowed to be bolted to the base of the fire hydrant.** Any new installations shall have the proper bury depth fire hydrant assembly. Extensions shall not be permitted on any new installations unless expressly approved by the Water Superintendent in those cases where the correct bury depth is not available. **It shall be the contractor's responsibility to field verify the water main depth prior to ordering the fire hydrant(s).**

B. All fire hydrants shall be set on a precast twelve (12") inch by twelve (12") inch by four (4") inch base blocks to stabilize the fire hydrant elevation. **All hydrants shall be plumb front to back and side to side upon completion of backfill and compaction.** A tracer wire consisting of twelve (12) gauge single strand coated copper wire will be connected to the tracer wire at the main if applicable and extended the length of the fire hydrant lateral and shall extend up next to the hydrant barrel an minimum of twelve (12") inches above finished grade. (**Please see Water Standard Drawings W-3 Typical 6" Fire Hydrant Setting and W-4 Fire Hydrant Location**)

C. All fire hydrants shall be connected to the service lateral with the use of mechanical joints **only.** Please see **Table 5.1** for proper bolt torque.

Table 5.1

Mechanical Joint Bolt Torque

Joint Size		Bolt size		Range of Torque	
in.	***(mm)***	***in.***	***(mm)***	***ft.lb***	***(N.m)***
4-24	**(102-610)**	**¾"**	**(19)**	**75-90**	**(102-122)**
30-36	**(762-914)**	**1"**	**(25)**	**100-120**	**(136-163)**
42-48	**(1067-1219)**	**1 ¼"**	**(32)**	**120-150**	**(163-203)**

D. All fire hydrants shall be at the proper depth and grade to facilitate ease of repair utilizing a standard hydrant repair wrench. All fire hydrant installations shall be straight and perpendicular from the main tap or tee to the fire hydrant unless expressly approved by the Superintendent. The fire hydrants shall be set square to the curb where possible and shall be plumb after backfill and compaction. The Contractor shall call for inspection prior to backfill, which shall include approval of the backfill materials which shall not contain any rock in excess of five (5") inches in diameter, and then after final grade is established. Individual fire hydrants and lateral installations shall be inspected upon installation, properly disinfected, pressure tested, flushed and bacteria sampled as per any other new installation.

E. Patching of all trenches shall consist of a minimum of three (3") inches of G-Mix unless otherwise directed on the plans or by the City Engineer. All joints between existing asphalt and new asphalt shall be coated with an approved emulsion tack coating.

Subsection 5.2.03 **THRUST BLOCKS**

A. Concrete poured in place, precast half (½) ecology blocks, or suitcase style precast fire hydrant thrust blocks shall be approved for new fire hydrant installations. All fire hydrants shall be set on a precast twelve (12") inch by twelve (12") inch by four (4") inch base blocks to stabilize the fire hydrant elevation. When pouring concrete blocks, the bearing surface shall be dug square and perpendicular to the direction of the anticipated thrust load. A minimum four (4) mil plastic wrap shall be supplied around all fittings prior to pouring concrete thrust blocks at the base of the fire hydrants and all related fittings. The Contractor shall ensure that no concrete is poured over the barrel drains. The contractor shall ensure that the drains have an adequate drainage area and are not inhibited in any way. When using precast thrust blocks, the load bearing area shall be cut square and perpendicular to the load. **The blocks shall be set tight and level against the tee or fitting** and any space between the block and bearing surface shall be filled with three quarter (¾") inch crushed aggregate and shall have a minimum ninety percent (90%) compaction rate.

B. Meg-a-lug joint restraints and tie rods may be used in place of thrust blocks in conditions where there may be inadequate bearing surface to pour or place thrust blocking. However this must be approved by the Engineer and/or Superintendent.

Subsection 5.2.04 **DRAIN ROCK**

A. Washed drain rock with a minimum one and one-half (1 ½") inch minus, non-crushed, shall be installed around the base of the fire hydrant a minimum of eight (8") inch depth and shall extend a minimum of four (4") inches below and above the barrel drains.

B. Drain rock shall be placed around the base of the fire hydrant to promote adequate drainage for freeze protection. The drain shall be one and one-half (1 ½") diameter washed river rock. See subsection 5.2.05 regarding approved filter fabric to be placed over the drain rock.

C. There shall be adequate drain rock placed to ensure complete barrel drainage. **Where soils may be unsuitable for adequate drainage, additional drain rock may be added to promote proper drainage away from the fire hydrant base. (Please see Water Standard Drawing W-3 Typical Fire hydrant Installation)**

Subsection 5.2.05 **FILTER FABRIC**

A. An approved Typar or equal filter fabric shall be placed over the drain rock and wrapped tight around the hydrant barrel to ensure that no fine materials can migrate into the drain rock and prevent barrel drainage.

Subsection 5.2.06 **BOLLARDS**

A. Any bollards requested by the City Fire Chief or his/her designee shall be placed a minimum three (3') feet from the fire hydrant and shall not obstruct access to any port of the hydrant.

Subsection 5.2.07 **INSPECTION**

A. The Contractor shall have his/her Field Inspector from the project engineering firm inspect all fire hydrant installations prior to backfill for proper installation. The contractor shall also immediately notify the City Water Department Field Inspector to confirm that the assembly is installed per City Construction Standards. **Any damage discovered by the inspector shall be noted and it shall be the Contractor's responsibility to repair or replace the damaged items as per the inspector's request.**

B. All fire hydrants will be plumb and level front to back and side to side. The traffic flanges shall be two and one half (2 1/2") inches above finished grade. New fire hydrants shall be ordered for the proper bury depth prior to installation. No extensions on new fire hydrants will be accepted unless prior approval is granted by the Superintendent. The large port shall face and be parallel with the street fronting the fire hydrant. All port cap chains shall be in place and securely connected to the port caps. Any unpainted portions that are exposed above finished grade shall be painted to match by the Contractor prior to acceptance.

C. The Contractor **shall not bury any work** to be inspected without such inspections taking place. The Contractor shall notify twenty four (24) hours in advanced and shall use every number available to contact the Field Inspector. If work is covered without the appropriate inspection, the Contractor will dig and expose any appurtenance which requires inspection at his/her own expense.

CHAPTER 6

DOMESTIC, IRRIGATION AND FIRE SERVICE LATERALS

SECTION 6.1 INFORMATION AND DOCUMENTATION

Subsection 6.1.01 GENERAL INFORMATION

A. A minimum of one service lateral installation will be required for each individual building. If multiple individual inhabitable buildings shall exist for one lot, each building shall have an individual service unless otherwise approved by the City Engineer and/or Superintendent. Multiple service laterals may be permitted for multifamily dwellings if approved by the City Engineer and/or Superintendent. The service lateral will terminate with a standard copper meter setter (up to two (2") inch service size) of the proper grade height with the meter center set at eighteen (18") inches below finished grade, an approved meter box, and shall have a minimum five (5) foot stub of galvanized pipe of the same diameter, threaded, and extending from the base of the coppersetter on the customer side of the meter box. **Three (3") inch and larger meter settings shall be installed in an approved 1914 series Wilbert water meter vault.**

Subsection 6.1.02 REFERENCES

A. IDAPA 58.01.08

B. AWWA/ANSI C800-05

Subsection 6.1.03 LOCATION AND MARKING THE STUB ENDS

A. The service lateral shall be located a minimum of two and one-half (2.5') feet left or right of the lot property line (five (5') feet between service laterals minimum) where **no power, gas or other utility** is allowed to be placed on the property line between the service laterals, unless otherwise approved by the City Engineer and/or Superintendent, and at right angles to the center of the right-of-way, with a minimum of ten (10') feet between the water and sewer laterals. Where the service laterals shall be separated by other utilities, the service lateral shall be a minimum of six (6') feet of separation from the property line to the service lateral. **Service laterals will not be permitted in driveway areas or any other areas where a vehicle will routinely drive or park over the meter box. Water service laterals shall not be connected to existing water main or larger fire service laterals that were originally intended for larger use, water main distribution stubs, or fire main/service stubs on the property to prevent the necessity of a street cut unless approved by the Superintendent. The service for each**

lot shall be located within the property lines of the respective lot facing the street where the supply main is located.

B. The customer end of lateral stubs of any kind which extend into private property for customer connection shall be marked with a minimum two by four (2" x 4") inch board extending a minimum of two (2') feet above finished grade. The exposed portion of the board shall be **painted blue** to indicate water service.

Subsection 6.1.04 SIZE

A. The specific size of domestic, irrigation and fire service laterals shall be limited to the installation of various lengths of one (1") inch, two (2") inch, four (4") inch, six (6") inch, and eight (8") inch services. Where concrete or machine formed asphaltic concrete curbs exist or are to be constructed, the location of the meter box shall be a minimum six inches (6") back of the curb. Where there are no curbs, the location of the box shall be as approved by the City Engineer and/or Superintendent in a location readily accessible to the City. The standard minimum lateral size for a residential lot is one inch (1"). Other size laterals shall be as approved by the City Engineer and/or Superintendent, and as noted on the project drawings. All service laterals shall remain a consistent size from the main tap to and through the meter box or vault and extending with a minimum five (5') stub out of the customer side. Reductions in size shall only be allowed inside the meter vault at the water meter.

B. A blow off assembly shall be installed in accordance with the City standards at locations noted on the plans and at such additional locations as required by the City Engineer and/or Superintendent for the removal of water and/or sediment. **All dead end mains and service stubs four (4") inch and larger, in excess of five (5) feet in length shall have a blow off assembly installed with applicable valve boxes to finished grade. (Please see Water Standard Drawing W-6 Typ. Frost-Free Blow Off Assembly)**

Subsection 6.1.05 MULTIPLE UNIT SERVICE LINE CONNECTIONS

A. Service lines to large structures with multiple single family living units sharing the same base address, such as apartments or condominiums requesting individual metering per unit, and where the meters are desired in one location only, shall be set so as to correlate from **left to right** in a numbered sequence from 1, 2, 3, 4, 5, 6, etc. If this cannot be properly done, the structure shall be either **metered with a single meter** and an owners association shall be established to manage the applicable fees, or the **meters shall be installed directly in front of each unit, where applicable.**

Subsection 6.1.06 SERVICE LINE REPLACEMENT/ADDITIONAL SERVICES

A. Service line replacement to existing lots or where a customer has requested an additional service installation shall require that the customer choose the exact location of the meter box installation. The service line replacement shall be one (1") inch or two (2") in size. The laterals will be laid as straight as possible from the water main to the meter box for

locating purposes and will include a minimum five (5') stub on the customer side of the meter. All replacement and new service lateral installations shall be inspected from the water main to the meter box by the Water Department. The customer's connection and line from there to the structure will be inspected by the plumbing inspector.

Subsection 6.1.07 DOCUMENTATION

A. All service laterals shall be identified and recorded by the Field Engineer and/or project Inspector as pertinent project information regarding location for transfer to as-builts which will be provided to the City Water Dept. Field Inspector. Measurements for the City's benefit shall be in feet and inches from an identifiable location such as valve box or fire hydrant and not from engineering stations or movable objects such as power poles, trees or buildings.

B. The Contractor and/or Project Engineer shall supply as-builts on the plans provided, indicating the exact locations of all facilities installed before the City will accept the project as completed. The Contractor shall supply the Superintendent with all construction notes which may or may not have been included on the as-builts. **As-builts are due to the City no more than thirty (30) days after substantial completion of the project. If no as-builts are received, the City shall withhold any building permits for the project and/or Certificates of Occupancy. Any and all plan/construction changes shall be included with the final as-builts.** The as-builts shall contain information regarding planned and actual installations, footage measurements for all fittings, tees and valves, detailed information and measurements for any appurtenances removed or replaced during construction, and any information regarding service stubs and their locations.

Subsection 6.1.08 PRE-CONSTRUCTION CONFERENCE

A. Prior to work commencing on **any** project, the Contractor shall schedule a pre-construction conference with the City Water Department to inform the Superintendent of the work to be performed. Any necessary contract documentation shall be provided to the City Water Department prior to the pre-construction conference. The Contractor shall attempt to have a representative from all of the Contractor's subs at the meeting, or shall be authorized to speak for them. The Contractor shall provide at the meeting:

1. A complete listing of the Contractor's subcontractors for the project.

2. An approved set of plans with the City Engineer's signature. Any changes, additions or deletions shall be reviewed and signed by the City Engineer prior to construction as well. The Contractor shall have a set of signed plans available at the work site at all times which shall be shown to the field inspector.

3. A project schedule which shall be regularly updated and any changes shall be submitted to the City during the project.

4. Proof of insurance, license and bonding if not provided to the City at an earlier date.

B. If construction stops or is delayed longer than thirty (30) days, or there are significant changes with the construction drawings/project, the Contractor shall set an additional pre-construction conference to review the work to be done and any possible changes. Minor drawing detail changes may be accomplished through the normal review process by the City Engineer.

Subsection 6.1.09 SERVICE SHUT-DOWN

A. Whenever it is necessary to shut down any service(s), the Contractor shall reference the Shutoff Policy. **All affected customers shall be notified with a written notice at least forty eight (48) hours prior to the shut down. Notices shall also be provided to City Hall, the Water Department Office, and the Fire Department forty eight (48) hours prior to shut down. If the shut down is to occur on a Monday, the affected services shall be notified in writing the preceding Friday. If requested by the Contractor, the City may provide the Contractor with a form letter to use as an official notice. The Contractor shall provide verification to the City that he/she has made every attempt to contact everyone affected.**

B. If an emergency shut down is required for any reason, the Contractor shall make every effort to immediately notify the Water Department at (208)769-2210 first and then the affected customers of the incident and expected duration of the shutdown.

SECTION 6.2 SERVICE LATERAL MATERIALS AND INSTALLATION

Subsection 6.2.01 ONE (1") INCH AND TWO (2") INCH SERVICES MATERIALS

A. The Contractor or his/her agent shall furnish all service materials, as depicted on Standard Drawings, which are needed to complete a service installation. The above materials will be available for City approval and must have said approval prior to installation. The following shall apply:

1. ***PIPE*** **-** The Contractor shall use iron pipe size (IPS) polyethylene pipe which shall meet Ultra High Molecular Weight (200 psi) and both SIDR-7 & PE 3408 standards for one (1") inch and two (2") inch diameter services. Polyethylene pipe connections shall be made with **approved pack joint compression style self gripping brass fittings with stainless steel internal sleeves (inserts).** The contractor may use water standard galvanized pipe as well for service connections. Black iron or uncoated steel pipe shall **not** be used in any situation.

2. ***SADDLE*** **-** Saddles utilized for tapping all mains shall be Romac 202S style coated body saddles with double stainless steel straps. Saddles may be used for service taps one (1") inch and two (2") inches in size. Taps four (4") inch and larger will require a tapping sleeve with a gate valve for installation with existing mains. Ductile iron tees

with gate valves for main size eight (8”) inch or less, or butterfly valves for main size twelve (12”) or larger, may be used in new construction. All gate and butterfly valves shall have Tyler 6855 series valve boxes set to finished grade.

3. ***CORPORATION STOP*** **-** All brass body, ballcorp style, corporation stops (corps) shall have iron pipe size threads on the inlet side of the valve and shall have iron pipe size, self gripping, pack joint for polyethylene pipe on the outlet side of the valve. **Stainless steel inserts shall be used with the pack joints to ensure that the polyethylene pipe will not distort and pull away from the joint.** The corporation stops will be used for one (1”) inch and two (2”) inch service taps.

4. ***COPPERSETTER, ONE AND TWO INCH*** **-** Coppersetters provided by the contractor shall comply with City standard**s** for one (1”) inch and two (2”) inch coppersetters. The two (2”) inch coppersetters shall have a bypass valve incorporated into the base of the coppersetter. A minimum four (4”) inch by twelve (12”) inch 3034 PVC sleeve shall be placed over the top of the bypass valve with a saddle cut for service key access. All setters shall have a minimum five (5’) foot galvanized stub with a galvanized cap extending from the base of the coppersetter on the customer side of the setter to provide stability. The coppersetter shall be plumb and level. The service shall match the coppersetter size. **(Please see Water Standard Drawings W-1 - 1” Coppersetter and W-14 - 2” Coppersetter)**

5. ***METERS*** **-** The meters supplied by the Contractor shall be the Badger or Sensus models for all sizes. These meters shall include radio read registers pre-wired with no less than a twenty (20’) foot lead supplied for connection with the Sensus 520 R MXU or Orion bubble up transmitter. If the meters, meter registers, or transmitter cables are damaged, it shall be the Contractor’s responsibility to replace the entire unit. Meters larger than one (1”) inch may be either a turbine style with integrated debris strainer or an approved disc style and shall meet standard meter lengths for one and one half (1 ½”) inch and two (2”) inch meters.

6. ***METER BOXES*** **-** Water meter boxes shall be Brooks #37 or Armorcast 12” x 20” x12” RPM Meter Box for one (1”) inch services, and Brooks #65 or Armorcast 17”x 30” x 12” Polymer box for two (2”) inch services. The meter box shall consist of three (3) risers with a top section, four (4) total sections, and an approved lid with a cast iron access lid or a cast iron traffic rated lid with no access panel.

   a.) The meter box shall be kept clean of dirt and debris to the bottom of the fourth section. **Meter boxes will not be permitted in driveway areas or any other areas where a vehicle will routinely drive or park over the meter box unless specifically approved by the City Engineer and/or the Superintendent.**

7. The customer end of lateral stubs of any kind which extend into private property for customer connection shall be marked with a two by four (2” x 4”) inch board extending a minimum of two (2’) feet above finished grade. The exposed portion of the board shall be **painted blue** to indicate water service.

Subsection 6.2.02 FOUR (4") INCH AND LARGER SERVICE MATERIALS

A. The Contractor or his/her agent shall furnish all service materials, as depicted on the applicable standard drawings, which are needed to complete a service installation. The following materials will be available for City approval and must have said approval prior to installation. The following shall apply:

1. ***THREE INCH OR LARGER METER SETTINGS*** **-** For meter installations three (3") inch and larger, a coppersetter is not available. Therefore, the Contractor shall install the meter in a vault with the provision of approved outside stem and yoke (OS & Y) gate valves on both sides of the meter and the appropriate companion flange connections. This setting shall be installed in an approved Wilbert 1914 series or equal concrete meter vault. The minimum tap size for a three (3") inch meter shall be four (4") inch **and four (4") inch pipe shall be extended into and from the customer side of the meter vault.** Any reductions shall be made inside the vault. **(Please see Water Standard Drawing W-15 - 3" Typical Meter Vault)**

2. ***TAPPING SLEEVE*** **-** Tapping sleeves for four (4") inch and larger services shall be a minimum full wrap stainless steel or other approved material for the water main being tapped. The tapping sleeve shall have a flange of the appropriate tap size. The tapping sleeve shall fully support the body of the main tapped so as to eliminate any chance of leakage. The tapping sleeve shall be installed and torqued to the manufacturer's specifications and instructions and the Contractor shall ensure that the test plug is on the upper portion of the saddle for a possible test on the sleeve. The site inspector shall determine at the time of installation as to whether a pressure test of the tapping sleeve and gate valve are necessary prior to the tap**. The coupon retrieved from the tap shall be shown to the Water Department representative immediately after removal.** The tapping saddle or sleeve and gate valve shall be swabbed with an appropriate strength solution of hypochlorite disinfectant.

3. ***GATE VALVES*** **-** Gate valves used for tapping sleeves shall be resilient seated per C509 standards, shall meet the "VALVES" standards of this document, and shall be suitable for tapping purposes as well as cleaned and disinfected. It is recommended to use the specific "tapping valves" with applicable alignment devices for the best result.

4. ***METERS*** **-** The meters supplied by the Contractor shall be the Badger or Sensus models for all sizes. These meters shall include radio read registers pre-wired with no less than a twenty (20') foot lead supplied for connection with the Sensus 520 R MXU or Orion bubble up meters. If the meters, meter registers, or transmitter cables are damaged, it shall be the Contractor's responsibility to replace the entire unit. Meters larger than one (1") inch may be either a turbine style with integrated debris strainer or an approved disc style and shall meet standard meter lengths for one and one half (1 ½") inch and two (2") inch meters.

5. ***METER VAULTS*** **-** For services three (3") inch and larger, **a Wilbert 1914 series, or approved equal, concrete meter vault will be provided** as per the Standard Drawing or the City Engineer's and /or Superintendent's specifications. A water meter vault other than the above, must be approved by the City Engineer and/or Superintendent if they are to be installed in the City system. **(Please see Water Standard Drawing W-17 – 3" and Larger Service Vault)**

6. The customer end of lateral stubs of any kind which extend into private property for customer connection shall be marked with a two by four (2" x 4") inch board extending a minimum of two (2') feet above finished grade. The exposed portion of the board shall be **painted blue** to indicate water service.

Subsection 6.2.03 **NEW SERVICE INSTALLATIONS**

A. Where the Contractor is installing new mains and/or services for new residential construction, the one (1") inch and two (2") inch service laterals shall be laid straight to the new coppersetter with a galvanized stub extended a minimum five (5') feet beyond the coppersetter with a galvanized cap to the lot it will serve. The customer shall connect to the stub with an approved pack joint fitting or threaded galvanized coupling. The Contractor may provide a longer galvanized extension from the coppersetter for the provision of other utilities directly behind the meter box. The customer connection at the end of the stub must be inspected by the plumbing inspector prior to burial. **No meter boxes or service laterals are to be placed in driveways or approaches.**

B. The customer end of lateral stubs of any kind which extend into private property for customer connection shall be marked with a two by four (2" x 4") inch board extending a minimum of two (2') feet above finished grade. The exposed portion of the board shall be **painted blue** to indicate water service.

C. Patching of all trenches shall consist of a minimum of three (3") inches of G-Mix unless otherwise directed on the plans or by the City Engineer. All joints between existing asphalt and new asphalt shall be coated with an approved emulsion tack coating.

Subsection 6.2.04 **FIRE SERVICE**

A. Fire services shall be installed under the same conditions as standard supply services with the exception that they **will not be metered**. Standard fire services shall be a minimum of two (2") inches. An additional isolation valve (curb stop for two (2") inch residential, gate valve for two (2") and larger commercial) may be required at the property line for service control per the City engineer and/or Superintendents direction. All fire services four (4") inches and larger shall have a control gate valve at the main tap in the street/r-o-w/easement. The proper backflow protection is also required on fire services dependent on a Fire Department Connection (FDC). Fire services shall be separate stubs from the domestic and irrigation supply lines. Complete fire service installations shall utilize approved backflow devices to isolate the fire service from the potable water supply to prevent contamination. All installed backflow devices shall be

tested upon installation and annually thereafter with the results sent to the Water Department office.

Subsection 6.2.05 SERVICES FOR RECONSTRUCTION PROJECTS

A. Reconnection of existing customer service laterals for water main replacement projects shall be installed from the new main to a minimum of two (2') feet behind the existing meter box if not already meeting current specifications. The service lateral replacement will include a new meter box and coppersetter to meet current standards. The new service shall be placed along side of the existing service prior to testing of the new main. The new service shall be connected to the customer side of the old meter setting after the new main and service lateral is tested and approved for operation. The old meter setting shall then be removed, the old meter shall be labeled or tagged with the original service address for later reference and the meter given to he CDA Water Department, and the existing service will be abandoned to the old main. All connections shall be inspected prior to backfilling. (**Please see Water Standard Drawing W-33 1" and 2" Service Reconnection to New Mains**)

Subsection 6.2.06 IRRIGATION METERS AND CONNECTIONS

A. New commercial properties shall be required to stub an additional irrigation meter service per **individual saleable lot** for possible reduction of sewer fees. The irrigation service shall be installed to domestic service standards complete with coppersetters and galvanized stubs. It is also recommended that irrigation services be installed per saleable lot in multifamily developments. Where a four (4") inch or larger irrigation service is required, no bypass in the meter vault is required. **(Please see Water Standard Drawing W-16 3" and Larger Meter Setting, Irr.)**

B. Where connections for a new irrigation system are made on residential domestic services, the Contractor/customer shall make all new irrigation connections a minimum of two (2') feet past the bottom of the meter box on the customer service line going to the building. No connections of any kind shall be accepted inside, under or in front of the meter box**. It shall be the Contractor's and/or customer's responsibility to read and understand all standards and specifications regarding irrigation system installation.**

Subsection 6.2.07 MULTIPLE UNIT SERVICE LINE CONNECTIONS

A. Service lines to large structures with multiple single family living units sharing the same base address, such as apartments or condominiums requesting individual metering per unit, and where the meters are desired in one location only, shall be set so as to correlate from **left to right** in a numbered sequence from 1, 2, 3, 4, 5, 6, etc. If this cannot be properly done, the structure shall be either **metered with a single meter** and an owners association shall be established to manage the applicable fees, or the **meters shall be installed directly in front of each unit, where applicable.**

Subsection 6.2.08 SERVICE LINE REPLACEMENT/ADDITIONAL SERVICES

A. Service line replacement to existing lots or where a customer has requested an additional service installation shall require that the customer choose the exact location of the meter box installation. The service line replacement shall be one (1") inch or two (2") in size. The laterals will be laid as straight as possible from the water main to the meter box for locating purposes. All replacement and new service lateral installations shall be inspected from the water main to the stub on the customer's side of the meter box by the Water Department field inspector.

Subsection 6.2.09 CUT SERVICES

A. When existing services are accidentally or intentionally cut between the meter and the main, the City Engineer and/or the Superintendent shall determine, regarding the type and condition of the existing service, as to whether the entire lateral must be replaced. Service line repairs of polyethylene pipe with pack joint compression couplings shall be allowed **only** upon the approval of the City Engineer and/or Superintendent for existing services. Galvanized service lines shall be replaced from the corp stop to the coppersetter unless otherwise directed by the City Engineer and/or Superintendent.

Subsection 6.2.10 LOCATING WIRE

A. When any service lateral is not perpendicular to the center line of the right of way and/or water main, a locating wire of not less than 12 ga. single-strand copper with an insulated coating shall be installed with the service. The locating wire shall extend from just under the meter box lid to the distribution main and **shall be connected to the water main locating wire with an approved direct bury connection. The Contractor shall verify continuity from beginning to end of the project and shall be responsible for repairs to any damaged tracer wire.**

Subsection 6.2.11 CUSTOMER CONNECTION

A. The Contractor/customer shall be responsible for connecting to the end of the galvanized stub of the meter setter. The customer shall use a female iron pipe thread by pack joint compression adapter to couple the corresponding size of polyethylene pipe to the galvanized stub. An irrigation style barbed connector and geared clamps **will not** be acceptable. The customer shall assume ownership of the service line from the bottom of the meter box to and inside the structure being served.

Subsection 6.2.12 METER INSTALLATION

A. All meters shall be furnished by the Contractor and installed in accordance with Chapter 9 – Water Meters, of these construction standards. (Please see Water Standard Drawing W-1 1" Coppersetter Standard Pit Setting and W-14 2" Standard Pit Setting).

SECTION 6.3 PROJECT COMPLETION

Subsection 6.3.01 INSPECTIONS

A. In the event that the service lateral is a stand alone project and not included in a main line project, the Contractor shall contact the Water Department Field Inspector 24 hours in advance to conduct an inspection and prepare as-builts of all installed laterals and confirm that the assembly is installed per City Construction Standards. **Any damage discovered by the inspector shall be noted and it shall be the Contractor's responsibility to repair or replace the damage items as per the inspector's request**

B. The Contractor **shall not bury any work** to be inspected without such inspections taking place. The Contractor shall notify twenty four (24) hours in advanced and shall use every number available to contact the Field Inspector. **If work is covered without the appropriate inspection, the Contractor will dig and expose any appurtenance which requires inspection at his/her own expense.**

Subsection 6.3.02 COMPLETION AND ACCEPTANCE

A. The installation shall not be considered complete and accepted by the City until accurate as-builts are provided by the engineering firm for the construction work including all appurtenances. **The Contractor has thirty (30) days from substantial completion to submit complete and accurate as-builts to the City Engineer and/or Superintendent.**

CHAPTER 7

THRUST BLOCKS AND JOINT RESTRAINTS

SECTION 7.1 INFORMATION AND DOCUMENTATION

Subsection 7.1.01 GENERAL INFORMATION

A. These standards and specifications shall detail the recommended installation of thrust blocks for joint restraint. Unusual situations may require a combination of or alternatives to these specifications. **Any deviations from the prescribed standards must be approved by the City Engineer and/or Superintendent**.

Subsection 7.1.02 REFERENCES

A. IDAPA 58.01.08

B. AWWA/ANSI

Subsection 7.1.03 DOCUMENTATION

A. A Field Engineer and/or Inspector shall be responsible for measuring and recording pertinent project information regarding location of all fittings and related thrust blocks for transfer to as-builts and provision to the City Water Dept. Field Inspector. Measurements for the City's benefit shall be in feet and inches from an identifiable location such as valve box or fire hydrant and not from engineering stations or movable objects such as power poles, trees or buildings.

B. The Contractor and/or Project Engineer shall supply as-builts on the plans provided, with any changes having prior signed approval, indicating the exact locations of all facilities installed before the City will accept the project as completed. The Contractor shall supply the Superintendent with all construction notes which may or may not have been included on the as-builts. **As-builts are due to the City no more than thirty (30) days after substantial completion of the project. If no as-builts are received, the City shall withhold any building permits for the project and/or Certificates of Occupancy. Any and all plan/construction changes shall be included with the final as-builts.** The as-builts shall contain information regarding planned and actual installations, footage measurements for all fittings, tees and valves, detailed information and measurements for any appurtenances removed or replaced during construction, and any information regarding service stubs and their locations.

SECTION 7.2 THRUST BLOCK MATERIALS AND INSTALLATION

Subsection 7.2.01 THRUST BLOCKS

A. Thrust blocks shall be installed at all crosses, tees, valves, tapping sleeves, elbows and other main line fittings, not including service saddles two (2") and smaller. All mechanical joint deflection of eleven and one-quarter (11 ¼) degrees or greater shall be physically restrained with a minimum of a poured concrete thrust or a half (½) concrete ecology block. **(Please see Water Standard Drawing W-9 Thrust Blocking)**

B. Each thrust block shall be designed to have a sufficient thrust bearing area and shall be placed square and level so as to safely transmit maximum thrust to the surrounding undisturbed embankment.

C. Where additional joint restraint is necessary such as four (4") and larger meter vaults, the City Engineer and/or Superintendent may require the Contractor to provide alternative methods for restraint such as welded steel joints or meg-a-lug gland pack restraints. (**Please see Water Standard Drawing W-17 3" and Larger Dom. Meter Vault)**

Subsection 7.2.02 CAST IN PLACE THRUST BLOCKS

A. The bearing faces of the block shall be poured against **undisturbed trench walls and shall be poured a minimum of six (6") inches below the pipe grade on the undisturbed trench bottom.** All concrete shall be kept behind the bells and flanges of fittings and valves. Form work shall be constructed wherever necessary to confine the concrete to the prescribed dimensions. All form lumber shall be removed after the block is poured and prior to pressure testing of the main. **No surplus concrete shall be disposed of in the trench. All fittings shall be wrapped with four (4) mil plastic sheeting prior to pouring concrete against the fittings.**

B. All thrust blocks shall be **allowed to cure for a sufficient time** to have developed their initial strength so that there **will be no movement in the main during testing**.

Subsection 7.2.03 PRE-CAST THRUST BLOCKS

A. Where the water main needs to be returned to service immediately, pre-cast thrust blocking may be allowed, but only as approved and/or directed by the City Engineer and/or Superintendent. The half (½) ecology block shall be set square and level against the fitting, at a minimum six (6") inches below the bottom of the fitting, and the space between the embankment and the block shall be filled with a minimum three quarter (¾") inch minus aggregate and compacted to ninety percent (90%) density in maximum one (1') foot lifts.

Subsection 7.2.04 COVERING OF FITTINGS

A. When thrust blocks are poured, **all** fittings shall be protected by being wrapped in 4 mil plastic. The poured blocks shall be poured the full depth of the fitting with a minimum of 4 mil plastic sheeting wrapped around the fitting. The concrete shall be poured to a perpendicular undisturbed embankment and a minimum of six (6") below the fitting to the undisturbed trench bottom.

SECTION 7.3 JOINT RESTRAINT

Subsection 7.3.01 THRUST BLOCKING

A. All mechanical joint deflection greater than and including eleven and one-quarter (11 ¼) degrees shall be physically restrained with a minimum of a poured concrete thrust or a half (½) concrete ecology block as approved by the Engineer. The poured blocks shall be poured the full depth of the fitting with a minimum 4 mil plastic sheeting double wrapped around the fitting. The concrete shall be poured to a perpendicular undisturbed embankment. The ecology block **shall be set square against and centered on the fitting,** at a minimum six (6") inches below the bottom of the fitting, and the space between the embankment and the block shall be filled with a minimum three quarter inch (¾") minus aggregate and compacted to 90% density. **(Please see Water Standard Drawing W-9 Thrust Blocking)**

B. Please see **Table 7.1** for applicable bolt torque on mechanical joints. This table **does not include torque settings** for the pre-engineered break away contact bolts.

Table 7.1

Mechanical Joint Bolt Torque

Joint Size		Bolt size		Range of Torque	
in.	***(mm)***	***in.***	***(mm)***	***ft.lb***	***(N.m)***
4-24	**(102-610)**	**¾"**	**(19)**	**75-90**	**(102-122)**
30-36	**(762-914)**	**1"**	**(25)**	**100-120**	**(136-163)**
42-48	**(1067-1219)**	**1 ¼"**	**(32)**	**120-150**	**(163-203)**

SECTION 7.4 PROJECT COMPLETION

Subsection 7.4.01 INSPECTION

A. The Contractor shall have his/her field inspector from the engineering firm inspect and prepare as-builts of all installed thrust blocks and joint restraint systems. The contractor shall also immediately notify the City Field Inspector to confirm that the assembly is

installed per city specifications. **Any damage discovered by the inspector shall be noted and it shall be the Contractor's responsibility to repair or replace the damage items as per the inspector's request.**

B. The Contractor **shall not bury any work** to be inspected without such inspections taking place. The Contractor shall notify the Water Department twenty four (24) hours in advanced and shall use every number available to contact the Field Inspector. If work is covered without the appropriate inspection, the Contractor will dig and expose any appurtenance which requires inspection at his/her own expense.

Subsection 7.4.02 COMPLETION AND ACCEPTANCE

A. The installation shall not be considered complete and accepted by the City until accurate as-builts are provided by the engineering firm for the construction work including all appurtenances. **The Contractor has thirty (30) days from substantial completion to submit complete and accurate as-builts to the City Engineer and/or Superintendent.**

CHAPTER 8

BEDDING AND BACKFILL

SECTION 8.1 INFORMATION AND DOCUMENTATION

Subsection 8.1.01 GENERAL INFORMATION

A. These standards and specifications will cover the general requirements for proper bedding and back fill of trenches used for water infrastructure construction only. Approved types of bedding and backfill materials are specified as well as placement and compaction methods.

Subsection 8.1.02 REFERENCES

A. IDAPA 58.01.08

B. AWWA / ANSI – C600-99, C602-00, C603-05, C605-94

Subsection 8.1.03 SUBMITTALS

A. The Superintendent shall approve all plans, drawings, or sketches showing locations of new facilities to be connected to the City water system. No work may begin until written approval from the Superintendent and the City Engineer has been received. The State Department of Environmental Quality (DEQ) has review authority on expansions to public water, sewer, and storm water systems, i.e. lift stations, booster stations, water storage facilities, and above ground treatment facilities. In this case no work shall begin until approval of these facilities from the Department of Environmental Quality has been received.

Subsection 8.1.04 DOCUMENTATION

A. A Field Engineer and/or Inspector shall be responsible for recording pertinent project information regarding proper compaction methods observed for transfer to as-builts and provision to the City Field Inspector. Measurements for the City's benefit shall be in feet and inches from an identifiable location such as valve box or fire hydrant and not from engineering stations or movable objects such as power poles, trees or buildings.

B. The Contractor and/or Project Engineer shall supply as-builts on the plans provided, indicating the exact locations of all facilities installed before the City will accept the project as completed. The Contractor shall supply the Superintendent with all construction notes which may or may not have been included on the as-builts. **As-builts are due to the City no more than thirty (30) days after substantial completion of the project. If no as-builts are received, the City shall withhold any building permits for the project and/or Certificates of Occupancy. Any and all plan/construction changes**

shall be included with the final as-builts. The as-builts shall contain information regarding planned and actual installations, footage measurements for all fittings, tees and valves, detailed information and measurements for any appurtenances removed or replaced during construction, and any information regarding service stubs and their locations.

Subsection 8.1.05 PRE-CONSTRUCTION CONFERENCE

A. Prior to work commencing on **any** project, the Contractor shall schedule a pre-construction conference with the City Water Department to inform the Superintendent of the work to be performed. Any necessary contract documentation shall be provided to the City Water Department prior to the pre-construction conference. The Contractor shall attempt to have a representative from all of the Contractor's subs at the meeting, or shall be authorized to speak for them. The Contractor shall provide at the meeting:

1. A complete listing of the Contractor's subcontractors for the project.

2. An approved set of plans with the City Engineer's signature. Any changes, additions or deletions shall be reviewed and signed by the City Engineer prior to construction as well. The Contractor shall have a set of signed plans available at the work site at all times which shall be shown to the field inspector.

3. A project schedule which shall be regularly updated and any changes shall be submitted to the City during the project.

4. Proof of insurance, license and bonding if not provided to the City at an earlier date.

B. If construction stops or is delayed longer than thirty (30) days, or there are significant changes with the construction drawings/project, the Contractor shall set an additional pre-construction conference to review the work to be done and any possible changes. Minor drawing detail changes may be accomplished through the normal review process by the City Engineer.

SECTION 8.2 APPROVED MATERIALS AND INSTALLATION METHODS

Subsection 8.2.01 GENERAL REQUIREMENTS

A. All bedding and backfill materials shall comply with the following specifications as set forth in City Water Dept. Construction Standards. **The City Field Inspector shall retain the right to reject any or all materials proposed for bedding and backfill if they do not meet the approved conditions as described in this section or the site conditions warrant use of alternate materials to provide a stable trench base for placement of Type III bedding materials.**

Subsection 8.2.02 APPROVED BEDDING MATERIALS

A. Native soils must meet the following criteria in order to be considered for use as approved pipe bedding material:

1. The native material must be clean and free of fresh or decomposing organic matter of any kind including but not limited to: roots, sod, branches, logs, stumps, thick layers of leaves, or demolition of any kind.

2. The native material shall consist of fine to coarse sand with aggregate or cobbles no larger than three quarters of an (¾") inch in diameter and shall have no sharp angular edges. The aggregate and cobbles cannot be any greater than approximately thirty five (35%) percent by volume of the soil composition with a maximum three (3) to nine (9) percent passing the #200 sieve. Fine loam with no sand content will **not** be accepted as bedding material.

3. The native soil cannot contain any more than approximately twenty (20%) percent optimum moisture content so that the material can be adequately compacted around the pipe.

4. The native soil shall not contain any noticeable amounts of low-molecular-weight organic vapors or petroleum products.

5. The native soil cannot contain **any** concrete, asphalt, brick, mortar or any similar demolition debris.

6. The native soil can be suitably screened to comply with the requirements listed above.

B. When the native soil on site is determined to be unsuitable for bedding per all previously specified requirements of these Construction Standards, the Contractor shall be required to use a **Type III select bedding material consisting of clean, fine to coarse sand with no aggregate greater than three quarter (¾") inch minus and which shall have no angular edges and consisting of at least sixty five (65%) percent sand by volume.**

C. In the event of significant water intrusion or flow through the trench profile, and whereas there may be the possibility of the fine bedding material washing away from the pipe, the Contractor may use a Type I select bedding material consisting of three quarter (¾") inch crushed or fractured aggregate suitable for soil stabilization. This condition must be expressly approved by the City Engineer and/or the Superintendent**. In the event the native soil does not meet approval for bedding material, and the backfill material contains a significant amount of rock, the Type III select bedding materials shall be used around all mains, laterals, services, fire hydrants, valve boxes, blow off assemblies and meter boxes to finished grade.**

Subsection 8.2.03 TRENCH BACKFILL MATERIALS

A. Sand and Sandy Loam: When the Contractor is installing water infrastructure in sandy soil conditions, the Contractor shall take all necessary safety precautions to ensure worker safety. The Contractor may request approval by the City Field Inspector, City Engineer, or Superintendent to utilize the existing sandy soils as proper bedding **and backfill materials if it is properly screened prior to use to ensure no large cobbles are present.** Once the bedding materials are placed and compacted per these Construction Standards, the native material, provided **no rocks or cobbles equal to or larger than five (5") inches in diameter** are found, may be used as backfill materials.

B. Clay and Black Soils with little or no sand content **shall not** be utilized for trench backfill materials.

C. Solid Rock and Rocky Soils: The installation of water infrastructure in these conditions shall **always require** the use of **Type III bedding materials**. **The rock or rocky soil shall not be used for backfill material, unless screened to less than five (5") inches in size and incorporating a minimum sixty five percent (65%) fine grade material by volume for soil stabilization.** Before placing any backfill in this situation, the Contractor shall be required to seek approval of the material by the City Engineer and/or Superintendent.

Subsection 8.2.04 BEDDING UNDER THE PIPE TO SPRING LINE

A. The area six (6") inches below, a minimum of six (6") inches on each side to the spring line of the pipe shall be hand-bedded with a shovel and T-handle tamper. In areas where a main is to be placed over solid rock, the City Engineer and/or Superintendent may require an additional depth of Type III select bedding to be placed below the main. The Contractor shall be responsible to notify the City Engineer and/or Superintendent of such conditions prior to main installation. **If the City is not notified prior to such installation, the Contractor may be required to remove the water main and place the correct amount of bedding at his/her cost.**

Subsection 8.2.05 BEDDING SPRING LINE TO ABOVE THE PIPE

A. Bedding material in the bedding zone from the pipe spring line to the backfill level (twelve (12") inches to twenty four (24") inches above the top of pipe) as specified by the City Field Engineer and as displayed in **Water Standard Drawing W-11 – Pipe Bedding and Backfill**, shall be placed in twelve (12") inch maximum lifts and compacted to at least ninety percent (90%) of the density of undisturbed surrounding materials to a point twenty four (24") inches above the top of the pipe. The remainder of the trench shall then be backfilled in twelve inch (12") lifts maximum to within twelve (12") of finished grade and adequately tamped utilizing a compaction method approved by the City Engineer and/or Superintendent.

Subsection 8.2.06 BACKFILL IN APPROVED NATIVE MATERIALS

A. Backfill material shall be approved by the City Engineer and/or Superintendent. The approved backfill material shall be placed above the bedding material in twelve inch (12") lifts and shall be mechanically compacted to a minimum ninety percent (90%) of the density of the surrounding materials. **The backfill shall not contain any rock equal to or greater than five (5") inches in diameter** and shall have at least sixty five percent (65%) consistent fines by volume for soil stabilization. If the Contractor backfills the trench with an unapproved backfill material, or the material has not been properly compacted, the City Engineer and/or Superintendent may require the material to be removed and replaced. This shall be at the Contractor's expense.

Subsection 8.2.07 BACKFILL IN ROCK

A. Where solid or large rock is encountered in an excavation, the Contractor shall remove rock to a minimum of nine (9") inches below grade and will furnish a minimum of nine (9") inches of tamped Type III bedding material below, on both sides to trench walls, and a **minimum of twenty four (24") inches above the pipe.** This will adequately protect the pipe from unintentional intrusion of rocks. The Contractor shall either replace the excavated rock with an approved backfill material or may crush the rock on-site. **No rock equal to or larger than five (5") inches in diameter** or any material without a minimum sixty five percent (65%) fines shall be utilized as approved backfill. **The City Engineer and/or Superintendent will require that any unapproved material will be removed from the site and replaced at the contractor's expense.**

Subsection 8.2.08 COMPACTION:

A. Compaction shall be accomplished by mechanical means utilizing equipment such as hydraulic plate packers, machine mounted hydraulic vibratory compactors, sheep's foot wheel compactors, vibratory wheel compactors, or impact plate packers. Compaction shall be achieved at ninety (90%) percent for bedding materials, ninety (90%) percent for backfill materials to twelve (12") below finished grade. Top course materials within road rights of way shall achieve ninety five (95%) percent compaction. Materials outside of roadways and parking lots may meet the ninety (90%) requirement. **All compaction shall done parallel with the trench with an approved method. (Please see Water Standard Drawing W-11 Pipe Bedding and Backfill)**

Subsection 8.2.09 PAVED SURFACES

A. Where paved surfaces are present, the Contractor shall be required to follow the city standards in regards to proper pavement removal, subsurface preparation and asphalt patching and repairs (see City Standards for Street Construction). All asphalt to be removed shall have a neat cut line exposed prior to patching and repairs. **All old pavement, base coarse, rocks, unused soil, grass and other unsuitable materials shall be removed from the site prior to completion of the paving project. All edges shall**

be properly coated with an approved tack coat just prior to paving. This includes all materials inadvertently left on adjacent properties.

B. Patching of all trenches shall consist of a minimum of three (3") inches of G-Mix unless otherwise directed on the plans or by the City Engineer. All joints between existing asphalt and new asphalt shall be coated with an approved emulsion tack coating.

Subsection 8.2.10 INSPECTIONS

A. The bedding for the main installation shall be inspected prior to backfilling of the trench. The Contractor shall notify the field inspector at least twenty four (24) hours prior to the desired inspection to allow sufficient time to have this completed. The final backfill shall be inspected as well prior to placing of asphalt or concrete.

B. ***TESTING*** - At the discretion of the City Engineer and/or Superintendent, field tests for density will be performed in accordance with ASTM D-1556 at the sole cost of the Contractor.

C. The Contractor **shall not bury any work** to be inspected without such inspections taking place. The Contractor shall notify twenty four (24) hours in advanced and shall use every number available to contact the Field Inspector. If work is covered without the appropriate inspection, the Contractor will dig and expose any appurtenance which requires inspection at his/her own expense.

CHAPTER 9

WATER METERS

SECTION 9.1 INFORMATION AND DOCUMENTATION

Subsection 9.1.01 GENERAL INFORMATION

A. The following specifications will detail the specific brands, types and models of water meters that the City of Coeur d'Alene Water Department will accept for installation into the distribution system in regards to residential and commercial domestic and irrigation services. **All meters shall read in U.S. 1000 gallons**

Subsection 9.1.02 REFERENCES

A. IDAPA 58.01.08

B. AWWA / ANSI C700-02, C701-02, C702-01, C707

C. NSF/ANSI 61

D. Sensus Product Technical Specifications

E. BadgerMeter, Inc. Product Technical Specifications

SECTION 9.2 BRANDS AND INSTALLATIONS

Subsection 9.2.01 METER CASE

A. ***LOW LEAD BRASS BODIED WATER METER*** – All meters installed for the purpose of registration of water usage for domestic or irrigation purposes, whether commercial, industrial or residential, shall be either:

1. ***BADGER*** - New Badger brand, low lead bronze case meters shall comply with **NSF/ANSI Standard 61**. New Badger meters shall be positive displacement, nutating disc for meter sizes three quarter (3/4") inch, short laying length only, (seven and one-half (7 ½") inches), through two (2") inch meters. The Contractor may use, upon prior approval, the turbine style meters for the one and one-half (1 ½") inch and two (2") inch meters in place of positive displacement meters. The turbo style meters shall have the same standard laying length and will require a built in strainer. The Badger disc meters consist of three basic components: the meter housing, measuring

chamber, and a permanently sealed register. The new meter shall utilize magnetic drive registers and have the standard meter connection points relative to the meter port size. Models shall include: M35 ¾", M70 1", M120 1 ½", M 170 2", Turbo series 120 1 ½" and Turbo series 170 2". Meters larger than two (2") inch may be compound or turbine meters dependent on the application and shall be specifically approved prior to installation. All meters three quarter (3/4") inch and one (1") inch shall have a replaceable cast iron frost bottom in the event that the meter should freeze to prevent damage to the bronze body.

2. ***SENSUS*** **-** New Sensus brand, low lead brass bodied full flow oscillating disc meters for three quarter (3/4") inch short laying length meter (seven and one-half (7 ½") inch) and the one (1") inch, model SR II. Meters larger than one (1") inch shall be either a brass bodied, full flow turbine style with strainer, or a brass bodied, full flow oscillating disc model SR meter. Sensus SR-EC® Water Meters consist of three basic components: main case; measuring chamber; and permanently, hermetically-sealed register. Main cases are of standard Bronze C84400 alloy which has been coated internally and externally with a durable, corrosion-resistant fusion-bonded epoxy with externally-threaded spuds. Meters three quarter (3/4") inch and one (1") inch shall have a replaceable cast iron frost bottom in the event that the meter should freeze to prevent damage to the bronze body.

Subsection 9.2.02 MEASURING CHAMBERS AND DRIVES

A. Measuring chambers for the Badger meters consist of a corrosion resistant thermo plastic extrusion rated for operating temperatures up to eighty (80) degrees Fahrenheit. The disc and chamber housing are constructed of the same materials with a stainless steel shaft and permanently mounted ceramic magnet that transfers the disc motion to follower magnet within the sealed register gear train.

B. Measuring chambers for the Sensus meters are constructed of Rocksyn®, a corrosion-resistant thermoplastic composite material. The disk contains a stainless steel shat at the center with a permanently mounted ceramic magnet which transfers the disk motion to a follower magnet in the sealed register housing.

C. ***PERFORMANCE CHART*** **-** Normal operating flow rates for The Sensus and Badger meters from three quarter (¾") inch through ten (10") inch are listed in table 9.1. These rates are for normal operating flows at 60 psi as set by AWWA meter performance standards. The meters listed do have an intermittent higher flow capacity but as there is increased head loss, only the standard flow chart shall be utilized in determining the proper meter though fixture count.

Table 9-1

Average GPM for Meter Sizes at 60 psi.

Sensus Meters			Badger Meters		
Type	Size	GPM	Type	Size	GPM
Disc	¾"	2-30	Disc	¾"	3/8-35
Disc	1"	3-50	Disc	1"	½-55
Disc	1 ½"	5-100	Disc	1 ½"	1 ¼-120
Disc	2"	8-160	Disc	2"	1 ½-170
Turbine	1 ½"	4-120	Turbine	1 ½"	4-160
Turbine	2"	4-160	Turbine	2"	4-200
Turbine	3"	5-350	Turbine	3"	5-450
Turbine	4"	15-1000	Turbine	4"	10-1000
Turbine	6"	30-2000	Turbine	6"	20-2000
Turbine	8"	35-3500	Turbine	8"	30-3500
Turbine	10"	55-5500	Turbine	10"	50-5500

Subsection 9.2.03 METER REGISTERS

A. The meter registers for the previously specified meters shall be a magnetic drive encoder style touchread register. **All registers used within the City of Coeur d'Alene water system shall read in one thousand (1000) gallon increments**. The specifications for each brand are as follows:

1. ***BADGER*** – The Badger meters utilized in the City of Coeur d'Alene use two different registers, The ADE and RTR, dependent on the type of MXU or Orion transmitter installed. Each shall meet the following specifications:

a.) The ADE style register is utilized in conjunction with the Sensus 520 R MXU and shall be a straight reading, permanently sealed, magnetic drive register, reading in gallons, and shall be specifically designed for compatibility with several automated reading systems including the Sensus 520 MXU and Sensus Automatic Meter Reading (AMR) Radio read currently used in the Coeur d'Alene water system. The ADE register shall have a full three hundred sixty (360) degree sweep hand, full face test reading register, and direct reading odometer style dial totalizer with a leak detector and shall be factory prewired with a **minimum twenty (20') foot three (3) wire lead and sealed touchpad external of the register**. The register shall be bayonet mounted to the main case and can be set in multiple positions to facilitate ease of reading. The register gearing shall be self lubricated so as to provide a long, reliable service life. The register shall have an operating range of minus five (5) degrees to one hundred twenty (120) degrees

Fahrenheit. The register housing shall be constructed of a durable thermoplastic extrusion with a tamper-proof mounting system.

b.) The RTR register is utilized with the ORION bubble up transmitter (similar to MXU) also currently in use by the City. The RTR register shall have the same rugged construction as the ADE register but is designed to be compatible with the Orion reading system. The wire lead for the RTR register shall only be six (6') feet in length as it is not necessary to utilize dual port systems for this transmitter.

2. ***SENSUS TOUCHREAD STYLE GALLONS REGISTER*** –The register must be of the straight reading type and have a full test dial on the face of the register that records one-tenth of the right-most odometer wheel. It shall read in gallons and be capable of direct visual reading both at the meter and by remote reading utilizing a visual interrogation device that connects through to the water meter via a TouchPad located external to the meter, and/or by a Meter Transceiver Unit (MXU) for remote based Automatic Meter Reading (AMR). The direct read numeral wheel assembly shall be located in the middle of the dial face with reading obtained from left to right using standard notation (billions, millions, and thousands separators and decimal points). All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made of a corrosion resistant material. The register shall be secured to the main case by means of a tamper resistant locking screw so that non-utility personnel cannot remove the register. The register must be field replaceable by utility personnel with the use of a manufacturer-supplied field tool. The field tool must not be commercially available. Seal wiring or a frangible head seal screw is not acceptable. The meter register shall have three terminal connections. The connection between the meter register and the remote pit lid module shall be accomplished with the use of all three terminal connections by **using a 3-conductor cable which shall be a minimum length of twenty (20') feet.** This will permit the register to be converted to Automatic Meter Reading (AMR) in the future. The register shall transmit the register data directly to the pit lid when interrogated by the interrogation device. **To ensure a reliable interrogation system in the moisture environment of a meter pit or vault, the pit lid-mounted module** shall be housed in a separate enclosure with factory sealed connections consisting of an environmentally approved epoxy at both the pit lid module and register terminal connections. This shall be vendor provided to prevent moisture penetration and eliminate the need for field sealing requirements. All vaults must have 1 7/8" minimum hole in manhole cover for the radio read MXU. **(Please see Water Standard Drawing W-30 Manhole Cover, Hern Iron Works)**

Subsection 9.2.04 CAST IRON FROST BOTTOM

A. The meter housings for both brands of meters in the three quarter (3/4" inch and one (1") inch sizes shall include a manufacturer provided **cast iron replaceable frost bottom** equipped with embossed breakaway ears or an embossed breakaway bottom design to prevent damage to the main case in the event that the meter were to freeze.

Subsection 9.2.05 MXU TRANSCEIVER AND ORION TRANSMITTER

A. All MXU's to be used with the Sensus water meters shall be either the Sensus model 505 or model 520R Pit Set type units. Badger meters installed in routes using the MXU may be connected to the 505 or 520R units in the same manner.

B. The MXU will be the interface between the encoded register and the radio interrogation unit. The MXU will power up when a valid alert signal is received from the reading interrogation unit. The interrogation unit will be either a hand-held or vehicle mounted device. The MXU and interrogation device will utilize a two-way communication protocol. Following the alert signal from the interrogation unit and transmission of meter reading data, the interrogation unit will signal to the MXU that valid reading parameters were met and will instruct the MXU to power down. The MXU must have the capability of utilizing a reading cycle code which is an element of the transmission protocol. The reading cycle code is utility controlled and changes with each reading cycle. Once an MXU has been successfully interrogated and powered down using a specific reading cycle code, the MXU will not alert again until the cycle code is changed. The MXU will have a fixed factory set non-programmable identification number to insure absolute identity of the MXU within the radio AMR system. In addition, the MXU will have the capability of storing a utility defined programmable class code. The class code will be used to separate different classes of meters and differentiate the MXU in multi-utility installations.

C. Orion transmitters are designed specifically to work with the Badger RTR registers as well as the Sensus encoder (touch read) register. It can extract the same information from each register and provide a wide variety of useful information to the meter data system. The bubble up transmitter can be installed in the same MXU capable meter box or vault lid or as a free standing unit in a basement or crawl space of a house.

Subsection 9.2.06 INSTALLATION

A. ***WATER METER*** – All new water meter settings shall include an approved coppersetter with the appropriate angle stop and customer side check valves. The one (1") and smaller meters shall be attached in the proper orientation (arrow cast in body pointing toward the building) by use of the threaded female meter spuds provided with the coppersetter. Any existing meter settings that currently do not have an approved coppersetter, shall provide adequate meter spuds to accommodate the Sensus meter. If meter spuds are not provided, the meter setting shall be either reconstructed with the appropriate coppersetter, or have the proper meter spuds installed. **All installations shall require approved meter gaskets for a drip tight seal.** Meters one and one half (1 ½") inch and larger shall be secured by the use of bolted flanges, zinc plated grade five or better steel bolts and nuts, either provided with the two (2") inch coppersetter or by plumbed companion flanges when using three (3") inch or larger meters. An approved flange gasket shall be included

to provide a drip tight connection with the appropriately sized zinc plated steel bolts and nuts.

B. ***CONDUIT FOR DUAL PORT*** **– A one and one-half (1 ½") inch conduit shall be provided for all dual pit settings** where the meter pits are installed ten (10') feet or less apart. The conduit shall penetrate the wall of the concrete or plastic meter boxes in the second riser approximately twelve (12") inches below finished grade and shall protrude no more than one (1") inch into each box. The concrete or plastic riser shall be drilled or cut to the appropriate size to receive the conduit. Use of a cut off saw is approved. The resulting space shall be sealed tight with a cement grout packed around the conduit. The ends of conduit shall remain free and cleaned of grout.

C. ***MXU TRANSCEIVER / ORION BUBBLE UP TRANSMITTER***- The radio read transceiver shall be mounted as per the following:

1. ***Under the Pit Lid Installation -*** Using an appropriate length of half (1/2") inch EMT conduit, select a location for the conduit where the transceiver installed position will not interfere with the meter and allow the transceiver to be located as high as possible inside the meter box. The transceiver should be kept approximately 1" from the sides of the meter box and positioned so the meter register odometer remains visible for visual confirmation readings. Conduit mounting method calls for driving a length of conduit into the ground at the bottom of the meter box (if the bottom of the meter box does not have an opening sufficient for driving the conduit vertically into the ground below, a different mounting method may need to be developed). After installation of the conduit, position the opening located in the pit locking nut over the conduit and set into place. Under the pit lid installation is now complete.

2. ***Pit Lid Installation –*** Disassemble the transceiver unit to begin the installation procedure. Unlock the Sensus radio device by pressing down on the two tabs on the Boot Locking Clip facing the port side connections. Once the tabs are depressed, slide the Boot Locking Clip out until the Pit Lid Housing is released from the Boot. Slide the Pit Lid Housing off of the Boot and Boot Locking Clip assembly. Remove the Pit Locking Nut from the underneath of the Pit Lid Housing by turning the nut counter clockwise. Place the Pit Lid Housing thru the pre-drilled hole in the top of the Pit Lid. Place the Pit Locking Nut at the bottom of the Pit Lid Housing aligning the Pit Locking Nut with the shaft of the Pit Lid Housing. Tighten the Pit Locking Nut by turning clockwise until the unit is firmly secured against the bottom of the Pit Lid. Insert the HDPE Radio with Boot attached into the cavity of the Pit Lid Housing Slide the Boot Locking Clip into the Boot while assuring alignment between the slot located on the bottom of the Pit Lid Housing and the Boot Locking Clip is achieved. To secure the unit, slide the Boot Locking Clip into the Boot until the Boot Locking Clip rests in the slot located on the bottom of the Pit Lid Housing and the Boot Locking Clip is engaged and locked.

3. ***Touch Coupler Installation Instructions -*** Perform a Touch Read on TR/PL sensor to insure Touch Read to the encoder works. Grasp the TR/PL sensor and place into

Port 1 of the Touch Coupler TR/PL Adaptor until secured. Repeat process into Port 2 if needed.

4. ***Sensus to Orion Installation –*** Where needed to adapt to an Orion transmitter, clip the wire approximately six (6") inches ahead of Touch Coupler.

D. ***PROGRAMMIN*G – All radio read transceiver programming shall be done by an authorized City employee.** Once all meter and transceivers have been installed, the contractor shall notify the City Water Department that the system is ready for programming.

1. The Orion bubble up transmitter will only require activation as it is preprogrammed from the factory. If the activation step is missed, the unit is self activating when water flows through the meter.

SECTION 9.3 PROJECT COMPLETION

Subsection 9.3.01 INSPECTION

A. All new water meter coppersetter/meter box installations shall be inspected and approved by a Water Department Field Inspector as to proper installation, depth and condition of setting. Any repairs to or replacement of existing meter settings and/or meter boxes and lids shall also require inspection and approval by a Water Department Field Inspector. The water meter shall be pressurized upon installation and visually inspected to confirm that no leaks are present. Once inspections are complete, the meter shall be removed and drained to prevent possible freezing. Any deviations from City Standards will require immediate correction by the Contractor.

CHAPTER 10

DISINFECTION OF WATER MAINS

SECTION 10.1 INFORMATION AND DOCUMENTATION

Subsection 10.1.01 GENERAL REQUIREMENTS

A. The Contractor shall furnish all necessary approved chemicals for complete disinfection of newly installed mains, laterals, fire hydrants and appurtenances as well as system repairs. All applicable portions of the mains and/or appurtenances to be tested shall be disinfected according to recognized standards for Disinfecting Water Mains recommended by AWWA standard C651-05.

Subsection 10.1.02 REFERENCES

A. IDAPA 58.01.08

B. ANSI/AWWA C651-05

C. The Contractor **shall be responsible for complying with and performing** the following AWWA Standards.

Subsection 10.1.03 DOCUMENTATION

A. The Contractor shall be responsible for reviewing, understanding and performing the following procedures step by step for proper disinfection of new construction, replacements and repairs. **Disinfection and proof of satisfactory results are mandatory before a main, lateral, fire hydrant, fire service or domestic/irrigation water line is placed in service.** The Contractor shall notify the Water Department Field inspector prior to filling, flushing and sampling a water line. The Field Inspector shall determine the minimum flushing time necessary to clear all disinfectant from the water line and the resultant quantity of bacteria samples to be withdrawn. **All test results will be presented to the City Water Dept. by the Project Engineer or Contractor in writing prior to the water line being placed in service**.

Subsection 10.1.04 PRE-CONSTRUCTION CONFERENCE

A. Prior to work commencing on **any** project greater than installation of a single water service, the Contractor shall schedule a pre-construction conference with the City Water Department to inform the Superintendent of the work to be performed. Any necessary contract documentation shall be provided to the City Water Department prior to the pre-construction conference. The Contractor shall attempt to have a representative from all of

the Contractor's subs at the meeting, or shall be authorized to speak for them. The Contractor shall provide at the meeting:

1. A complete listing of the Contractor's subcontractors for the project.

2. An approved set of plans with the City Engineer's signature. Any changes, additions or deletions shall be reviewed and signed by the City Engineer prior to construction as well. The Contractor shall have a set of signed plans available at the work site at all times which shall be shown to the field inspector.

3. A project schedule which shall be regularly updated and any changes shall be submitted to the City during the project.

4. Proof of insurance, license and bonding if not provided to the City at an earlier date.

B. If construction stops or is delayed longer than thirty (30) days, or there are significant changes with the construction drawings/project, the Contractor shall set an additional pre-construction conference to review the work to be done and any possible changes. Minor drawing detail changes may be accomplished through the normal review process by the City Engineer.

SECTION 10.2 TYPE OF APPROVED DISINFECTING AGENTS

Subsection 10.2.01 CALCIUM HYPOCHLORITE TABLETS

A. Calcium hypochlorite in five (5 g) gram tablet form with sixty five (65%) percent available chlorine shall be utilized for the initial disinfection of all new water mains, service laterals of adequate size, and fire hydrants installed in any portion of the water system whether it be an extension or a replacement main. The tablets shall be **glued to the pipe with Permatex #1**, not the fittings, in sufficient number as indicated in **Table 10.1** so that it will stay in place during the initial filling of the water line and generate a minimum concentration of fifty (50 mg/L) milligrams per Liter of total chlorine to achieve a proper disinfection rate. This shall be done for all new installations and replacements larger than ten (10') feet unless the replacement must immediately be placed back in service.

Subsection 10.2.02 SODIUM HYPOCHLORITE LIQUID

A. Where mains or services have been cut for repairs or have been severed accidentally, the replacement pipe and fittings shall be swabbed with a liquid solution of sodium hypochlorite on the interior of all fittings and pipe. Prior to final assembly, additional liquid hypochlorite may be used to add to the disinfection effort. Slowly fill and allow the repair to sit for as long as possible prior to flushing and returning to service.

B. Sodium hypochlorite may also be utilized for re-disinfection, if approved by the Field inspector, should the initial attempt fail to provide satisfactory samples. A minimum five (5%) percent solution shall be used in sufficient volume to achieve a minimum fifty (50 mg/L) milligrams per liter of total chlorine available. This solution shall then be injected into the line to be disinfected and allowed to sit for forty eight (48) hours or as long as possible as the case may be.

SECTION 10.3 APPROVED DISINFECTION METHODS

Subsection 10.3.01 AWWA STANDARD TABLET METHOD FOR DISINFECTING WATER MAINS AND SERVICE LATERALS

A. **BASIC TABLET PROCEDURE UTILIZED BY CITY OF COEUR d'ALENE** - The basic procedure comprises three initial steps comprised of the following:

1. Preventing contaminating materials from entering the water mains during construction or repair and **removal by flushing all materials** that may have entered the water main, laterals and services by flushing at the meter and/or house as applicable. **(Please see Subsection 10.3.02)**

2. Disinfecting any residual contamination that may remain and flushing out at the meter settings or house faucets. **(Please see Subsection 10.3.03)**

3. Determining the bacteriologic quality of **all mains, laterals and services** by laboratory test after disinfection and flushing. **(Please see Subsection 10.3.04)**

Subsection 10.3.02 PREVENTATIVE MEASURES DURING CONSTRUCTION

A. Recommended methods for **k**eeping the pipe, fittings and materials clean and dry.

1. ***Protection*** **-** Precautions shall be taken to protect pipe interiors, fittings and valves against contamination. Pipe delivered for construction shall be strung so as **to minimize entrance of foreign material.** When pipe installation is not in progress (i.e. at the close of the day's work), all openings in the pipeline in the trench shall be closed by watertight plugs. Joints of all pipe in the trench shall be completed before work is stopped. If any contaminants enter the pipe line in the trench, the Contractor shall effectively flush the pipe to clean out the contamination. If not done, the City Engineer and/or Superintendent may require that the contaminated pipe be removed and replaced at the Contractors expense. If water accumulates in the trench, the plugs shall remain in place until the trench is clear of any groundwater and dry.

2. Delay in placement of delivered pipe invites inadvertent contamination. The more closely the delivery date is correlated to the date of pipe installation, the less chance contamination will occur.

3. ***Standards*** - See C600-AWWA Standard for Installation of Cast Iron Water Mains, and C-900-905 AWWA Standard for Installation of (PVC) Pressure Pipe. If dirt not removed by the flushing operation enters the pipe, the interior of the pipe shall be cleaned and swabbed as necessary with a five percent (5%) hypochlorite disinfecting solution.

4. ***Pipe Lubricants*** - The lubricant used in the installation of sealing gaskets shall be suitable for use in potable water. It shall be delivered to the job in closed containers and shall be kept clean. **The use of any other agent that does not meet the manufacturer's specifications is strictly prohibited.**

5. ***Cleaning and swabbing*** - If dirt enters the pipe, it shall be removed and the interior pipe surface swabbed with a 1 to 5 percent hypochlorite disinfecting solution. If, in the opinion of the purchaser, the dirt remaining in the pipe will not be removed using the flushing operation, then the interior of the pipe shall be cleaned using mechanical means, such as a hydraulically propelled foam pig (or other suitable device acceptable to the purchaser) in conjunction with the application of a 1 percent hypochlorite disinfecting solution. The cleaning method used shall not force mud or debris into the interior pipe-joint spaces and shall be acceptable to the purchaser.

6. ***Flooding by storm or accident during construction*** - If the main is flooded during construction**, it shall be cleared of the floodwater by draining and flushing with potable water until the main is clean.** The section exposed to the floodwater shall then be filled with chlorinated potable water that, at the end of a 24-hr holding period, will have a free chlorine residual of not less than 25 mg/L. The chlorinated water may then be drained or flushed from the main. **After construction is completed, the main shall be disinfected using the continuous-feed or slug method.**

Subsection 10.3.03 WATER MAIN FLUSHING ASSEMBLY

A. A main flushing assembly shall be installed at a major low section of the main which may be subject to accumulating sediment and shall be sized to provide a minimum of two point five (2.5') feet per second scouring velocity in the main to remove any accumulation of sediment. A two (2") inch assembly will be installed to grade with a two (2") gate valve, threaded coupling and finger tight plug six (6") inches from finished grade in approved Tyler valve boxes. The flush point will only **require the sixteen (16") Tyler top section** and lid at finished grade. Locations shall be determined by the City Engineer and/or Superintendent.

Subsection 10.3.04 APPROVED FORM OF CHLORINE DISINFECTION

A. ***Tablet Method*** - Tablet disinfection is the preferred method of water main disinfection for four (4") inch through twenty four (24") inch diameter mains. Because the preliminary flushing step must be significantly reduced, this method requires that scrupulous cleanliness has been exercised during main installation. If trench water or foreign material has entered the main or if the water temperature is below 5° C. (41° F.) and total chlorine levels of twenty five (25 mg/L) milligrams per Liter cannot be achieved

in forty eight (48) hours, alternate methods shall be reviewed and approved by the City Water Department. Water mains larger than twenty four (24") inch may also require an alternate method of disinfection to be approved by the City Water Department.

1. ***Placement of Tablets*** - Tablets shall be placed in each twenty (20') foot section of pipe and also in fire and flush hydrants, hydrant branches, and other appurtenances. The **tablets shall be attached by an approved adhesive (Permatex No. 1)**, except for the tablets placed directly in hydrant bases and in the fittings between the pipe sections. **All of the tablets glued within the pipe must be at the top of the main.** If the tablets are fastened before the pipe section is placed in the trench, their position should be marked on each section of pipe to ensure that the tablets will end up at the top of the main. **If any glued tablets disintegrate prior to pipe installation, the Contractor shall glue in new tablets or replace the pipe. (Please see Table 10.1)**

TABLE 10.1

Number of Hypochlorite Tablets of 5 – G Required for Dose of 50 Mg/L										
(Based on a 3 ¾ g. available chlorine per tablet.)										
Diameter of Pipe / Inches	**2"**	**4"**	**6"**	**8"**	**12"**	**16"**	**20"**	**24"**	**36"**	**48"**
# of tablets/section of pipe (20')	**1**	**1**	**2**	**3**	**5**	**6**	**9**	**13**	**N/A**	**N/A**

2. ***Approved adhesive*** - The **adhesive may be Permatex No. 1** or any alternative approved by the City of Coeur d'Alene Water Department. There shall be no adhesive on the tablet except on the broad side next to the surface to which the tablet is attached.

3. ***Filling and Contact Time*** - When installation has been completed, the main shall be filled with water at a rate to ensure that the water within the main will flow at a velocity no greater than 1 ft/sec (0.3 m/sec). Precautions shall be taken to ensure that air pockets are eliminated. **This water shall remain in the pipe for at least forty eight (48) hours to ensure an adequate contact time regardless of water temperature. A detectable free chlorine residual** should be found at each sampling point after the forty eight (48) hour period. **The results must be reported to the City Water Dept. immediately**.

4. ***Valves*** - Valves to the existing mains shall be closed drip tight so that the strong chlorine solution in the line being treated **will not flow back into the line supplying the water.**

5. ***Final Flushing*** - After the applicable retention period, the heavily chlorinated water shall be flushed from the main until the chlorine concentration in the water leaving the main is no higher than the residual generally prevailing in the distribution system, or less than 1 mg/1. An approved chlorine residual determination shall be made to ascertain that the heavily chlorinated water has satisfactorily been removed from the pipeline. **Flushing must be done on all mains, laterals, flush hydrants and appurtenances for the appropriate amount of time** to ensure that water in the main has been exchanged a minimum of **three (3) times**. This will require calculation of the entire main capacity and a metered and/or timed calculation to determine that the amount of flushing is sufficient accomplish this task**. These calculations must be presented to the on-site inspector for approval prior to flushing. (Please see Table 10.2).**

TABLE 10.2

REQUIRED OPENING TO FLUSH PIPELINES*

(40 psi Residual)

	Flow req. to		Hydrant Outlet Nozzles	
Pipe Size (in.)	produce 2.5 fps velocity gpm	Orifice Size (in.)	Number	Size (in.)
4"	100	15/16"	1	2.5"
6"	220	1 3/8"	1	2.5"
8"	390	1.7/8"	1	2.5"
10"	610	2 5/16"	1	2.5"
12"	880	2 13/16"	1	2.5"
14"	1,200	3 1/4"	2	2.5"
16"	1,565	3 5/8"	2	2.5"
18"	1,980	4 3/16"	2	2.5"

a.) *With forty (40) psi residual pressure, a two and one half (2 ½") inch hydrant outlet nozzle will discharge approximately one thousand (1,000) gallons per minute (gpm) and a four and one half (4 ½") inch hydrant nozzle will discharge approximately two thousand, five hundred (2,500) gallons per minute.

6. ***Disposal of Water*** - Water from the flushing of the main shall be disposed of as directed by the City Engineer and/or Superintendent in accordance with applicable regulations. **The Contractor shall take steps up to and possibly including chemical dechlorination to prevent damage to any existing grasses, plants and**

shrubs during the flushing process. Where necessary, federal, state, local, or provincial regulatory agencies should be contacted to determine special provisions for the disposal of heavily chlorinated water.

Subsection 10.3.05 BACTERIOLOGIC SAMPLING

A. ***Bacteriologic Tests*** - After final flushing, and before the water main is placed in service, a sample or samples **shall be collected at designated points along the main(s) and from the end of the line** and tested for bacteriologic absence and shall show the absence of coliform organisms. If the number and frequency of samples is not prescribed by the public health authority having jurisdiction, The City Water Dept. Inspector may determine the number of samples required. Any project will require at least one (1) sample shall be collected from chlorinated supplies where a chlorine residual is maintained throughout the new main. **From unchlorinated supplies at least two (2) samples shall be collected at least twenty four (24) hours apart.**

1. In the case of extremely long mains (over 1000'), it is desirable that samples be collected at designated points along the length of the **line at a minimum of every one thousand two hundred (1200)' feet as well as at its end.**

2. ***Sample Collection*** - Samples for bacteriologic analysis shall be collected in sterile bottles treated with sodium thiosulfate. **Fire hydrants may be used in collecting of samples** but the Contractor should disinfect the ports prior to sampling or may run the risk of accidental contamination. A suggested sampling tap consists of a standard corporation cock installed in the main with a copper tube gooseneck assembly. After samples have been collected, the gooseneck assembly may be removed and retained for future use. **Bacteria samples are the sole responsibility of the Contractor or owner. The sample reports shall be sent or faxed to the City Water Department at (208)769-2336 in writing.**

3. ***Repetition of Procedure*** - If the initial disinfection fails to produce satisfactory samples, disinfection shall be repeated until satisfactory samples have been obtained. The tablet method cannot be used in these subsequent disinfections**. The main may not be placed in service until satisfactory test results have been received by the CDA Water Department and approved by the City Engineer and/or Superintendent.**

Subsection 10.3.06 ALTERNATE METHODS OF DISINFECTION

A. When the tablet method cannot be utilized due to main size, water or foreign material intrusion, or repeated failures, the Contractor shall present alternative methods of disinfection for approval by the City Water Department This may include the injection method.

1. ***Preliminary Flushing*** - Prior to any alternate method of disinfection, all of the mains shall be flushed prior to disinfection. The sites and velocities of flushing shall

be as specified by the City Engineer and/or Superintendent. No flushing shall be done without prior notification sent to the Water Department Office.

2. ***Flushing Velocity*** - It is recommended that the flushing velocity be not less than 2.5 ft./sec. The rate of flow required to produce this velocity in various diameters is shown in Table 1. **No site for flushing should be chosen unless it has been determined that drainage is adequate at that site. The Contractor shall be responsible for all damage that may occur during flushing or because of the flushing procedure.**

3. ***Recommended Cautions*** - Flushing is no substitute for preventive measures taken before and during pipe installation. Certain contaminants, especially in caked deposits, resist flushing at any velocity. Furthermore, with pipe diameters of sixteen (16") inches or more, even the minimum recommended flushing velocity of 2.5 ft./sec. is sometimes difficult to achieve.

Subsection 10.3.07 PROCEDURE AFTER CUTTING OR REPAIR TO EXISTING MAINS

A. The following procedures apply primarily when existing mains are wholly or partially dewatered. After the appropriate procedures have been completed, the existing main may be returned to service prior to the completion of bacteriological testing in order to minimize the time customers are without water. Leaks or breaks that are repaired with clamping devices while the mains remain full of pressurized water may present little danger of contamination and therefore may not require disinfection.

1. ***Swabbing with hypochlorite solution*** - The interior of pipe and fittings (particularly couplings and sleeves) used in making the repair shall be swabbed or sprayed with a 1 percent hypochlorite solution before they are installed.

2. ***Flushing*** - Thorough flushing is the most practical means of removing contamination introduced during repairs. If valve and hydrant locations permit, flushing toward the work location from both directions is recommended. Flushing shall be started as soon as the repairs are completed and shall be continued until discolored water is eliminated.

3. ***Bacteriological samples*** - Bacteriological samples shall be taken after repairs are completed to provide a record for determining the procedure's effectiveness. **If the direction of flow is unknown, then samples shall be taken on each side of the main break**. If positive bacteriological samples are recorded, then the situation shall be evaluated by the potential owner who can determine corrective action. **Daily sampling shall be continued until two consecutive negative samples are recorded.**

SECTION 10.4 PROJECT COMPLETION

Subsection 10.4.01 INSPECTION

A. The Contractor shall have his/her Field Inspector working in a cooperative effort with the Water Department Field Inspector confirm that proper disinfection procedures were followed. **The City shall be provided with copies of all acceptable bacteria test reports. Any damage discovered by the inspector shall be noted and it shall be the Contractor's responsibility to repair or replace the damage items as per the inspector's request.**

B. The Contractor **shall not bury any work** to be inspected without such inspections taking place. The Contractor shall notify twenty four (24) hours in advanced and shall use every number available to contact the Field Inspector. If work is covered without the appropriate inspection, the Contractor will dig and expose any appurtenance which requires inspection at his/her own expense.

C. All bacteria test report copies shall be sent to the City Water Department for approval.

CHAPTER 11

HYDROSTATIC TESTING

SECTION 11.1 INFORMATION AND DOCUMENTATION

Subsection 11.1.01 GENERAL INFORMATION

A. Pressure testing of all mains complete with all valves and fittings, fire hydrants, domestic services, fire service laterals and stubs shall be done under the following Construction Standards as directed by the City Engineer and/or Superintendent for any water facility installation. Any deviations from the prescribed methods must be approved by the City Engineer and/or Superintendent prior to such tests being performed.

Subsection 11.1.02 REFERENCES

A. IDAPA 58.01.08

B. AWWA C 605-94

C. AWWA C 600-99

Subsection 11.1.03 DOCUMENTATION

A. The Contractor shall notify the City Field Inspector when he/she is ready to supply the mandatory pressure test of the water line. The Contractor shall provide a standard hose bibb fitting on his/her test equipment for a field recorder or data logger to be attached to. The test shall last a minimum of two (2) hours at one hundred sixty (160) psi with the recording device in place for the entire time. (**Please see Water Standard Drawing W-35 Approved Pressure Testing Methods)**

Subsection 11.1.04 PRE-CONSTRUCTION CONFERENCE

A. Prior to work commencing on **any** project, the Contractor shall schedule a pre-construction conference with the City Water Department to inform the Superintendent of the work to be performed. Any necessary contract documentation shall be provided to the City Water Department prior to the pre-construction conference. The Contractor shall attempt to have a representative from all of the Contractor's subs at the meeting, or shall be authorized to speak for them. The Contractor shall provide at the meeting:

1. A complete listing of the Contractor's subcontractors for the project.

2. An approved set of plans with the City Engineer's signature. Any changes, additions or deletions shall be reviewed and signed by the City Engineer prior to construction

as well. The Contractor shall have a set of signed plans available at the work site at all times which shall be shown to the field inspector.

3. A project schedule which shall be regularly updated and any changes shall be submitted to the City during the project.

4. Proof of insurance, license and bonding if not provided to the City at an earlier date.

B. If construction stops or is delayed longer than thirty (30) days, or there are significant changes with the construction drawings/project, the Contractor shall set an additional pre-construction conference to review the work to be done and any possible changes. Minor drawing detail changes may be accomplished through the normal review process by the City Engineer.

SECTION 11.2 APPROVED PRESSURE TESTING PROCEDURES

Section 11.2.01 GENERAL REQUIREMENTS

A. The Contractor shall be responsible for supplying all related materials and equipment for the pressure test with the exception of the City supplied recording instrument. The Contractor shall provide an accurate footage of the pipe to be tested including any laterals and stubs. The Contractor shall provide a suitable connection for the test equipment, a calibrated pressure gauge and an isolation ball valve and a water meter for the leak loss calculations. (**Please see Water Standard Drawing W-35 – Approved Pressure Testing Method)**

Section 11.2.02 PRESSURE TEST PROCEDURE

A. All mains complete with valves, fittings, fire hydrants, fire services and laterals, service laterals, stubs and other facilities and appurtenances shall be hydrostatically tested, meeting Section 19 of AWWA C603-64T Specifications at one hundred sixty (160) psi for a two (2) hour duration. **All valves, with the exception of the existing supply main valve(s), shall be in the fully open position and all valve boxes shall be clean and accessible for the inspector prior to the test being performed**.

1. ***Thrust blocks*** - All thrust-blocks shall have been in place for a sufficient time to have developed their initial strength so that there will be no movement of the main, as approved by the City Engineer and/or Superintendent.

2. ***Mains*** - The main(s) shall be filled with water and all remaining air shall be purged from all mains, fire hydrants and fire services, domestic and irrigation services, laterals and stubs prior to being subjected to the hydrostatic test.

3. ***Equipment*** - The Contractor shall provide the complete means of conducting such tests including pumps and all related equipment and shall conduct the test using

pressure recording equipment furnished by the City to provide a permanent record of each test. The Contractor shall provide a test manifold which will include an accurate glycerin filled pressure gauge capable of reading in two (2) psi increments with a sufficient rating for the applicable test pressure. An additional hose bibb style faucet shall be provided for the City furnished equipment connection. A teflon seated ball valve will be utilized to isolate the test pump from the manifold. An accurate water meter shall be connected to the low pressure side of the test pump (prior to connection for test pumping) to record the amount of water lost when re-pressurizing the main. This meter shall read in one (1) gallon increments with a one tenth ($1/10^{th}$) of a gallon dial. It is recommended that the Contractor pressurize the main at least once to ensure that all trapped air is relieved prior to the City's final test.

4. **Inspection** - All hydrostatic tests shall be conducted in the presence of the City inspector and scheduled to be conducted during regular City working hours inclusive of the **two (2) hour test period. Any overtime required to complete the test on behalf of the City shall be billed to and paid by the Contractor.**

5. **System Testing** - Hydrostatic tests shall be conducted with mains, service taps, fire hydrants, laterals, stubs and other appurtenances required to constitute a completed project as shown on approved plans excluding the tie-ins to existing mains. The Contractor shall not be permitted to make final tie-ins to existing mains except as a supply source for the new infrastructure before testing unless approved by the City Engineer and/or Superintendent. **If approved to do so, then the same testing practices shall govern as if the tie-ins were not made prior to testing and final acceptance of the project.**

6. The leak loss chart provided in table 11-1 may be used to calculate the maximum allowable leak loss for the pipe size and length. It will be very important that the Contractor have or provide accurate footages of each size of pipe to be involved in the pressure test. It is recommended that the Contractor pressurize the pipe several times prior to beginning the actual pressure test to attempt to evacuate all air which will affect the outcome of the test. All required components of the test manifold must be in place and acceptable to the inspector and/or engineer or the test will not be allowed.

TABLE 11-1

ALLOWABLE LEAKAGE FOR AWWA PVC PIPE C-900

Nominal Pipe Size (in.)	Average Test Pressure in Line: psi 160	175	200
	Allowable Leakage per 1000' or 50 joints: gal/hr (L/hr)		
4”	0.33	0.36	0.38
6”	0.50	0.54	0.57
8”	0.66	0.72	0.76
10”	0.83	0.89	0.96
12”	0.99	1.07	1.15
16”	1.32	1.43	1.53
18”	1.49	1.61	1.72
20”	1.66	1.79	1.91
24”	1.99	2.15	2.29

7. **Test Pressure** - The test pressure is to be kept as nearly as possible to one hundred sixty (160) psi or greater as required. If pressure drops below the calculated allowable loss, the test will be terminated by the inspector and the contractor shall correct any problems prior to rescheduling the pressure test. **(Please see Water Standard Drawing W-35 Approved Pressure Testing Methods)**

   a.) Test pressure for **all** fire service laterals (not including City fire hydrants) shall be a minimum of two hundred (200) psi or greater at two hours as required by code. The pressure test must be performed by, or under the supervision of a licensed fire sprinkler contractor.

8. **Leaks and Defects** - Any defective portions of work performed (materials and/or workmanship) discovered during hydrostatic tests shall be replaced or repaired by the Contractor before the Engineer and/or inspector will approve and accept the completed job. After repairs are made, the Contractor will be required to repeat the pressure testing until an acceptable test is completed.

B. Prior to the City issuance of a Certificate of Occupancy or a Temporary Certificate of Occupancy, all required fire hydrants shall be tested and approved as to service, location, and available fire flow by the City Fire Department. The fire hydrant(s) shall be pressure tested, disinfected, and bacteria sampled in accordance with all applicable City standards for water main construction

SECTION 11.3 PROJECT COMPLETION

Subsection 11.3.01 WITNESSING THE TEST

A. The Contractor shall have his/her field inspector from the engineering firm inspect and confirm that proper pressure testing procedures were followed. The City shall be provided with copies of an acceptable test. The Contractor shall also immediately notify the City Field Inspector to confirm that proper procedures were followed per current City specifications. **Any damage discovered by the inspector shall be noted and it shall be the Contractor's responsibility to repair or replace the damaged items as per the inspector's request.**

Subsection 11.3.02 ACCEPTANCE

A. This procedure shall not be considered complete and accepted by the City until an approved test has been completed and a copy received by the City.

B. All water utilized for testing purposes will come from a potable supply such as an approved transport tank or container which shall be approved by the engineer and/or Field Inspector.

CHAPTER 12

NON-POTABLE WATER LINE SEPARATION

SECTION 12.1 INFORMATION AND DOCUMENTATION

Subsection 12.1.01 GENERAL REQUIREMENTS

A. When a water main crosses under an existing sewer main, the Contractor shall take all necessary precautions to insure the integrity and uninterrupted service of the sewer main. If a sanitary or storm sewer main is broken during construction, the Contractor shall immediately call the agency having jurisdiction and shall aid and assist or make the repair as directed by the Superintendent or the agency having jurisdiction over the sewer main. All costs related to the repair shall be paid for by the Contractor. All repairs to sewer mains shall be subject to rigid inspection by the Superintendent and the agency having jurisdiction over the sewers. Zone A select backfill material shall be extended to twelve (12) inches above the sewer main. **(Please see Water Standard Drawing W-11 Pipe Bedding and Backfill)**

B. When a new sanitary or storm sewer main crosses under an existing AC water main, the water main at the discretion of the Superintendent may need to be altered per city specifications. **(Please see Water Standard Drawing W-8 Approved AC Main Replacement Crossing)**.

Subsection 12.1.02 REFERENCES

A. IDAPA 58.01.08

B. AWWA / ANSI

Subsection 12.1.03 HORIZONTAL SEPARATION OF WATER AND SEWER LINES

A. Water and sewer line separation must meet the DEQ standard, or the following, whichever is more restrictive:

1. When the potable water line and non-potable line have at least ten (10') feet horizontal separation, and the water main has at least eighteen (18") inches vertical separation above the non-potable line, then no other special conditions shall exist unless pointed out by the City Engineer or Superintendent.

2. If the ten (10') foot horizontal separation cannot be maintained, and the Contractor has prior approval from the City Engineer and DEQ, then the following conditions shall be met:

3. The water and non-potable line shall be at least six (6') feet apart and;

4. The non-potable line shall be constructed or reconstructed with pipe which conforms to water main standards and pressure tested for water-tightness or;

5. One of the lines shall be encased with a sleeving material acceptable to DEQ and the City Engineer and/or Superintendent.

Subsection 12.1.04 **SEWER LATERALS**

A. The Contractor shall make every effort to avoid disturbing existing sewer laterals during compaction.

B. The Contractor shall make every effort to avoid disturbing existing sewer laterals during compaction. The Contractor shall be responsible for a period of up to one (1) year for any failure of sewer main or service repairs made during and as a part of the water main, service, or other installation project as per the Contractor's written or implied warranty.

C. The trench shall be backfilled to twelve (12") inches above the lateral prior to completion of backfilling. All repairs to sewer laterals shall be made in accordance with the latest city standards, and shall be subject to rigid inspection by the Superintendent and the Wastewater Department. Zone A select backfill material shall be extended to twelve (12") inches above the sewer lateral whether or not the lateral is broken. **(Please see Water Standard Drawing W-11 Pipe Bedding and Backfill**

Subsection 12.1.05 **DOCUMENTATION**

A. A field engineer and/or inspector shall be responsible for measuring and recording pertinent project information regarding location of replaced water main and related valves, tees, elbows, fire hydrants, and crossings with other utilities, etc., for transfer to as-builts and provision to the City field inspector. Measurements for the City's benefit shall be in feet and inches from an identifiable location such as valve box or fire hydrant and not from engineering stations or movable objects such as power poles, trees or buildings.

B. The Contractor and/or Project Engineer shall supply as-builts on the plans provided, indicating the exact locations of all facilities installed before the City will accept the project as completed. The Contractor shall supply the Superintendent with all construction notes which may or may not have been included on the as-builts. **As-builts are due to the City no more than thirty (30) days after substantial completion of the project. If no as-builts are received, the City shall withhold any building permits for the project and/or Certificates of Occupancy. Any and all plan/construction changes**

shall be included with the final as-builts. The as-builts shall contain information regarding planned and actual installations, footage measurements for all fittings, tees and valves, detailed information and measurements for any appurtenances removed or replaced during construction, and any information regarding service stubs and their locations.

SECTION 12.2 MATERIALS AND PRACTICES

Subsection 12.2.01 VARIOUS MATERIALS USED

A. There may be various types of materials that the potable and non-potable lines are constructed of. This may include but is not limited to:

1. C900 PVC plastic pipe.

2. Class 160 PVC plastic pipe

3. 3034 PVC plastic pipe

4. DR 18 PVC plastic pipe

5. AC concrete pipe

6. Precast concrete pipe

7. Coated steel pipe

8. Galvanized steel pipe

9. HDPE Poly pipe

Subsection 12.2.02 APPROVED BEDDING MATERIALS:

A. Contractor shall be required to use a **Type III select bedding material consisting of clean, fine to coarse sand with no aggregate greater than three quarter (¾") inch minus and which shall have no angular edges.**

B. In the event of significant water intrusion or flow through the trench profile, and whereas there may be the possibility of the fine bedding material washing away from the pipe, the Contractor may use a Type I select bedding material consisting of three quarter (¾") inch crushed or fractured aggregate suitable for soil stabilization. This condition must be expressly approved by the City Engineer and/or the Superintendent**. The Type III select bedding materials shall be used around all fire hydrants, valve boxes, blow off assemblies and meter boxes to finished grade.**

C. All street cuts and/or open work areas shall be covered or backfilled during overnight exposure as per City code and construction standards, or as approved by the City Engineer.

Subsection 12.2.03 WATER AND SANITARY/STORM SEWER LINE CROSSINGS

A. Under normal conditions, water lines shall cross a minimum of eighteen (18") inches above any sanitary sewer or storm sewer. When an eighteen (18") inch vertical separation between the bottom of the water line and the top of the sewer cannot be maintained, the sewer lines shall be constructed, or reconstructed as the case may be, with pipe which conforms to water main standards, or sleeved with a suitable material for a distance of at least ten (10) feet horizontally on both sides of the water main, (twenty (20') feet total). The water pipe shall be centered at the crossing so that the joints will be an equal distance and as far as possible from the sewer. If the water main is located below a sanitary or storm sewer, the water main shall be sleeved at least ten (10') feet horizontally each side of the sewer main, twenty (20') feet total.

Subsection 12.2.04 SEPARATION FROM SEWAGE DISPOSAL SYSTEMS

A. A minimum horizontal distance of twenty-five (25') feet shall be maintained between a subsurface sewage disposal system and water distribution pipes.

Subsection 12.2.05 UNAPPROVED AUXILIARY WATER SOURCES

A. Unapproved auxiliary water supplies and/or sources shall be **any source or private water system** not supplied by the public water system and **not approved** by the water purveyor. These systems shall follow under the same separation criteria as non-potable water line separation of at least ten (10') foot minimum and shall at no time be constructed within public water systems rights-of-way or easements with the exception of crossings. **All unapproved auxiliary supplies to be constructed during a construction project shall be constructed of either purple pipe or a pipe with approved markings a maximum of every five (5') feet denoting "non-potable water" and a non-potable water line marking tape buried a minimum of two (2') feet below finished grade**. Any exposed appurtenance to an unapproved source shall have a purple color and markings denoting "non-potable water, do not drink".

B. Plans to unapproved auxiliary water sources shall be kept on site at all times and shall be available to the water purveyor for review in the event utility locates are required. **The water purveyor will not at any time be responsible for locating unapproved auxiliary water supplies and private water systems.** It will be the sole responsibility of the private system owner for location purposes and repair of damages should the owner fail to locate the system.

SECTION 12.3 PROJECT COMPLETION

Subsection 12.3.01 INSPECTION

A. The Contractor shall have his/her field inspector from the engineering firm inspect and prepare as-builts of all installations. The contractor shall also immediately notify the City Field Inspector to confirm that the assembly is installed per city specifications. **Any damage discovered by the inspector shall be noted and it shall be the Contractor's responsibility to repair or replace the damage items as per the inspector's request.**

B. The Contractor **shall not bury any work** to be inspected without such inspections taking place. The Contractor shall notify twenty four (24) hours in advanced and shall use every number available to contact the Field Inspector. If work is covered without the appropriate inspection, the Contractor will dig and expose any appurtenance which requires inspection at his/her own expense.

Subsection 12.3.02 COMPLETION AND ACCEPTANCE

A. The installation shall not be considered complete and accepted by the City until accurate as-builts are provided by the engineering firm for the construction work including all appurtenances. **The Contractor has thirty (30) days from substantial completion to submit complete and accurate as-builts to the City Engineer and/or Superintendent.**

CHAPTER 13

BACKFLOW ASSEMBLIES

SECTION 13.1 INFORMATION AND DOCUMENTATION

Subsection 13.1.01 GENERAL REQUIREMENTS

A. This section will detail the approved installation of backflow assemblies within the City of Coeur d'Alene. The City currently has a Cross Connection Control Program which tracks and governs the specific requirements for backflow assemblies. This construction standard will specify the proper installation of the various assemblies in regards to new construction and reconstruction of existing systems.

Subsection 13.1.02 REFERENCES

A. AWWA – C510-97, C512-04,

B. USC-FCCC&HR - University of Southern California – Foundation for Cross Connection Control and Hydraulic Research.

C. DEQ – Department of Environmental Quality

D. CMC-13.24.000 – City Municipal Code #13.24.000

E. IDAPA-58.01.08

F. UPC, Ch. 6 – Uniform Plumbing Code, Chapter 6

Subsection 13.1.03 CROSS CONNECTION CONTROL TECHNICIAN

A. Technician – (208)676-7408

B. Technician – (208)818-4818

Subsection 13.1.04 DOCUMENTATION

A. A City Field Inspector or backflow assembly tester shall be responsible for measuring and recording pertinent project information regarding location and types of backflow assemblies for transfer to the City Cross Connection control Program software. Information for the City's benefit shall be:

1. Type of assembly**,**

2. Brand

3. Model number,

4. Serial number,

5. Size,

6. Location,

7. Type of hazard protected,

B. The Contractor and/or Project Engineer shall supply as-builts on the plans provided, indicating the exact locations of all assemblies installed before the City will accept the project as completed. The Contractor shall supply the Superintendent with all construction notes which may or may not have been included on the as-builts. **As-builts are due to the City no more than thirty (30) days after substantial completion of the project. If no as-builts are received, the City shall withhold any building permits for the project and/or Certificates of Occupancy. Any and all plan/construction changes shall be included with the final as-builts.** The as-builts shall contain information regarding planned and actual installations, footage measurements for all fittings, tees and valves, detailed information and measurements for any appurtenances removed or replaced during construction, and any information regarding assemblies and their locations.

Subsection 13.1.05 PRE-CONSTRUCTION CONFERENCE

A. Prior to work commencing on **any** project, the Contractor shall schedule a pre-construction conference with the City Water Department to inform the Superintendent of the work to be performed. Any necessary contract documentation shall be provided to the City Water Department prior to the pre-construction conference. The Contractor shall attempt to have a representative from all of the Contractor's subs at the meeting, or shall be authorized to speak for them. The Contractor shall provide at the meeting:

1. A complete listing of the Contractor's subcontractors for the project.

2. An approved set of plans with the City Engineer's signature. Any changes, additions or deletions shall be reviewed and signed by the City Engineer prior to construction as well. The Contractor shall have a set of signed plans available at the work site at all times which shall be shown to the field inspector.

3. A project schedule which shall be regularly updated and any changes shall be submitted to the City during the project.

4. Proof of insurance, license and bonding if not provided to the City at an earlier date.

B. If construction stops or is delayed longer than thirty (30) days, or there are significant changes with the construction drawings/project, the Contractor shall set an additional pre-construction conference to review the work to be done and any possible changes. Minor drawing detail changes may be accomplished through the normal review process by the City Engineer.

SECTION 13.2 *APPROVED ASSEMBLIES AND PROCEDURES*

Subsection 13.2.01 ASSEMBLY APPROVAL

A. All assemblies chosen for installation shall be listed on the most current USC-FCCC&HR list of approved assemblies and shall be commensurate with the degree of hazard to be protected. The Contractor installing the assembly shall check with the Water Department Technician in charge of the Cross Connection Control Program to verify that the assemblies are on the approved list and for proper installation technique(s). It shall be the Contractor's responsibility to replace any unapproved assembly installed on his/her project and to correct any improper installations at his/her own expense.

Subsection 13.2.02 TYPES OF ASSEMBLIES

A. ***AVB*** – Atmospheric Vacuum Breaker – Used in low degree hazard situations. Cannot be pressurized for more than twelve (12) hours in a twenty four (24) hour period and shall have **no** valves downstream of the assembly. Must be mounted above ground, minimum six (6") inches above all points of downstream use. Not for use in backpressure situations.

B ***PVBA*** – Pressure Vacuum Breaker Assembly– Used frequently in low hazard irrigation systems. Can be pressurized for more than twelve (12) hours and may have valves downstream of the assembly. Must be mounted above ground, minimum twelve (12") inches above all points of downstream use. Not for use in back pressure situations.

C. ***SVBA*** - Spill Resistant Pressure Vacuum Breaker Assembly - Relatively new type of pressure vacuum breaker assembly designed for use where water should not be spilled or dumped on a regular basis. May have valves downstream of the assembly. Must be mounted above ground level, minimum twelve (12") inches above all points of downstream use. Not for use in backpressure situations.

D. ***DCVA*** – Double Check Valve Assembly - An assembly with two check valves, utilized primarily in premise isolation, irrigation and fire sprinkler systems to protect the potable water supply from low hazard backflow conditions and backpressure from high pressure supply systems. Can be mounted below ground.

E. ***RPBA*** - Reduced Pressure Backflow Assembly - An assembly utilized in high hazard premise and device isolation, and all fire sprinkler systems with a Fire Department Connection (FDC). As this assembly has a relief valve designed into it, this assembly is

approved for most high hazards with the provision that it is plumbed with adequate drainage as it can dump as much water as the service line can feed to it. Must be mounted above ground and kept from freezing or mounted inside structure with adequate drains.

F. ***AIR GAP*** - A physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel. An approved air gap shall be at least double the diameter of the supply pipe measured vertically above the overflow rim of the vessel- in no case less than one (1") inch. This is the most stringent method of backflow prevention and can be used in extreme high hazard situations where no other form of protection is acceptable.

Subsection 13.2.03 **APPROVED INSTALLATIONS**

A. ***AVB*** – The atmospheric vacuum breaker shall only be used on irrigation systems or equipment with a low hazard rating. The device shall be installed downstream of any control valves and shall be installed a minimum of six (6") above the highest point of use. There shall be no valves downstream of the assembly and the assembly shall not be pressurized for more than twelve (12) hours in a twenty four (24) hour period. If AVB's are used, they shall be marked approved by IAPMO or by ASSE. The AVB must be mounted in an area where considerable water spillage is not an issue**. (Please see Water Standard Drawing W-22 Atmospheric Vacuum Breaker Assy.)**

B. ***PVBA*** – The pressure vacuum breaker is one of the most common irrigation system backflow prevention assemblies due to its relatively inexpensive cost and ease of use and maintenance. The pressure vacuum breaker can have control valves upstream and/or downstream of the assembly and can be pressurized for twelve (12) hours or more. It shall be mounted a minimum of twelve (12") inches above the highest point of use and shall be mounted in an area where considerable spillage is not a concern. **(Please see Water Standard Drawing W-23 Standard Pressure/Spill Proof Vacuum Breaker)**

C. ***SVBA*** – The spill resistant pressure vacuum breaker is primarily utilized where there is a concern about the amount of water spillage but the situation calls for the use of a pressure vacuum breaker. The installation of the device is the same as the pressure vacuum breaker except that the concern over spillage is not as critical. **(Please see Water Standard Drawing W-23 Standard Pressure/Spill resistant Vacuum Breaker Assembly installation)**

D. ***DCVA*** – The double check valve is another favored device for irrigation systems and is widely used for fire sprinkler systems which do not use chemicals and do not have a FDC as well as for premise isolation for low hazard commercial businesses. The device can be mounted below ground in a vault or control box, depending on the size of the application, and is adequate for low hazard backflow and back pressure situations. The smaller assemblies can be mounted in a standard meter box or irrigation control box. Assemblies one and one-quarter (1 1/4") inch and larger are usually installed in larger concrete vaults or in building mechanical rooms. The assembly shall be mounted in the approved

orientation only. Please check with the Water Department to verify the assembly's approved orientation. Any assembly incorrectly installed or not on the current USC approval list shall be removed and replaced at the Contractor's expense. **(Please see Water Standard Drawings W-25 Approved 1" & 2" DCVA for premise Isolation and W-26 Approved DCVA for Irrigation Installation)**

E. ***RPBA*** – The reduced pressure backflow assembly is used in place of the double check valve when there is a high health hazard present. The RP protects against both backflow and back pressure but adds a relief valve in the assembly to provide a higher level of protection. However, this assembly must be installed above ground and protected from freezing. The preferred installation in climates such as ours is in a heated mechanical room. The assembly must have an adequate drain for water spillage. The proper air gap (2 times the opening diameter) shall be maintained at the assembly drain port. An adequate drain is one that is sized for the maximum possible flow of the assembly or the line feeding the assembly. If not plumbed into an approved drain system, the drain must be plumbed to an exterior area and have line of sight to verify clearance. The assembly shall be mounted in the approved orientation only. Please check with the Water Department to verify the assembly's approved orientation. Any assembly incorrectly installed or not on the current USC approval list shall be removed and replaced at the Contractor's expense. **(Please see Standard Drawings W-20 RP for Premise Isolation, Standard Method and W-21 RP Premise Isolation, Alternate method).**

E. ***AIR GAP*** - An air gap is utilized for the highest health hazard situations where no other type of protection is adequate. This type of system usually requires an auxiliary storage vat, booster pump(s) and float control valve(s). The potable water supply has a physical separation for the customer's system by use of the air gap. The most common installation is to utilize a storage vat or tank which is fed by the potable supply line. A physical air gap is maintained above the flood rim of the tank (a minimum of 2 times the pipe diameter) with a float or electronic valve used to maintain the water level in the tank. A booster pump is then used to feed and /or pressurize the customer's system. **(Please see Standard Drawing W-27 Approved Air Gap Standard)**

Subsection 13.2.04 PROPER DRAIN SIZING

A. ***ADEQUATE DRAINAGE –*** All drains utilized for the reduced pressure backflow assemblies (RPBA, also known as RPZ) shall be sized to accommodate the maximum dump capacity as calculated and approved by the Uniform Plumbing Code and the USC manual. The drains may be constructed from approved materials such as ABS plastic, generally used for interior drain plumbing, ductile iron or copper, generally used in exterior applications where UV resistance is required. The drains must follow all plumbing regulations in regards to minimum/maximum slope, required anchor points, inlet and outlet construction. In the rare situation where an RPBA is allowed to be used in a vault, the drain shall be open to daylight above any known flood plain and open at both ends by line of sight confirmation. A backwater valve may be utilized at the lower end of the drain to prevent cold air and/or animals and insects from entering the pipe and

damaging the device. The following tables **13.1** and **13.2** indicate that possible maximum dump capacity of the different size of devices.

Table 13.1

Relief Discharge Design

Backflow Preventer Size Mm	Inches	Maximum Discharge L/s	GPM
6 – 15	¼ - ½	4.7	75
20 - 25	¾ - 1	12.6	200
30 - 50	1 ¼ - 2	18.9	300
64 – 75	2 ½ - 3	28.4	450
100 – 150	4 – 6	47.3	750
200 - 250	8 – 10	69.3	1100
300 – 400	12 – 16	170.0	2700

Table 13.2

Drain Size Required For RPBA Discharge		
Backflow Pipe Size	GPM Discharge W/RPZ Dumping	Diameter Floor Drain Required
¾" - 1"	200 Gallons	4" – 6"
1 ¼" – 2"	300 Gallons	5" – 6"
2 ½" – 3"	450 Gallons	6" – 8"
4' – 6"	750 Gallons	8" – 10"
8" – 10"	1100 Gallons	10" –or- 6" + 8"

SECTION 13.3 PROJECT COMPLETION AND REVIEW

Subsection 13.3.01 INSPECTIONS AND TESTING

A. All new assembly installations must be inspected by the City upon completion and prior to operation. The City plumbing inspector is responsible for all inspections from the property line in. Please contact the Building Department to schedule an inspection at (208)769-2267. Assemblies utilized for premise isolation in the right-of-way will be

inspected by the Water Department. Please call the Water Department to schedule an inspection at (208)676-7408. All assemblies shall be tested by an approved licensed Backflow Assembly Tester (BAT) upon installation, after repairs and/or replacement and at least annually thereafter. Air gaps shall be inspected annually by the City. Please contact the City at (208)676-7408 to register as a Backflow Assembly Tester with the City.

Subsection 13.3.02 COMPLETION AND ACCEPTANCE

A. The installation shall not be considered complete and accepted by the City until accurate as-builts are provided by the engineering firm for the construction work including all appurtenances. **The Contractor has thirty (30) days from substantial completion to submit complete and accurate as-builts to the City Engineer and/or Superintendent.**

Subsection 13.3.03 ANNUAL TESTING

A. All assemblies shall be tested annually after initial installation, acceptance and testing. The owner of the assembly shall be responsible for having a certified Backflow Assembly Tester perform annual testing of approved assemblies.

CHAPTER 14

AUTOMATIC CONTROL VALVES

SECTION 14.1 INFORMATION AND DOCUMENTATION

Subsection 14.1.01 GENERAL REQUIREMENTS

A. Automatic control valves may include but are not limited to pressure reducing valves, pressure sustaining valves, altitude valves, surge anticipator valves, pump relief valves, air / vacuum release valves, etc.

Subsection 14.2.02 AUTOMATIC CONTROL VALVES

A. Automatic control valves such as pressure reducing valves or pressure relief valves shall meet all applicable ANSI/AWWA and ISPWC standards, Division 400, for construction and protective coatings. Automatic controls shall have isolation valves to facilitate service and replacement. Automatic or control valves shall have speed controls, required three (3") inch glycerin filled pressure gauges on the high and low pressure chambers, and **a rising stem position indicator** to allow for visible confirmation of valve position. The pressure gauges shall be mounted a minimum of 4" above the assembly so as to facilitate viewing from the vault lid. **(Please see Water Standard Drawing W-18 Pressure Sustaining Valve Assy.**)

B. Automatic control valves shall be specifically designed per application and a detail drawing shall be supplied with the contract documents. Control valves shall be installed in approved vaults with all necessary appurtenances for access and maintenance as shown on the standard drawings. The control valves shall be installed with isolation valves located on each side of the control valve and proper joint restraint for maintenance and replacement purposes. **(Please see Water Standard Drawing W-17 3" and Larger Dom. Meter Vault and W-18 Pressure Sustaining Valve Assembly**)

Subsection 14.2.03 EQUIPMENT ISOLATION VALVES

A. Valves used as equipment or device isolation valves in meter vaults, automatic control valve vaults, booster stations and pump stations for automatic control valve, pump, meter and/or backflow device control isolation shall be "outside stem and yoke" (OS&Y) resilient seated gate valves or an approved equal style valve which will have visible indication of the valve position.

Subsection 14.2.04 AIR RELEASE/VACUUM VALVE ASSEMBLIES

A. Air release assembly shall be installed with a saddle tap at the top of the highest point of the water main. The tap shall incorporate a Romac 202S double stainless strap saddle

with an approved Mueller or Ford one (1”) inch male iron pipe size (IPS) by pack joint compression corporation stop, or approved equal that meets NSF-61 approval. One (1”) inch iron pipe size (IPS) polyethylene pipe shall be used to extend from the corporation stop to the air release assembly. The air release assembly shall consist of: two one (1) inch galvanized ninety degree elbows and three (3) one (1”) inch by two (2”) inch galvanized elbows with a bug screen, the air release valve, a one (1”) inch by two (2”) inch galvanized nipple, a one (1”) inch ball valve, and a one (1”) inch male iron pipe size (MIP) by pack joint compression Mueller or Ford adapter, or approved equal that meets NFS . The one (1”) inch service line shall be laid with a maximum rise of one (1”) inch in ten (10’) feet and shall be laid straight and true. The air release assembly shall be set in the meter box so that the top of the air release valve is approximately eighteen (18”) inches below finished grade. Support stakes shall be provided to support the assemble plumb and vertical in the meter box. The assembly shall be attached to the stakes with stainless steel straps or banding. The meter boxes shall be set and backfilled with sand or a maximum of three quarter (3/4”) inch minus crushed aggregate to the finished grade. The interior of the meter boxes shall be kept clean and free of debris to the bottom of the fourth box. **(Please see Water Standard Drawing W-7 1” Air Release Assembly)**

1. **LOCATION -** The air release shall be located at the highest elevation or elevations if crossing extreme variations in elevations. The air release valve shall be located in a meter box, #37 Brooks Model or #65 Brooks Model, consisting of three (3) risers and a top section **(four (4) total sections)** with a concrete or cast iron lid. The assembly shall be located at the edge of the right-of-way closest to the water main. The air release valve and vault shall not be located in a street or paved driveway unless approved by the City Engineer and/or Superintendent with a traffic rated lid. **(Please see Water Standard Drawing W-7 1” Air Release Assembly)**

Subsection 14.2.05 WATER MAIN FLUSHING ASSEMBLY

A. A main flushing assembly shall be installed at a major low section of the main which may be subject to accumulating sediment and shall be sized to provide a minimum of two point five (2.5’) feet per second scouring velocity in the main to remove any accumulation of sediment. A two (2”) inch assembly will be installed to grade with a two (2”) gate valve, threaded coupling and finger tight plug six (6”) inches from finished grade in approved Tyler valve boxes. The flush point will only **require the sixteen (16”) Tyler top section** and lid at finished grade. Locations shall be determined by the City Engineer and/or Superintendent.

CHAPTER 15

MONITORING WELL SPECIFICATIONS

SECTION 15.1 INFORMATION AND DOCUMENTATION

Subsection 15.1.01 GENERAL

A. It may at times be in the best interest of the City of Coeur d' Alene Water Department to accept an abandoned well on developed property as an aquifer monitoring well in lieu of total abandonment as required by IDAPA 37-03-09, Section 12. The Contractor shall be required to modify the existing well casing and install a below ground containment vault as specified in these construction standards.

Subsection 15.1.02 REFERENCES

A. AWWA

B. IDAPA 37-03-09 & 58.01.08

C. IDEQ

D. ASTM Manual (D-5092), "Design Practice and Installation of Groundwater Monitoring Wells in Aquifers"

Subsection 15.1.03 EXISTING DOMESTIC WELLS

A. Any unused or unusable existing domestic wells with a minimum six (6") inch diameter casing, on public or private property to be developed, may be offered to the City in lieu of total abandonment by a licensed and certified well driller as required by IDAPA 37-03-09, Section 12. The City may consider the location of the well in correlation with other known test well sites, the proposed use of the property and the general location of the well on the aquifer in determining whether it is conducive to prep the well for a monitoring station. Any and all costs for modifications shall be at the developer's expense in lieu of proper abandonment and decommissioning. **Any known existing water rights for the well shall be transferred to the City prior to modification or abandonment.**

Subsection 15.1.04 DOCUMENTATION

A. A field engineer and/or inspector shall be responsible for measuring and recording pertinent project information regarding location of monitoring wells for transfer to as-builts and provision to the City field inspector. Measurements for the City's benefit shall

be in feet and inches from an identifiable location such as valve box or fire hydrant and not from engineering stations or movable objects such as power poles, trees or buildings.

B. The Contractor and/or Project Engineer shall supply as-builts on the plans provided, indicating the exact locations of all facilities installed before the City will accept the project as completed. The Contractor shall supply the Superintendent with all construction notes which may or may not have been included on the as-builts. **As-builts are due to the City no more than thirty (30) days after substantial completion of the project. If no as-builts are received, the City shall withhold any building permits for the project and/or Certificates of Occupancy. Any and all plan/construction changes shall be included with the final as-builts.** The as-builts shall contain information regarding planned and actual installations, footage measurements for all fittings, tees and valves, detailed information and measurements for any appurtenances removed or replaced during construction, and any information regarding service stubs and their locations.

Subsection 15.1.05 PRE-CONSTRUCTION CONFERENCE

A. Prior to work commencing on **any** project, the Contractor shall schedule a pre-construction conference with the City Water Department to inform the Superintendent of the work to be performed. Any necessary contract documentation shall be provided to the City Water Department prior to the pre-construction conference. The Contractor shall attempt to have a representative from all of the Contractor's subs at the meeting, or shall be authorized to speak for them. The Contractor shall provide at the meeting:

1. A complete listing of the Contractor's subcontractors for the project.

2. An approved set of plans with the City Engineer's signature. Any changes, additions or deletions shall be reviewed and signed by the City Engineer prior to construction as well. The Contractor shall have a set of signed plans available at the work site at all times which shall be shown to the field inspector.

3. A project schedule which shall be regularly updated and any changes shall be submitted to the City during the project.

4. Proof of insurance, license and bonding if not provided to the City at an earlier date.

B. If construction stops or is delayed longer than thirty (30) days, or there are significant changes with the construction drawings/project, the Contractor shall set an additional pre-construction conference to review the work to be done and any possible changes. Minor drawing detail changes may be accomplished through the normal review process by the City Engineer.

SECTION 15.2 MATERIALS AND INSTALLATION

Subsection 15.2.01 CONCRETE AND PIPING

A. Concrete utilized for construction of the monitoring well vault shall be a minimum 5 sack mix or greater if traffic rating is required. The well casing shall be steel and an approved cap shall be installed.

B. All piping used for drains shall be 3034 PVC plastic pipe.

Subsection 15.2.02 CAST IRON LID

A. An approved cast iron ring and lid shall be utilized for access to the well head. The ring and lid shall be a lockable, traffic rated design with the City of Coeur d'Alene logo stamped into the casting.

Subsection 15.2.03 CONVERSION TO MONITORING WELL

A. The Contractor shall excavate around the well head to a depth of three (3') feet where a traffic rated concrete vault shall be placed or constructed around the well head. The vault floor shall be sealed around the well casing with the exception of a minimum two (2") inch piped drain leading to an approved drain field or injection well (drywell) if available to prevent the vault from flooding or accumulating standing water. The casing shall be cut off a maximum of one (1') foot below finished grade. An approved self sealing well cap with a two (2") inch threaded test port and galvanized plug shall be installed. As an alternate design requiring prior approval, a welded cap installed by a certified welder with a two (2") inch threaded test port and plug. The vault shall be capped with a water tight, traffic rated, 36" manhole ring and lid at finished grade. The ring shall be grouted tight to the vault wall. The excavation shall be backfilled and compacted to road bed standards. Paved or concrete surfacing shall be placed around the completed vault per the development requirements. (Please **see standard drawing W-28 Monitoring Well Casing Modification**)

1. ***ACCESS PORT*** - Upon completion of conversion to a monitoring well, the well shall be equipped with an access port that will allow for measurement of the depth to water or an approved pressure gage fitting that will allow access for measurement of shut-in pressure of an artesian flowing well. All pressure gage fittings shall include control valves such that the pressure gage can be removed. Approved access ports are illustrated in standard drawing W-28 together with approved locations for pressure gage fittings. Air lines are not a satisfactory substitution for an access port. (Per IDAPA 37-03-09, 7-1-93)

2. ***DRAIN FIELD*** - An approved drain field shall be constructed to effectively provide vault drainage in the event there is any water intrusion and/or accumulation in the monitoring well vault. The drain field shall be constructed to DEQ and Panhandle Health District standards and shall be registered with the Panhandle Health District.

The drain field shall be sized to handle ten (10) times the monitoring well vault capacity.

3. ***INJECTION WELL*** – In lieu of an approved drain field, an injection well (drywell) may be installed or used if an existing one is available. The injection well shall have a minimum of ten (10) times the volume of the monitoring well vault and shall be registered with the Panhandle Health District if not already done so. All current approved specifications will apply.

Subsection 15.2.04 CONSTRUCTION OF NEW MONITORING WELL

A. All new monitoring wells shall be constructed and maintained in a manner reflective of regulated standards under IDWR, ASTM Manual D-5092, and applicable City standards that will prevent intrusion of waste and/or contamination into the aquifer and as otherwise required by these rules. The new monitoring well shall have a minimum 6" diameter casing with a neat grout sanitary seal around the upper casing area a minimum depth of 150' from finished grade or as designed by the engineer. The water bearing area of the casing may be either slotted or screened as designed by the engineer. The well head shall be constructed in the same manner as specified under "Conversion of Existing wells" with all applicable water tight seals and floor drain, drain field or injection well.

1. ***ACCESS PORT*** - Upon completion of a new monitoring well, and before removal of the well rig from the site, the well shall be equipped with an access port that will allow for measurement of the depth to water or an approved pressure gage fitting that will allow access for measurement of shut-in pressure of an artesian flowing well. All pressure gage fittings shall include control valves such that the pressure gage can be removed. Approved access ports are illustrated in standard drawing W-28. Air lines are not a satisfactory substitution for an access port. (Per IDAPA 37-03-09, 7-1-93)

2. ***DRAIN FIELD*** - An approved drain field shall be constructed to effectively provide vault drainage in the event there is any water intrusion and/or accumulation in the monitoring well vault. The drain field shall be constructed to DEQ and Panhandle Health District standards and shall be registered with the Panhandle Health District. The drain field shall be sized to handle ten (10) times the monitoring well vault capacity.

3. ***INJECTION WELL*** – In lieu of an approved drain field, an injection well (drywell) may be installed or used if an existing one is available. The injection well shall have a minimum of ten (10) times the volume of the monitoring well vault and shall be registered with the Panhandle Health District if not already done so.

Subsection 15.2.05 ABANDONING OF WELLS

A. When a monitoring well is no longer useful or needed, the owner or operator of the well shall abandon the well in accordance with IDAPA Rule 37-03-09, Section 12, Subsection 025.12.

1. **The well owner is charged with maintaining and abandoning a well in a manner that will prevent waste and/or contamination of the ground water. Permanently abandoned wells may have the casing removed or left in place and shall be filled with bentonite grout, cement grout, concrete, or puddling clay or other material as required to stop the upward or downward movement of water.** If the well is artesian, cement grout, concrete or a packer approved by the City Engineer and/or Superintendent shall be placed across the confining stratum overlying the artesian zone so as to prevent subsurface leakage from the artesian zone. The remainder of the well shall be filled with cement grout, concrete, or other approved material. (Reference IDAPA 37-03-09, dated 7-1-93)

2. The City Engineer and/or Superintendent may require the abandonment of a well in compliance with the provisions of IDAPA Rule 37-03-09, Section 12 Subsection 025.12.a. if the condition of the well does not meet minimum well construction standards or if there is no valid water right or other authorization acceptable to the City Engineer and/or Superintendent for use of the well.

B. Patching of all trenches shall consist of a minimum of three (3") inches of G-Mix unless otherwise directed on the plans or by the City Engineer. All joints between existing asphalt and new asphalt shall be coated with an approved emulsion tack coating.

Section 15.3 COMPLETION

Subsection 15.3.01 INSPECTION

A. The Contractor shall have his/her field inspector from the engineering firm inspect and prepare as-builts of all installed air release assemblies. The contractor shall also immediately notify the City Field Inspector to confirm that the assembly is installed per city specifications. **Any damage discovered by the inspector shall be noted and it shall be the Contractor's responsibility to repair or replace the damage items as per the inspector's request**

Subsection 15.3.02 <u>COMPLETION AND ACCEPTANCE</u>

A. The installation shall not be considered complete and accepted by the City until accurate as-builts are provided by the engineering firm for the construction work including all appurtenances. **The Contractor has thirty (30) days from substantial completion to submit complete and accurate as-builts to the City Engineer and/or Superintendent.**

B. The Contractor and/or Project Engineer shall supply as-builts on the plans provided, indicating the exact locations of all facilities installed before the City will accept the project as completed. The Contractor shall supply the Superintendent with all construction notes which may or may not have been included on the as-builts. **As-builts are due to the City no more than thirty (30) days after substantial completion of the project. If no as-builts are received, the City shall withhold any building permits for the project and/or Certificates of Occupancy. Any and all plan/construction changes**

shall be included with the final as-builts. The as-builts shall contain information regarding planned and actual installations, footage measurements for all fittings, tees and valves, detailed information and measurements for any appurtenances removed or replaced during construction, and any information regarding service stubs and their locations.

CEMETERY LOT TRANSFER/SALE/REPURCHASE PROCEDURE AND ROUTING SLIP

Request received by: Municipal Services / Kathy Lewis / 11/16/07
Department Name / Employee Name / Date

Request made by: George Thayer / 208-687-0484 off.
Name / Phone

PO Box 190 Rathdrum ID 83858
Address

The request is for: / / Repurchase of Lot(s)
/X/ Transfer of Lot(s) from Osie & Annie Thayer to George & Florence Thayer (Brother & Sister)

Niche(s): ____, ____, ____.
Lot(s): 08, ____, ____, ____, ____, ____, ____. Block: 63 Section: C to George Thayer

Lot(s) are located in /X/ Forest Cemetery / / Forest Cemetery Annex (Riverview).
Copy of / / Deed or / / Certificate of Sale must be attached.
Person making request is / / Owner /X/ Executor* / / Other* 07/03/C to Florence Thayer

*If "executor" or "other", affidaviats of authorization must be attached.

Title transfer fee ($ 40.00) attached**.
**Request will not be processed without receipt of fee. Cashier Receipt No.: 319385

ACCOUNTING DEPARTMENT Shall complete the following:

Attach copy of original contract.

Vonnie Johnson
Accountant Signature

CEMETERY SUPERVISOR shall complete the following:

1. The above-referenced Lot(s) is/are certified to be vacant: / / Yes / / No
2. The owner of record of the Lot(s) in the Cemtery Book of Deeds is listed as:

   _____

3. The purchase price of the Lot(s) when sold to the owner of record was $_____ per lot.

RDE — Supervisor's Init.
3/10/09 — Date

LEGAL/RECORDS shall complete the following:

1. Quit Claim Deed(s) received: / / Yes / / No.

Person making request is authorized to execute the claim: M.C. — Attorney Init. — 3/10/09 — Date

I certify that all requirements for the transfer/sale/repurchase of cemetery lot(s) have been met and recommend that that transaction be completed.

Susan K. Weathers — City Clerk's Signature
3-10-09 — Date

COUNCIL ACTION

Council approved transfer/sale/repurchase of above-referenced Lot(s) in regular session on: _____
Mo./ Day /Yr.

CEMETERY SUPERVISOR shall complete the following:

Change of ownership noted/recorded in the Book of Deeds: / / Yes / / No
Cemetery copy filed / /; original and support documents returned to City Clerk / /

_____ — Cemetery Supervisor's Signature
_____ — Date

Distribution: Original to City Clerk
Yellow copy Finance Dept.
Pink copy to Cemetery Dept.

CEMETERY LOT TRANSFER/SALE/REPURCHASE PROCEDURE AND ROUTING SLIP

Request received by: Municipal Services / 03/10/09
Department Name / Employee Name / Date

Request made by: George Thayer / 208-687-0484 off
Name / Phone

PO Box 190 Rathdrum Idaho 83858
Address

The request is for: / / Repurchase of Lot(s)
/X/ Transfer of Lot(s) from Osie & Annie Thayer to Florence A. Thayer

Niche(s): ____, ____, ____.
Lot(s): 07, ____, ____, ____, ____, ____, ____. Block: 63 Section: C

Lot(s) are located in /X/ Forest Cemetery / / Forest Cemetery Annex (Riverview).
Copy of / / Deed or / / Certificate of Sale must be attached.
Person making request is / / Owner / / Executor* /X/ Other*____

*If "executor" or "other", affidaviats of authorization must be attached.

Title transfer fee ($ N/A) attached**. (Paid on lot#08)
**Request will not be processed without receipt of fee. Cashier Receipt No.: 319385

ACCOUNTING DEPARTMENT Shall complete the following:

Attach copy of original contract.

Vonnie L Jensen
Accountant Signature

CEMETERY SUPERVISOR shall complete the following:

1. The above-referenced Lot(s) is/are certified to be vacant: / / Yes / / No
2. The owner of record of the Lot(s) in the Cemtery Book of Deeds is listed as:

   ____

3. The purchase price of the Lot(s) when sold to the owner of record was $____ per lot.

RDE / 3/10/09
Supervisor's Init. / Date

LEGAL/RECORDS shall complete the following:

1. Quit Claim Deed(s) received: / / Yes / / No.
Person making request is authorized to execute the claim: ____ / 3/10/09
Attorney Init. / Date

I certify that all requirements for the ~~transfer~~/sale/repurchase of cemetery lot(s) have been met and recommend that that transaction be completed.

Susan K. Weathers / 3-10-09
City Clerk's Signature / Date

COUNCIL ACTION

Council approved ~~transfer~~/sale/repurchase of above-referenced Lot(s) in regular session on: ____
Mo./ Day /Yr.

CEMETERY SUPERVISOR shall complete the following:

Change of ownership noted/recorded in the Book of Deeds: / / Yes / / No
Cemetery copy filed / /; original and support documents returned to City Clerk / /

____ / ____
Cemetery Supervisor's Signature / Date

Distribution: Original to City Clerk
Yellow copy Finance Dept.
Pink copy to Cemetery Dept.

DATE: MARCH 11, 2009

TO: MAYOR AND CITY COUNCIL

FROM: PLANNING DEPARTMENT

RE: SETTING OF PUBLIC HEARING DATE: APRIL 7, 2009

Mayor Bloem,

The Planning Department has forwarded the following item to the City Council for scheduling of a public hearing. In keeping with state law and Council policy, the Council will set the date of the public hearing upon receipt of recommendation.

ITEM NO.	REQUEST	COMMISSION ACTION	COMMENT
ZC-2-09	Zone change from R-12 to R-17 Applicant: George Mitchell Location: 2903 4th Street	Recommended Approval	Quasi-Judicial

In order to satisfy the mandatory 15-day notice requirement, the next recommended hearing date will be **APRIL 7, 2009.**

JS:ss

ANNOUNCEMENTS

Memo to Council

DATE: March 4, 2009
RE: Appointments to Boards/Commissions/Committees

The following appointments are presented for your consideration for the March 17th Council Meeting:

KEITH JONES	URBAN FORESTRY COMMITTEE
TARYN PETERSEN	PEDESTRIAN & BICYCLE ADV. COMMITTEE

Copies of the data sheets are in front of your mailboxes.

Sincerely,

Amy Ferguson
Executive Assistant

cc: Susan Weathers, Municipal Services Director
Karen Haskew, Urban Forestry Committee
Monte McCully, Pedestrian & Bicycle Advisory Committee

OTHER COMMITTEE MINUTES
(Requiring Council Action)

March 9, 2009
PUBLIC WORKS COMMITTEE
MINUTES

COMMITTEE MEMBERS PRESENT
Council Member Mike Kennedy
Council Member Woody McEvers
Council Member Al Hassell

STAFF PRESENT
Sid Fredrickson, WW Supt.
Warren Wilson, Deputy City Atty
Jim Markley, Water Supt.
Amy Ferguson, Exec. Assistant
Jon Ingalls, Deputy City Admin.
Terry Pickel, Asst. Water Supt.
Troy Tymesen, Finance Director

GUESTS
Craig Wilcox, Item #1

Item 1 Benches for Bus Stops Initiative
Consent Calendar

Jon Ingalls, Deputy City Administrator, presented a request for approval of a license agreement with Citylink enabling donor-funded bus stop benches maintained by Citylink to be placed in City public right of way for the purposes of providing a place for persons using public transportation a better place to wait for a bus. Mr. Ingalls said that in February, he presented the benches for bus stops initiative to City Council. Citylink ridership is growing significantly and riders have expressed an interest in basic amenities. The group who has been exploring the issue has looked at what other communities are doing and tried to stay away from advertising. The group is comprised of Craig Wilcox if the Idaho Panhandle Kiwanis, the Transportation Roundtable, Coeur d'Alene Tribe, Citylink, Spokane Regional Transit Council, Kootenai Metropolitan Planning Organization (KMPO), the City of Post Falls, and the Disability Action Center. The bus stop bench would be a basic ADA compliant bench that would not have advertisement on it but would have an opportunity for donor recognition. Mr. Ingalls explained that the Sign Code allows for up to 25% of the area of the back of the bench to have a donor recognition plaque from a business or a private citizen. The recognition plaque could also have the business logo, but would not include a phone number or business address.

Mr. Ingalls explained that the bench would probably need to have some anti-skateboard bumps put on it and it would be consistent among the different municipalities. The proposed license agreement has been reviewed by the Legal Department and has also been approved by Citylink.

Councilman Hassel said that Citylink currently has about 40,000 riders per month and he believes ridership will be increasing and that the benches will be well-received. Mr. Ingalls explained that they would like for one permit to be issued which would cover all of the proposed locations.

Mr. Wilcox explained that the benches will be placed into concrete. The sponsorship plaque would be 8 ½ x 16 inches wide in a sepia or copper tone. Councilman McEvers asked about web site addresses on the plaques. Mr. Wilcox said that at this point they are keeping the

sponsorship plaque as simple as possible and are not really meeting any resistance regarding the limitations on the plaque. There will be a minimum guarantee of 5 years to have your name on the bench and websites would not be allowed.

Mr. Wilcox said that if anyone is interested in a sponsorship to please contact him at 208-667-1212. He believes that public transportation is very important for growth and maintaining an efficient economy for our city.

MOTION by McEvers , seconded by Hassell, to recommend Council approval of Resolution No. 09-012, authorizing an agreement with Citylink for donor-funded bus stop benches maintained by Citylink to be placed in City public right of way and recommending that all of the benches be placed under a single permit. Motion carried.

Item 2 <u>Contract for Facilitator by Dischargers for TMDL</u>
Consent Calendar

Sid Fredrickson, Wastewater Superintendent, presented a request for the committee's recommendation that council enter into a contract, along with other stakeholders, with GeoEngineers for facilitation services to assist the stakeholders in the ongoing negotiations with EPA and the Washington Department of Ecology, in an amount not to exceed $10,000.00.
Mr. Fredrickson explained that it is necessary to hire a facilitator to assist in ongoing modeling efforts that EPA is doing that will be affecting both Washington and Idaho dischargers. The Executive Committee, consisting of a member of each of the 9 stakeholders (Avista, Spokane County, City of Spokane, HARSB, Coeur d'Alene, Post Falls, Liberty Lake Water & Sewer District, Kaiser Aluminum, and Inland Empire Paper), sent out a request for qualifications and three firms responded. The Executive Committee chose GeoEngineers to assist with organizing, putting out agendas, keeping track, minutes, etc. Mr. Fredrickson noted that there is a line item in the budget for permit planning that this would fall under. The amount that each of the stakeholders would be expected to pay would not exceed $10,000.

Mr. Fredrickson said that the timeline that EPA has set for completion of the modeling work and the issuance of a final TMDL is January, 2010. Once that loading has been established, then that will be the basis for EPA issuing discharge permits which will fix the amount of any oxygen demanding contaminant in the wastewater stream. He further said that Avista will be the lead agency and will have the actual contract with GeoEngineers. The city would enter into a Memorandum of Agreement and Avista would be billing the city.

MOTION by McEvers, seconded by Hassell, to recommend Council approval of Resolution No. 09-012 authorizing the City of Coeur d'Alene to enter into a contract with GeoEngineers for facilitation services to assist stakeholders in ongoing negotiations with EPA and the Washington Department of Ecology for a cost not to exceed $10,000.00. Motion carried.

Item 3 Request for Funding to Assist with Wastewater Reuse Research.

Sid Fredrickson, Wastewater Superintendent, presented a request for the committee's recommendation that council authorize a funding request for $10,000.00 per year for two years from the University of Idaho to help with the research into reuse of gray water. Successful reuse would cut down the total phosphorus entering the treatment plant and would result in less water flow into the plant and subsequently into the river.

Mr. Fredrickson explained that Professor Eric Coates of the University of Idaho has written a grant application and he would be looking at Spokane River specific research in ways to recycle gray water (tubs, showers, lavatory sinks, etc.). They want to look at economic ways of recycling gray water by putting in some sort of a treatment facility within individual homes so that the gray water can be used over again for flushing water, shower water, etc. Mr. Fredrickson said that as part of the city's draft permit with the EPA there will be a requirement for phosphorus source control within the city and they will have to provide to EPA a water reuse plan, and a water conservation plan. Other wastewater utilities have offered such things as rebates to residents if they put in reduced flow fixtures in their homes or if they buy a front-loading washing machine because the water flow is reduced. As part of water conservation, Mr. Fredrickson said that it would make good sense to help contribute to the University of Idaho research project. Anything that will in the long term lead to better wastewater reuse and to better water conservation by lowering the flows coming into the plant and the flows going into the river makes a lot of sense.

Mr. Fredrickson said that Professor Coates will also be requesting assistance from other dischargers as well and there is no final agreement yet. Councilman Hassell asked if effective reuse of gray water would be one way of mitigating the size of future sewer rate increases as well. Mr. Fredrickson said that if we reduce the amount of flow coming into the plant that does help with offsetting the needs for future capital at some point.

Mr. Fredrickson confirmed that they are looking at eventually producing a Class A effluent, which has very little restriction on its use as irrigation for a golf course or a public park. The water is very high quality and is highly disinfected.

MOTION by Hassell, seconded by McEvers, to recommend Council approval of a request for funding of a two year research project from the University of Idaho on the reuse of gray water in an amount of $10,000 per year, for a total of $20,000, with a further recommendation that all of the dischargers agree to participate before any agreement is entered into. Motion carried.

Item 4 Review of Water Department Construction Standards
Consent Calendar

Terry Pickel, Assistant Water Superintendent, presented a request for adoption of the 2009 revision of the Water Department Construction Standards designed to augment the Idaho Standards for Public Works Construction (ISPWC).

Mr. Pickel explained that the Water Department Construction Standards have been around for quite a few years but they have never officially been adopted by council. The current version has been revised to be more in line with the ISPWC. In addition, they have tried to make a document that is more user friendly and self-explanatory for contractors, water works suppliers, and inspectors.

Mr. Pickel said that the document has been sent to Consolidated Supply and other suppliers and they have reviewed it. It has also been sent to the North Idaho Building Contractors Association and they had no comments. The document was also reviewed by Gordon Dobler, City Engineer, and Warren Wilson of the Legal Department. The Water Department Construction Standards recognizes that the ISPWC is the governing regulation and basically is just the city's explanation of the rules.

Councilman McEvers asked who does the inspections. Mr. Pickel said that the Engineering Department does the inspections, but the Water Department does have people go out and oversee some of the work. On some projects the developers are required to have some of the inspections done by the engineering firm that designed the subdivision.

Councilman McEvers asked for an explanation of "as-builts." Mr. Pickel explained that "as-builts" are finished drawings after a project has been completed. A past problem has been not receiving the proper "as-builts." That is one of the things they are trying to make clear in the construction standards.

MOTION by McEvers, seconded by Hassell, to recommend Council consider the approval of Resolution No. 09-014 adopting the Water Department Construction Standards. Motion carried.

The meeting adjourned at 4:35 p.m.

Respectfully submitted,

Amy C. Ferguson
Public Works Committee Liaison

Public Works Committee
Staff Report

To: Public Works Committee
From: H. Sid Fredrickson, Wastewater Supt.
Date: March 9, 2009
Subj: Request for Funding to Assist with Wastewater Reuse Research

DECISION POINT: Council may wish to fund a request for $10,000 per year for two years from the University of Idaho to help with the research into reuse of gray water. Successful reuse would cut down of the total phosphorus entering the treatment plant and would result in less water flow into the plant and subsequently into the river.

HISTORY: Although the draft discharge permit for the treatment plant has been rescinded by the EPA, we can anticipate much of the draft language will be in the final permit. Three major program changes were in the draft permit:

- The requirement of phosphorus source control, i.e., reduction of the amount of phosphorus entering the plant.
- Wastewater Reuse – Develop and implement plans for the reuse of the treated effluent to lower the amount entering the river.
- Develop and implement a water conservation plan the will reduce the flows entering the plant and subsequently entering the river.

Dr Erik Coats is a professor of engineering at the U of I. He is proposing a research project into the individual household reuse of gray water – water used in bathroom sinks, showers, etc. that would reduce to flow and possibly phosphorus entering the plant. His project is specific to the Spokane River. (See attached.)

Besides applying for grants, he is asking for financial contributions from the dischargers. He is asking the city for $10,000 per year for two years.

FINANCIAL ANALYSIS: The current budget has a line item called “Permit Renewal Planning” and is set at $200,000. This line item would be used to fund this project.

PERFORMANCE ANALYSIS: Wastewater reuse and conservation will undoubtedly be a requirement of the city’s new discharge permit. This appears a an excellent opportunity to partner with the U of I in a cutting edge research project.

DECISION POINT: Council may wish to fund a request for $10,000 per year for two years from the University of Idaho to help with the research into reuse of gray water. Successful reuse would cut down of the total phosphorus entering the treatment plant and would result in less water flow into the plant and subsequently into the river.

Sustainable Water Reuse through Gray Water Recycling for Year-round, In-home, Non-potable Use

INTRODUCTION

Over 90% of potable water utilized by a residential user is discharged to the wastewater system [1]; of this, over 40% is slightly contaminated gray water [2]. Recognizing the inherent value of this latter resource, untreated gray water is reused (not recycled) in certain regions of the U.S. (arid regions or those experiencing drought); however, the practice is aimed principally at landscape irrigation [2] and thus does not yield measurable impacts to the wastewater and water community on a year round, continuous basis. Conversely, if we **recycled** gray water at the home before it was discharged to the wastewater system, significant year-round impacts would be realized by both the wastewater and water community. To that end, we propose the following gray water recycling concept: collect and treat gray water within single-family residences, wherein it would be recycled multiple times for laundry, toilet flushing, and (optimistically) showering before ultimately being discharged to the wastewater system. In stark contrast to current gray water reuse practices, not only would this practice significantly reduce water supply demands and wastewater flow to wastewater treatment facilities (WWTFs) year-round, it would yield considerable energy savings through reduced treatment requirements and pumping. Finally, significant system-wide capacity (treatment, conveyance) would be recovered.

PROJECT HYPOTHESES AND RESEARCH OBJECTIVES

The proposed study represents the genesis of a new dimension in water reuse wherein homeowners would actively manage their water resources through gray water recycling for in-home, non-potable purposes. The study will be driven by the following hypotheses:

- *Hypothesis No. 1:* Gray water can be recycled at single family residences in an environmentally safe and sustainable manner for in-home, non-potable reuse purposes.
- *Hypothesis No. 2:* Single-family residences implementing the proposed gray water recycling concept will realize >50% reduction in wastewater flows and potable water demand on a year-round basis.

The research will be completed by addressing the following research objectives:

1. Characterize gray water quality over a cross-section of single family residential sources.
2. Identify and evaluate most viable commercially available water treatment technologies.
3. Conduct public perception surveys to identify underlying social factors that either enhance or reduce the probability that end users will adopt the in-home gray water reuse concept.

WATERSHED FOCUSED

The research will be conducted with a focus on the Spokane River watershed. This region was selected in large part due to the pending dissolved oxygen Total Maximum Daily Load (TMDL) for the Spokane River; this TMDL will ultimately require WWTFs to significantly reduce the mass of phosphorus discharged to the river. This phosphorus reduction goal could, to a large degree, be achieved by broad adoption of our proposed gray water recycling concept. Specifically, with wastewater flows reduced by over 40% through gray water recycling, assuming that WWTF effluent phosphorus concentrations would remain constant (a very reasonable assumption), the mass of phosphorus discharged to the river would then be reduced by over 40%. This reduction in phosphorus loading to the river would contribute considerably toward regional compliance with the TMDL. By focusing this research within a watershed, we will establish a blueprint for nation-wide implementation.

Gray Water Recycling for Year-round, In-home, Non-potable Use

RESEARCH OBJECTIVE. The proposed study is centered on advancing a new dimension in water reuse wherein homeowners actively manage their water resources through gray water recycling for year-round, in-home, non-potable purposes. The primary objectives of the proposed research are to:

- Identify treatment technologies that can be deployed in a home such that gray water can be recycled in an environmentally safe and sustainable manner for year-round, in-home, non-potable purposes.
- Conduct public opinion surveys to identify hurdles that must be overcome to advance this concept.

WATERSHED FOCUSED. The research needs to be focused in a region with acute water resource and wastewater management issues. To that end, the research will center on the Spokane River watershed. This region was selected in large part due to the pending dissolved oxygen Total Maximum Daily Load (TMDL) for the Spokane River; this TMDL will ultimately require wastewater treatment facilities (WWTFs) to significantly reduce the mass of phosphorus discharged to the river. This phosphorus reduction goal could, in part, be achieved by broad adoption of our proposed gray water recycling concept. Specifically, with wastewater flows reduced by over 40% through gray water recycling, assuming that WWTF effluent phosphorus concentrations remain constant (a very reasonable assumption), the mass of phosphorus discharged to the river will then be reduced by over 40%. This reduction in phosphorus loading to the river will contribute considerably toward regional compliance with the TMDL. By focusing this research within a watershed, we will establish a blueprint for nation-wide implementation.

PRELIMINARY DATA. We have conducted some preliminary investigations on gray water treatment; our results are summarized in Table 1. As shown, basic filtration significantly improved water quality.

Table 1 – Preliminary Gray Water Quality Data

	Turbidity (NTU)	Alkalinity (mg $CaCO_3$/L)	Hardness (mg $CaCO_3$/L)	Conductivity (ppm)	Fecal Coliform (MPN/100 mL)
Untreated	291	150	120	184	ND
GAC/IE	89.5	20	0	59	ND
Filtered (0.5 µm)	1.33	135	125	79.2	ND
Filtered+GAC/IE	3.4	40	0	80.7	ND
EPA Drinking Water	0.3	--	<150	<500	none

RESEARCH CHALLENGES. To the best of our knowledge this gray water recycling concept has neither been proposed nor evaluated in any detail. The reason may seem obvious – the 'yuck' factor; however, this issue is only one that must be addressed. Specific research challenges are as follows:

Technical. This research will focus on using off-the-shelf packaged treatment technologies. A central research challenge will be to demonstrate that requisite water quality can be achieved in an efficient, reliable manner utilizing these treatment systems. Other, long-term issues include system redundancy and reliability; real-time system monitoring; and preventing potable water cross connection.

Regulatory. Currently, states are principally responsible for establishing regulations for gray water reuse [1]; however, few, if any, states will currently allow this proposed form of gray water reuse. State regulatory agencies will need to be proactively involved in this research.

Social. Public responses to this proposed gray water recycling concept will primarily determine its fate. Broad public (*i.e.,* end-user) support and implementation will be required to fully realize the inherent value of this novel concept.

TECHNICAL APPROACH.

Task 1 – Gray Water Characterization. The purpose of this task will be to characterize gray water quality from single-family residences with different family characteristics. Sampling sites will be selected to

represent a typical community cross section (*e.g.,* with/without children; senior citizens). Samples will be analyzed for the following parameters: fecal coliform, turbidity, hardness, conductivity, alkalinity, and pH.

Task 2 – Gray Water Treatment: Technology and Water Quality Assessment. Under this task we will identify treatment systems that can reliably yield water quality necessary for the proposed uses. This study will focus on using commercially-available, off-the-shelf treatment systems. The EPA has identified several technologies as highly promising for in-home potable water treatment [2]. Combinations of treatment systems will be tested in the laboratory utilizing composite gray water samples. The objectives of this treatment assessment will be to:

i) Identify treatment technologies capable of achieving effluent criteria;
ii) Determine effluent quality and treatment efficiency; and
iii) Estimate operational life for treatment combination through extended duration tests.

Combinations of technologies will first be pre-screened such that only those capable of achieving minimum effluent requirements are assessed (effluent criteria modeled after EPA drinking water standards/guidelines). Once successful combinations of treatment technologies have been identified, extended duration treatment tests will be performed in which combinations of technology will be tested for approximately six months. Gray water from the most contaminated site (Task 1) will be utilized in these analyses. Recognizing the time and effort required to collect the necessary data, no more than three treatment 'systems' will be evaluated. For each extended-duration treatment assessment, influent and effluent samples will be analyzed daily. Samples will also be collected between individual treatment units to assess relative efficiencies, and to identify if service/replacement is required. Samples will be analyzed for fecal coliform, turbidity, color, hardness, TDS, alkalinity, and pH. We will also monitor effluent periodically for soaps, detergents, cleaning chemicals, perfumes, and select cosmetics; as part of these investigations, influent samples will be periodically spiked (both as a control and to confirm treatability) with typical forms of these products. As a control, tap water from the public water system will be tested for the same constituents.

Regardless of effluent water quality, any deleterious odors could ultimately deter many end-users; thus, odor will also be periodically assessed (Standard Methods). Treated water will be tested both at ambient temperature and at an appropriate warmer temperature consistent with showering/laundry.

Pathogen-specific Testing. Under this sub-task we will more comprehensively demonstrate that the water is pathogen-free by employing custom-designed microarrays to examine effluent for the presence of >1,500 human pathogens. Testing will focus on effluent from the extended duration tests (Task 2).

Task 3 –Public Opinion Surveys. For the proposed gray water recycling concept to be successful, public support will be paramount. To that end, the objectives of this task will be to: 1) broadly assess the general public's perceptions and level of knowledge of gray water and gray water recycling, and how those perceptions might affect their willingness live in a home outfitted for gray water recycling; and 2) understand how perceptions of the relative costs vs. benefits of in-home gray water recycling affect homeowners' willingness to adopt the proposed concept, either by retrofitting their own home or purchasing a new home with the technology already installed.

To understand the potential barriers and incentives to in-home gray water recycling, we will conduct a survey in the Spokane-Coeur d'Alene area (including the cities of Spokane, Coeur d'Alene, Rathdrum, Post Falls, and Hayden Lake as well as Spokane County). The survey will include questions about respondents' knowledge of gray water concepts, recycling (including perceptions and misconceptions), their willingness to implement water conservation practices in general, as well as gray water recycling in particular, and how respondents might weigh costs/benefits of in-home gray water recycling. In addition, we will ask demographic-oriented questions about water use, household size, number of persons/household, education level, income, and age. We will conduct the surveys following the Dillman research method [3].

This method involves multiple mailings and strict design requirements (*e.g.,* surveys sent first class mail with postage stamps) normally yielding higher survey response rates and reduction in survey error [4]. Frames of respondents will be constructed from publicly available property tax rolls. The survey will be restricted to property owners in single-family residences; these individuals can make decisions about their property and will benefit most from cost savings due to water recycling. The mail survey methodology using property tax rolls also allows us to have a complete frame of all eligible households within a city, and is not subject to some of the issues facing telephone surveys, such as unlisted numbers or cell-phone only households [5]. From the frame, we will randomly select a sample of survey recipients using SAS (v. 9.3, SAS Institute, Inc., 2005). We will target 400 completed surveys for an overall sampling margin of error of +/-5%. Data will be entered into SPSS (v. 16, SPSS, Inc., 2008), and data analysis will be conducted using SPSS and SAS statistical software packages. Means, medians, frequencies, percents, and 95% confidence intervals will be computed for all variables as appropriate. Chi-square analyses will be used to examine bivariate relationships among variables. In addition, we will use logistic regression and logit models to create predictive equations to determine how the explanatory variables (location, household water use, education, etc.) affect willingness among property owners to retrofit existing homes to permit implementation of gray water reuse technology.

Task 4 – Regulatory Coordination. The purpose of this task will be to collaboratively develop preliminary criteria such that public entities (*i.e.,* regulatory agencies; water-wastewater purveyors; local health districts) could ultimately develop formal structures to implement the proposed gray water recycling concept. Both the Washington State Departments of Ecology and Health have agreed to participate in this research (letters of commitment available upon request).

ORIGINALITY AND INNOVATION OF THE RESEARCH. As our research group has worked to advance this concept, there have been those who have immediately concluded that it is of academic interest only, and that it cannot practically or pragmatically be deployed. Our response: water supplies are becoming ever more limited; water quality regulations are becoming increasingly stringent; our population is increasing; it is critically important that we investigate any and all innovative and potentially viable concepts for addressing this nexus. To that end, our gray water recycling concept is certainly unique and innovative; it further exhibits significant potential to have long lasting, positive effects on water resources management. We also believe that, with sufficient education, our concept will readily be accepted by the general public given that the gray water is being recycled for non-potable purposes. Additional original elements (by task) include:

- Task 1 will yield an assessment of gray water quality from a cross section of single-family residences; there is a general dearth of data on this topic.
- Task 2 will produce a compendium of gray water treatment system requirements, capabilities, and associated effluent quality; such an assessment has yet to be completed. At least one publication in a peer-reviewed journal is expected from Tasks 1/2.
- Task 3 will generate an assessment of the public knowledge base and knowledge gaps about gray water recycling for in-home benefits. In addition, Task 3 will generate a strategic approach for maximizing opportunities among homeowners based on a combination of attitudinal and demographic data. One to two publications in peer-reviewed journals are expected from this task.
- Task 4 will yield the necessary regulatory 'roadmap' toward concept implementation.

RELEVANCE & FUTURE APPLICATIONS. Over 90% of potable water utilized by a residential user is discharged to the wastewater system [6]; of this, over 40% is gray water [1]. Recognizing the inherent value of this latter resource, untreated gray water is reused (not recycled) in certain regions of the U.S. (arid regions or those experiencing drought); however, the practice is aimed principally at landscape irrigation [1] and thus does not yield measurable impacts to the wastewater and water community on a year round, continuous basis. Conversely, by recycling gray water at the home before it is discharged to

the wastewater system, significant year-round impacts will be realized by both the wastewater and water community. In contrast to current gray water reuse practices, not only will this practice significantly reduce water supply demands and wastewater flow to wastewater treatment facilities year-round, it will yield considerable energy savings through reduced treatment requirements and pumping. Finally, significant system-wide capacity (treatment, conveyance) will be recovered.

PROJECT MANAGEMENT PLAN. This project brings together a multi-disciplinary team with necessary and critical expertise in water reuse, and in social behavior related to technological change. Dr. Coats will be responsible for overall project management, and will be responsible for all project reports and meetings. Dr. Coats will also be the task manager/technical lead for Tasks 1, 2, and 4. Dr. Wulfhorst will be the task manager for Task 3, while Ms. Kane will serve as the technical lead.

Dr. Erik R. Coats, Ph.D., P.E. is an Assistant Professor in the Dept of Civil Engineering at UI. Prior to earning his doctorate, Dr. Coats spent 10 years consulting as a Professional Engineer in the municipal water/wastewater treatment field. Dr. Coats' research is focused broadly on resource recovery from waste streams; this includes investigations to more efficiently reclaim water from wastewater, as well as the recovery and conversion of high value nutrients from 'waste' streams. Specifically, Dr. Coats' lab group is currently investigating i) microbial phosphorus removal and the metabolisms driving this poorly understood process, and ii) the synthesis of biological thermoplastics on municipal wastewater, fermenter dairy manure, and crude glycerol-based wastewater (derived from biodiesel manufacturing).

Dr. J.D. Wulfhorst, Ph.D., an Associate Professor in the Dept of Agricultural Economics & Rural Sociology at UI, has worked as a social science researcher for 18 years; he focuses his work on risk perceptions, sustainable energy and communities, economic development, and technological change in resource management. Dr. Wulfhorst has a breadth of experience with a variety of qualitative and quantitative data collection methods; he has contributed to the development of mixed-method approaches to offer innovative designs. His honors include a recent invitation to present at the Oxford Roundtable on issues of trust in government related to technological change. Dr. Wulfhorst has served as Director/Principal Investigator of the Social Science Research Unit (SSRU) since 2000.

Stephanie Kane, M.S. holds Master's degrees in zoology and statistics, and is the Project Manager and statistician at the UI SSRU. Ms. Kane is highly versed in the technical aspects of the design and analysis of social science research. She has authored or co-authored five refereed journal articles, as well as many technical reports for the SSRU in the last year. Her statistical interests center on categorical data modeling and alternatives to the proportional odds model of logistic regression.

References

1. Roesner, L., Y. Qian, M. Criswell, M. Stromberger, and S. Klein, Long-term effects of landscape irrigation using household graywater - literature review and synthesis, WERF, 2006.
2. EPA, Investigation of the capability of point-of-use/point-of-entry treatment devices as a means of providing water security, EPA/600/R-06/012, EPA, 2006.
3. Dillman, D., *Mail and internet surveys: the tailored design method*. 2007, Hoboken, NJ: John Wiley and Sons, Inc.
4. Dillman, D., *The design and administration of mail surveys.* Annual Review of Sociology, 1991. **17**: p. 225-249.
5. Lavrakas, P.J., C.D. Shuttles, C. Steeh, and H. Fienberg, *The state of surveyhing cell phone numbers in the United States: 2007 and beyond.* Public Opinion Quarterly, 2007. **71**: p. 840-854.
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PUBLIC HEARINGS

CITY COUNCIL
STAFF REPORT

FROM: JOHN J. STAMSOS, SENIOR PLANNER
DATE: MARCH 17, 2009
SUBJECT: ZC-1-09 - ZONE CHANGE FROM R-8 TO C-17
LOCATION: +/- 18,121 SQ. FT. PARCEL AT THE SOUTHWEST CORNER OF HWY. 95 AND HANLEY AVENUE

DECISION POINT:

Chris Cheeley DBA as A Thousand Hills, LLC is requesting approval of a Zone Change from R-8 (Residential at 8 units/acre) to C-17 (Commercial at 17 units/acre).

This is an appeal, filed by the applicant, of the Planning Commission's denial of the request on January 13, 2009.

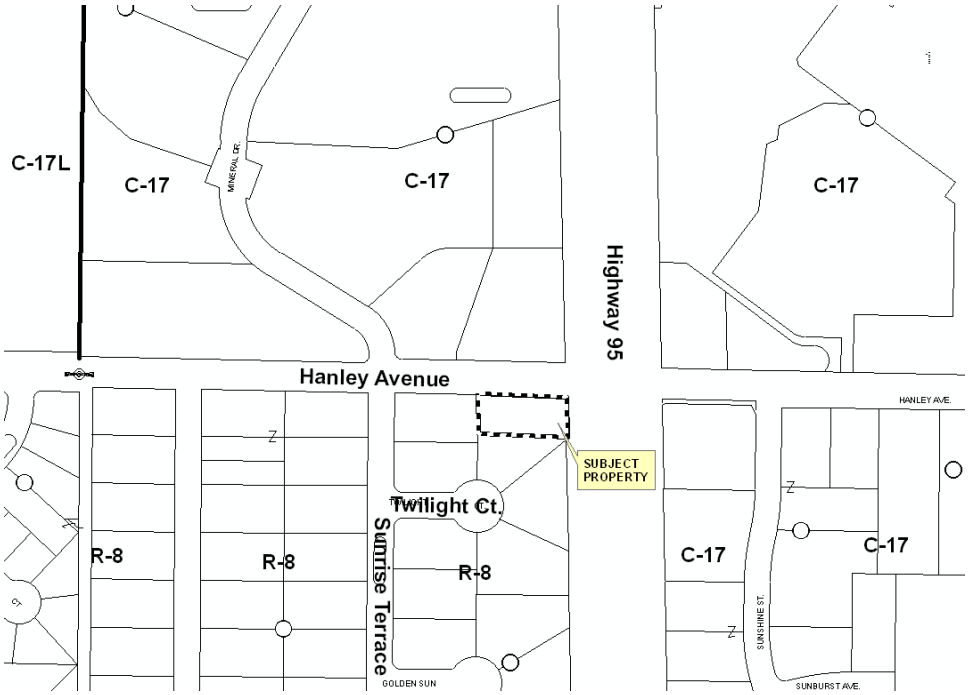
SITE PHOTOS:

A. Aerial photo

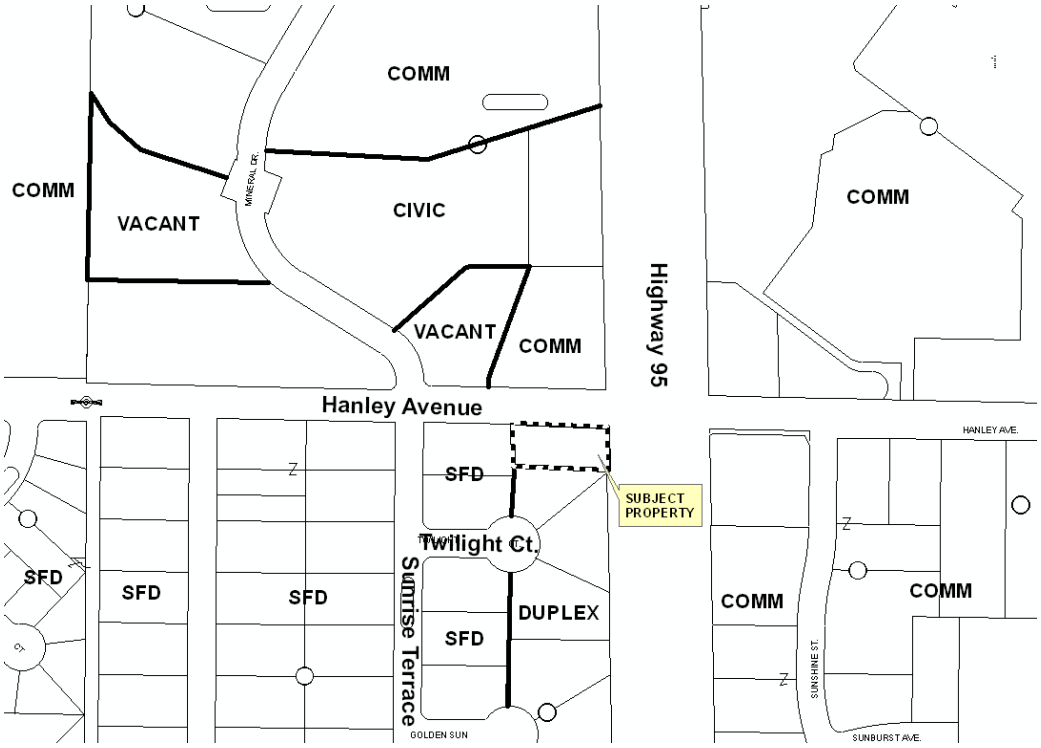
B. Subject property.

GENERAL INFORMATION:

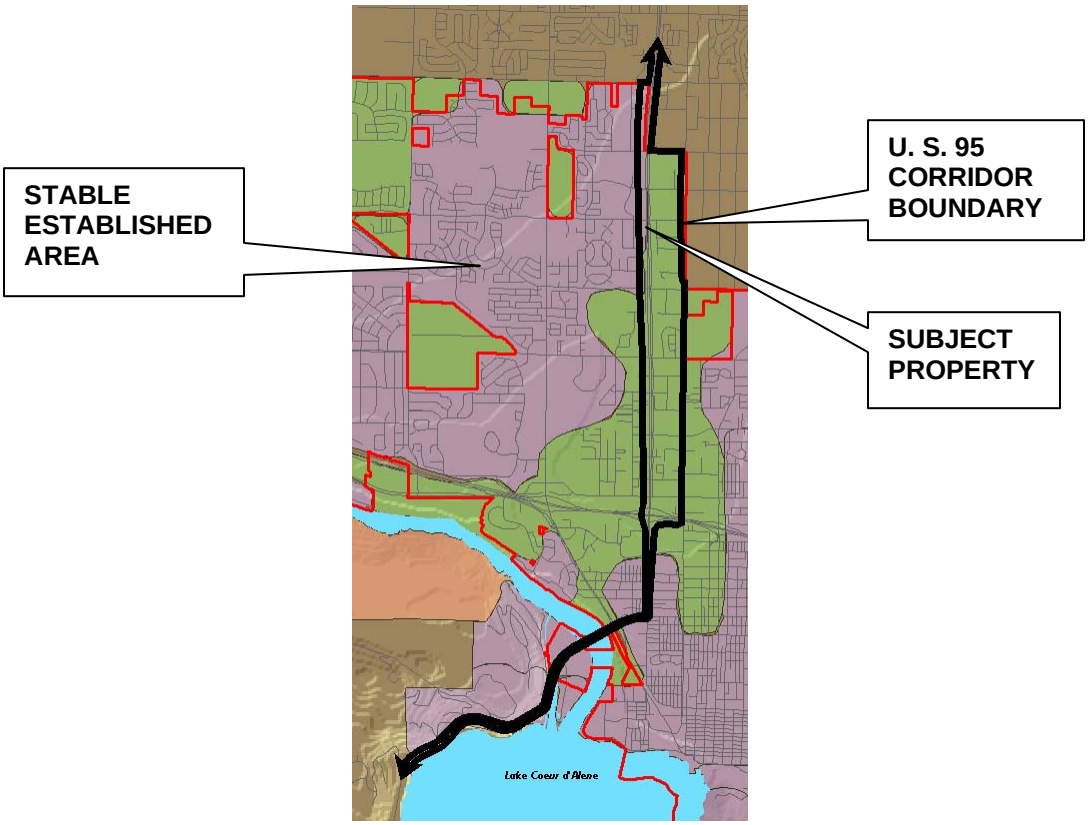
A. Zoning:



B. Generalized land use pattern:



C. 2007 Comprehensive plan designation – Stable Established – U. S. 95 Corridor.



D. Applicant: Chris Cheeley DBA A Thousand Hills, LLC
1700 Northwest Boulevard
Coeur d'Alene, ID 83814

E. Owner: Robert Prince
10646 North Lakeview Drive
Hayden Lake, ID 83835

F. Land uses in the area include residential – single-family and duplex, commercial, civic and vacant parcels.

G. The subject property is vacant and undeveloped.

H. Previous actions on subject property:

1. On January 13, 2009 the Planning Commission heard the above request and denied it by a 3 to 2 vote.

2. On January 21, 2009, the applicant filed an appeal of the Planning Commissions decision on the zone change.

PERFORMANCE ANALYSIS:

A. Zoning ordinance considerations:

Approval of the zone change request would intensify the potential use of the property and change the range of uses allowed by right and special use permit from residential and civic uses allowed in the R-8 zone to residential, civic, commercial retail sales and service uses that are allowed in the requested C-17 zone.

C-17 Commercial zone:

1. Purpose

The C-17 District is intended as a broad spectrum commercial district that permits limited service, wholesale/retail and heavy commercial in addition to allowing residential development at a density of seventeen (17) units per gross acre. This District should be located adjacent to arterials; however, joint access developments are encouraged.

2. Allowed uses:

Permitted by right:

1. Single-family detached housing
2. Duplex housing
3. Cluster housing
4. Multiple-family
5. Home occupations.
6. Community education.
7. Essential service.
8. Community assembly.
9. Religious assembly.
10. Public recreation.
11. Neighborhood recreation.
12. Commercial recreation.

13. Automobile parking when serving an adjacent business or apartment.
14. Hospitals/health care.
15. Professional offices.
16. Administrative offices.
17. Banks and financial institutions.
18. Personal service establishments.
19. Agricultural supplies and commodity sales.
20. Automobile and accessory sales.
21. Business supply retail sales.
22. Construction retail sales.
23. Convenience sales.
24. Department stores.
25. Farm equipment sales.
26. Food and beverage stores, on/off site consumption.
27. Retail gasoline sales.
28. Home furnishing retail sales.
29. Specialty retail sales.
30. Veterinary office.
31. Hotel/motel.
32. Automotive fleet storage.
33. Automotive parking.
34. Automobile renting.
35. Automobile repair and cleaning.
36. Building maintenance service.
37. Business support service.
38. Communication service.
39. Consumer repair service.
40. Convenience service.
41. Funeral service.
42. General construction service.
43. Group assembly.
44. Laundry service.
45. Finished goods wholesale.
46. Group dwelling-detached housing.
47. Mini-storage facilities.
48. Noncommercial kennel.
49. Handicapped or minimal care facility.
50. Rehabilitative facility.
51. Child care facility.
52. Juvenile offenders facility.
53. Boarding house.
54. Commercial kennel.
55. Community organization.
56. Nursing/convalescent/rest homes for the aged.
57. Commercial film production.

Permitted by special use permit:

1. Veterinary hospital.
2. Warehouse/storage.
3. Custom manufacturing.
4. Extensive impact.
5. Adult entertainment sales and service.
6. Auto camp.
7. Residential density of the R-34 district as specified.
8. Underground bulk liquid fuel storage-wholesale.

9. Criminal transitional facility.
10. Wireless communication facility.

B. **Finding #B8: That this proposal (is) (is not) in conformance with the Comprehensive Plan policies.**

1. The subject property is within the Area of City Impact Boundary.

2. The 2007 Comprehensive Plan Map designates the subject property as Stable Established and in the U. S. 95 Corridor, as follows:

A. Stable Established:

These areas are where the character of neighborhoods has largely been established and, in general, should be maintained. The street network, the number of building lots and general land use are not expected to change greatly within the planning period.

B. U. S. 95 Corridor:

The city of Coeur d'Alene will be working during the next planning period until the year 2027 with the Idaho Department of Transportation to design an efficient transportation system through the city.

C. The characteristics of the US 95 Corridor will be:

- Ensuring that access to businesses along the highway corridor is protected.
- Ensuring the city is not divided by this highway.
- Designing a system for the safe and efficient traffic flow through the city with a separate arterial for through traffic.
- Encouraging retention and planting of native variety, evergreen trees. Anticipating that US 95 traffic will be possibly diverted to a future bypass.
- Careful planning is needed to the south of Coeur d'Alene due to the continued development of Blackwell Island.
- Careful planning is needed to the south of Coeur d'Alene because access to these areas is limited to the US 95 bridge over the Spokane River.
- Retaining and expanding landscaping along both I-90 and US 95. Provide for safe crossings of US 95 for pedestrian and bicycle traffic.

3. Significant 2007 Comprehensive Plan policies:

➢ Objective 1.02 - Water Quality:

Protect the cleanliness and safety of the lakes, rivers, watersheds, and the aquifer.

- Objective 1.07 - Urban Forests:

  Restrict tree removal in city rights-of-way and increase tree planting in additional rights-of-way.

- Objective 1.11- Community Design:

  Employ current design standards for development that pay close attention to context, sustainability, urban design, and pedestrian access and usability throughout the city.

- Objective 1.12 - Community Design:

  Support the enhancement of existing urbanized areas and discourage sprawl.

- Objective 1.14 - Efficiency:

  Promote the efficient use of existing infrastructure, thereby reducing impacts to undeveloped areas.

- Objective 1.16 - Connectivity:

  Promote bicycle and pedestrian connectivity and access between neighborhoods, open spaces, parks, and trail systems.

- Objective 2.01 - Business Image & Diversity:

  Welcome and support a diverse mix of quality professional, trade, business, and service industries, while protecting existing uses of these types from encroachment by incompatible land uses.

- Objective 2.04 - Downtown & Neighborhood Service Nodes:

  Prioritize a strong, vibrant downtown and compatible neighborhood service nodes throughout the city.

- Objective 3.05 - Neighborhoods:

  Protect and preserve existing neighborhoods from incompatible land uses and developments.

- Objective 3.16 - Capital Improvements:

  Ensure infrastructure and essential services are available prior to approval for properties seeking development.

- Objective 3.18 - Transportation:

  Provide accessible, safe and efficient traffic circulation for motorized, bicycle and pedestrian modes of transportation, requesting input from authoritative districts and neighboring communities when applicable.

- Objective - 4.01 City Services:

  Make decisions based on the needs and desires of the citizenry.

- Objective 4.02 - City Services:

  Provide quality services to all of our residents (potable water, sewer and stormwater systems, street maintenance, fire and police protection, street lights, recreation, recycling and trash collection).

Transportation Plan policies:

The Transportation Plan is an addendum to the Comprehensive Plan and is a policy document that is intended to guide decisions that affect transportation issues. Its goal is to correct existing deficiencies and to anticipate, plan and provide for future transportation needs.

- 31A: "Develop an improved arterial system that integrates with existing street Patterns."
- 33A: "Safe vehicular and pedestrian circulation should be enhanced through careful design and active enforcement."
- 34A: "Use existing street systems better."
- 34B: "Reduce automobile dependency by providing bike paths and sidewalks."

4. Evaluation: The City Council must determine, based on the information before them, whether the 2007 Comprehensive Plan policies do or do not support the request. Specific ways in which the policy is or is not supported by this request should be stated in the finding.

C. **Finding #B9: That public facilities and utilities (are) (are not) available and adequate for the proposed use.**

SEWER:

Public sewer is available to this lot.

Evaluation: Public sewer is available along the east lot line (parallels U.S. 95) and of adequate size to support this request. The existing sewer lateral will be reviewed for appropriate sizing for commercial application at building permit time.

Submitted by Don Keil, Assistant Wastewater Superintendent

WATER:

Water is available to the proposed development.

Evaluation: The Water Department has an existing easement for a 12 inch main across the corner of the property and it is served with a new 1 inch service.

Submitted by Terry Pickel, Assistant Water Superintendent

STORMWATER:

City Code requires a stormwater management plan to be submitted and approved prior to any construction activity on the site.

Evaluation: Construction of any impervious surface will require the installation of "on-site" drainage swales for stormwater containment. Completion of a stormwater drainage plan will be required with any permit submittal application for the subject property.

TRAFFIC:

The proposed use would be considered a Specialty Retail Center in the ITE Trip Generation Manual, and therefore, the average number of trips that may be generated at peak hours is approximately 5.93 per 1000 sq. ft. of gross floor space.

Evaluation: Using a recently completed facility by the applicant as a model, the 2,750 square foot building may result in 16.3 trips during the peak hour periods. Considering that this type of retail is not a significant A.M. peak hour (7-9) contributor, and the subject property would be situated at a signalized intersection (Hanley Ave & U.S. Hwy 95), the adjacent and connecting streets will accommodate the traffic volume.

STREETS:

1. The subject property is bordered by Hanley Avenue on the north and U.S. Hwy 95 on the east. The platted right-of-way width on Hanley Avenue is a thirty foot "half section", however, Hanley Avenue is one of the major east/west arterial roadways and the existing right-of-way does not meet the City standard of 50 feet for the necessary "half section". The City has no control over U.S. Hwy. 95 which is under the jurisdiction of the Idaho Transportation Department.

   Evaluation: Dedication of an additional twenty feet (20') feet of right-of-way on the Hanley Avenue frontage will be required prior to the final approval of the zone change.

2. The Hanley Avenue frontage is lacking the necessary street improvements (curbing, sidewalk, drainage facilities, etc.).

   Evaluation: Frontage improvements will be a requirement of any building permit that is submitted for the subject property. These improvements will be required to be installed prior to any occupancy of constructed facilities on the site and must be approved by the City Engineer prior to installation.

3. Due to the proximity of the subject property to the highway 95 Hanley Avenue intersection, access to the site will be restricted.

   Evaluation: To avoid potential congestion at the intersection, all access to the site will be restricted to the westerly boundary of the subject property and any approach that is constructed will be limited to the minimum size of twenty four feet (24') for two way traffic.

APPLICABLE CODES AND POLICIES

UTILITIES

1. All proposed utilities within the project shall be installed underground.

2. All water and sewer facilities servicing the project shall be installed and approved prior to issuance of building permits.

STREETS

3. Street improvement plans conforming to City guidelines shall be submitted and approved by the City Engineer prior to construction.

4. All required street improvements shall be constructed prior to issuance of building permits.

õ An encroachment permit shall be obtained prior to any work being performed in the existing right-of-way.

STORMWATER

6. A stormwater management plan shall be submitted and approved prior to start of any construction. The plan shall conform to all requirements of the City.

FIRE PROTECTION

7. Fire hydrant(s) shall be installed at any/all locations deemed necessary by the City of Coeur d'Alene Fire Department.

Submitted by Chris Bates, Engineering Project Manager

FIRE:

The fire department will address other issues such as water supply, hydrants and access prior to any site development and upon receipt of additional information of this project.

Submitted by Glen Lauper, Deputy Fire Chief

POLICE:

I have no comments at this time.

Submitted by Steve Childers, Captain, Police Department

D. **Finding #B10: That the physical characteristics of the site (make) (do not make) it suitable for the request at this time.**

There are no physical constraints such as topography that would make the subject property unsuitable for development.

E. **Finding #B11: That the proposal (would) (would not) adversely affect the surrounding neighborhood with regard to traffic, neighborhood character, (and) (or) existing land uses.**

The subject property is located at the southwest corner of the busy intersection of Hanley Avenue and U. S. 95 and only has access to Hanley. It is located along the Highway 95 commercial corridor adjacent to the Sunrise Terrace residential neighborhood but has no direct access to this neighborhood; however, there could be impacts to the surrounding. US Highway 95 has become a high impact gateway into the community as well as the major north-south highway through north Idaho. The subject property is one of several properties along both sides of Highway 95 that is directly impacted by its close proximity to the highway and thus dramatically affected by traffic, noise and other impacts.

Evaluation: The City Council must determine what affect the proposed C-17 zoning would have on traffic, land uses and the character of the surrounding area.

F. Proposed conditions:

Engineering:

1. Dedicate twenty feet (20') of right-of-way to prior to the final approval of the zone change.

2. Install street frontage improvements based upon a design approved by the City Engineer prior to any occupancy of facilities on the subject property.

3. All access will be restricted to the westerly boundary of the subject property. Access approach size will be restricted to the minimum size of twenty four feet (24') for two way traffic.

G. Ordinances and Standards Used In Evaluation:

Comprehensive Plan - Amended 2007
Transportation Plan
Municipal Code.
Idaho Code.
Wastewater Treatment Facility Plan.
Water and Sewer Service Policies.
Urban Forestry Standards.
Transportation and Traffic Engineering Handbook, I.T.E.
Manual on Uniform Traffic Control Devices.
Coeur d'Alene Bikeways Plan

ACTION ALTERNATIVES:

Staff recommends the City Council take the following action:

The City Council must consider this request and make appropriate findings to approve, deny or deny without prejudice. The findings worksheet is attached.

If the Council approves the request, they may adopt the Planning Commission findings, create their own findings or use some of the Planning Commission findings and some of their own findings.

If the Council denies the request, a new set of findings must be made.

Zoning change request justification

In requesting a change from the current R8 to C17, it is critical that the purposes and intents of the City of Coeur d'Alene Comprehensive Plan are our guide. Thus, after a brief synopsis of my objective with for this parcel, I will address several points in the Comprehensive Plan and how my proposal will further the goals of the City and of the community.

This lot on the southwest corner of Highway 95 and Hanley Avenue has remained vacant since the subdivision in the 1970's, most likely because it is zoned residential but would not be an appropriate location on which to build a dwelling. Situated at a major signalized intersection and without ingress/egress onto a residential street, this lot clearly "connects" to the Highway 95 commercial community, rather than to the Sunrise Terrace residential community.

I respect that any change may be undesirable to some, but I am convinced that this request is fair to all concerned, and enhances the long term interests of all affected parties. The lot is very small (18,000 square feet) and appears to have been split from the original lot 28, leaving it facing US 95 to the east, the Coldwell Banker Commercial building to the north, and back yard fences to the south and west.

I considered the suggestion that we apply for (NC) Neighborhood Commercial zone, but a lot on US95 did not fit the intent of that zoning. Also, the requirements of the Design Standards ("Buildings must be designed with a residential character, including elements such as pitched roofs, lap siding, and wide window trim.") did not fit with the typical design found along the corridor.

I plan to build a small retail building, similar to what we just completed at 1700 Northwest Boulevard in Coeur d'Alene (without any coffee). On Northwest Boulevard we are contiguous to and across the street from a residential neighborhood, and we built a building that is an enhancement to both the residential community and the commercial street. This lot on US95 would lend itself well to a building located as close as permitted to the highway, with parking in the rear and ingress/egress as far west as possible on Hanley.

Here are several ways in which this project would conform to the stated goals of the Comprehensive Plan:

Page 7: *"The community is our greatest asset. We must make every effort to provide quality neighborhoods, and to protect existing neighborhoods, for our generation and many more to come. Our future holds dynamic change, and the city is planning for land use patterns to ensure growth occurs in a compatible and responsible manner consistent with historical character and lake location."*

The land use pattern of US 95 is clear – it is for commercial use. In fact, **the subject lot is the only residential lot at an intersection on US 95 in the City. In fact, from Ironwood Drive to Hayden Avenue all four lots at every signalized intersection are C17**. This is perhaps the most compelling fact justifying this request. Also, none of the homes in the subdivision front Hanley – all of their driveways connect to side streets.

Page 10: *"**Goal #1: Natural Environment** Our Comprehensive Plan supports policies that preserve the beauty of our natural environment and enhance the beauty of Coeur d'Alene."*

Currently, this lot is not enhancing the beauty of Coeur d'Alene. It is a weed-covered lot, and frequently collects garbage. Comparing it to the beautiful building and professional landscaping directly north provides a stark contrast. We intend to use natural materials on this building (slate, granite, copper) as we used on Northwest Boulevard.

Page 10: ***"Goal #2: Economic Environment** Our Comprehensive Plan preserves the city's quality workplaces and encourages economic growth."*

In addition to spending hundreds of thousands of dollars employing local construction workers, this building would provide a location for jobs close to where people live. It would also likely increase the property taxes on this parcel ten-fold, contributing back to the community for decades in the future.

Page 13: *"**Objective 1.07 Urban Forests:** Restrict tree removal in city rights-of-way and increase tree planting in additional rights-of-way."*

The addition of street trees would enhance the appearance of the intersection and help to buffer the existing residential neighborhood from US 95.

Page 14: *"**Objective 1.14 Efficiency:** Promote the efficient use of existing infrastructure, thereby reducing impacts to undeveloped areas."*

This location already has the roads and utilities in place thus would not impact any appreciable undeveloped area. We hope to widen Hanley Avenue along this section, adding a lane from which cars can continue east across US 95 or can turn right to proceed south on US 95. This would practically double the number of cars able to pass through the intersection during each traffic signal change and would allow for less obtrusive stacking at the intersection.

Page 16: *"**Objective 2.01 Business Image & Diversity:** Welcome and support a diverse mix of quality professional, trade, business, and service industries, while protecting existing uses of these types from encroachment by incompatible land uses."*

I would submit that since the existing use of properties on US95 is commercial, erecting a residential structure on this lot would be incompatible with the appropriate uses. In contrast, allowing the construction of a quality commercial building would demonstrate support for local business.

Page 18: *"**Objective 3.06 Neighborhoods:** Protect the residential character of neighborhoods by allowing residential/commercial/industrial transition boundaries at alleyways or along back lot lines if possible."*

Because this lot cannot connect to the residential streets, the transition between commercial and residential use is already in place. Requiring that this lot remain residential would not protect the residential character of the contiguous neighborhood, because this lot is isolated from the residential lots.

Page 56: *"**US 95 Corridor Today** US Highway 95 has become a high impact gateway into the community as well as the major north-south highway through north Idaho. It is also the main arterial that connects communities to the north of Coeur d'Alene to I-90 and is the state's principal route to Canada…Large scale native trees along this corridor help to offset the negative impacts associated with a major thoroughfare…."*

US 95 is a major thoroughfare. Providing businesses that are visible and easily accessible serves both the local residents and those from outlying communities. Replacing a weed lot with an attractive building at this high profile intersection will certainly enhance the gateway to our city.

Page 57: *"**US 95 Corridor Tomorrow** The city of Coeur d'Alene will be working during the next planning period until the year 2027 with the Idaho Department of Transportation to design an efficient transportation system through the city.*
The characteristics of the US 95 Corridor will be:
- *Ensuring that access to businesses along the highway corridor is protected.*
- *Ensuring the city is not divided by this highway.*

• *Designing a system for the safe and efficient traffic flow through the city with a separate arterial for through traffic.*
• *Encouraging retention and planting of native variety, evergreen trees."*

Allowing construction on this lot will address each of above bullet points:

- The Plan assumes that businesses will be located along the highway corridor (which is the case in every other section);
- Enhancements to Hanley, if allowed by the City and IDOT, would significantly enhance the east-west connection;
- Again, additional trees would be required by the city.

Page 72: *"**Property Rights** In addition to valuing effective and efficient management, our city government places a high value on the property rights of its citizens. As the population of our city grows, the likelihood of conflict between city regulations and either the property rights of a developer or the rights of neighbors, also grows. The city will strive to minimize this potential for conflict and to ensure that land use policies and restrictions of the City of Coeur d'Alene do not violate private property rights."*

I appreciate that the City respects property rights. Hopefully, neighboring residential property owners will see the value of allowing this lot to be developed in a manner consistent with the rest of the similar lots on US95 intersections. As the owner of this lot, I would be placed in a difficult position if the only possible development was residential, as it would not be an appropriate place for dwellings. In addition, the neighboring commercial property owners would likely appreciate the value of developing and enhancing this lot.

Page 75: *"**Closing Statement** We have established four goals in our plan that can be summarized as follows: We intend over the life of this plan, until 2027, to keep our city beautiful, to help it grow economically, to preserve those qualities that make us want to continue to live here, and to maintain a system of city government that is responsive to the citizenry and that keeps the city a safe place. In summary, we will value, preserve, and enhance those places we call special….*

Coeur d'Alene will continue to grow over the life of this plan. The growth will be less spread out than in the past….There will be innovative residential/commercial developments proposed. All must be given careful thought, keeping in mind their effects on surrounding, older, established neighborhoods."

I, too, desire to keep my hometown beautiful, to help it grow economically, and to preserve those qualities which have made me continue to want to live here. I am committed to enhancing a place which is truly special. Although growth may sometimes be inconvenient or challenging, it can be done well and the end result can be beneficial to the nearby neighborhoods.

I hope that this justification addressed the interests of all parties involved, and I look forward to clarifying any aspect which remains a concern.

Applicant:	Chris Cheeley
Location:	S.W. corner of Hwy 95 and Hanley Avenue
Request:	A proposed zone change from R-8 (Residential at 8 units/acre) to C-17 (Commercial at 17 units/acre) QUASI-JUDICIAL (ZC-1-09)

Senior Planner Stamsos presented the staff report, gave the mailing tally as 0 in favor, 4 opposed, and 3 neutral and answered questions from the Commission.

Commissioner Rasor inquired if staff could explain why the applicant chose C-17 rather than Neighborhood Commercial. He explained that Neighborhood Commercial would seem to be a better choice since this property abuts a residential neighborhood.

Senior Planner Stamsos commented that he suggested to the applicant Neighborhood Commercial at the time the applicant turned in his application. He added that the applicant explained that he had considered Neighborhood Commercial, but felt there were too many restrictions within that classification that would limit the type of use he intends to put on the property.

Public testimony open.

Chris Cheeley, applicant representative, 10439 W. Shale Court, commented that he was born and raised in this area and feels that this property should be zoned C-17 because of the location. He feels that US 95 should be considered a commercial corridor because of the numerous businesses located in this area. He added that this property, even through it sits next to a residential neighborhood, would not be a good spot for a home.

He explained that his intent, if approved, is to clean up this lot by putting a building on the lot similar in design to the one located on Northwest Boulevard, minus the coffee stand. He added that the building will be designed to blend with the existing homes using natural materials such as copper and wood. He commented that this lot has been vacant for 40 years and has run into some obstacles, which why this lot has not been purchased previously.

He addressed the problems with traffic and discussed this with the City Engineer that if this application is approved, will give the additional right-of-way needed to help widen a portion of Hanley Avenue right turns without backing up traffic. He commented that this lot is small and is limited to the size of building that could be placed on this property. He stressed that he will be a good neighbor and feels that this building will be a benefit to the community if approved.

Commissioner Rasor commented that he feels C-17L would be a better fit for this property, because the applicant would need a Special Use permit allowing the Planning Commission to place additional conditions on the property if needed. He feels that C-17 is premature for this area.

Mr. Cheeley commented that he disagrees and noted that U.S. 95 is where numerous retail stores have located making this area prime for commercial activity.

Commissioner Luttropp inquired if the Planning Commission has the authority to change the zoning requested by the applicant from C-17 to C-17L during this meeting.

Chairman Jordan commented that the Planning Commission does not have that authority and that this item would have to be re-advertised.

Deputy City Attorney Wilson advised the Commission to not predetermine this request and to hear all public testimony before they make a decision.

John Tart, 12868 Hidden Valley Road, commented that he owns a duplex behind this property and has a hard time keeping tenants in his duplex because of the traffic on Hanley Avenue. He added that he would not have any objection if these three rows of homes facing U.S. 95 were zoned commercial.

Larry Anderson, 515 Twilight Court, commented that placing a business on this lot would add to the existing traffic problem.

John Vandenberg, 6045 Sunrise Terrace, commented that putting a store on the corner would be dangerous and not fair to the other homeowner's wanting to protect their privacy.

Mike Dolphin, 6000 N. Sunrise Terrace, commented that he sees a problem with access and by adding additional room to provide another turn lane on Hanley Avenue would only make traffic worse.

Chairman Jordan commented that he wanted to clarify that this request is not for a mass zone change in this area. He felt he needed to mention this for anybody watching this hearing on television.

Robert Unrub, 6385 Sunrise Terrace, commented that since they built new apartments across from Lake City High School, combined with the kids leaving school using Hanley Avenue, that adding another business would add to the congestion.

REBUTTAL:

Mr. Cheeley commented that he sympathizes with the property owner who said he had a problem with keeping tenants in his property because of the traffic problem. He explained that his intentions are to develop this property into something that will benefit the community plus investing money to provide another turn lane on Hanley Avenue, helping to ease some of the congestion. He added he is willing to work with the neighborhood and be a good neighbor.

Commissioner Messina inquired if adding another turn lane on Hanley Avenue would help with the congestion on Hanley Avenue.

Engineering Service Director Dobler explained by providing another turn lane would help reduce congestion. He added it is a goal to get cars through this intersection and by having an additional lane; it would help alleviate that problem.

Public testimony closed.

DISCUSSION:

Commissioner Bowlby commented that she understands the applicant's vision, but feels if this is allowed it would be considered spot zoning. She commented that she has heard some comments from citizens to not allow a lot of commercial use in this area. She explained that approving this would go against the integrity of the neighborhood and feels this request is premature.

Commissioner Luttropp commented that he feels C-17 is the appropriate zone for this property. He explained that the neighborhood has already been impacted by the growing commercial businesses in this area and feels that this property would blend with the other businesses.

Commissioner Messina inquired if this request is approved, how the city could guarantee that the applicant would provide the additional land for the right-of-way needed for the turn lane.

Deputy City Attorney Wilson commented that there are conditions listed in the staff report and if

approved, that will be provided.

Commissioner Messina commented that he agrees with the applicant's choice for C-17. He explained that there are many benefits including an extra turn lane on Hanley Avenue that will help with the flow of traffic. He added that this lot is not big enough to build a very large building and feels that the negative testimony given is not because of the building, but with traffic. He feels that the applicant is willing to work with the city to help alleviate this problem that could be a win/win for everyone.

Commissioner Evans commented that she will vote to deny this request based on the drastic change it will have on the neighborhood if approved. She added that she would like to see other zoning options.

Motion by Rasor, seconded by Bowlby, to deny Item ZC-1-09. Motion approved.

ROLL CALL:

Commissioner Bowlby	Voted	Aye
Commissioner Evans	Voted	Aye
Commissioner Messina	Voted	Nay
Commissioner Rasor	Voted	Aye
Commissioner Luttropp	Voted	Nay

Motion to deny carried by a 3 to 2 vote.

COEUR D'ALENE PLANNING COMMISSION

FINDINGS AND ORDER

A. INTRODUCTION

This matter having come before the Coeur d'Alene Planning Commission on January 13, 2009, and there being present a person requesting approval of ITEM ZC-1-09, a request for a zone change from R-8 (Residential at 8 units/acre) toC-17 (Commercial at 17 units/acre).

LOCATION: +/- 18,121 sq, ft. at the Southwest corner of Hwy 95 and Hanley Ave.

APPLICANT: Chris Cheeley dba A Thousand Hills, LLC

B. FINDINGS: JUSTIFICATION FOR THE DECISION/CRITERIA, STANDARDS AND FACTS RELIED UPON

B1. That the existing land uses are residential: single-family and duplex, commercial, civic and vacant parcels.

B2. That the Comprehensive Plan Map designation is Stable Established.

B3. That the zoning is R-8 (Residential at 8 units/acre).

B4. That the notice of public hearing was published on December 27, 2009, which fulfills the legal requirement.

B5. That the notice of public hearing was posted on the property on January 2, 2009, which fulfills the legal requirement.

B6. That 29 notices of public hearing were mailed to all property owners of record within three-hundred feet of the subject property on December 26, 2008, and 7 responses were received: 0 in favor, 4 opposed, and 3 neutral.

B7. That public testimony was heard on January 13, 2009, including but not limited to:

John Stamsos, Senior Planner.

Mr. Stamsos reviewed the staff analysis for land use, neighborhood characteristics, utilities, traffic and streets. Mr. Stamsos testified that the zoning south of Hanley Ave. and west of Hwy 95 is R-8. All of the area north of Hanley Ave. and east of Hwy 95 is zoned C-17. He testified that the proposed change from R-8 to C-17 would allow for a significant intensification of potential uses as identified in the staff report. He further testified that the area is considered stable established in the comprehensive plan but is also in the U.S. 95 corridor planning boundary, as discussed in the staff report.

Chris Cheeley, 10439 W. Shale Court, Post Falls.

Mr. Cheeley testified that in his opinion the property should be zoned C-17 because of its location. He testified that all of the property along Hwy 95 should be considered a commercial corridor because of the numerous businesses located in this area. He testified that this property is the only residentially zoned property at a signalized intersection along Hwy 95 in the city limits and beyond. He added that this property, because of its proximity to Hwy 95 and the lack of access from the lot to the developed residential portions of Sunrise Terrace, is not a good spot for a home. He testified that he chose not to request Neighborhood Commercial or Community Commercial because the property does not face the existing residential property but rather faces Hanley Ave. and the Hwy 95 corridor and the design regulations for those zones would make it difficult to develop a reasonable commercial structure on this property. He also testified that because of the small size of this lot, many of the incompatible uses allowed in the C-17 zone will not practical. He explained that his intent is build a commercial building on the lot similar in design to one he recently built at 1700 Northwest Boulevard, minus the coffee stand. He further testified that the building will be designed to blend with the existing homes using natural materials such as copper and wood. He testified that the comprehensive plan policies concerning reasonable and compatible development patterns, enhancing the beauty of the city, encouraging economic growth of the city and promoting the efficient use of existing infrastructure support rezoning this property to C-17. He testified that this rezone would help address traffic concerns on Hanley Ave. by dedicating additional right-of-way needed to widen a portion of Hanley Ave. for cars to make a right turn without backing up traffic on Hanley Ave.

John Tart, 12868 Hidden Valley Road, Rathdrum.

Mr. Tart testified that he owns a duplex behind this property that backs up to Hwy 95 and that he has had a hard time keeping tenants in his duplex because of the traffic/noise from Hwy 95 and the difficulty of accessing Hanley Ave because of traffic. He further testified that all of the property in Sunrise Terrace backing up to Hwy 95 should be rezoned commercial.

Larry Anderson, 515 Twilight Court.

Mr. Anderson testified that he owns property adjacent to the subject property. He further testified that placing a business on this lot will increase the traffic problems on Hanley Ave. but he agrees that the entire corridor should be rezoned commercial.

John Vandenberg, 6045 Sunrise Terrace.

Mr. Vandenburg testified the traffic at this intersection is already a problem. He was concerned that any additional uses in the area without changes to Hanley Ave. will only add to the problem. He testified that there is no pedestrian crossing across Hwy 95 on this corner, which will inhibit pedestrian access to the business. He further testified that intruding into a residential zone with the commercial zone is unfair to the residents.

Michael Dolphin, 6000 N. Sunrise Terrace.

Mr. Dolphin testified that he owns the property directly west of the subject property. He testified that traffic and access is already a problem and adding an additional turning lane would make the situation worse. He further testified that he would be ok with the entire corridor being rezoned but he would want to be kept apprised of that kind of change so he could plan for the change.

Robert Unruh, 6385 Sunrise Terrace.

Mr. Unruh testified that since the construction of Lake City High school and the apartments across the street from the school, traffic on Hanley Ave. has become very heavy. He testified that he has no particular objection to the proposal but he forsees more traffic and congestion.

Gordon Dobler, Engineering Service Director.

Mr. Dobler testified that the proposed zone change will advance one of the goals of the Hwy 95 study. He further testified that the additional right of way that would be acquired with this project would provide a turn lane and possibly another through lane that would reduce traffic queues at the intersection. He added it is a goal to get cars through this intersection and by having an additional lane would help elevate that problem.

B8. That this proposal is not in conformance with the Comprehensive Plan policies.

We find that the proposed zone change is not in conformance with the Comprehensive Plan as follows:

The property in question is within the stable established area identified in the comprehensive plan and within the Hwy 95 corridor. Stable established areas are those areas where "the character of neighborhoods has largely been established and, in general, should be maintained." Additionally, "the general land use" is "not expected to change greatly within the planning period." The proposed zone change would allow for an intrusion by the city's most intense commercial zone across Hanley Ave and Hwy 95 into an established residential neighborhood. This does not comport with the direction for stable established areas in the comprehensive plan. The inclusion of this property within the Hwy 95 planning area in the comprehensive plan may indicate that this property should at some time be zoned as commercial property. However, by taking this one property by itself and requesting the city's most intense commercial zone creates an inappropriate intrusion of intense commercial into an existing residential area at this time. In addition, this conclusion is supported by Objective 3.05 of the comprehensive plan to protect and preserve existing neighborhoods from incompatible land uses and developments.

B9. That public facilities and utilities are available and adequate for the proposed use.

The staff report indicates that adequate sewer, water, police and fire services are available for the subject property. Additionally, the staff report indicates that street system will provide adequate access to the property. There was no testimony received at the public hearing that

indicated that this is not the case. As such, we find that the provisions for these requirements are adequate.

B10. That the physical characteristics of the site make it suitable for the request at this time because:

The site is essentially flat as such we find that the physical characteristics of the site do make it suitable for the requested zoning.

B11. That the proposal would not adversely affect the surrounding neighborhood with regard to traffic, neighborhood character or existing land uses.

While there was significant testimony about increasing traffic on Hanley Ave, which we find persuasive, Gordon Dobler, City Engineer, testified that the proposed re-zone would actually help resolve the traffic issues by providing right of way for additional lanes that would reduce the traffic queuing on Hanley Ave. There is little question that the Sunrise Terrace neighborhood has been impacted by increasing traffic but we find that, because of the additional right of way and the location of the property at the intersection, approving the requested zone change would not adversely impact the surrounding neighborhood regarding traffic. With regard to neighborhood character and existing land uses, the overwhelming testimony was that the neighborhood character has already been impacted by the growth in traffic and other impacts on Hwy 95 and Hanley Ave. This increase in traffic and noise has led to difficulties in attracting tenants in the properties backing up to Hwy 95. There was little or no testimony indicating that a small commercial building would further adversely impact the neighborhood character. As such, we conclude that the proposed transition from residential to commercial for this property would not adversely impact the existing neighborhood's character and existing land uses. We again reiterate that the zone change is being denied because the intensity of the requested zoning is not compatible with the comprehensive plan.

C. ORDER: CONCLUSION AND DECISION

The Planning and Zoning Commission, pursuant to the aforementioned, finds that the request of **Chris Cheeley dba A Thousand Hills, LLC** for approval of the zone change as described in the application should be **denied**.

D. ORDINANCES AND STANDARDS USED IN EVALUATION

Comprehensive Plan - 2007.

Transportation Plan.

Municipal Code.

Idaho Code.

Wastewater Treatment Facility Plan.

Water and Sewer Service Policies.

Urban Forestry Standards.

Transportation and Traffic Engineering Handbook, I.T.E.

Manual on Uniform Traffic Control Devices.

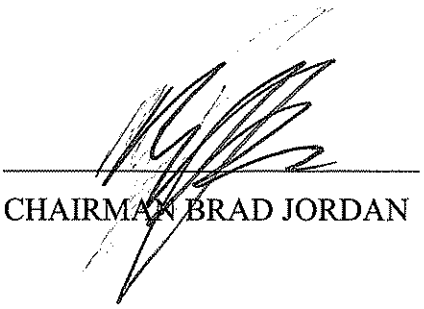
Coeur d'Alene Bikeways Plan.

Motion by Rasor, seconded by Bowlby, to adopt the foregoing Findings and Order.

ROLL CALL:

Commissioner Bowlby	Voted Aye
Commissioner Luttropp	Voted Nay
Commissioner Messina	Voted Nay
Commissioner Rasor	Voted Aye
Commissioner Evans	Voted Aye

Motion to deny carried by a 3 to 2 vote.



CHAIRMAN BRAD JORDAN

COEUR D'ALENE CITY COUNCIL

FINDINGS AND ORDER

A. INTRODUCTION

This matter having come before the City Council on, March 17, 2009, and there being present a person requesting approval of ITEM ZC-1-09, a request for a zone change R-8 (Residential at 8 units/acre) to C-17 (Commercial at 17 units/acre).

LOCATION: +/- 18,121 sq. ft. parcel at the Southwest corner of hwy. 95 and Hanley Avenue

APPLICANT: Chris Cheeley DBA as A Thousand Hills, LL

B. FINDINGS: JUSTIFICATION FOR THE DECISION/CRITERIA, STANDARDS AND FACTS RELIED UPON

(The City Council may adopt Items B1-through7.)

B1. That the existing land uses are residential – single-family and duplex, commercial, civic and vacant parcels.

B2. That the Comprehensive Plan Map designation is Stable Established

B3. That the zoning is R-8 (Residential at 8 units/acre)

B4. That the notice of public hearing was published on, February 28, 2009, which fulfills the proper legal requirement.

B5. That the notice of public hearing was posted on the property on, March 9, 2009, which fulfills the proper legal requirement.

B6. That 29 notices of public hearing were mailed to all property owners of record within three-hundred feet of the subject property on February 27, 2009, and _____ responses were received: ____ in favor, ____ opposed, and ____ neutral.

B7. That public testimony was heard on March 17, 2009.

B8. That this proposal **(is) (is not)** in conformance with the Comprehensive Plan policies as follows:

B9. That public facilities and utilities **(are) (are not)** available and adequate for the proposed use. This is based on

Criteria to consider for B9:

1. **Can water be provided or extended to serve the property?**
2. **Can sewer service be provided or extended to serve the property?**
3. **Does the existing street system provide adequate access to the property?**
4. **Is police and fire service available and adequate to the property?**

B10. That the physical characteristics of the site **(do) (do not)** make it suitable for the request at this time because

Criteria to consider for B10:

1. **Topography**
2. **Streams**
3. **Wetlands**
4. **Rock outcroppings, etc.**
5. **vegetative cover**

B11. That the proposal **(would) (would not)** adversely affect the surrounding neighborhood with regard to traffic, neighborhood character, **(and) (or)** existing land uses because

Criteria to consider for B11:

1. **Traffic congestion**
2. **Is the proposed zoning compatible with the surrounding area in terms of density, types of uses allowed or building types allowed**
3. **Existing land use pattern i.e. residential, commercial, residential w churches & schools etc.**

C. **ORDER: CONCLUSION AND DECISION**

The City Council, pursuant to the aforementioned, finds that the request of **CHRIS CHEELEY** for a zone change, as described in the application should be **(approved) (denied) (denied without prejudice)**.

Special conditions applied are as follows:

Motion by _____, seconded by _____, to adopt the foregoing Findings and Order.

ROLL CALL:

Council Member Hassell	Voted _____
Council Member Edinger	Voted _____
Council Member Goodlander	Voted _____
Council Member McEvers	Voted _____
Council Member Bruning	Voted _____
Council Member Kennedy	Voted _____

Mayor Bloem Voted _____ (tie breaker)

Council Member(s) _____were absent.

Motion to _____ carried by a ____ to ____ vote.

_____
MAYOR SANDI BLOEM

CITY COUNCIL
STAFF REPORT

FROM: JOHN J. STAMSOS, SENIOR PLANNER
DATE: MARCH 17, 2009
SUBJECT: A-7-08 – ZONING IN CONJUNCTION WITH ANNEXATION
LOCATION: +/- 2.7 ACRE PARCEL AT 1130 EAST SKYLINE DRIVE

DECISION POINT:

Stephen B. Meyer is requesting Zoning in Conjunction with Annexation from County Restricted Residential to City R-3 (Residential at 3 units/acre).

SITE PHOTOS:

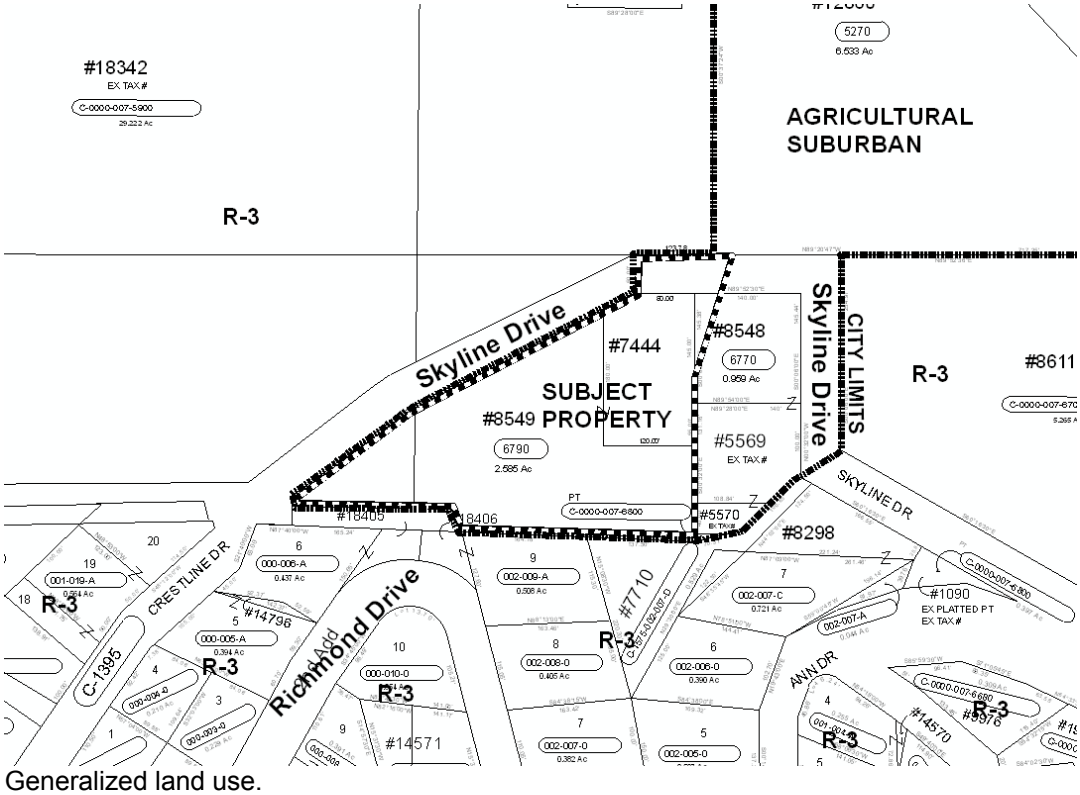
A. Site photo

B. Site photo – Looking southeast from Skyline Drive

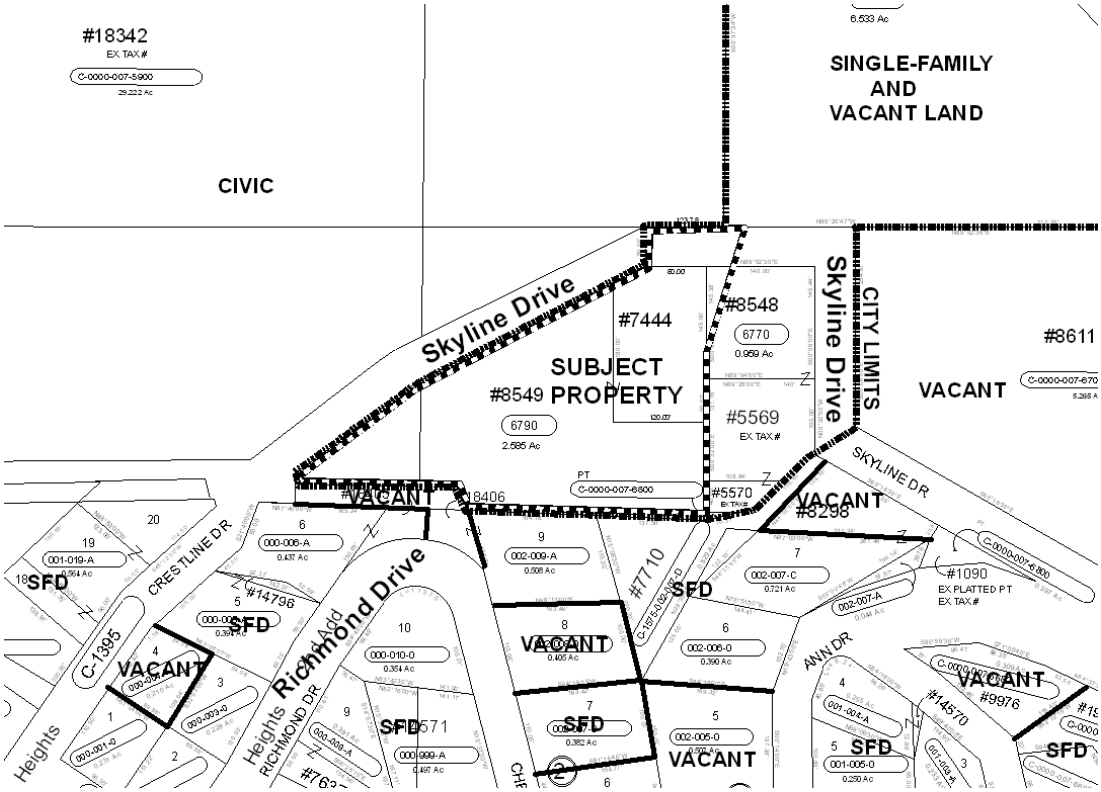
C. Site photo – Looking northeast from Richmond Drive

GENERAL INFORMATION:

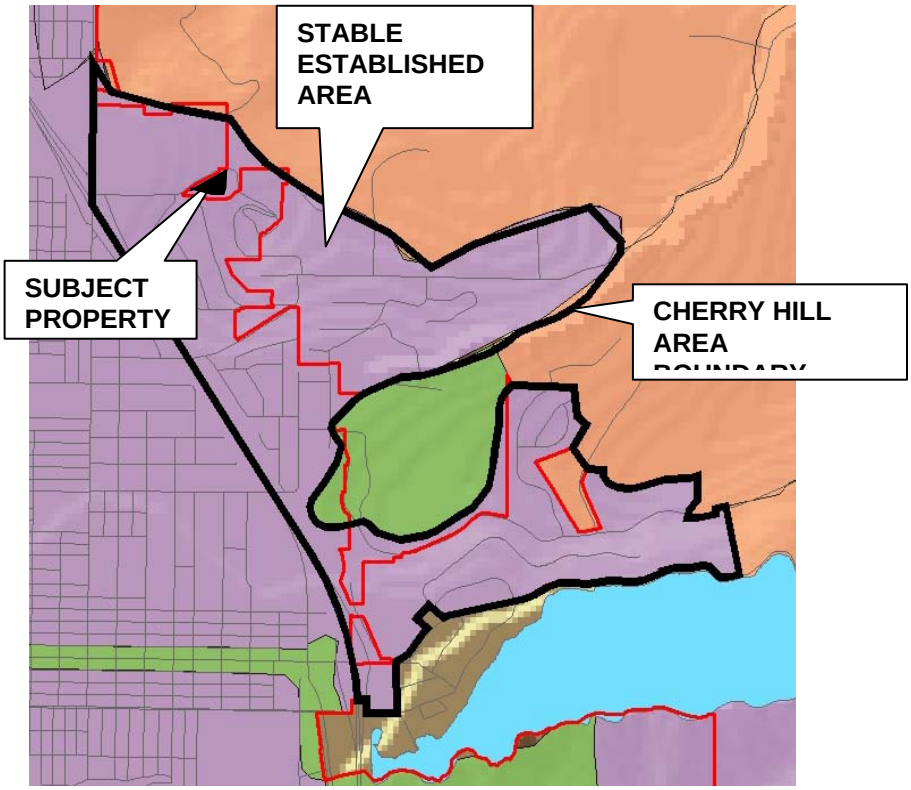
A. Zoning.



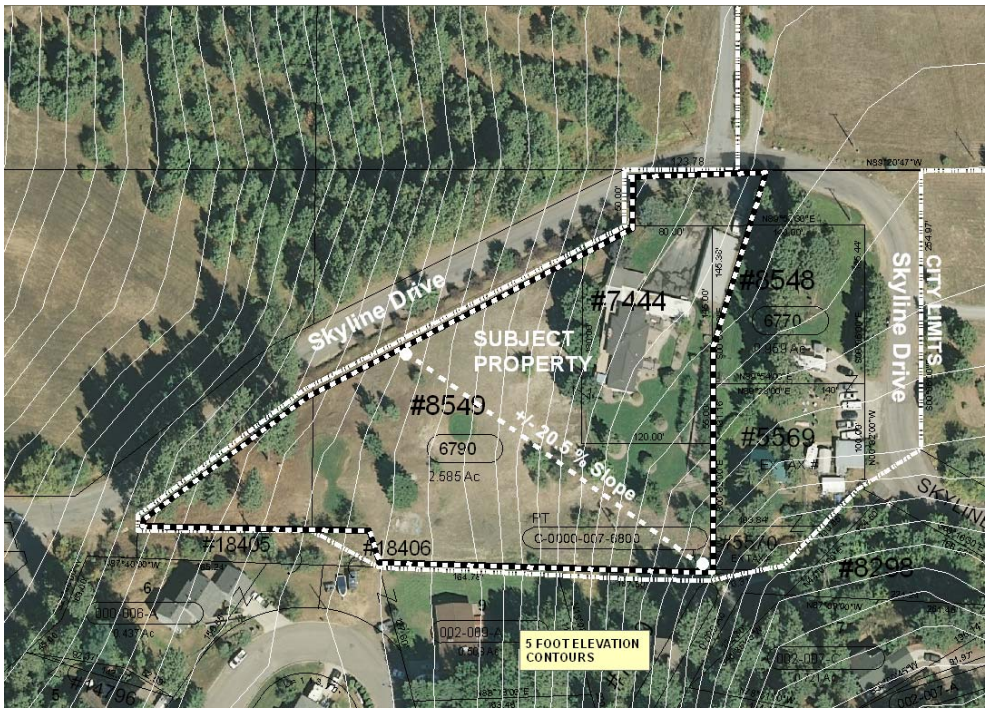
B. Generalized land use.



C. 2007 Comprehensive Plan - Stable Established – Cherry Hill Area:



D. Site topography.



E. Sewer availability

F. Applicant/: Stephen B. Meyer
Owner 1130 East Skyline Drive
Cœur d'Alene, ID 83814

G. Tax # 7444 contains a single family dwelling and Tax # 8549 is vacant.

H. Land uses in the area include single-family, civic (Cherry Hill Park) and vacant land.

I. The Request to Consider Annexation (RCA-10-08) was approved by the City Council on June 17, 2008.

J. The Planning Commission approved the request on January 13, 2009 by a 3 to 2 vote.

PERFORMANCE ANALYSIS:

A. **Zoning:**

The R-3 district is intended as a residential area that permits single-family detached housing at a density of three units per gross acre.
Permitted uses:

1. Administrative.
2. Essential service (underground).

3. "Home occupation" as defined in this title.

4. Single-family, detached housing.

Uses allowed by special use permit:

1. Commercial film production.

2. Community assembly.

3. Community education.

4. Community organization.

5. Convenience sales.

6. Essential service (aboveground).

7. Noncommercial kennel.

8. Religious assembly.

The zoning pattern (see zoning map on page 2) in the surrounding area shows Agricultural-Suburban zoning in the County and R-3 zoning in the City.

B. **Finding #B8: That this proposal (is) (is not) in conformance with the Comprehensive Plan policies.**

1. The subject property is within the Area of City Impact Boundary.

2. The subject property has a land use designation of Stable Established and is within the Cherry Hill Area, as follows:

Stable Established Areas:

These areas are where the character of neighborhoods has largely been established and, in general, should be maintained. The street network, the number of building lots and general land use are not expected to change greatly within the planning period.

Cherry Hill Area:

This area will continue to develop as a lower density single-family residential area with care taken to preserve natural vegetation, views, and open space on steeper slopes. Future development will present challenges in preserving open space and tree cover, and providing necessary infrastructure in the context of hillside development. As this area continues to develop, parcels not suitable for development should be preserved as open space though conservation easements, clustering, and acquisitions.

The characteristics of Cherry Hill neighborhoods will be:

- That overall density in this area will be approximately one dwelling unit per acre (1:1). However, in any given development, higher densities, up to three units per acre (3:1) are appropriate where site access is gained without significant disturbance, terrain is relatively flat, natural landforms permit development, and where development will not significantly impact views and vistas.

- Limited opportunity for future development.

- Developments within the Fernan Lake Watershed should reflect careful consideration of the impacts of the development on water quality in Fernan Lake.
- Clustering of smaller lots to preserve large connected open space areas as well as views and vistas are encouraged.
- Incentives will be provided to encourage clustering.

3. Significant policies:

➢ Objective 1.01 - Environmental Quality:

Minimize potential pollution problems such as air, land, water, or hazardous materials.

➢ Objective 1.02 - Water Quality:

Protect the cleanliness and safety of the lakes, rivers, watersheds, and the aquifer

➢ Objective 1.12 - Community Design:

Support the enhancement of existing urbanized areas and discourage sprawl.

➢ Objective 1.13 - Open Space:

Encourage all participants to make open space a priority with every development and annexation.

➢ Objective 1.14 - Efficiency:

Promote the efficient use of existing infrastructure, thereby reducing impacts to undeveloped areas.

➢ Objective 3.02 - Managed Growth:

Coordinate planning efforts with our neighboring cities and Kootenai County, emphasizing connectivity and open spaces.

➢ Objective 3.16 - Capital Improvements:

Ensure infrastructure and essential services are available prior to approval for properties seeking development.

➢ Objective 4.02 - City Services:

Provide quality services to all of our residents (potable water, sewer and stormwater systems, street maintenance, fire and police protection, street lights, recreation, recycling, and trash collection).

4. Evaluation: The City Council must determine, based on the information before them, whether the Comprehensive Plan policies do or do not support the request. Specific ways in which the policy is or is not supported by this request should be stated in the finding.

C. **Finding #B9: That public facilities and utilities (are) (are not) available and adequate for the proposed use.**

SEWER:

Public sanitary sewer is nearby at the intersection of Richmond Drive and Cherrywood Drive.

Evaluation: The connection to this public sanitary sewer, however, would require the applicant to purchase property or obtain an easement over private property he does not own in order to connect to the sewer.

Comments submitted by Don Keil, Assistant Wastewater Superintendent

WATER:

The subject property is not served by city water.

Evaluation: There is currently no water main directly serving the parcel to be annexed. In order to develop this lot, the customer will be required to extend a water main on Crestline Drive up to and across the property frontage. Depending on where the lot is developed, there may also be issues with elevation and availability of sufficient pressure.

Comments submitted by Terry Pickel, Assistent Wastewater Superintendent

STORMWATER:

City Code requires a stormwater management plan to be submitted and approved prior to any development activity on the site.

TRAFFIC:

Without a defined use, traffic generation cannot be determined, therefore, traffic mitigation issues will be addressed at the time of development on the subject property.

STREETS:

The area proposed for annexation adjoins, and would be accessed by, Skyline Drive on the north. The subject roadway is a narrow (21' – 24' wide), and at times congested travel way with an existing grade that exceeds the maximum 8% allowed by City Code. Roadway mitigation measures will be addressed at the time of development of the subject property.

APPLICABLE CODES AND POLICIES:

Utilities:

1. All proposed utilities within the project shall be installed underground.

2. All water and sewer facilities shall be designed and constructed to the requirements of the City of Coeur d'Alene. Improvement plans conforming to City guidelines shall be submitted and approved by the City Engineer prior to construction.

3. All water and sewer facilities servicing the project shall be installed and approved prior to issuance of building permits.

4. All required utility easements shall be dedicated on the final plat.

Streets ;

5. All new streets shall be dedicated and constructed to City of Coeur d'Alene standards.

6. Street improvement plans conforming to City guidelines shall be submitted and approved by the City Engineer prior to construction.

7. All required street improvements shall be constructed prior to issuance of building permits.

8. An encroachment permit shall be obtained prior to any work being performed in the existing right-of-way.

Stormwater:

9. A stormwater management plan shall be submitted and approved prior to start of any construction. The plan shall conform to all requirements of the City.

Submitted by Chris Bates, Engineering Project Manager

FIRE:

No comments.

Submitted by Glenn Lauper, Deputy Fire Chief

POLICE:

No comments.
Submitted by Steve Childers, Captain, Police Department

D. **Finding #B10: That the physical characteristics of the site (make) (do not make) it suitable for the request at this time.**

The subject property has an average slope of 20.5%. (See map on page 4)

Evaluation: With annexation, compliance with the Hillside Regulations would be required for any future development.

E. **Finding #B11: That the proposal (would) (would not) adversely affect the surrounding neighborhood with regard to traffic, neighborhood character, (and) (or) existing land uses.**

The subject property is in an area of single-family residential development that is zoned R-3 or County Agricultural-Suburban and is adjacent to Skyline Drive, which is capable of handling traffic from any future development on the subject property.

Evaluation: The requested R-3 zoning would be compatible with the single-family development and residential character of the surrounding area.

F. Items recommended for an Annexation Agreement.

None.

G. Ordinances and Standards Used In Evaluation:
Comprehensive Plan - Amended 2007.
Municipal Code.
Idaho Code.
Wastewater Treatment Facility Plan.
Water and Sewer Service Policies.
Urban Forestry Standards.
Transportation and Traffic Engineering Handbook, I.T.E.
Manual on Uniform Traffic Control Devices.

ACTION ALTERNATIVES:

Staff recommends the City Council take the following action:

The City Council must consider this request and make appropriate findings to approve, deny or deny without prejudice. The findings worksheet is attached.

If the Council approves the request, they may adopt the Planning Commission findings, create their own findings or use some of the Planning Commission findings and some of their own findings.

If the Council denies the request, a new set of findings must be made.

To: Mayor & Council
City of Coeur d' Alene
Coeur d' Alene ID

From: Steven B. Meyer
1130 E. Skyline Drive
Coeur d' Alene ID 83814

10-26-08

Subject: Annexation Request

To Whom It May Concern,

As of this date. I hereby request annexation into the City of Coeur d' Alene. I fully understand that there are annexation fees and an annexation agreement that will be negotiated. I am aware of the (6), six month agreement execution rule. Your consideration of this request would be greatly appreciated.

Respectfully Submitted,

Steven B. Meyer

Applicant:	Steven B. Meyer
Location:	1130 E. Skyline Drive
Request:	Proposed annexation from County Restricted Rural to City R-3 (Residential at 3 units/acre) QUASI-JUDICIAL (A-7-08)

Senior Planner Stamsos presented the staff report, gave the mailing tally as 1 in favor, 2 opposed, and 3 neutral and answered questions from the Commission.

Commissioner Bowlby inquired if access on Skyline Drive allowed.

Senior Planner Stamsos answered that is correct.

Commissioner Rasor inquired if a timeline with the applicant would be discussed once the application is approved, when sewer and water will be connected, and if this timeline would be included in the annexation agreement.

Deputy City Attorney Wilson concurred that those details will be discussed once this item is approved by council.

Commissioner Luttropp inquired if the city has a policy to seek out the other property owners, once an application is filed for annexation, if they have any interest to be included in this request.

Senior Planner Stamsos commented it is not the policy for the city to seek out other property for annexation. He explained that once an application is filed, notices are sent informing the surrounding property owners of the up-coming annexation, and they could contact the city if interested.

Public testimony open.

Bob Redfearn, applicant representative, 2735 Fernan Hill Road, explained that they do not have any plans for development on this property and if they do decide to develop this property, it would be for one single family dwelling unit.

Commissioner Luttropp inquired if there is a set limit on the number of homes that can be connected to sewer and water in that area.

Deputy City Attorney Wilson explained that the city water and wastewater departments have determined the number of homes they can safely maintain within the current city boundary, and if there is a problem those concerns are addressed with the applicant.

Commissioner Luttropp commented that he feels R-1 is the more appropriate zone for this property.

Commissioner Rasor commented that he disagrees, and feels that that the R-3 zone chosen by the applicant is not a concern since this property is regulated by the hillside regulations, preventing any unwanted uses on the property.

Chairman Jordan concurs that the R-3 designation is compatible from looking at the land use map in the staff report.

Commissioner Bowlby concurs with Commissioner Luttropp that R-1 zoning is the appropriate zone.

Motion by Rasor, seconded by Messina, to approve Item A-7-08. Motion approved.

ROLL CALL:

Commissioner Bowlby	Voted	Nay
Commissioner Evans	Voted	Aye
Commissioner Messina	Voted	Aye
Commissioner Rasor	Voted	Aye
Commissioner Luttropp	Voted	Nay

Motion to approve carried by a 3 to 2 vote.

COEUR D'ALENE PLANNING COMMISSION

FINDINGS AND ORDER

A. INTRODUCTION

This matter having come before the Planning Commission on January 13, 2009, and there being present a person requesting approval of ITEM A-7-08, a request for zoning prior to annexation from County Restricted Residential to City R-3 (Residential at 3 units/acre).

LOCATION: +/- 2.7 acre parcel located at 1130 East Skyline Drive.

APPLICANT: Steven B. Meyer

B. FINDINGS: JUSTIFICATION FOR THE DECISION/CRITERIA, STANDARDS AND FACTS RELIED UPON

B1. That the existing land uses are single family residential, civic (Cherry Hill park) and vacant land.

B2. That the Comprehensive Plan Map designation is Stable Established.

B3. That the current zoning is County Restricted Residential.

B4. That the notice of public hearing was published on November 22, 2008, which fulfills the proper legal requirement.

B5. That the notice of public hearing was not required to be posted, which fulfills the proper legal requirement.

B6. That 21 notices of public hearing were mailed to all property owners of record within three-hundred feet of the subject property on November 21, 2008 and 6 responses were received: 1 in favor, 2 opposed, and 3 neutral.

B7. That public testimony was taken on January 13, 2008 including:

John Stamsos, Senior Planner:

Mr. Stamsos presented the staff report and testified that the subject property is an unannexed 2.7 acre parcel that is almost completely surrounded by the City. He further testified that the applicant has requested R-3 zoning for the parcel which contains one residence. All of the surrounding property in the city is zoned R-3. He further testified that the Comprehensive Plan

designation for the property is Stable Established and that the property is in the Cherry Hill area of the Comprehensive Plan. He further testified that the property would be accessed from Skyline Drive.

Bob Redfern, 2735 Fernan Hill Road:

Mr. Redfern testified on behalf of the applicant that the applicant wants to annex the property now to facilitate long range planning for the property and had no plans for further development of the property in the near term. He testified that a water hook up for the existing residence is approved. He testified that the annexation would make a cleaner City limits in this area.

B8. That this proposal **is** in conformance with the Comprehensive Plan policies as follows:

The staff report notes that this property is within the city's area of city impact boundary and is given the stable established land use designation within the Cherry Hill area in the comprehensive plan. Stable established areas are areas where "the character of neighborhoods has largely been established and, in general, should be maintained." The subject property is located in an un-annexed pocket that is largely surrounded by the city boundaries. All of the properties in the city surrounding this property are zoned R-3, which is the zone the applicant is requesting for this property. As such, the request maintains the character of the surrounding neighborhood as contemplated by the stable established designation in the comprehensive plan. Further, while the Cherry Hill area anticipates an overall density in the area of approximately one unit per acre, densities in any given development may reach three units per acre can be appropriate if site access is gained without significant disturbance, the terrain is relatively flat, the natural landforms permit development and the development will not significantly impact views and vistas. In this instance, access to the property is from an established road, and the property is in an area that will not significantly impact views and vistas and where the natural landforms permit development. While the property has an average slope of 20.5% measured from the highest point to the lowest point on the property, the fact that the other factors supporting a density of three units per acre are present and the fact that the subject property will be governed by the city's hillside regulations indicate that R-3 is an appropriate zone.

Additionally, Comprehensive Plan objective 1.12 (supporting enhancement of existing urbanized areas) and 1.14 (efficient use of existing infrastructure) support the applicant's request for R-3 zoning. As such, we find that the requested R-3 zoning conforms to the Comprehensive Plan.

B9. That public facilities and utilities **are** available and adequate for the proposed use.

Based on the staff report, we find that existing public facilities and services are available and adequate for the proposed zoning. The staff report indicates that water and sewer are available for extension to the subject property, albeit at a potentially significant cost, if the property is further developed. Additionally, police and fire service are available to the area since essentially all of the surrounding property is within city limits.

B10. That the physical characteristics of the site **do** make it suitable for the request at this time.

As discussed above, the subject property is in an area of existing homes and is accessed from an existing road with no physical constraints. While the property has an average slope of 20.5% measured from the highest point to the lowest point on the property, the application of the city's hillside regulations will mitigate adverse consequences from any future development beyond the existing home on the property. As such, we find that the physical characteristics of the site do make it suitable for the requested zoning.

B11. That the proposal **would not** adversely affect the surrounding neighborhood with regard to traffic, neighborhood character, **or** existing land uses.

As noted above, the subject parcel is almost completely surrounded by property currently within the City limits that has the same zoning. The street network in this area is fully developed. As such, we find that the proposed zoning will not adversely affect the surrounding neighborhood with regard to traffic, neighborhood character or existing land uses.

C. ORDER: CONCLUSION AND DECISION

The Planning Commission, pursuant to the aforementioned, finds that the request of **Steven B. Meyer** for zoning prior to annexation, as described in the application should be **approved**.

D. ORDINANCES AND STANDARDS USED IN EVALUATION

Comprehensive Plan - 2007.

Transportation Plan.

Municipal Code.

Idaho Code.

Wastewater Treatment Facility Plan.

Water and Sewer Service Policies.

Urban Forestry Standards.

Transportation and Traffic Engineering Handbook, I.T.E.

Manual on Uniform Traffic Control Devices.

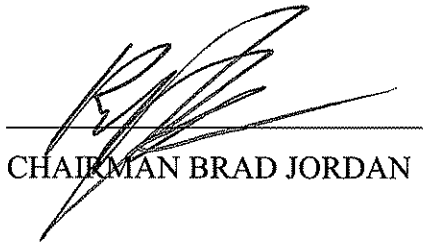
Coeur d'Alene Bikeways Plan.

Motion by Rasor, seconded by Messina, to adopt the foregoing Findings and Order.

ROLL CALL:

Commissioner Bowlby	Voted Nay
Commissioner Evans	Voted Aye
Commissioner Luttropp	Voted Nay
Commissioner Messina	Voted Aye
Commissioner Rasor	Voted Aye

Motion to approve carried by a 3 to 2 vote.



CHAIRMAN BRAD JORDAN

COEUR D'ALENE CITY COUNCIL

FINDINGS AND ORDER

A. INTRODUCTION

This matter having come before the City Council on, March 17, 2009, and there being present a person requesting approval of ITEM A-7-08, a request for zoning in conjunction with annexation from County Restricted Residential to City R-3 (Residential at 3 units/acre).

LOCATION: +/- 2.7 acre parcel at 1130 East Skyline Drive

APPLICANT: Steven B. Meyer

B. FINDINGS: JUSTIFICATION FOR THE DECISION/CRITERIA, STANDARDS AND FACTS RELIED UPON

(The City Council may adopt Items B1-through7.)

B1. That the existing land uses are single-family, civic (Cherry Hill Park) and vacant land.

B2. That the Comprehensive Plan Map designation is Stable Established

B3. That the zoning is County Restricted Residential

B4. That the notice of public hearing was published on February 28, 2009, which fulfills the proper legal requirement.

B5. That the notice of public hearing was not required to be posted, which fulfills the proper legal requirement.

B6. That 21 notices of public hearing were mailed to all property owners of record within three-hundred feet of the subject property on and _____ responses were received: ____ in favor, ____ opposed, and ____ neutral.

B7. That public testimony was heard on March 17, 2009.

B8. That this proposal **(is) (is not)** in conformance with the Comprehensive Plan policies as follows:

B9. That public facilities and utilities **(are) (are not)** available and adequate for the proposed use. This is based on

Criteria to consider for B9:

1. **Can water be provided or extended to serve the property?**
2. **Can sewer service be provided or extended to serve the property?**
3. **Does the existing street system provide adequate access to the property?**
4. **Is police and fire service available to the property?**

B10. That the physical characteristics of the site **(do) (do not)** make it suitable for the request at this time because

Criteria to consider for B10:

1. **Topography.**
2. **Streams.**
3. **Wetlands.**
4. **Rock outcroppings, etc.**
5. **vegetative cover.**

B11. That the proposal **(would) (would not)** adversely affect the surrounding neighborhood with regard to traffic, neighborhood character, **(and) (or)** existing land uses because

Criteria to consider for B11:

1. **Traffic congestion.**
2. **Is the proposed zoning compatible with the surrounding area in terms of density, types of uses allowed or building types allowed?**
3. **Existing land use pattern i.e. residential, commercial, residential w churches & schools etc.**

C. **ORDER: CONCLUSION AND DECISION**

The City Council, pursuant to the aforementioned, finds that the request of **STEVEN B. MEYER** for zoning in conjunction with annexation, as described in the application should be **(approved) (denied) (denied without prejudice)**.

Suggested provisions for inclusion in an Annexation Agreement are as follows:

Motion by _____, seconded by _____, to adopt the foregoing Findings and Order.

ROLL CALL:

Council Member Hassell	Voted _____
Council Member Edinger	Voted _____
Council Member Goodlander	Voted _____
Council Member McEvers	Voted _____
Council Member Bruning	Voted _____
Council Member Kennedy	Voted _____

Mayor Bloem Voted _____ (tie breaker)

Council Member(s) _____were absent.

Motion to _____ carried by a ____ to ____ vote.

_____
MAYOR SANDI BLOEM

INFORMATION SECTION
Including
Correspondence
Board, Commission, Committee Minutes

CITY OF COEUR D'ALENE

Treasurer's Report of Cash and Investment Transactions

FUND	BALANCE 1/31/09	RECEIPTS	DISBURSE-MENTS	BALANCE 2/28/09
General-Designated	$455,418	$36,175	$170	$491,423
General-Undesignated	6,242,139	2,217,790	3,471,919	4,988,010
Special Revenue:				
Library	270,024	22,225	84,053	208,196
Cemetery	77,805	14,504	27,618	64,691
Parks Capital Improvements	1,259,755	4,246	17,186	1,246,815
Impact Fees	2,136,964	141,739		2,278,703
Annexation Fees	172,390	184		172,574
Insurance	2,020,606	3,961	6,802	2,017,765
Debt Service:				
2000, 2002 & 2006 G.O. Bonds	1,031,573	64,866	169,880	926,559
LID Guarantee	285,000	304		285,304
LID 124 Northshire/Queen Anne/Indian Meadows	782			782
LID 127 Fairway / Howard Francis	(137)			(137)
LID 129 Septic Tank Abatement	204,423	2,022		206,445
LID 130 Lakeside / Ramsey / Industrial Park	94,592			94,592
LID 133 E Sherman/Gravel Sts/Forest Prk Paving	-			-
LID 143 Lunceford / Neider	6,688			6,688
LID 146 Northwest Boulevard	188,141	17,288		205,429
LID 148 Fruitland Lane Sewer Cap Fees	-	3,493		3,493
Capital Projects:				
Street Projects	1,098,479	1,170	143,666	955,983
2006 GO Bond Capital Projects	527,343	562	74,368	453,537
Enterprise:				
Street Lights	168,693	39,148	35,008	172,833
Water	223,795	200,942	156,636	268,101
Water Capitalization Fees	1,106,800	28,047		1,134,847
Wastewater	16,259,791	458,138	355,507	16,362,422
Wastewater-Reserved	1,150,426	26,500		1,176,926
WWTP Capitalization Fees	2,355,253	133,255		2,488,508
WW Property Mgmt	60,668			60,668
Sanitation	320,107	248,118	233,088	335,137
Public Parking	594,010	11,049	3,333	601,726
Stormwater Mgmt	459,888	108,112	31,542	536,458
Wastewater Debt Service	71			71
Trust and Agency:				
Kootenai County Solid Waste Billing	196,593	176,053	196,893	175,753
LID Advance Payments	387			387
Police Retirement	1,416,929	116,906	129,628	1,404,207
Cemetery P/C	2,072,044	2,525	5,118	2,069,451
Sales Tax	2,366	1,081	2,366	1,081
Fort Sherman Playground	-			-
Jewett House	11,296	529	1,486	10,339
KCATT	3,404	3		3,407
Reforestation	6,384	7		6,391
Street Trees	204,810	3,818		208,628
Community Canopy	955	81	696	340
CdA Arts Commission	998	1		999
Public Art Fund	78,593	84		78,677
Public Art Fund - LCDC	177,395	189		177,584
Public Art Fund - Maintenance	110,920	118	34	111,004
KMPO - Kootenai Metro Planning Org	35,161	44,230	33,573	45,818
BID	110,368	3,651	30,000	84,019
Homeless Trust Fund	363	648	363	648
GRAND TOTAL	$43,200,454	$4,133,762	$5,210,933	$42,123,283

CITY OF COEUR D'ALENE
BUDGET STATUS REPORT
FIVE MONTHS ENDED
28-Feb-2009

FUND OR DEPARTMENT	TYPE OF EXPENDITURE	TOTAL BUDGETED	SPENT THRU 2/28/2009	PERCENT EXPENDED
Mayor/Council	Personnel Services	$178,075	$70,708	40%
	Services/Supplies	18,560	4,559	25%
Administration	Personnel Services	487,884	198,606	41%
	Services/Supplies	319,576	15,684	5%
Finance	Personnel Services	618,800	255,206	41%
	Services/Supplies	134,590	41,866	31%
Municipal Services	Personnel Services	781,490	325,305	42%
	Services/Supplies	519,090	256,454	49%
Human Resources	Personnel Services	200,841	85,159	42%
	Services/Supplies	50,600	8,613	17%
Legal	Personnel Services	1,188,345	479,175	40%
	Services/Supplies	103,542	27,873	27%
	Capital Outlay			
Planning	Personnel Services	480,015	198,205	41%
	Services/Supplies	59,800	19,968	33%
Building Maintenance	Personnel Services	274,385	99,131	36%
	Services/Supplies	147,975	41,292	28%
Police	Personnel Services	8,388,028	3,407,031	41%
	Services/Supplies	720,719	229,323	32%
	Capital Outlay	138,018	74,055	54%
Fire	Personnel Services	6,198,116	2,703,831	44%
	Services/Supplies	419,402	131,423	31%
	Capital Outlay	30,000	35,952	120%
General Government	Services/Supplies	202,890	177,830	88%
Byrne Grant (Federal)	Services/Supplies	80,662	524	1%
COPS Grant	Services/Supplies			
CdA Drug Task Force	Services/Supplies	51,640	10,280	20%
	Capital Outlay			
Streets	Personnel Services	1,801,367	708,677	39%
	Services/Supplies	512,750	195,488	38%
	Capital Outlay	235,000	117,970	50%
ADA Sidewalk Abatement	Personnel Services	140,214	693	0%
	Services/Supplies	71,600	39,592	55%
Engineering Services	Personnel Services	524,633	176,073	34%
	Services/Supplies	736,600	108,548	15%
	Capital Outlay			

CITY OF COEUR D'ALENE
BUDGET STATUS REPORT
FIVE MONTHS ENDED
28-Feb-2009

FUND OR DEPARTMENT	TYPE OF EXPENDITURE	TOTAL BUDGETED	SPENT THRU 2/28/2009	PERCENT EXPENDED
Parks	Personnel Services	1,210,389	389,152	32%
	Services/Supplies	433,820	88,303	20%
	Capital Outlay	81,000	9,900	12%
Recreation	Personnel Services	584,633	207,462	35%
	Services/Supplies	151,600	23,119	15%
	Capital Outlay	41,000		
Building Inspection	Personnel Services	832,665	321,992	39%
	Services/Supplies	56,150	15,626	28%
	Capital Outlay	16,000	15,900	99%
Total General Fund		29,222,464	11,316,548	39%
Library	Personnel Services	922,504	360,551	39%
	Services/Supplies	192,900	68,657	36%
	Capital Outlay	65,000	22,796	35%
Cemetery	Personnel Services	172,654	67,173	39%
	Services/Supplies	76,080	27,038	36%
	Capital Outlay	48,000	33,322	69%
Impact Fees	Services/Supplies	2,000,000	1,374,789	69%
Annexation Fees	Services/Supplies	400,000	400,000	100%
Parks Capital Improvements	Capital Outlay	1,578,000	366,467	23%
Insurance	Services/Supplies	318,000	17,780	6%
Total Special Revenue		5,773,138	2,738,573	47%
Debt Service Fund		2,383,816	1,236,771	52%
Ramsey Road	Capital Outlay			
Govt Way - Dalton to Hanley	Capital Outlay	300,000		
Howard - Neider Extension	Capital Outlay	450,000	(179,550)	-40%
4th St - Lakeside to Harrison	Capital Outlay		138,643	
4th St - Anton to Timber	Capital Outlay		254	
Ironwood	Capital Outlay			
15th Street - Lunceford to Dalton	Capital Outlay	220,000		
Seltice Way	Capital Outlay			
15th St & Harrison signal	Capital Outlay	250,000		
Front Street	Capital Outlay			
GO Bond - Refunding & Misc	Capital Outlay			
Library Building	Capital Outlay		6,222	
Fire Dept GO Bond Expenditure	Capital Outlay	500,000	154,839	31%
Total Capital Projects Funds		1,720,000	120,408	7%

CITY OF COEUR D'ALENE
BUDGET STATUS REPORT
FIVE MONTHS ENDED
28-Feb-2009

FUND OR DEPARTMENT	TYPE OF EXPENDITURE	TOTAL BUDGETED	SPENT THRU 2/28/2009	PERCENT EXPENDED
Street Lights	Services/Supplies	572,090	188,638	33%
Water	Personnel Services	1,489,698	592,754	40%
	Services/Supplies	3,674,714	417,990	11%
	Capital Outlay	1,856,000	528,557	28%
Water Capitalization Fees	Services/Supplies	1,000,000		
Wastewater	Personnel Services	2,070,178	749,268	36%
	Services/Supplies	5,001,574	654,148	13%
	Capital Outlay	8,620,000	268,857	3%
	Debt Service	1,488,860	597,493	40%
WW Capitalization	Services/Supplies	3,798,325		
Sanitation	Services/Supplies	3,100,546	1,027,395	33%
Public Parking	Services/Supplies	184,132	55,777	30%
	Capital Outlay			
Stormwater Mgmt	Personnel Services	372,189	125,539	34%
	Services/Supplies	521,837	150,068	29%
	Capital Outlay	675,000	152,770	23%
Total Enterprise Funds		34,425,143	5,509,254	16%
Kootenai County Solid Waste		2,400,000	750,148	31%
Police Retirement		244,728	91,404	37%
Cemetery Perpetual Care		103,000	40,832	40%
Jewett House		16,300	6,094	37%
Reforestation		2,000		
Street Trees		40,000	8,700	22%
Community Canopy		620	1,060	171%
CdA Arts Commission		6,700	1,104	16%
Public Art Fund		101,000		
Public Art Fund - LCDC		105,000		
Public Art Fund - Maintenance		5,000	1,089	22%
Fort Sherman Playground			2,707	
KMPO		539,200	191,538	36%
Business Improvement District		142,000	90,000	63%
Homeless Trust Fund		4,000	1,350	34%
Total Trust & Agency		3,709,548	1,186,026	32%
TOTALS:		$77,234,109	$22,107,580	29%