# City of Missoula Items Held in City Council Committees

				Pages
1.	Admin	istration and Finance Committee		
	1.1	Create and Fund a Paid Parental Leave Policy for City of Missoula Employees	Heidi West	1
	1.2	Missoula City Council – Proposed Code of Ethics for Elected Officials and Board and Commission Members	Heather Harp	6
	1.3	Audit Presentation Fiscal Year 2019	Leigh Griffing	19
2.	Budge	t Committee of the Whole		
3.	Comm	ittee of the Whole		
	3.1	Joint meeting of the Missoula County Board of County Commissioners and the Missoula City Council	Bryan von Lossberg	20
	3.2	Max Wave Project and Permitting Update	Bryan von Lossberg	33
	3.3	Missoula Economic Partnership Update	Bryan von Lossberg	146
	3.4	Water utility litigation update	Bryan von Lossberg	211
4.	Land U	Jse and Planning Committee		
	4.1	Our Missoula Development Guide - Looking Forward	Garin Wally	213
	4.2	MCPB update to the LUP committee	Jordan Hess	258
	4.3	Appointments to the Historic Preservation Commission	Marty Rehbein	260
5.	Parks	and Conservation Committee		
6.	Public	Safety and Health Committee		
	6.1	Missoula Aging Services, Initiatives and Services Update - Susan Kohler	Gwen Jones	266
	6.2	Health Department Update	Michelle Cares	292

### 7. Public Works Committee

7.1	Traffic Control Devices Including Marked Crosswalks Administrative Rule	Jordan Hess	296
7.2	St. Patrick's Hospital W. Pine Street Right-of- Way Vacation Between May and McCormick Streets	Mary McCrea	314

### City of Missoula, Montana

### Item to be referred to City Council Committee

Committee: Admin and Finance Item title: Create and Fund a Paid Parental Leave Policy for City of Missoula Employees Date: 9.23.2015 Sponsor: Heidi West and Emily Bentley Prepared by: Heidi West and Emily Bentley Wards affected: All

Action Required: Direct staff to develop an employee policy and budget for such policy that allows 12 weeks paid maternal leave (for birth and adoption) and flexible scheduling upon return from leave, intended as a stop-gap measure to a policy that can eventually include leave for both parents.

**Recommended Motion:** Move to adopt a 12 week paid maternal leave and flexible scheduling policy for the City of Missoula.

Move to amend the FY16 budget....

Timeline:

Referred on: 9.23.2015 Committee discussion: 10.5.2016

### Information needed for committee discussion:

Cost of implementing a 12 week paid maternal leave policy if it were applied retroactively to the beginning of the fiscal year vs. if it were it were instituted or the remainder of the fiscal year.

### **Background and Alternatives Explored:**

During the 2017 Budget discussions the City Council discussed paid parental leave for city employees. However, it was decided to return to the subject of paid parental leave upon completion of the budget process to evaluate the financial implications of parental leave scenarios to be implemented in the upcoming budget season. In the interim, City Council discussed prioritizing a twelve week paid maternity leave policy to go into effect as soon as possible. This was determined to be a less expensive stop-gap measure.

Examples of a few of the other cities that provide a variety of paid parental leave benefits:

Seattle currently provides 4 weeks of paid parental leave that can be used in conjuction with other benefits to supply additional time off, however the city council is looking at expanding paid leave. Details can be found here:

http://www.seattle.gov/Documents/Departments/Council/Members/Gonzalez/Action-Plan---Increasing-City-of-Seattle-Workforce-Equity.pdf

Portland currently provides 6 weeks of paid leave. Ordinance can be viewed at: http://www.portlandonline.com/fritz/index.cfm?a=556768&c=49205

In April San Francisco created a city wide requirement for paid parental leave that will go into effect at the beginning of 2017:

http://sfgov.org/olse/paid-parental-leave-ordinance

And the State of New York just passed legislation that will be rolling in state wide paid parental leave over the next few year. I had trouble finding a good link on the New York State Website but here is an informational page:

https://www.ny.gov/paid-family-leave-strong-families-strong-ny/provide-paid-family-leavenew-york-workers

Paid parental leave is a benefit that New York

http://www1.nyc.gov/office-of-the-mayor/news/025-16/mayor-de-blasio-signs-paid-parentalleave-personnel-order-nyc-workers#/0

Financial implications: TBD

# Staff Recommendation to Amend 9-23-16 City Council Referral Entitled "Create a Paid Parental Leave Policy for City of Missoula Employees"

### "Action Required: Direct staff to:

- Develop a policy that establishes a six-week pregnancy-related medical leave bank that current affected City of Missoula employees may use, retroactive to July 1, 2016, for pregnancy-related medical leave (defined as "leave related to any physical limitations imposed by pregnancy or childbirth");
- Ensure that the policy provides that current affected employees may use the pregnancy-related medical leave bank prior to using accrued sick leave under Montana state law and Family and Medical Leave provided under federal law or any other accrued leave;
- Ensure that the pregnancy-related medical leave bank is not retroactively applied to any former City of Missoula employees who have terminated since July 1, 2016;
- Develop a budget for this proposed pregnancy-related medical leave bank;
- Retroactive to July 1, 2016, restore any sick leave taken (up to six weeks) by any current employee(s) for pregnancy-related medical leave, and deduct an equivalent amount of leave from the newly established pregnancy-related medical leave bank;
- Develop a policy effective July 1, 2017 that provides a six week "parental leave bank" that City of Missoula employees may use for:
  - (1) pregnancy-related medical leave; and/or
  - (2) parental leave (for the purposes of bonding with a child and/or caring for a newly born or adopted child);
- Develop a proposed FY18 budget for this "parental leave bank;"
- Ensure that the policy provides that affected employees may use this leave bank prior to using accrued sick leave under Montana state law and Family and Medical Leave provided under federal law or any other accrued leave; and
- Develop cost or budget estimates for any future expansion of this leave bank as directed by City Council at a later date (for example, expanding the leave bank from six weeks to twelve weeks)."

### Selected Passages from EEOC "Enforcement Guidance: Pregnancy and Related Issues (June 25, 2015)

https://www1.eeoc.gov//laws/guidance/pregnancy\_guidance.cfm?renderforprint=1#IC2

An employer may not compel an employee to take leave because she is pregnant, as long as she is able to perform her job. Such an action violates Title VII even if the employer believes it is acting in the employee's best interest.<sup>[110]</sup>

A policy requiring workers to take leave during pregnancy or excluding all pregnant or fertile women from a job is illegal except in the unlikely event that an employer can prove that non-pregnancy or non-fertility is a bona fide occupational qualification (BFOQ).<sup>[112]</sup> To establish a BFOQ, the employer must prove that the challenged qualification is "reasonably necessary to the normal operation of [the] particular business or enterprise."<sup>[113]</sup>

While employers may not force pregnant workers to take leave, they must allow women with physical limitations resulting from pregnancy to take leave on the same terms and conditions as others who are similar in their ability or inability to work.<sup>[114]</sup> Thus, an employer could not fire a pregnant employee for being absent if her absence fell within the provisions of the employer's sick leave policy.<sup>[115]</sup>

An employer may not require employees disabled by pregnancy or related medical conditions to exhaust their sick leave before using other types of accrued leave if it does not impose the same requirement on employees who seek leave for other medical conditions.

Similarly, an employer may not impose a shorter maximum period for pregnancy-related leave than for other types of medical or short-term disability leave. Title VII does not, however, require an employer to grant pregnancy-related medical leave or parental leave or to treat pregnancy-related absences more favorably than absences for other medical conditions.<sup>[116]</sup>

A policy that restricts leave might disproportionately impact pregnant women. For example, a 10-day ceiling on sick leave and a policy denying sick leave during the first year of employment have been found to disparately impact pregnant women. [121]

If a claimant establishes that such a policy has a disparate impact, an employer must prove that the policy is job related and consistent with business necessity. An employer must have supporting evidence to justify its policy. Business necessity cannot be established by a mere articulation of reasons. Thus, one court refused to find business necessity where the employer argued that it provided no leave to employees who had worked less than one year because it had a high turnover rate and wanted to allow leave only to those who had demonstrated "staying power," but provided no supporting evidence.<sup>[122]</sup> The court also found that an alternative policy denying leave for a shorter time period might have served the same business goal, since the evidence showed that most of the first year turnover occurred during the first three months of employment.<sup>[123]</sup>

For purposes of determining Title VII's requirements, employers should carefully distinguish between leave related to any physical limitations imposed by pregnancy or childbirth (described in this document as pregnancy-related medical leave) and leave for purposes of bonding with a child and/or providing care for a child (described in this document as parental leave).

Leave related to pregnancy, childbirth, or related medical conditions can be limited to women affected by those conditions.<sup>[124]</sup> However, parental leave must be provided to similarly situated men and women on the same terms.<sup>[125]</sup> If, for example, an employer extends leave to new mothers beyond the period of recuperation from childbirth (e.g. to provide the mothers time to bond with and/or care for the baby), it cannot lawfully fail to provide an equivalent amount of leave to new fathers for the same purpose.

#### Leave and Other Fringe Benefits (Best Practices)

- Leave related to pregnancy, childbirth, or related conditions can be limited to women affected by those conditions. Parental leave must be provided to similarly situated men and women on the same terms.
- If there is a restrictive leave policy (such as restricted leave during a probationary period), evaluate whether it disproportionately impacts pregnant workers and, if so, whether it is necessary for business operations. Ensure that the policy notes that an employee may qualify for leave as a reasonable accommodation.
- Review workplace policies that limit employee flexibility, such as fixed hours of work and mandatory overtime, to ensure that they are necessary for business operations.
- Consult with employees who plan to take pregnancy and/or parental leave in order to determine how their job responsibilities will be handled in their absence.
- Ensure that employees who are on leaves of absence due to pregnancy, childbirth, or related medical conditions have access to training, if desired, while out of the workplace.[179]

home

Legislation T 📑 Contact us

Item Info	Jination							
Title:		Creat	Create and Fund a Paid Parental Leave Policy for City of Missoula Employees					
Item #:						Status:	Held in Committee	
Туре:						#:	A&F	
Version:		3 <sup>rd</sup>				Sponsor:	Heidi West	
Meeting Date:		<u>-</u> <u>1/1/2050</u>				A 11		
Meeting	Date:	<u>1/1/2</u>	<u>050</u>			Ward:	All	
Meeting   Meeting <sup>-</sup>				Held in Committee		Ward: Video:	All No Video Available	
	Туре:			Held in Committee				
Meeting	Туре:			Held in Committee				
Meeting Attachme	Type: ents:			Held in Committee				
Meeting Attachme Text No Text A	Type: ents:			Held in Committee				
Meeting Attachme Text	Type: ents:			Held in Committee	Meeting Date			
Meeting Attachme Text No Text A	Type: ents: Available	AF R	eferrals		Meeting Date 9/26/2016	Video:		
Meeting Attachme Text No Text A	Type: ents: Available Version	AF R	eferrals		-	Video: Meeting Type		

No voting recorded



#### City of Missoula, Montana Item to be Referred to City Council Committee

Committee:	Administration and Finance					
Item:	Missoula City Council – Proposed Code of Ethics for Elected Officials and Board and Commission Members					
Date:	December 4, 2019					
Sponsor(s):	Heather Harp	Heather Harp				
Prepared by:	Steve Johnson, Central Services Director					
Ward(s) Affected:						
	Ward 1	□ Ward 4				
	Ward 2	□ Ward 5				
	□ Ward 3	□ Ward 6				
	⊠ All Wards □ N/A					

#### **Action Required:**

Approve Proposed City Council Policy

#### Recommended Motion(s):

I move the City Council: Approve the proposed code of ethics for City of Missoula elected officials and members of boards and commissions.

Timeline:	
Referral to committee:	November 21, 2019
Committee discussion:	12-4-19
Council action (or sets hearing):	12-9-19
Public Hearing:	n/a
Deadline:	n/a

**Background and Alternatives Explored:** Background and Alternatives Explored: The City of Missoula Ethics Advisory Committee has met over the last year to discuss options for a City Code of Ethics Policy for Elected Officials and Members of Boards and Commissions.

#### Financial Implications: None.

#### Links to external websites:

http://www.cityethics.org/files/Local%20Govt%20Ethics%20Nutshell.pdf

https://missoulian.com/news/state-and-regional/st-ignatius-official-jailed-will-retain-seat-as-embezzlementcase/article\_a2366a60-eec4-5110-9425-38837cf0deea.html

# Code of Ethics Policy for City of Missoula Elected Officials and Members of City of Missoula Boards and Commissions

### PURPOSE

It is the intent of the City of Missoula to establish a Code of Ethics Policy for Elected Officials and Appointed Board or Commission Members. Ethics-related policies for all City of Missoula employees other than members of City boards and commissions are established under separate policies in the City of Missoula Human Resources Policy Manual.

The Code of Ethics for Elected Officials and Appointed Board or Commission Members encourages and protects impartial and independent judgment and ensures that the private conduct and financial interests of public officers, officials and board and commission members do not result in a conflict of interest in their responsibilities to serve the public and uphold the public trust as defined in 2-2-103, MCA.

All newly elected City of Missoula officials and newly appointed members of City of Missoula Boards and Commissions shall be provided with a hard copy of or an electronic link to this Code of Ethics Policy.

### DEFINITIONS

A "**board or commission member**" is a member of "a quasi-judicial board or commission or of a board, commission, or committee with rulemaking authority," and is also considered a "**public employee**" under Montana law at 2-2-102(7)(c), MCA.

A "**conflict of interest**" is a transgression of a statutory rule of conduct, a violation of a legitimate ethical principle, a violation of a local ordinance related to ethical conduct, or an abuse of public trust by a public officer or public employee. Some actions taken by public officers or public employees are conflicts of interest per se, while other actions may or may not pose such conflicts depending upon the relevant facts and circumstances.

"**Disclosure**" requirements under 2-2-131, MCA, provide that that, prior to acting "in a manner that may impinge on public duty, including the award of a permit, contract or license, a public officer or employee must disclose "the nature of the private interest that creates the conflict." The disclosure must be made in writing to the commissioner of political practices, listing: (1) the amount of the private interest, if any, (2) the purpose and duration of the person's services rendered, if any, and (3) the compensation received for the services or other information that is necessary to describe the interest. See also disclosure requirements in 2-2-105(4), MCA.

"**Gift of substantial value**" under 2-2-102(3)(a), MCA, means a gift with a value of \$50 or more per individual recipient, and does not include "trivial benefits incidental to personal, professional or business contacts and involving no substantial risk of undermining official impartiality" (see also 45-7-104(5)(b), MCA).

"Local government" means "an incorporated city or town" or a "special district" under 2-2-102, MCA.

"Official act" or "official action" refers to "a vote, decision, recommendation, approval, disapproval, or other action, including inaction, that involves the use of discretionary authority" by a "public officer" or "board or commission member."

"Official misconduct" under 45-7-401(1), MCA, occurs when a public servant: (1) purposely or negligently fails to perform and mandatory duty as required by law or by a court of competent jurisdiction, (2) knowingly performs an act in an official capacity that the public servant knows is forbidden by law, (3) performs an act in excess of the public servant's lawful authority to obtain a personal advantage or an advantage for another person, (4) solicits or knowingly accepts for the performance of any act a fee or reward that the public servant knows is not authorized by law, or (5) knowingly conducts a meeting of a public agency in violation of 2-3-202 or 2-3-303, MCA.

"Public officer" means "any elected officer of a local government" under 2-2-102(8)(a).

"**Special district**" under 2-2-102(9), MCA, means "a unit of local government, authorized by law to performs a single function or a limited number of functions." The term also includes "any district or other entity formed by interlocal agreement."

# STANDARDS OF CONDUCT FOR CITY OF MISSOULA ELECTED OFFICIALS OR APPOINTED BOARD OR COMMISSION MEMBERS

The following Standards of Conduct do not involve alleged violations of Montana law and are enforceable by the Missoula City Council or the Mayor of the City of Missoula. City Council may formally reprimand, censure, deny or modify committee assignments, or restrict budgets for City Council members who violate these Standards of Conduct. Appointed board or commission members who violate these Standards of Conduct may be subject to removal from boards and commissions or any other sanctions not expressly prohibited, proscribed or restricted by Montana law or City of Missoula Ordinance (see "Enforcement" section below).

Missoula Elected Officials and Appointed Board or Commission Members shall, in the course of carrying out all official actions, duties and responsibilities, demonstrate:

- Honesty, integrity and trustworthiness;
- Fairness, equality and equity;
- Satisfactory attendance, effort and preparation;
- Accountability;
- Transparency and a commitment to open meetings when the public's right to know supersedes the privacy interests of any person or persons asserting a privacy interest;
- Civility, respect and decorum in all public meetings and in interactions with members of the public, City of Missoula staff, the media and other elected officials; and
- Recognition of the appropriate role of City Council members as members of a larger group, and that the Council must specifically authorize individual Council members to act on behalf of the larger group.

### **ENFORCEMENT OF STANDARDS OF CONDUCT**

Enforcement of the above standards of conduct shall be the responsibility of the Missoula City Council, unless alleged violations involve matters that are appropriate for referral to the Missoula County Attorney, the Missoula City Attorney, the commissioner of political practices, a private attorney for possible civil litigation, district court, municipal court, justice court or local law enforcement.

In reviewing any claims of a public officer's failure to observe non-statutory standards of conduct, City Council (through the Council President) may seek consultation or advice from City staff (such as the Ethics Advisory Committee below) or from any member of the public or any other person or persons whom council believes can provide relevant information, advice or assistance.

Any board or commission member appointed by the Mayor of the City of Missoula who violates the above standards of conduct may be subject to removal by the Mayor. Likewise, any board or commission member appointed by the Missoula City Council who violates the above standards of conduct may be subject to removal by the Council.

#### PROHIBITIONS FOR ELECTED OFFICIALS AND BOARD AND COMMISSION MEMBERS

Under 2-2-104, MCA, a City of Missoula elected official or appointed board or commission member may not violate any of the following rules of conduct for public officers, legislators and public employees:

- Accept a gift of substantial value or a substantial economic benefit as defined under state law, tantamount to a gift that: (1) would tend to improperly influence a reasonable person in that position to depart from the faithful and impartial discharge of official public duties; or (2) that the person knows, or any reasonable person in that position would know, is primarily for the purpose of rewarding the person for an official action taken;
- Disclose legitimately confidential information acquired in the course of official duties in order to improperly advance an elected official or appointed board or commission member's economic interests; or
- Engage in any other behavior or conduct proscribed under Montana code of ethics/standards of conduct statutes or Missoula City Ordinance.

See statutory language here:

#### 2-2-104, MCA:

https://leg.mt.gov/bills/mca/title\_0020/chapter\_0020/part\_0010/section\_0040/0020-0020-0010-0040.html

#### See also: Missoula Municipal Code – Title 2 - Chapter 2.88 - Code of Ethics:

http://www.ci.missoula.mt.us/DocumentCenter/View/1025/Municipal-Code-Title-02-Administration--Personnel?bidId=#Chapter 2 88

Under 2-2-105, MCA, a public officers or public employees (including members of City of Missoula boards and commissions, may not violate any of the following ethical requirements for public officers and public employees (including members of City of Missoula boards or commissions:

- Acquire an interest in any business or undertaking that the officer or employee has reason to believe may be directly and substantially affected to its economic benefit by official action to be taken by the officer's or employee's agency.
- Within twelve months following the term of elected office or board or commission membership, obtain employment by taking direct advantage of matters with which the elected officer, board or commission member was directly involved during such term of office or board or commission membership, when such advantage is not available to others;
- Participate in any official action as a member of a board or commission in which the public employee has a conflict created by a personal or private interest that would directly give rise to an appearance of impropriety as to the public employee's influence, benefit, or detriment in regard to the matter, without disclosing the interest in writing prior to participating in the official action.
- Perform an official act directly and substantially affecting a business or other undertaking to its economic detriment when the officer or employee has a substantial personal interest in a competing firm or undertaking.
- Engage in any other behavior or conduct proscribed under Montana code of ethics/standards of conduct statutes or Missoula City Ordinance.

See statutory language here:

### 2-2-105, MCA: https://leg.mt.gov/bills/mca/title\_0020/chapter\_0020/part\_0010/section\_0050/0020-0020-0010-0050.html

#### See also: Missoula Municipal Code – Title 2 - Chapter 2.88 - Code of Ethics:

http://www.ci.missoula.mt.us/DocumentCenter/View/1025/Municipal-Code-Title-02-Administration--Personnel?bidId=#Chapter 2 88

Under 2-2-121, MCA, a City of Missoula elected official or appointed board or commission member may not violate the following rules of conduct for public officers and public employees:

• Use public time, facilities, equipment, supplies, personnel or funds for the elected official, board or commission member's private business purposes;

- Acquire an interest in a business or undertaking in which the officer has reason to believe will directly and substantially benefit from action taken by the council, board or commission;
- Engage in a substantial financial transaction for the elected official, appointed board or commission member's private business purposes with a person whom the elected official, appointed board or commission member regulates or supervises in the course of official duties;
- Assist any person for a fee or other compensation in obtaining a contract, claim, license or other economic benefit a city agency over which an elected official, board or commission member exercises supervision in the course of official duties (this section does not apply to a member of a board or commission unless that person is also a full-time public employee);
- Assist any person for a contingent fee in obtaining a contract, claim, license or other economic benefit from any city agency;
- Perform an official act that directly and substantially affects a business or other undertaking, to its economic detriment, when the elected official, board or commission member has a substantial personal interest in a competing firm or undertaking;
- Solicit or accept employment, or engage in negotiations or meetings to consider such employment, with a person whom the officer or employee regulates in the course of official duties, without first giving written notification to the to the officer's or employee's supervisor and department director;
- Use public time, facilities, equipment, supplies, personnel or funds to solicit support or opposition to any political candidate or ballot issue, unless authorized by Montana law or incidental to another activity required or authorized under Montana law;
- Perform an official act that directly and substantially economically benefits a business or other undertaking in which the elected official or appointed board or commission member has a substantial financial interest or is engaged with that business interest or undertaking as counsel, consultant, representative or agent;
- Take official action (such as rulemaking) on any matter in which the elected officer or board or commission member has an actual or apparent conflict created by a personal or private interest that is not disclosed prior to taking such official action;
- Engage in any other behavior or conduct proscribed under Montana code of ethics/standards of conduct statutes or Missoula City Ordinances.

See statutory language here:

#### 2-2-121, MCA:

https://leg.mt.gov/bills/mca/title\_0020/chapter\_0020/part\_0010/section\_0210/0020-0020-0010-0210.html

#### See also: Missoula Municipal Code – Title 2 - Chapter 2.88 - Code of Ethics:

http://www.ci.missoula.mt.us/DocumentCenter/View/1025/Municipal-Code-Title-02-Administration--Personnel?bidld=#Chapter 2 88

Under 2-2-201, MCA through 2-2-207, MCA, a public officer, an appointed public board or commission member or a former employee may not engage in any of the following proscribed acts pertaining to contracts or claims:

• Have an interest in any contract made by them in their official capacity or by any body, agency, or board of which they are members or employees if they are directly involved with the contract. A former employee may not, within 6 months following the termination of employment, contract or be employed by an employer who contracts with the state or any of its subdivisions involving matters with which the former employee was directly involved during employment.

This does not include situations specifically excluded under Montana law, such as when an officer, employee or commission or board member holds a minority interest in a corporation or where merchandise is sold to the highest bidder at public.

- Have an interest in sales or purchases. State, county, town, township, and city officers must not be purchasers at any sale or vendors at any purchase made by them in their official capacity.
- Purchase or sell or in any manner receive to their own use or benefit any evidences of indebtedness except those expressly authorized under Montana law.
- When the officer is charged with the disbursement of public moneys, pay any warrant or other evidence of indebtedness against the state, county, city, town, or township when the same has been purchased, sold, received, or transferred contrary to any of the provisions of Montana law.
- Fail to suspend the settlement or payment of an account under the conditions set forth in 2-2-207, MCA involving an affidavit establishing probable cause.
- Engage in any other behavior or conduct proscribed under Montana code of ethics/standards of conduct statutes or Missoula City Ordinances.

See statutory language here:

#### 2-2-201, MCA:

https://leg.mt.gov/bills/mca/title\_0020/chapter\_0020/part\_0020/section\_0010/0020-0020-0020-0020-0010.html

#### 2-2-201, MCA:

https://leg.mt.gov/bills/mca/title\_0020/chapter\_0020/part\_0020/section\_0020/0020-0020-0020-0020.html

#### 2-2-203, MCA:

https://leg.mt.gov/bills/mca/title\_0020/chapter\_0020/part\_0020/section\_0030/0020-0020-0020-0020-0030.html

#### 2-2-204, MCA:

https://leg.mt.gov/bills/mca/title\_0020/chapter\_0020/part\_0020/section\_0040/0020-0020-0020-0020-0040.html

#### 2-2-205, MCA:

https://leg.mt.gov/bills/mca/title\_0020/chapter\_0020/part\_0020/section\_0050/0020-0020-0020-0020-0050.html

#### 2-2-206, MCA:

https://leg.mt.gov/bills/mca/title\_0020/chapter\_0020/part\_0020/section\_0060/0020-0020-0020-0020-0060.html

#### 2-2-207, MCA:

https://leg.mt.gov/bills/mca/title\_0020/chapter\_0020/part\_0020/section\_0070/0020-0020-0020-0020-0070.html

#### See also: Missoula Municipal Code – Title 2 - Chapter 2.88 - Code of Ethics:

http://www.ci.missoula.mt.us/DocumentCenter/View/1025/Municipal-Code-Title-02-Administration--Personnel?bidId=#Chapter 2 88

#### ENFORCEMENT OF THE STANDARDS OF CONDUCT AND ETHICAL REQUIREMENTS

A person alleging a violation of 2-2-104, MCA, 2-2-105, MCA, 2-2-121, MCA or 2-2-201 through 2-2-207, MCA by a City of Missoula elected official or appointed board or commission member must notify the Missoula County Attorney directly regarding the alleged violation. If the county attorney declines to bring an action, the person alleging the violation may, in accordance with 2-2-144(3), MCA, file a civil action directly in district court seeking a fine of not less than \$50 or more than \$1000.

Under 2-2-144(5) and 2-2-144(6), MCA, the City of Missoula may establish a three-member review panel to hear complaints alleging a violation of 2-2-104, MCA, 2-2-121, MCA or 2-2-201, MCA by a City of Missoula elected official or appointed board or commission member. The City of Missoula shall establish procedures and rules for such a panel. The panel members may not be officers or employees of the City of Missoula. The panel shall review complaints and may refer to the Missoula County Attorney and complaints that appear to be substantiated. If such a panel is established by the City of Missoula, a complaint must be filed with the committee prior to making the complaint to the Missoula County Attorney.

If the City of Missoula does not establish a review panel under 2-2-144(5), MCA, a complaint must be filed directly with the commissioner of political practices pursuant to 2-2-136, MCA.

Page 13 of 329

Any person alleging "official misconduct" as defined in 45-7-401, MCA (see "Definitions" section above), must file an action in the appropriate Montana district court.

#### See also: Missoula Municipal Code – Title 2 - Chapter 2.88 - Code of Ethics:

http://www.ci.missoula.mt.us/DocumentCenter/View/1025/Municipal-Code-Title-02-Administration--Personnel?bidId=#Chapter 2 88

### ETHICS ADVISORY COMMITTEE

An Ethics Advisory Committee shall be established to provide advice and counsel to officers, officials and employees who may have a question regarding an issue that relates directly to the Code of Ethics and Rules of Conduct for City of Missoula Elected Officials and Members of City of Missoula Boards and Commissions. The Committee shall consist of the Chair of Administration and Finance Committee, the City Attorney, the Chief Administrative Officer, and the Human Resources Director. The advisory committee shall meet at the request of the Chair of the Administration and Finance Committee, whom shall also serve as the Chair of the Ethics Advisory Committee.

The recommendations, suggestions and comments of the committee are advisory and consultative only. Members of the committee shall safeguard all legitimate privacy interests and shall monitor the Code of Ethics and recommend changes as needed.

#### Chapter 2.88

#### CODE OF ETHICS

Sections:

2.88.010 Purpose.
2.88.020 Organizational Responsibility
2.88.030 Definitions.
2.88.040 Just and equitable treatment.
2.88.050 Campaign activities.
2.88.060 Gifts and Things of Value.
2.88.070 Conflicts of Interest.
2.88.080 Prior employment.
2.88.090 Contemporaneous employment.
2.88.100 Subsequent employment.
2.88.110 New employee training.
2.88.120 Ethics Advisory Committee
2.88.130 Violation of ordinance.

**2.88.010 Purpose**. It is the intent of the City of Missoula to establish a code of ethics. This code protects and encourages impartial and independent judgment ensuring that the private conduct and financial interests of public officers, officials and employees do not present a real conflict of interest in their responsibilities to serve the public.

The Code establishes minimum standards of conduct and is designed to assist public officers, officials and employees in understanding their obligations. This Code of Ethics applies to all officers, officials and city employees, whether full-time, part-time, seasonal or temporary.

Public confidence in government is essential and the City can help sustain it by establishing and enforcing rules to assure the impartiality and honesty of officials and employees in all public transactions and decisions. Each affected agency of city government should inform its employees of the provisions of this chapter and strive to effectively enforce its requirements by seeking appropriate assistance from the City Attorney, Mayor's office or Personnel office. (Ord. 3110, 1999)

**2.88.020 Organizational Responsibility**. The administrative and legislative affairs of the city shall be conducted in a manner free from influences and/or activities that compromise the integrity of the process. Services and goods procured by and for the city shall be done so in a fair and unbiased manner. (Ord. 3110, 1999)

**2.88.030 Definitions**. Unless the context specifically indicates otherwise, the meanings of terms used in this ordinance shall be as follows:

A. *Department* shall mean and include all divisions, agencies, offices, departments, boards and commissions, authorities or committees of the city.

B. *Employee* shall mean and include any person in the employ of the city or of any agency or department thereof, whether receiving compensation or not.

C. *Gift* shall mean any benefit, favor, service, privilege, or thing of value which could be interpreted as influencing an employee's impartiality. Gifts include, but are not limited to: trips, money,

merchandise, foodstuffs, and tickets to sports, civic or cultural events; services or work provided by City suppliers and offers of future employment from City suppliers. Gifts do not include items that would not ordinarily be interpreted as affecting an employee's impartiality; such as an occasional business lunch, potted plants or flowers, boxes of candy for office personnel, "gimme caps" or advertising office supplies, such as pencils, calendars, or pens, or other token gifts of small value.

D. *Immediate and direct official action* shall mean any vote, decision, recommendation, approval, disapproval, or other action, including inaction, which involves the use of discretionary authority.

E. Officer shall mean and include any person in the service or employ of the city whose office is set forth in the City of Missoula Charter.

F. Official shall mean and include any person who individually, or collectively with others, employs the employees or controls the personnel of any group of employees defined by subsection (1) hereof to be a department, together with any person who individually or collectively with others constitutes a "department" as so defined regardless of whether the person is technically deemed an "officer" or "employee" of the city.

G. Substantial conflict of interest shall mean a situation, which is likely to affect the judgment or actions of an officer, official, or employee in the performance of duties as such officer, official, or employee.

*H. Financial Interest* shall mean any interest which shall yield, directly or indirectly, a monetary or other material benefit (other than duly authorized salary or compensation for services to the City) to the employee or any other person retaining the services of the officer, official or employee. (Ord. 3110, 1999)

#### 2.88.040 Just and equitable treatment.

A. Use of Public Property. No officer, official or employee shall request or permit the use of cityowned vehicles, equipment, materials or property or the expenditure of city funds for personal convenience or profit unless authorized by other agreement. Use or expenditure is to be restricted to such services as are available to the public generally or for such employee in the conduct of official business. Administrative Rule # 11 specifically addresses employees' use of city-owned vehicles in the course of their work.

B. Obligations to Citizens. No officer, official or employee shall grant any special consideration, treatment or advantage beyond that which is available to every other citizen.

C. Except as authorized by law and in the course of his or her official duties, no officer, official or employee shall use the power or authority of his or her office or position with the city in a manner intended to induce or coerce any other person to provide such officer, official or employee or any other person with any compensation, gift, or other thing of value directly or indirectly.

D. No officer, official or employee may ask for or receive, directly or indirectly, any compensation, gift, or thing of value, or promise thereof, for performing or for omitting or deferring the performance of any official duty, or action by the city other than the compensation, costs or fees provided by law. (Ord. 3110, 1999)

**2.88.050 Campaign activities**. City employees are encouraged to participate in the political process on their own time, with their own personal resources, and outside of the workplace by working on campaigns for the election of any person to any office or for the promotion of or opposition to any ballot proposition. Employees shall not use or authorize the use of the facility of the City of Missoula for such purposes except as authorized by law. See subsection 2 - 2 - 121 (3) MCA which applies to public officers, officials and employees. City employees may provide neutral, objective, and factual data regarding campaign related issues or individuals. (Ord. 3110, 1999)

**2.88.060 Gifts and Things of Value**. Officers, officials and employees may not accept gifts or other things of value when given by anyone who does business or seeks to do business with the employee's agency, if the gift is given for performance, or the failure to perform, one's duty; or when the gift could appear to be for the purpose of obtaining special consideration or to influence a city action. Pursuant to subsection 45-7-104 (5)(b) MCA, this section does not apply to trivial benefits incidental to personal, professional, or business contacts and involving no substantial risk of undermining official impartiality. A hosting government or agency may sometimes pay for other costs, such as travel expense and hotel accommodation, associated with government-related activities. Gifts of this nature are not a violation of this policy.

Gifts do not include items for which fair market value is paid or which are reimbursed by the city, or items received but donated to a charitable organization within 30 days of receipt of the gift. If the gift is a perishable item, such as flowers or candy, it may be placed on a public counter and shared with the public. Meals are not considered gifts or items of value. (Ord. 3110, 1999)

**2.88.070 Conflicts of Interest**. In addition to conflicts of interest identified in the City of Missoula's Personnel Policy Manual, the following rules apply to all officers, officials and employees of the City.

No officer, official or employee shall engage in any act that is in conflict with the performance of official duties. An officer, official or employee shall be deemed to have a conflict of interest if he or she directly or indirectly:

A. Receives or has any financial interest in any purchase, sale or lease to or by the city of any service or property when such financial interest was received or obtained with the prior knowledge that the city intended to purchase, sell or lease such property or service;

B. Is beneficially interested, directly or indirectly, in any contract, sale, lease, option or purchase that may be made by, through, or under the supervision of the employee, in whole or in part, or accepts, directly or indirectly, any compensation, gift or thing of value from any other person beneficially interested therein;

C. Accepts or seeks for others, directly or indirectly, any employment, travel expense, service, information, compensation, gift or thing of value on more favorable terms than those granted to other city employees or the public generally. These favorable terms may not be solicited from any person doing business, or seeking to do business with the city in an area for which the employee has responsibility or with regard to which he or she may participate. This subsection shall not apply to the receipt by elected officials, or by employees who are supervised directly by an elected official, of meals, refreshments or transportation within the boundaries of the city when given in connection with meetings with constituents or meetings which are informational or ceremonial in nature. (Ord. 3110, 1999)

**2.88.080 Prior employment**. No officer, official, or employee shall be disqualified from employment by the city solely because of his or her prior employment; however such officer, official, or employee shall be disqualified from taking any immediate and direct official action with respect to his or her prior employer for a period of six (6) months from the date of termination of employment. (Ord. 3110, 1999)

**2.88.090 Contemporaneous employment** Under no circumstances shall any employee engage in an outside business that may cause a conflict of interest with his or her duties at the city. No use should be made of City-owned materials or facilities in performing such outside work nor should such work be done on City time. (Ord. 3110, 1999)

2.88.100 Subsequent employment. No officer, official, or employee shall:

A. During or for six (6) months following termination of office or employment, obtain employment in which he or she will take direct advantage, unavailable to other, of matters with which he or she took immediate and direct official action during his or her term of employment;

B. Engage in any action or litigation in which the city is involved, on behalf of any other person or entity, when the action or litigation involves an issue on which the employee took immediate and direct official action while an employee of the city, for one (1) year following termination of service with the city. (Ord. 3110, 1999)

**2.88.110** New employee training. Every employee, upon initiating employment with the city, shall receive a copy of the code of ethics as part of the employee's orientation. (Ord. 3110, 1999)

**2.88.120 Ethics Advisory Committee**. An Ethics Advisory Committee shall be established to provide advice and counsel to officers, officials and employees who may have a question regarding an issue that relates directly to them. The Committee shall consist of the Chair of Administration and Finance Committee or his or her designee, City Attorney, Chief Administrative Officer, and Personnel Director. The recommendations or comments of the committee are only advisory and hold no weight or affect on the direction the officers, officials and employees take with regard to the issue raised. Members of the committee are charged with keeping all information confidential. They shall monitor the Code of Ethics and recommend changes as the need arises. (Ord. 3110, 1999)

**2.88.130 Violation of ordinance**. Violation of this ordinance shall be ground for discharge or other disciplinary action. Disciplinary action and grievance procedures will be conducted according to the City's Personnel Policies and Montana Code Annotated where appropriate. (Ord. 3110, 1999)



Committee:	Administration and Finance			
Item:	Fiscal Year 2019 Audit Presentation			
Date:	February 27, 2020			
Sponsor(s):	Leigh Griffing			
Prepared by:	Marianne Cox			
Ward(s) Affected:	<ul> <li>Ward 1</li> <li>Ward 2</li> <li>Ward 3</li> <li>Ward 6</li> </ul>			

#### Action Required:

No action. Informational presentation only.

#### Recommended Motion(s):

I move the City Council: No motion. Informational presentation only.

#### Timeline:

Referral to committee: Committee discussion: Council action (or sets hearing): Public Hearing: Deadline: March 2, 2020 Wednesday, March 25, 2020 N/A N/A N/A

#### **Background and Alternatives Explored:**

Each year, the City of Missoula is required to perform an annual audit of the city budget and report the findings. Jan Schweitzer of Anderson ZurMuehlen and Co. will share with the Administration and Finance Committee an overview of the audit process and the fiscal year 2019 audit presentation, including details from the Comprehensive Annual Financial Report (CAFR).

#### **Financial Implications:**

N/A

### City of Missoula, Montana Item to be Referred to City Council Committee

Committee:	Committee of the Whole
Item:	Joint meeting of the Board of County Commissioners and the Missoula City Council
Date:	04/18/2018
Sponsor:	Michelle Cares
Prepared by:	Michelle Cares
Wards Affected:	All wards
Action Required: None	
Recommended Motio	n(s):
Timeline:	

Referral to committee:	04/10/2018
Committee discussion:	04/18/2018

### **Background and Alternatives Explored:**

Please schedule from 11:30 – 1:30 on Wednesday, April 18, 2018.

The primary goal is to bring together the county commissioners and the city council to discuss our shared interests, strategic vision, and ways in which we can do a better job of working collaboratively going forward.

The commissioners and mayor meet frequently, but apart from meetings that require a joint action on the part of both governing bodies (e.g., approval of spending open space bonds), these two groups don't get together often. The last gathering was April 2017.

### Agenda for 4/18/2018

- Dedicated Presentation and Discussion Items
  - Jail Diversion Master Plan Update; Commissioner Cola Rowley, Sheriff McDermott, Justice of the Peace Landee Holloway and Councilor Michelle Cares
  - Community Wildfire Protection Plan: Commissioner Dave Strohmaier, Director of the Office of Emergency Management Adriane Beck
- Additional topics that may be discussed more generally if time allows
  - o County land use mapping project
  - o Downtown Missoula Master Plan Update

- Transportation
   Housing / Collaboration on 10-year plan to end homelessness
- Annexation

Financial Implications:

None

Links to external websites:

# **APPENDICES**

# Recommendations

# **Behavioral Health Recommendations:**

### > 3.0 Resource Crisis Intervention Trained Officers:

- Prioritize and encourage CIT training for patrol officers
- Provide resources for shift commanders to direct CIT officers to these types of calls (in addition to the officer on patrol who is closest to the situation)
- Provide resources to allow for longer response times for patrol officers to CIT calls, and for more than one responding officer
- $\circ~$  Provide resources so that there is at least one CIT-trained officer on every shift
- $\circ~$  Hold local trainings more frequently and involve local mental health agencies

# > 3.1 Create Crisis Intervention Protocol with Hospitals:

- Work with St. Patrick Hospital, Community Hospital, and Western Montana Mental Health Center to create a protocol for handling criminal detainees in a mental health crisis that includes:
  - Utilizing jail as the very last option
  - Stabilizing the person in crisis either at the hospital or in an emergency detention bed
  - Officers remaining as needed to ensure the safety of medical personnel

# > 3.2 Engage in Crisis Intervention Statewide Efforts:

- Remain engaged in statewide efforts for ongoing education
- Remain engaged to ensure consistency in applications for CIT programs statewide
- Idea share with other communities for improvements to the program.
- Prioritize and support these efforts
- Compensating coordinators

# > 3.3 Cultural Sensitivity in Crisis Intervention Training:

• CIT trainings should include and underscore resources for Native Americans in crisis

# > 3.4 Increase Emergency Detention Beds:

- Continue applying for HB 33 and HB 34 grant money to construct and operate secure emergency detention beds
- Work with WMMHC to ensure the beds are operationally solvent.

- Beds should reduce the number of people Missoula County sends to the state hospital; significantly, decrease strain on the St. Patrick Hospital Emergency Department, and reduce expenses associated with hospital uncompensated care
- Beds should reduce the number of people booked into the jail in mental health crisis and generally improve outcomes for this population

# > 3.5 Build Social Detox Beds:

- Draft a funding plan to build and staff four to six social detox beds
- Estimated yearly costs to staff the facility would range between \$250,000 and \$300,000
- $\circ$  Expenditure should offset the cost avoidance in uncompensated medical care

# > 3.6 Build/Fund a Drop in Center and Permanent Supportive Housing:

- Build a drop-in center
- Build permanent supportive housing
- Resource ongoing operations
- \$4.5 million in annual uncompensated care costs resulting from the treatment of Missoula's homeless by local hospitals
- Advocate to legislature to allow Medicaid dollars to be used for housing

# > 3.7 Fund Treatment Court:

- Fund Co-Occurring and Veterans Court
- Costs are associated with personnel, drug/alcohol testing, and treatment services
- $\circ~$  Assist the court in finding grant funding for its ongoing operational expenses
- Adopt best practices for measuring outcomes for participants, including recidivism measures

# > 3.8 Implement DUI Court:

• Implement an evidence-based DUI Court for moderate and high risk individuals who can safety live in the community during participation

# > 3.9 Improve Access to Prescription Medications:

- Ensure contracts for vendors for medical services at MCDF provide for the best continuum of care in and outside of MCDF
- $\circ\,$  Contracts should ensure medical staff have mental health care credentials
- Contracts should specify use of formulary that provides for individualized medication management plans that prioritize mental health stabilization

- Pursue collaborations with Partnership Health Center whenever possible
- $\circ~$  Measure progress by periodically administering an inmate survey on the quality of medical or mental health care

### > 3.10 Add Health Care Navigator to Detention Center:

- Jail staff should apply to the Center for Medicare and Medicaid (CMS) to become a Certified Application Counselor (CAC) organization
- $\circ~$  Implementation of this recommendation stands to yield significant cost savings in medical care for MCDF

# > 3.11 Increase Number of Social Workers at Detention Center:

- Ensure funding for a minimum of two social workers and two case managers in the jail to assist with mental health services and diversion, programming, case management, re-entry planning, and applications for social service benefits
- Explore repurposing space to accommodate the additional staff
- These positions could be hard-funded by Missoula County and City, or the County could apply for state mental health jail diversion grants under HB 33 to fund these positions (or a combination of both)
- $\circ~$  State and local funding should be supplemented with other grant funding, as it becomes available

### > 3.12 Increase Programming at Detention Center:

- Increase programming for inmates at the Detention Center
- MCDC should solicit and facilitate programming from volunteer service providers in the community
- Prioritize evidence-based programming demonstrated to reduce recidivism, improve participant mental and/or physical health and well-being, and otherwise improve participant outcomes
- Prioritize culturally appropriate programming for Native American detainees, including those capable of addressing historical trauma
- Programs may include education classes, classes on early childhood trauma and parenting, peer-to-peer programs, women-centered classes, and general skills classes

### > 3.13 Allow Smudging Ceremonies at Detention Center:

- Accommodate smudging ceremonies important to several Native American tribes
- Smudging is a healing and purification ritual that involves burning and smudging should be considered a routine offering at the jail

### **Pre-Sentencing Recommendations:**

- 4.0 Improve Data Collection by Adding Booking Clerk at Detention Center:
  - Have at least one person on shift at all times who is trained and collects in-depth booking data
  - Booking clerk should produce weekly reports to the Municipal, Justice, and District Courts that list detainees by court, with current length of stay, charge, and judge

### ➢ 4.1 Increase Court Hours:

- Work with judiciary to support increased court hours, including providing increased resources
- Provide resources for increased hours for prosecution
- Advocate to state to provide resources to increase hours that public defenders are available

### 4.2 Execute Nonviolent Warrants Primarily During Regular Court Hours:

- Stipulate that officers use discretion to execute nonviolent ordinance and misdemeanor warrants during regular court hours (when the individual does not pose a public safety threat)
- Law enforcement should ensure individuals are not taken to jail before seeing a judge. (Exceptions might be if it is dangerous for law enforcement to remove the individual from the patrol car)
- Recommendation does not imply that individuals pulled over for driving under the influence should be released before seeing a judge

### > 4.3 Utilize Evidence-Based Risk Assessment:

- Judges should set bond based on an evidence-based risk assessment
- Narrowly tailoring conditions of release to be the least restrictive

# > 4.4 Prioritize court dates for jailed defendants:

- Judges should prioritize court dates for jailed defendants
- This will come after the booking clerk starts providing weekly or biweekly reports to the courts regarding jailed defendants

# ▶ 4.5 Track Continuances:

- Advocate to the Public Defender Commission to track continuance requests for jailed defendants
- Address underlying causes of continuances with defense counsel
- OPD attorneys should prioritize jail visits for clients
- OPD regional manager should monitor continuance request rates and address inconsistencies

# ➢ 4.6 Utilize Text Messaging:

- $\circ~$  Use low-cost technology, such as text messages or auto-calls, to remind defendants of court dates
- Advocate for the State to fund the purchase of a module in Full Court Enterprise that can send these messages

# ➢ 4.7 Run Low-level Sentences Concurrent:

• Low-level, municipal ordinance violations should run concurrent with a felony state sentence

### > 4.8 Provide Pre-Sentence Assessment Immediately Upon Booking:

- Have trained staff at MCDF administer the PSA-Court assessment
- Assessment and recommendations for conditions of release should be made available to the judge at the defendant's initial appearance

# > 4.9 Provide Funding Source for Pre-trail Electronic Monitoring:

- $\circ~$  Provide funding for judges to draw from to pay for pre-trial services for indigent offenders
- Funding should follow the individual (no bulk contracts) and enable judges to order alcohol monitoring or drug testing

# > 4.10 Increased Accountability for Private Supervision Programs:

- Either pay per person per day, or have a minimum number of supervisees per officer, to increase capacity
- Require annual or twice-yearly reports on costs and failure rates, etc.,
- Require policies on evidence-based incentives and sanctions from private providers
- Have target success rate, working with a vendor for a compliance plan
- $\circ~$  Structure contract to ensure pre-trial supervision programs offer required classes on site and include them in the supervision fee

### Sentencing and Post-Sentencing Recommendations:

### > 5.0 Support Efforts to Eliminate Mandatory Minimums:

- Restore judicial discretion
- Support legislation that eliminates mandatory minimums
- Including DUI's, driving while suspended or revoked and petty theft,
- Lobby for policies recommended by the Sentencing Commission that meet the goals of this plan and reduce DOC overflow at County jails

# > 5.1 Utilize Evidence-Based Assessment of Ability to Pay:

- Institute an independent objective assessment process to determine a defendant's ability to pay fines and fees
- Waive them appropriately

# > 5.2 Monthly Billing Statements:

- Send billing statements to offenders notifying them of the outstanding debt and the consequences of non-payment
- If a judges do suspend a license or issue a warrant for failing to comply with financial requirements of a sentence, he or she should keep data on the incidents

# > 5.3 Institute Work Release:

• MCDF should institute a Work Release program

### > 5.4 Allow Some Flexibility with Timesheets:

- Allow a 15-minute grace period for arriving late to a Work Program site. Currently, a participant who is even a few minutes late can be terminated from the program
- Placement opportunities should exist for people with physical disabilities, and judges should be informed of these positions

# > 5.5 **\$15.00 per Hour Credit for Community Service**:

• Increase credit for community service to \$15.00 per hour to incentivize participation

# > 5.6 Increase Use of Alternative Jail:

• Provide a payment source for judges to sentence indigent offenders to Alternative Jail rather than the jail

# > 5.7 Institute Evidence-Based Risk Assessment in Sentencing:

- Screen arrestees for risk level in order to determine conditions of release
- $\circ~$  Judges should also use the risk assessment to tailor sentencing options to the individual's level of risk
- Misdemeanor probation should be used only with high risk offenders

# > 5.8 Increase Transparency for Private Providers:

- Require contracted vendors to make available policies on sanctions and incentives.
- $\circ~$  Require an annual report detailing the per-person per-day cost of probation
- $\circ$   $\;$  Work with the jail to adopt and monitor recidivism outcomes  $\;$
- Contracts should also be explicit in classes that may be required by participants
- Classes should be included in the contracted cost and be made available on evenings and weekends

# > 5.9 Increase Use of Electronic Monitoring:

- Implement a home arrest monitoring program and electronic monitoring program for moderate risk offenders such as some people found guilty of DUI's
- Run by the jail or through a private provider
- Sentencing option should not be contingent upon an offender's ability to pay

# > 5.10 Provide Re-entry Assistance at Detention Center:

- Provide for at least one SOAR-certified re-entry assistant to work with the jail population with public benefit applications and re-entry plans that include housing and employment options
- $\circ$  SOAR-certified staffer can assist in having benefits properly suspended upon incarceration when necessary rather than terminated
- Annual savings to the Medicaid expansion to the jail population (for 24-hour medical treatments outside the jail) should be reinvested in this re-entry position

### Jail Diversion Master Plan Update April 18, 2018

Missoula City and County adopted the Jail Diversion Master Plan (JDMP) brought forth by Sheriff McDermott in November of 2016 and have been evaluating the 40 recommendations for non-assaultive defendants with an eye to timing, potential partners and funding. This first year has been characterized by making operational and low- or no-cost changes while beginning discussions and building partnerships around the forward movement of some of the more complex, expensive recommendations, such as a drop-in center and permanent supportive housing. It is important to keep in mind that those with non-assaultive charges only generate a portion of the inmate population in the Missoula County Detention Facility (MCDF). From July-December 2017, although they accounted for 41.7% of bookings, snap-shots of non-assaultive defendants in custody on the first day of each month reveal they made up 30.8% of the population. Non-violent misdemeanors (the misdemeanor sub-set of non-assaultive charges) accounted for 30.4% of total bookings during this same period, but were only an average of 2.9% of the population on the first day of each month and had an average stay of 3 days. In the JDMP, recommendations for the non-assaultive population were categorized as behavioral health, pre-sentencing, and post-sentencing.

Four recommendations around behavioral health involve Crisis Intervention Teams (CIT), including providing resources, working with hospitals, engaging in statewide efforts, and encompassing cultural humility in CIT training. Both City and County first responders and community stakeholders are active in CIT and continue to address these recommendations. It was also advised that emergency detention units be built. With support from State and County funding, Western Montana Mental Health Center constructed two involuntary emergency detention beds with compassionate and professional supervision for people in a mental health crisis. Justice of the Peace Landee Holloway currently oversees a DUI court and has applied for a grant to advance plans to implement an evidence-based model, as suggested by the JDMP. Sheriff McDermott recently issued a request for proposals (RFP) and plans to award the \$1.2 million medical contract for MCDF to Planned Parenthood, which will address three additional behavioral health recommendations by 1) improving access to prescription medications through an alternate formulary and adding four hours a week of a medical provider specially trained in the diagnostics and prescribing of psychiatric medications for complex cases, and 2) providing a healthcare navigator who also 3) performs re-entry assistance through coordinating community resources for inmates upon release.

In March, Missoula County was awarded funding for a Supportive Housing Program for returning citizens through the Montana Board of Crime Control (MBCC). Promoting the use of a Housing First model, the MBCC sought applications that could help provide housing for individuals returning to their community. Missoula County was one of four counties to receive funding and will work with the District XI Human Resource Council to staff a Re-entry Case Manager and a Housing Stability Coordinator, as well as provide a limited amount of rental assistance funds.

The JDMP goes on to recommend additional social workers and programming in MCDF to create better outcomes for inmates. Under Sheriff McDermott's leadership, MCDF has begun bringing in several groups to aid in providing incarcerated individuals services, such as yoga and parenting classes, and has built an

in-house behavioral health team. Providing behavioral health treatment in the jail is a daunting task. In 2017, 59 chemical dependency evaluations were completed by the half-time licensed addiction counselor (LAC), out of 98 requests. The LAC is one of 3.5 staff positions on the team at MCDF. Also in 2017, 252 juveniles were seen in group and individual mental health sessions, as were 2,380 adult individuals. Of these, 43% were identified to meet the criteria of severe and disabling mental illness, 38% identified as homeless, and 43% had a co-occurring disorder. This staff responded individually to 3,692 mental health requests from inmates. Further, 133 suicide assessments were completed and 39 individuals were diverted from MCDF to a mental health facility. The caseload is overwhelming, and discussions are ongoing about what additional positions would be the most efficient use of funding to provide the most relief in workflow and community need. The provision of mental health services, including re-entry assistance and case management, helps link exiting inmates to services in the community to reduce recidivism and support the development of productive citizens.

In 2017, Missoula County was awarded a 15-month grant to address the disproportionate number of Native Americans incarcerated at MCDF by conducting culturally-sensitive interviews of inmates who identify as Native American to gather their perception and experience with services, their engagement with cultural identity, and how incarceration may affect their life plans; introducing cultural programming within MCDF; and providing cultural safety training to all MCDF staff. This aligns with the JDMP recommendation to increase culturally appropriate programming at MCDF and can help provide guidance for future work to reduce recidivism.

Evaluations of several of the pre-sentencing recommendations have shown that conditions do not currently support pursuit. For example, instead of adding a booking clerk at MCDF as recommended, Missoula County supported the hiring of four additional detention officers to maintain full staffing in this high turnover position to ease time constraints that restrict collection of accurate booking data. Increased court hours would be difficult; court staff and judges, public and private attorneys, public defenders, and transport staff would have to work alternate hours and incur increased personnel costs. Since there is not consensus that implementation would yield better outcomes, this recommendation will not be enacted without further research. A work release program will not be feasible until MCDF is consistently less than 80-90% full, and work program flexibility may take the form of scheduling adaptability or alternate sanctions versus program removal rather than the recommended flexibility with arrival time. Law enforcement will continue to execute nonviolent warrants primarily during court hours to keep those costs low and reduce unadjudicated jail time, and judges will continue to prioritize court dates for jailed defendants in most circumstances as recommended. Defendants will continue to receive notifications of non-payment and consequences from the court in lieu of monthly billing statements.

The JDMP recommended crediting individuals \$15 an hour for community service. This was implemented in both Justice Courts and Municipal Court on April 1; judges simply adjusted the hours required based on the hourly credit to eliminate the individual's debt owed. Increased accountability for private supervision programs like pre-trial supervision, as well as for post-sentencing programs such as misdemeanor probation and community service were recommended, as were increased electronic monitoring and use of an evidence-based risk assessment. Missoula County is releasing an RFP this quarter that will address these recommendations.

Beginning in April, Missoula will attend to several recommendations by piloting a pre-trial diversion program by the Montana Supreme Court. The 2017 legislature mandated the use of an evidence-based risk assessment and made recommendations for managing defendants who are released awaiting trial. The Arnold Foundation was contracted to develop this project to maximize public safety, court appearance, and the appropriate use of bail, release and detention. Judges will have the Public Safety Assessment, a risk assessment tool that analyzes each defendant's current and prior criminal conduct and previous failure to appear in court, available as a part of their decision-making process. Research-based factors, including a focus on violent offenses, provides a judge with information about whether a defendant can be successful in the community while awaiting trial. Therefore, this addresses more than just the sub-population targeted by the JDMP and will be performed on all people with new criminal charges booked into MCDF. After refining, the tool will be utilized statewide. Missoula County will receive state funding to assist defendants awaiting trial to remain law-abiding, at work and participating in necessary support services. This effort will also satisfy another recommendation by including text messaging court reminders to defendants. Implementing an evidence-based risk assessment is a significant step towards reaching national best practices in justice systems as well as accomplishing recommendations of the JDMP.

Although this update does not address every recommendation, it provides an overview of what has been done in the past year regarding non-assaultive defendants. There has been success on several fronts. Moving forward, we will push into the more expensive and complex strategies that will have positive impacts on other sub-populations as well. The City, County and multiple community-based private and non-profit groups have partnered on the issue of attainable housing. State funding for mental health services was severely cut last session, and the community is grappling with how to move forward with integrated community care. As we know too well, lack of housing, mental health care, and substance abuse treatment are drivers of crime and recidivism. We appreciate the support from the community while building these initial efforts, and look forward to the continued positivity and collaborative spirit of Missoula as we work towards long-term goals and outcomes.

Respectfully submitted,

Nicole "Cola" Rowley PhD, Missoula County Commission Michelle Cares, Missoula City Council home

Legislation T 📑 Contact us

#### Item Information

°% 🔊

Title:	Joint meeting of the Missoula Coun	nty Board of County Commissioners and the Missoula City Council		
Item #:		Status:	Held in Committee	
Туре:		#:	COW	
Version:	4 <sup>th</sup>	Sponsor:	Michelle Cares	
Meeting Date:	<u>1/1/2050</u>	Ward:	Ward 1, Ward 2, Ward 3, Ward 4, Ward 5, Ward 6	
Meeting Type: Attachments:	COW Referrals Held in Committee	Video:	No Video Available	

#### Text

No Text Available

### History

	Version	Item #	Туре	Status	Meeting Date	Meeting Type
	<u>1<sup>st</sup></u>				<u>2/13/2017</u>	City Council
	<u>2<sup>nd</sup></u>			Held in committee	<u>3/15/2017</u>	COW
	<u>3<sup>rd</sup></u>			Held in committee	<u>4/18/2018</u>	COW
•	4 <sup>th</sup>			Held in Committee	<u>1/1/2050</u>	COW Referrals Held in Committee

### Vote Records

No voting recorded

#### City of Missoula, Montana Item to be Referred to City Council Committee

Committee:	COW
Agenda item title:	Max Wave Project and Permitting Update
Date:	May 4, 2018
Sponsor:	Bryan von Lossberg
Prepared by:	Bryan von Lossberg
Ward(s) affected:	All

#### Action Required: None

Recommended Motion: None

Timeline:

Referred to committee:	May 4, 2018
Committee discussion:	May 9, 2018
Public hearing (if necessary):	N/A
Deadline:	N/A

#### Background and Alternatives Explored:

Brennan's Wave maintenance and the Max Wave project were last reviewed in COW over three years ago on Feb. 18th, 2015.

Volunteers and a local non-profit built the Brennan's Wave whitewater park structure in 2006. That initial construction, as well as the long-term viability of the structure, involved and continues to require substantial design, permitting, and maintenance activities. There are also long-term ownership and liability considerations. While construction of Brennan's Wave occurred outside of city government's jurisdiction, public funding from the Missoula Redevelopment Agency benefitted the project.

A follow up project downstream and in the vicinity of Broadway Island — Max Wave — has been under development and review for several years. A permit application for the Max Wave project was submitted to the US Army Corps of Engineers and Montana Department of Environmental Quality around the beginning of 2018. Brennan's Wave, Inc. and the City of Missoula are identified as co-applicants on the permit application. The Corps issued a public notice of a 30-day public comment period on April 13, 2018, and that public comment period closes May 14, 2018.

From the Public Notice:

The application of The City of Missoula and Brennan's Wave, Inc. for approval of plans and issuance of a permit under authority of the Secretary of the Army is being considered by the District Engineer, U.S. Army Corps of Engineers, Omaha, Nebraska. **The project described herein is not being proposed by the Corps, but by the applicant; the Corps will evaluate the proposed work to determine if it is permittable under current laws and regulations.** 

**Description of Proposed Project:** The City of Missoula and Brennan's Wave, Inc. are proposing to construct, operate, and maintain a whitewater drop structures to be known as

the Max Wave. The proposed project is located at the Flynn-Lowney Diversion on the Clark Fork River in downtown Missoula, Montana. The Max Wave will be located adjacent to Ogren Park Allegiance Field and immediately downstream from McCormick Park and the All-Abilities Playground. The goal of the Max Wave project, as stated by the applicants, is to provide a recreational venue while enhancing safe boater passage, providing safe access to those with accessibility needs, maintaining the ditch company's ability to divert flows, restoring heavily impacted streambanks, and maintaining passage for bull trout and other fish.

Since the public notice issued in 2015 which advertised the proposed Max Wave project, the following change have been made:

- Elimination of a wave feature at the lower section to allow for a widened AOP channel.
- Increased complexity and variation to create holding pockets and cover in the AOP channels.
- Reduction and limitation on the use of grout.
- Commitment to inclusion of a fish screen on the irrigation ditch as a form of mitigation for the project.
- Additional information on riparian vegetative efforts.
- Incorporation of a 2-dimensional hydraulic model with comprehensive results and analysis.
- Modification of Aquatic Organism Passage channels to reduce velocities for fish passage.
- Reduction of trail width and incorporation of additional vegetation at the two access points.
- Reduction in size of the deflector on the north bank.
- Development of an operation and maintenance plan.

The Public Notice contains additional project details and schematics and can be accessed at the link below.

This project is of great interest and consequence to the community, and there are many stakeholders and organizations that play a role in the complex deign, evaluation, permitting, operations, and maintenance process. Given that the 30-day public comment period associated with the permit application before the US Army Corps of Engineers is currently open and scheduled to close on May 14th, this committee meeting is timely.

Representatives from Brennan's Wave, Inc. and Morrison Maierle will provide an overview and history of the project.

Representatives from the Confederated Salish and Kootenai Tribes will present regarding CSKT's role in the USACE permit process.

There are several other permitting, or otherwise involved, agencies. Representative from the following organizations will be available to answer questions:

- Montana Fish Wildlife & Parks (MT Stream Protection Act SPA 124 Permit agency),
- · Montana Department of Natural Resources and Conservation (Right of Way Easement),
- US Fish and Wildlife Service (Endangered Species Consultation; invited but unconfirmed),
- · City of Missoula Floodplain administration,
- City of Missoula Parks and Recreation.

Additionally, representatives from the Clark Fork Coalition and Montana Trout Unlimited will be present.

Financial Implications: Undetermined at this time.

Links: Project posting at the US Army Corps of Engineers http://www.nwo.usace.army.mil/Media/Public-Notices/Article/1491475/nwo-2010-01566-mtm/



US Army Corps of Engineers ® Omaha District

#### PUBLIC NOTICE

Application No: NWO-2010-01566-MTM Applicant: City of Missoula & Brennan's Wave, Inc. Waterway: Clark Fork River Issue Date: April 13, 2018 Expiration Date: May 14, 2018

**30 DAY NOTICE** 

#### Missoula Regulatory Office 1600 North Avenue West, Suite 105 Missoula, Montana 59801

#### JOINT PUBLIC NOTICE FOR PERMIT APPLICATION SUBMITTED TO U.S. ARMY CORPS OF ENGINEERS AND MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

The application of The City of Missoula and Brennan's Wave, Inc. for approval of plans and issuance of a permit under authority of the Secretary of the Army is being considered by the District Engineer, U.S. Army Corps of Engineers, Omaha, Nebraska. **The project described** herein is not being proposed by the Corps, but by the applicant; the Corps will evaluate the proposed work to determine if it is permittable under current laws and regulations.

**Description of Proposed Project:** The City of Missoula and Brennan's Wave, Inc. are proposing to construct, operate, and maintain a whitewater drop structures to be known as the Max Wave. The proposed project is located at the Flynn-Lowney Diversion on the Clark Fork River in downtown Missoula, Montana. The Max Wave will be located adjacent to Ogren Park Allegiance Field and immediately downstream from McCormick Park and the All-Abilities Playground. The goal of the Max Wave project, as stated by the applicants, is to provide a recreational venue while enhancing safe boater passage, providing safe access to those with accessibility needs, maintaining the ditch company's ability to divert flows, restoring heavily impacted streambanks, and maintaining passage for bull trout and other fish.

Since the public notice issued in 2015 which advertised the proposed Max Wave project, the following change have been made:

- Elimination of a wave feature at the lower section to allow for a widened AOP channel.
- Increased complexity and variation to create holding pockets and cover in the AOP channels.
- Reduction and limitation on the use of grout.
- Commitment to inclusion of a fish screen on the irrigation ditch as a form of mitigation for the project.
- Additional information on riparian vegetative efforts.
- Incorporation of a 2-dimensional hydraulic model with comprehensive results and analysis.
- Modification of Aquatic Organism Passage channels to reduce velocities for fish passage.
- Reduction of trail width and incorporation of additional vegetation at the two access points.

- Reduction in size of the deflector on the north bank.
- Development of an operation and maintenance plan.

The Max Wave project consists of two grouted rock drop structures anchored to the south shore and West Broadway Island. The Project Overview Plan is provided immediately following Section 5.0 References. Drop structure #1 consists of a 60-foot wide play wave, a 75-foot wide aquatic organism/novice boater passage, a headgate island and a 110-foot wide diversion overflow channel. Drop structure #2, which is downstream of drop structure #1, consists of a 60-foot wide play wave and a 75-foot wide aquatic organism passage. Additional improvements downstream of drop structure #2 include a barb on both the south (river left) and a deflector on the north banks (river right). The southern barb consists of terraced seating and serves to protect the City's new boat ramp, providing slower water for recreationists behind the barb. Similarly the north bank deflector is designed to create slower water along the north shore thereby protecting the existing beaches established along the shoreline of West Broadway Island whiles providing a swimming and viewing area.

Each whitewater drop structure will be constructed with a hydraulic drop. The drop structures will consist of native stone boulders with the voids between the boulders filled with grout. The drop structures will be oriented to direct flow towards the center of the river away from the boat ramp and island beaches. The pools following each drop structure will be armored with type H rip rap.

A headgate island will be constructed on the northern edge of drop structure #1. This island will anchor the northern edge of the drop structure to West Broadway Island in addition to ensuring sufficient water levels for the Flynn-Lowney Diversion. The headgate island will be constructed with ungrouted boulders and will be a more stable structure than the irrigation company has used in the past, thereby eliminating the need for regular maintenance as currently occurs. A 110-foot wide diversion overflow channel will be situated as part of this headgate island for high flow scenarios.

A roughened channel with no hydraulic drop known as the aquatic organism passage (AOP) will be situated north of the whitewater play waves and will also serve as a route for novice boater passage. The AOP will be in two sections, each bypassing the two drop structures. Each AOP section will be approximately 75 feet wide and will continue downstream past the whitewater features with a long gradient decline. The AOP channels are terraced to provide hydraulic variation in velocity rates for a given flow rate. Roughening of the channel bottoms is incorporated to provide resting places.

Access to the wave is anticipated to be primarily from the south bank from the Silver Park boat ramp and river trail. The existing concrete slabs lining the sides of the river will be removed and replaced with terraced boulder seating adjacent to each of the drop structures. These terraced areas will incorporate planting pockets for trees and native vegetation. A 8foot wide concrete ADA-compliant trail will connect the adjacent gravel river trail to each of the drop structures. These concrete ADA-compliant trails will have a maximum slope of 5% and will terminate in a put-in and viewing area. These trails will be located in expected high traffic areas to minimize stream bank disturbance.

The deflector and barb are designed to protect the existing boat ramp and existing beaches along West Broadway Island. These features will be built with similar material to the whitewater drop structures and will extend into the river. The features are located beneath the ordinary high water mark line.

Large random boulders are shown on the plans and are intended to be placed in slower water areas to provide eddies for fish and recreationists. These boulders are to be large enough and located in protected areas where the river will not move them.

Besides installation of new features, the project involves removal of undesirable materials currently located in the river and riparian banks. The riparian banks on the south side of the Clark Fork River includes what appears to be one layer concrete slab debris. The current river velocities along the south bank are high due to the location of the channel thalweg along the bank and it is presumed that the concrete slabs were placed to prevent soil erosion. The proposed project adjusts the thalweg of the channel away from the south bank towards the center of the channel. With the reduction of velocities along the bank, it is proposed that the concrete jersey barriers. The presence of rebar has also been reported. The proposed project will remove all identified rebar, metal, concrete jersey barriers and other found material and replace with appropriately sized rock with grout for stability.

Construction will occur between September and February to ensure low flows and minimal impact to the irrigation flows of the adjacent Flynn-Lowney irrigation system. A two stage cofferdam will be constructed splitting the project into south and north halves. The stage one cofferdam will isolate the south half of the project from the river, allowing dry construction of the south shore improvements and the whitewater play waves. Final design of the cofferdam is not available yet but it is expected that the cofferdam will consist of large boulders stacked upon each other. These boulders are anticipated to generate minimal turbidity. Once the boulder wall is completed and the interior of the work has been isolated, finer material will be added to the dry side of the cofferdam to reduce cofferdam leakage. Groundwater and water that penetrates the coffer dam will be collected and pumped to settling ponds before being discharged to the river at the downstream end of the project. Hydraulic models show that the size of the river area to the north is sufficient to pass winter flows. Following construction of the southern half, the river will be flipped to the southern side and the north half will be isolated using a similar style cofferdam.

Structure	Fill Area (SF)	Cobble Base Volume (CY)	Type H Rip Rap (CY)	Boulder Volume (CY)	Grout/ Concrete Volume (CY)	Total Volume (CY)
Structure 1	19,868	0	460	750	405	1,615
Structure 2	16,895	0	365	640	340	1,345
Diversion Overflow	13,907	260	N/A	810	545	1,615
New Deflector	3,886	N/A	N/A	380	N/A	380

#### Fill Material Below the Ordinary High Water Mark

A location map and drawings are attached to this notice. A copy of this public notice and a complete set of drawings is also available at http://www.nwo.usace.army.mil/html/od-rmt/pn/pn.html.

**Location:** The proposed project is located in the city of Missoula on the Clark Fork River at the Flynn-Lowney Diversion between the Orange Street Bridge and the California Street Pedestrian Bridge, Section 21, Township, 13 North, Range 19 West, Missoula County, Montana (Lat/Lon: 46.8757/-114.00626).

**Purpose:** The applicants' project purpose is to replace an existing irrigation diversion structure (Flynn-Lowney Diversion) and to provide recreational opportunities in the Clark Fork River. The project also provides Americans with Disabilities Act (ADA) - compliant access to the river and expands recreational opportunities to those with accessibility needs. The existing structure is a rip-rap rock weir that has been reinforced with scrap metal, rebar, and jersey barriers which has resulted in an unsafe structure. The in-channel debris will be removed and the diversion will be reconstructed into a safer, more stable structure that will continue to serve water rights users. The proposed project, the Max Wave, will also accommodate in-stream drop structures, known as whitewater play waves, which will provide recreational and spectator opportunities in downtown Missoula. A deflector will be built to slow velocities near the existing take-out near Silver Park. Terraces will be incorporated along the bank to provide access for spectators. An aquatic organism passage channel has been incorporated to the design.

**Mitigation:** Avoidance, Minimization and Compensation. The applicant is proposing to avoid and minimize impacts to the Clark Fork River by undertaking construction activities on site in the low flow conditions and utilization of construction BMPs and has stated in the application that rock and grouted features have been minimized. The project is located within the service area of the Upper Clark Fork Stream Mitigation Bank. The applicants are proposing on-site permittee responsible compensatory stream mitigation by augmenting existing vegetation on approximately 4.4 acres of West Broadway Island (WBI) which is owned by the city of Missoula and through the incorporation of a fish screen onto the Flynn-Lowney headgate. The Corps will evaluate the proposed mitigation plan to ensure compliance with 33 CFR Part 332.

Fill material in wetlands is limited to less than 0.1 acre (3,440 square feet) and compensatory wetland mitigation will not be required.

**401 Water Quality Certification:** The Montana Department of Environmental Quality, 1520 East 6th Avenue, PO Box 200901, Helena, Montana 59620-0901 will review the proposed project with the intent to certify in accordance with the provisions of Section 401 of the Clean Water Act. The certification, if issued, will express the State's opinion that the operations undertaken by the applicant will not result in a violation of applicable water quality standards. The Montana Department of Environmental Quality hereby incorporates this public notice as its own public notice and procedures by reference thereto.

**Cultural Resources:** The Corps is lead federal agency for determining compliance with Section 106 of the National Historic Preservation Act for this project and will complete a cultural resource review of the project site in conjunction with their obligations under Section 106 and the National Environmental Policy Act. The Omaha District is currently reviewing information in order to determine the presence of eligible properties and effect determinations.

**Threatened / Endangered Species:** The Corps is the lead federal agency for determining compliance with the Endangered Species Act. Listed species for Missoula County include: Grizzly Bear, Water Howellia, Canada Lynx, Bull Trout, Yellow-billed cuckoo, and Whitebark Pine. The project area does not contain suitable habitat for the Grizzly Bear, Water Howellia, Canada Lynx, and Yellow-billed cuckoo. The Corps has made a no effect determination for Grizzly Bear, Water Howellia, Canada Lynx, and Yellow-billed cuckoo. The Corps has made a no effect determination for Grizzly Bear, Water Howellia, Canada Lynx, and Yellow-billed cuckoo. The Clark Fork River is designated critical habitat for bull trout. The Corps will consult with the USFWS for effects to bull trout and bull trout critical habitat. ESA consultation will be completed prior to the Corps permit decision.

**Evaluation Factors**: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposed activity must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. In addition, the evaluation of the impact of work on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act (40 C.F.R.; Part 230).

**Comments:** The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. All public notice comments will be considered public information and will be subject to review by the applicant.

Any person may request, in writing and within the comment period specified in this notice, that a public hearing be held for the purpose of gathering additional information. Requests for public hearings must be identified as such and shall state specifically the reasons for holding a public hearing and what additional information would be obtained. The request must be submitted to the U.S. Army Corps of Engineers, 1600 North Avenue West, Suite 105, Missoula, Montana. If it is decided that additional information is required and that a public hearing should be held, interested parties will be notified of the date, time and location.

Any interested party (particularly officials of any town, city, county, state, or Federal agency; Indian tribe; or local association whose interests may be affected by the work) is invited to submit to this office written facts, arguments, or objections on or before the expiration date listed on the front of this notice. Any agency or individual having an objection to the work should specifically identify it as an objection with clear and specific reasons. Comments, both favorable and unfavorable, will be accepted, made a part of the record and will receive full consideration in subsequent actions on this application. All replies to the public notice should be addressed to the U.S. Army Corps of Engineers, 1600 North Avenue West, Suite 105, Missoula, Montana, 59801. Please reference the Application Number found on the first page of this notice in any correspondence. Christina Schroeder, telephone number (406) 541-4845, extension 322, may be contacted for additional information. You may also fax your comments to (406) 541-4849, or email them to: Christina.L.Schroeder@usace.army.mil

Comments postmarked after the expiration date of this public notice, or received by fax or e-mail after the expiration date, will not be considered. Comments left on our voicemail system will not be considered.

**Statutory Authorities:** A permit, if issued, will be under the provisions of Section 404 of the Clean Water Act.

# MAX WAVE AT THE FLYNN-LOWNEY DIVERSION WHITEWATER AND RIPARIAN IMPROVEMENTS CLARK FORK RIVER, MISSOULA, MONTANA



FILE NO.	
APPLICANT	CITY OF MISSOULA
LOCATION	CLARK FORK RIVER, MISSOULA, MONTANA
	MISSOULA COUNTY
DATE	JAN II, 2018 DATE CREATED: SEP 2014
SHEET	I OF 35 PREVIOUS REVISION: 9/14/1

PERMIT SET - NOT FOR CONSTRUCTION

ENGINEER:

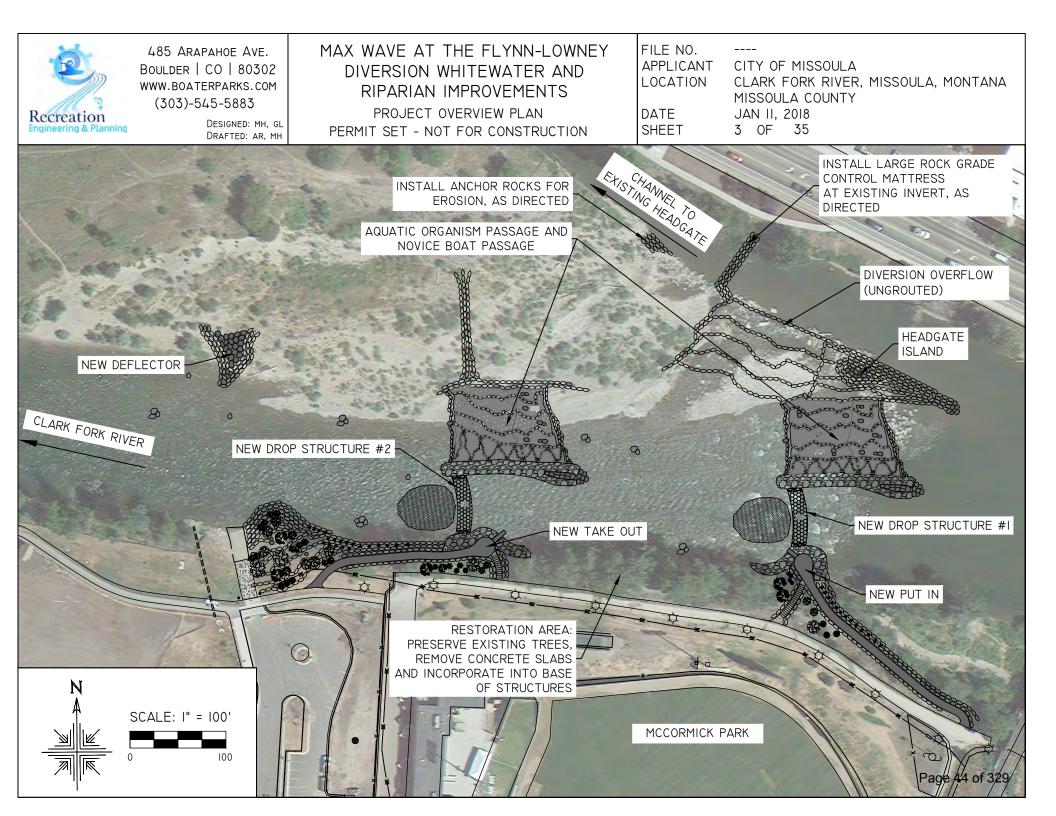


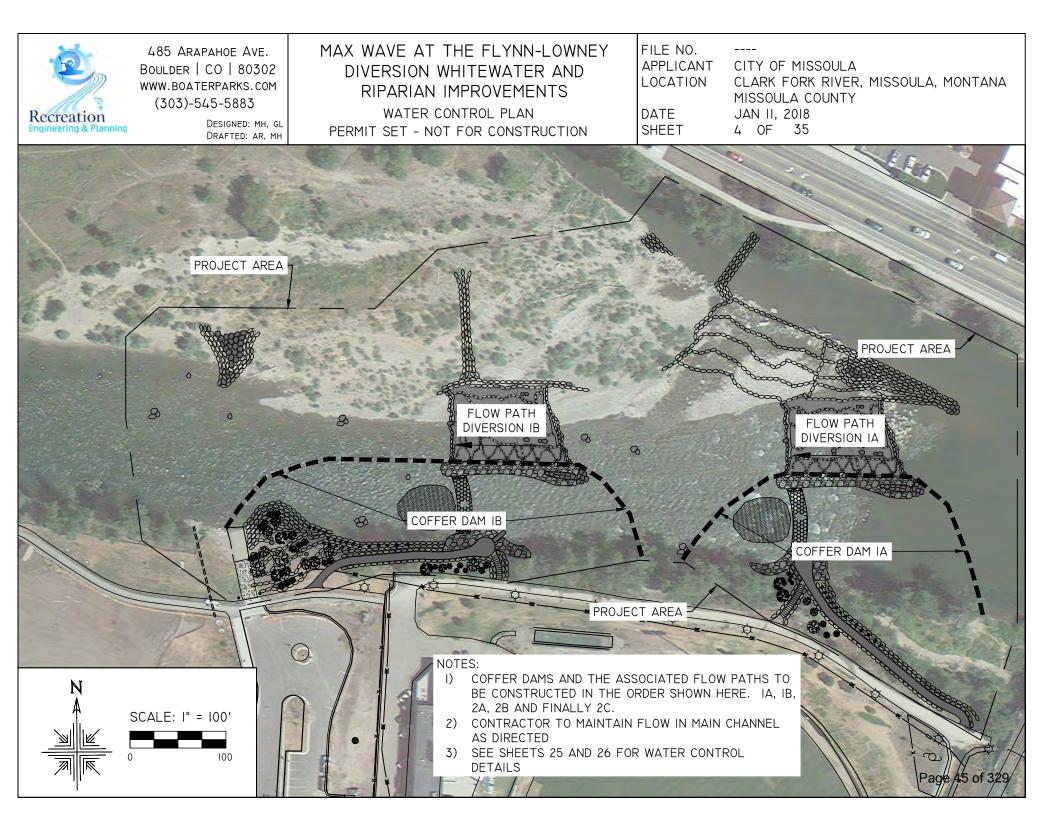
GARY M. LACY, P.E. RECREATION ENGINEERING AND PLANNING 485 ARAPAHOE AVE. BOULDER, CO 80302 303-545-5883 INFO@BOATERPARKS.COM

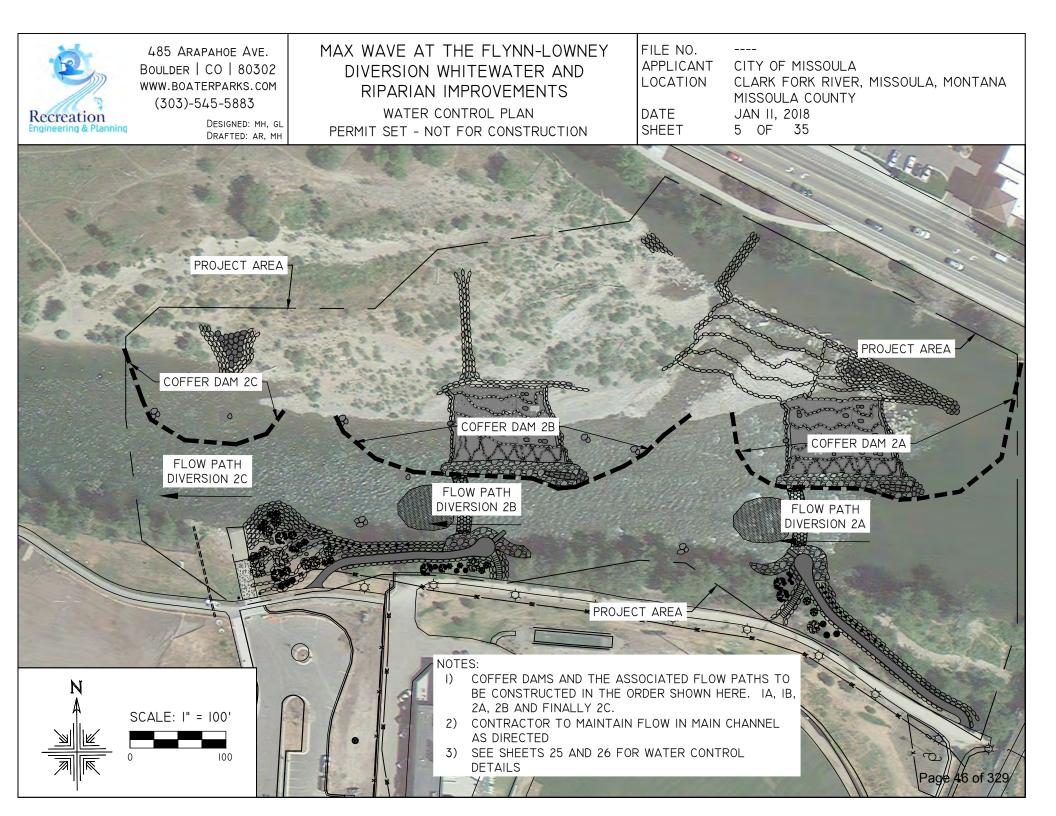
#### TABLE OF CONTENTS

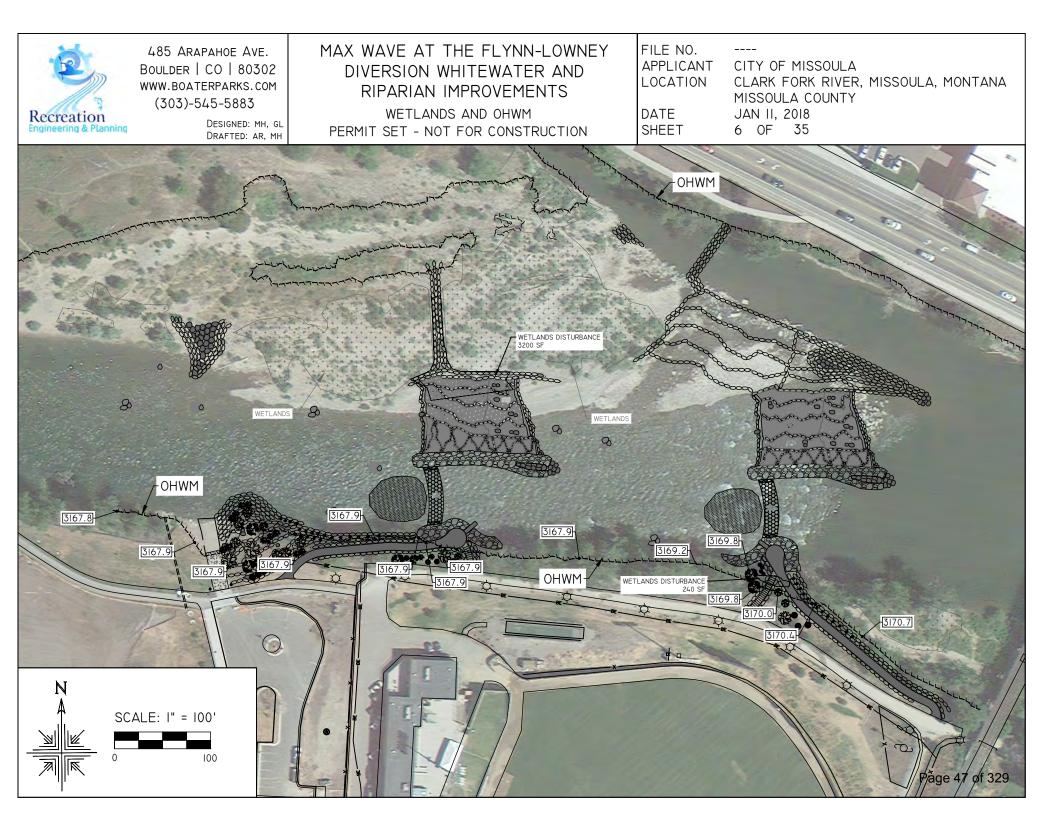
- I. PROJECT LOCATION MAP AND TABLE OF CONTENTS
- 2. PROJECT LEGEND AND NOTES
- 3. PROJECT OVERVIEW PLAN
- 4-5. WATER CONTROL PLAN
- 6. WETLANDS AND OHWM
- 7. STRUCTURE #1 PLAN
- 8-II. STRUCTURE #1 SECTIONS
- 12. STRUCTURE #2 PLAN
- 13-15. STRUCTURE #2 SECTIONS
- 16. LONGITUDINAL PROFILE
- 17-27. TYPICAL DETAILS
- 28-32. SPECIFICATIONS
- 33-35. LANDSCAPING DETAILS

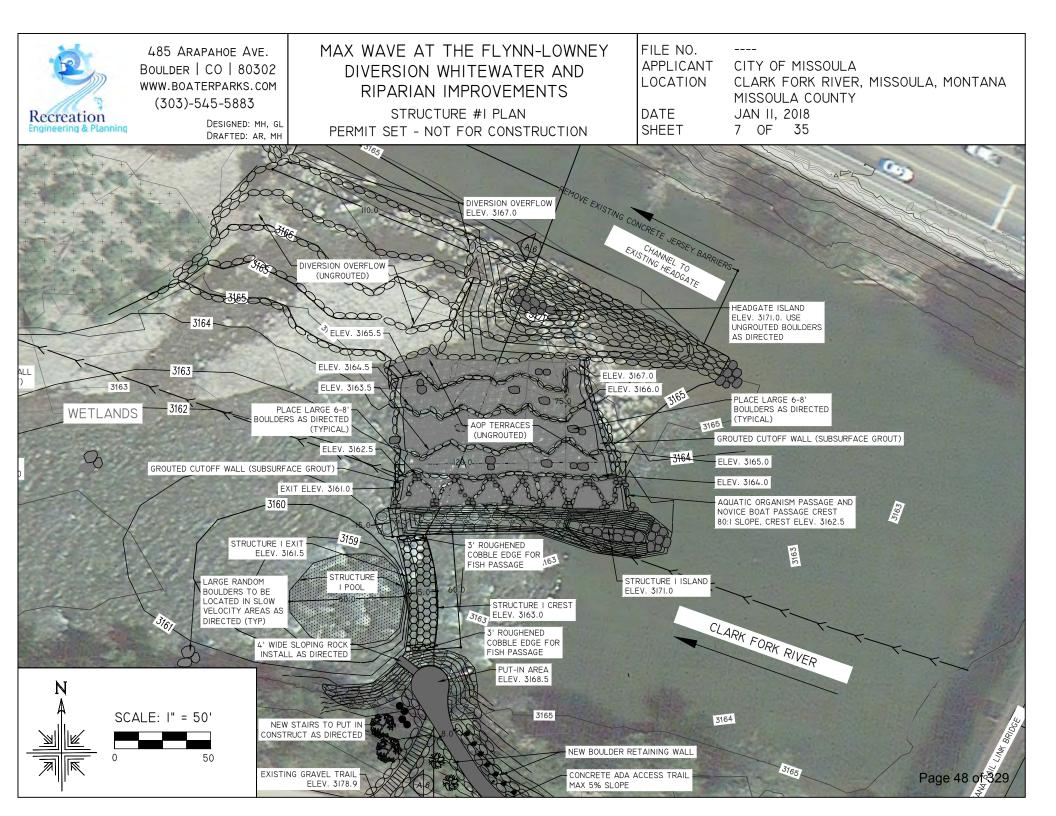
	)   80302 PARKS.COM	MAX WAVE AT THE FLYNN-LO DIVERSION WHITEWATER A RIPARIAN IMPROVEMENT PROJECT LEGEND AND NOTES PERMIT SET - NOT FOR CONSTRUC	AND S	FILE NO. APPLICANT LOCATION DATE SHEET	 CITY OF MISSOULA CLARK FORK RIVER, MIS MISSOULA COUNTY JAN II, 2018 2 OF 35	SSOULA, MONTANA
LEGEND		GENERA	L NOTES	<u>S</u>		
BOULDER TERRACING OR RETAINING WALLS (UNGROUTED) STRUCTURE LOW FLOW (GROUTED) AQUATIC ORGANISM PASSAGE		2. ROCK FILL PURPOSES. NO 3. AN REP R STRUCTURES A 4. ALL STRUC	HATCH AND V T TO SCALE. EPRESENTATIV AND TERRACIN TURE CREST A	'E SHALL BE PRE G. AND EXIT ELEVA	EA LEVEL. GES SHOWN FOR ILLUSTRATIV ESENT DURING CONSTRUCTION TIONS ARE APPROXIMATE AN E PRIOR TO CONSTRUCTION.	I OF ALL
(SUB-SURFACE GROUT) AQUATIC ORGANISM TERRACES (UNGROUTED)		THALWEG AND DIRECTION OF FLOW	\ \ \ \ \ \			
GROUTED WING AND ISLAND (GROUT HELD BACK 6")		EXISTING CONTOUR LINES		Ľ	SELECT ANDSCAPING BOULDER.	8
GROUTED CUTOFF WALL (SUB-SURFACE GROUT)		ORDINARY HIGH WATER MARK (OHWM)		0.7	TREE PLANTING (SEE DETAILS)	
STRUCTURE POOL		WETLANDS	$\begin{array}{c} + & + & + & + & + & + & + & + & + & + $		SHRUB PLANTING (SEE DETAILS)	***
					WILLOW PLANTING (SEE DETAILS)	

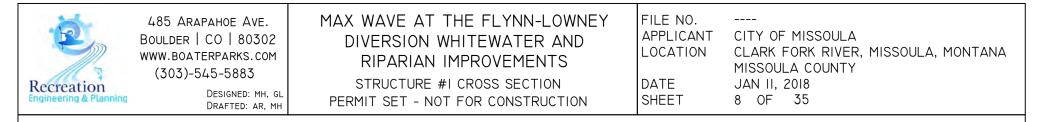


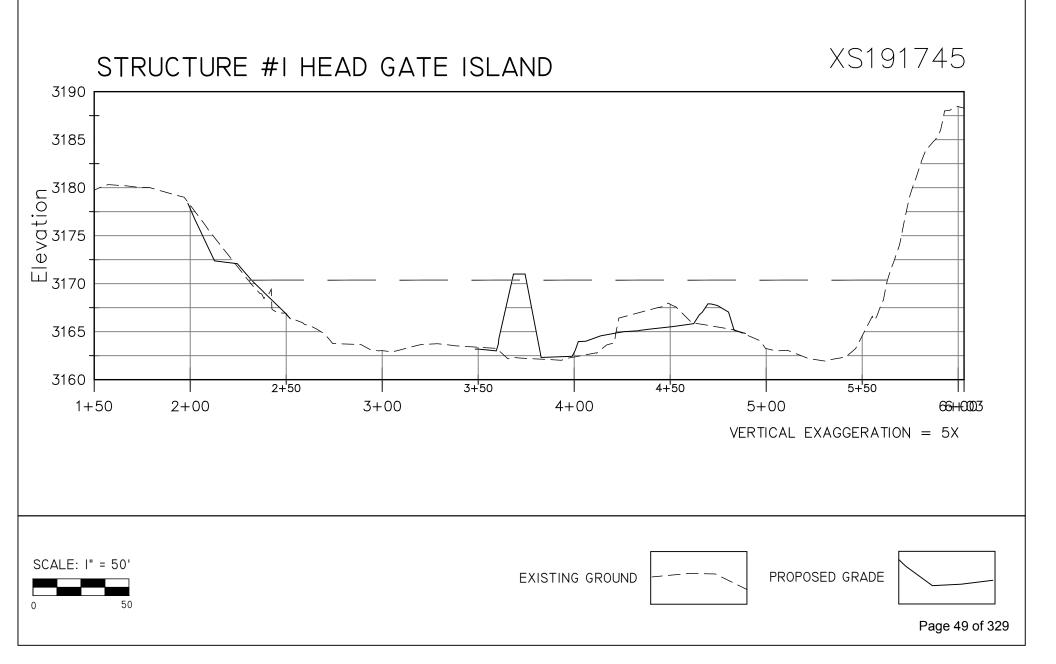


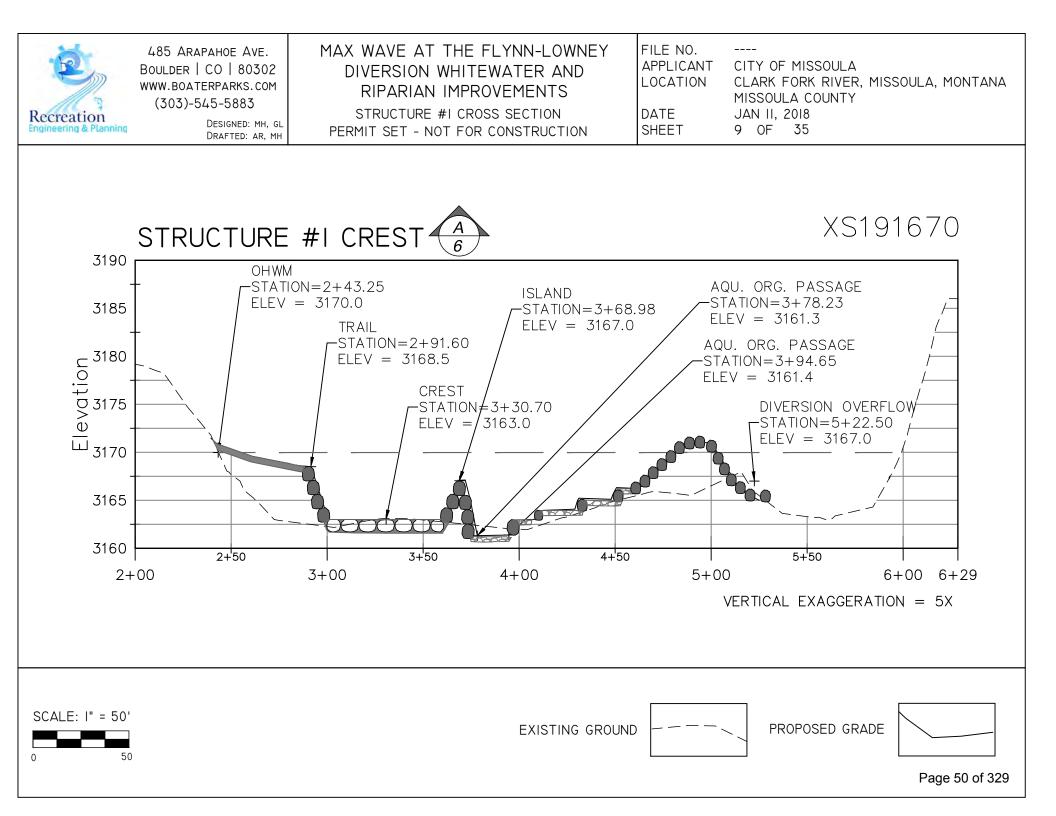




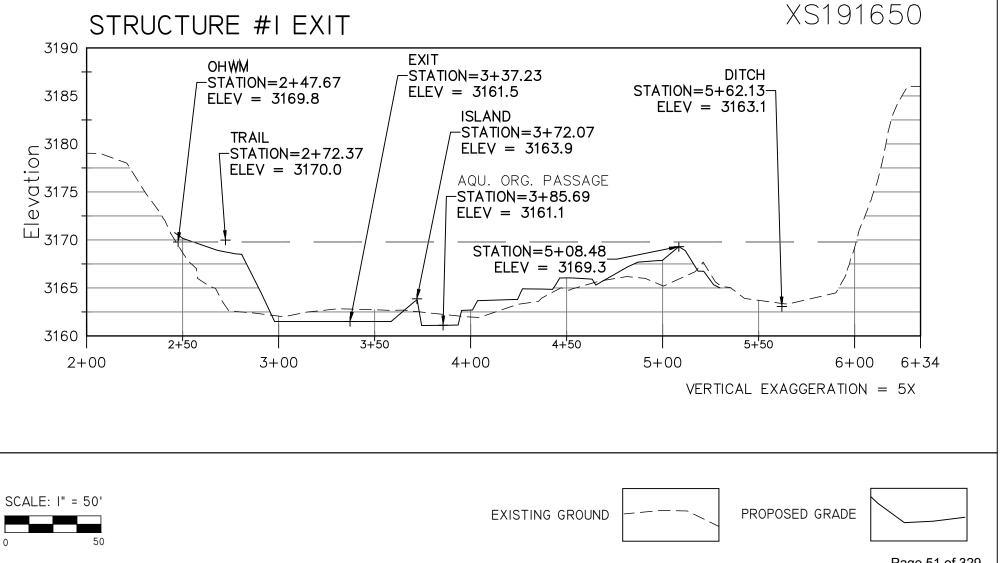








Recreation Engineering & Planning	485 ARAPAHOE AVE. BOULDER   CO   80302 WWW.BOATERPARKS.COM (303)-545-5883 DESIGNED: MH, GL DRAFTED: AR, MH	MAX WAVE AT THE FLYNN-LOWNEY DIVERSION WHITEWATER AND RIPARIAN IMPROVEMENTS STRUCTURE #I CROSS SECTION PERMIT SET - NOT FOR CONSTRUCTION	FILE NO. APPLICANT LOCATION DATE SHEET	 CITY OF MISSOULA CLARK FORK RIVER, MISSOULA, MONTANA MISSOULA COUNTY JAN II, 2018 IO OF 35
--------------------------------------	---	--	--	--

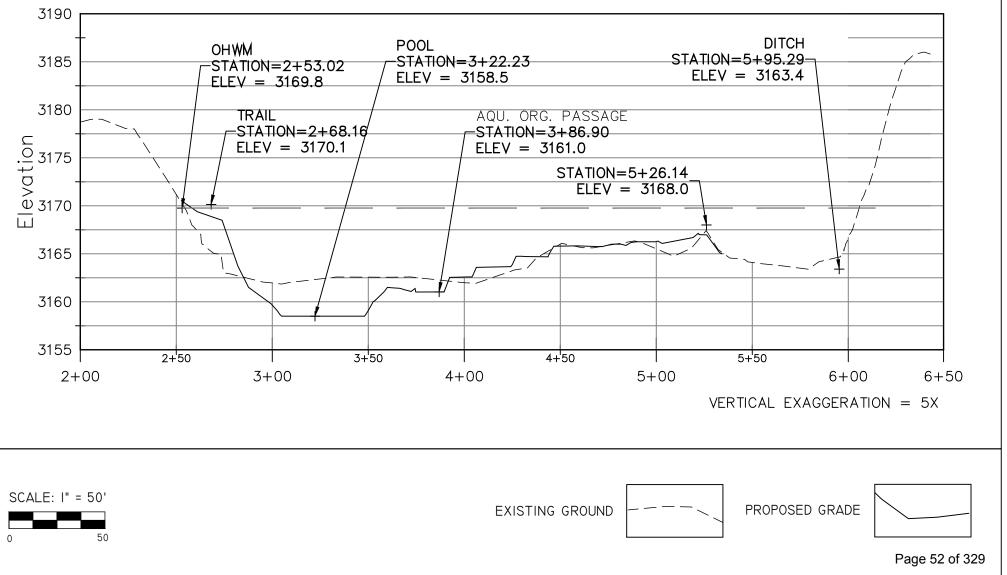


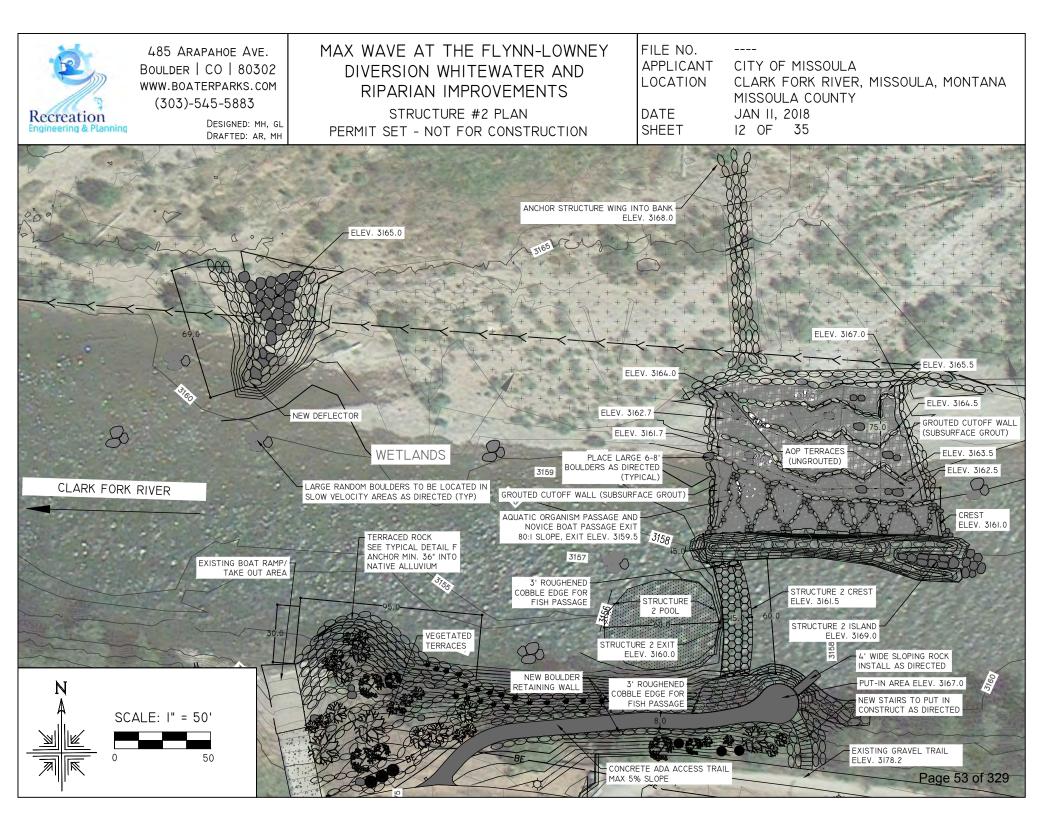
Page 51 of 329

Recreation Engineering & Planning	485 ARAPAHOE AVE. BOULDER   CO   80302 WWW.BOATERPARKS.COM (303)-545-5883 Designed: mh, gl Drafted: ar, mh	DIVERSION WHITEWATER AND RIPARIAN IMPROVEMENTS STRUCTURE #I CROSS SECTION	FILE NO. APPLICANT LOCATION DATE SHEET	 CITY OF MISSOULA CLARK FORK RIVER, MISSOULA, MONTANA MISSOULA COUNTY JAN II, 2018 II OF 35
--------------------------------------	---	---	--	--

XS191643

## STRUCTURE #I POOL

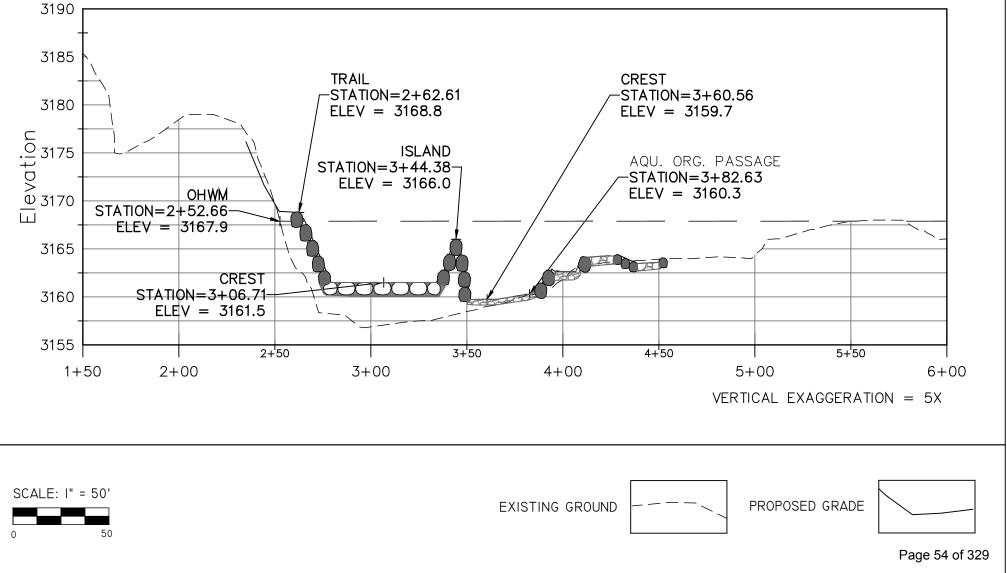






# STRUCTURE #2 CREST

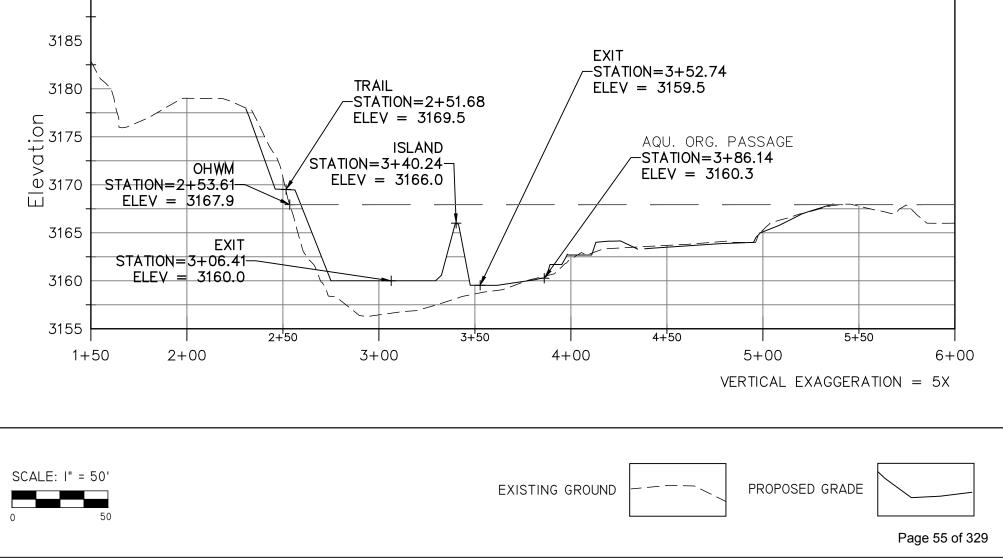
XS191304



Recreation Engineering & Planning	485 ARAPAHOE AVE. BOULDER   CO   80302 WWW.BOATERPARKS.COM (303)-545-5883 Designed: mh, gl Drafted: ar, mh	MAX WAVE AT THE FLYNN-LOWNEY DIVERSION WHITEWATER AND RIPARIAN IMPROVEMENTS STRUCTURE #2 CROSS SECTION PERMIT SET - NOT FOR CONSTRUCTION	FILE NO. APPLICANT LOCATION DATE SHEET	 CITY OF MISSOULA CLARK FORK RIVER, MISSOULA, MONTANA MISSOULA COUNTY JAN II, 2018 I4 OF 35
--------------------------------------	---	--	--	--

# STRUCTURE #2 EXIT

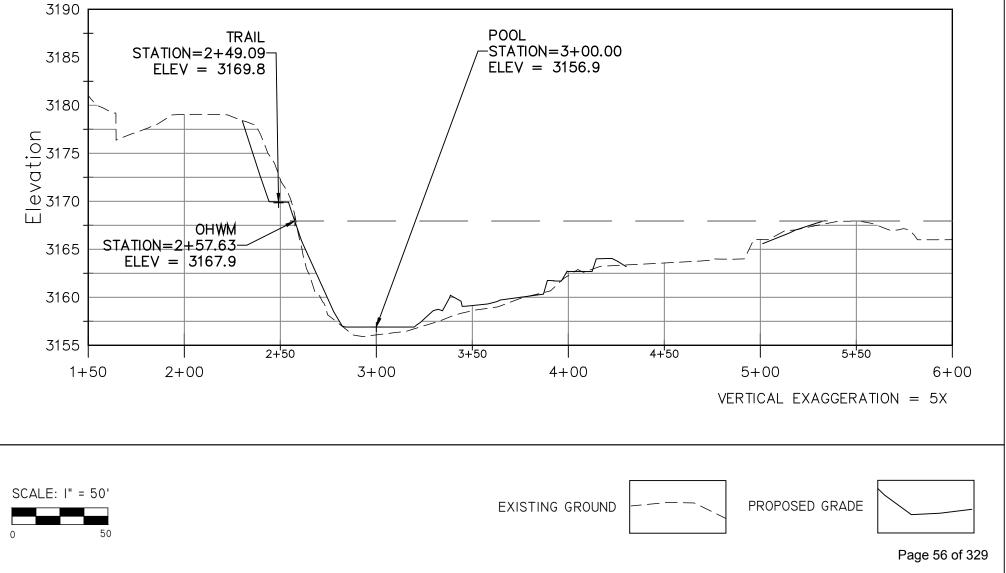
XS191287

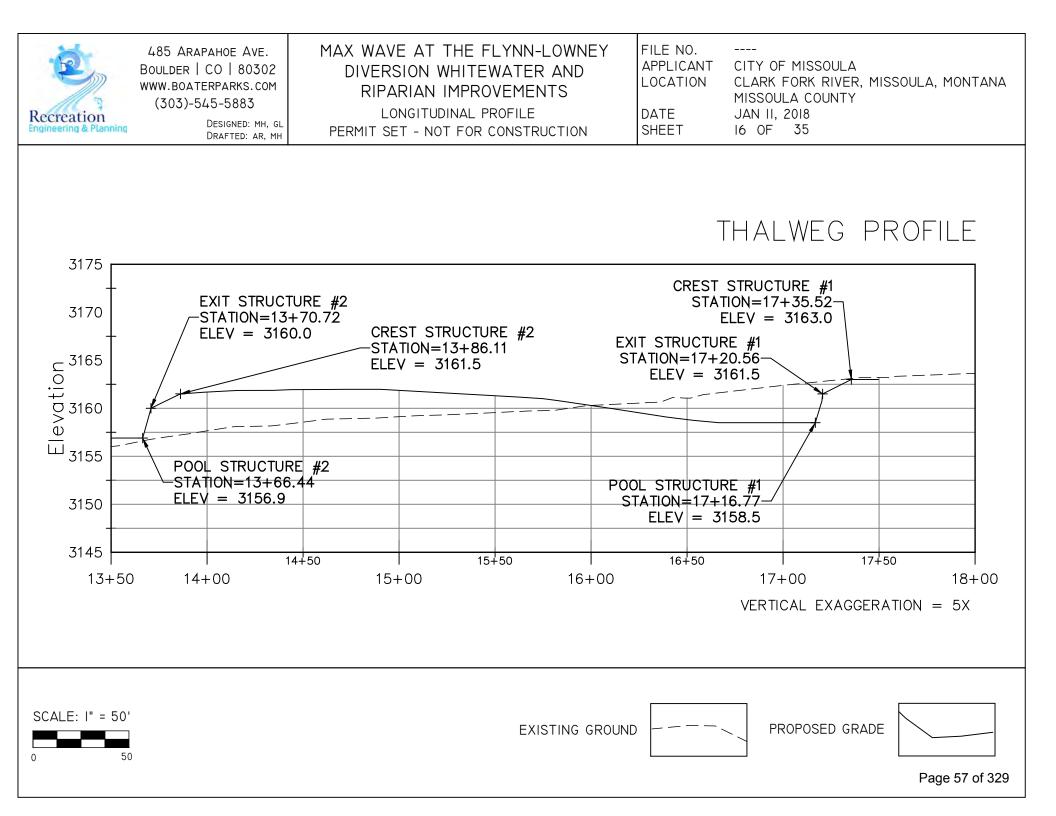


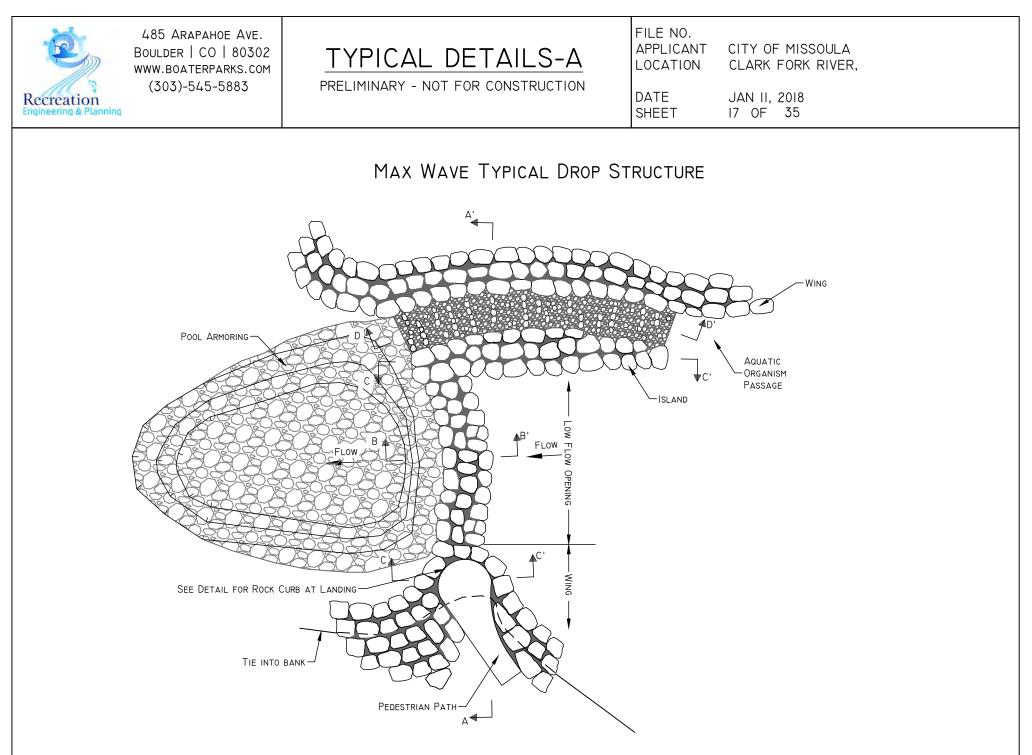
Recreation Engineering & Planning	485 ARAPAHOE AVE. BOULDER   CO   80302 WWW.BOATERPARKS.COM (303)-545-5883 Designed: mh, gl Drafted: ar, mh	MAX WAVE AT THE FLYNN-LOWNEY DIVERSION WHITEWATER AND RIPARIAN IMPROVEMENTS STRUCTURE #2 CROSS SECTION PERMIT SET - NOT FOR CONSTRUCTION	FILE NO. APPLICANT LOCATION DATE SHEET	 CITY OF MISSOULA CLARK FORK RIVER, MISSOULA, MONTANA MISSOULA COUNTY JAN II, 2018 IS OF 35
--------------------------------------	---	--	--	--









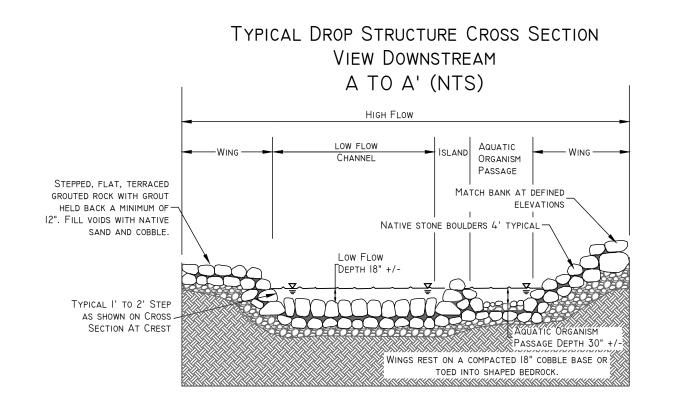


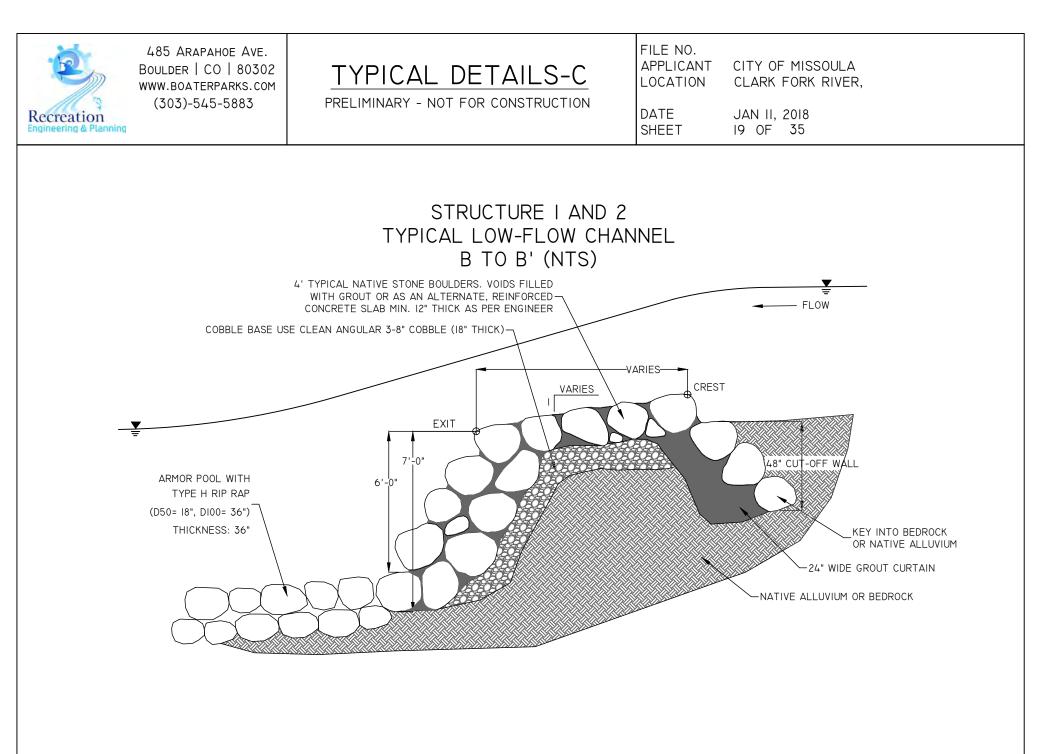




PRELIMINARY - NOT FOR CONSTRUCTION

FILE NO. APPLICANT LOCATION	CITY OF MISSOULA CLARK FORK RIVER,
DATE SHEET	JAN II, 2018 18 OF 35



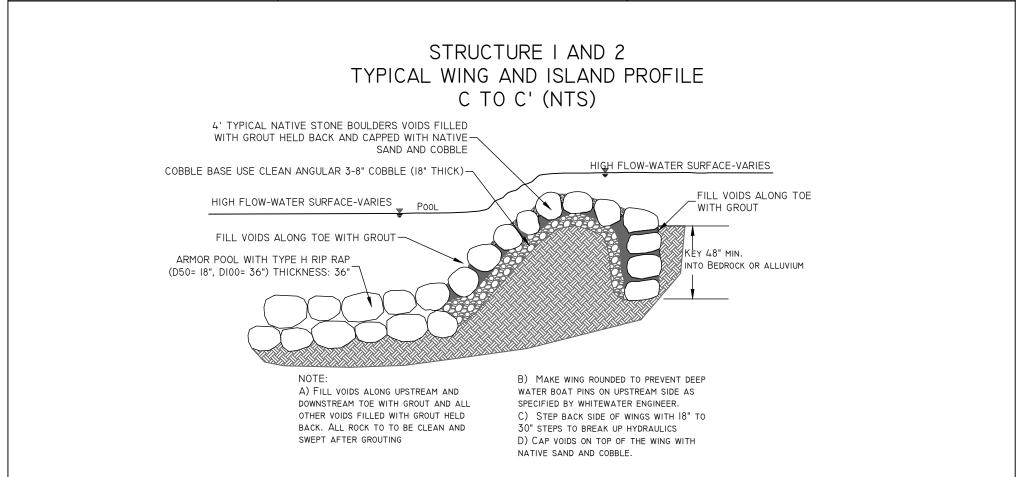


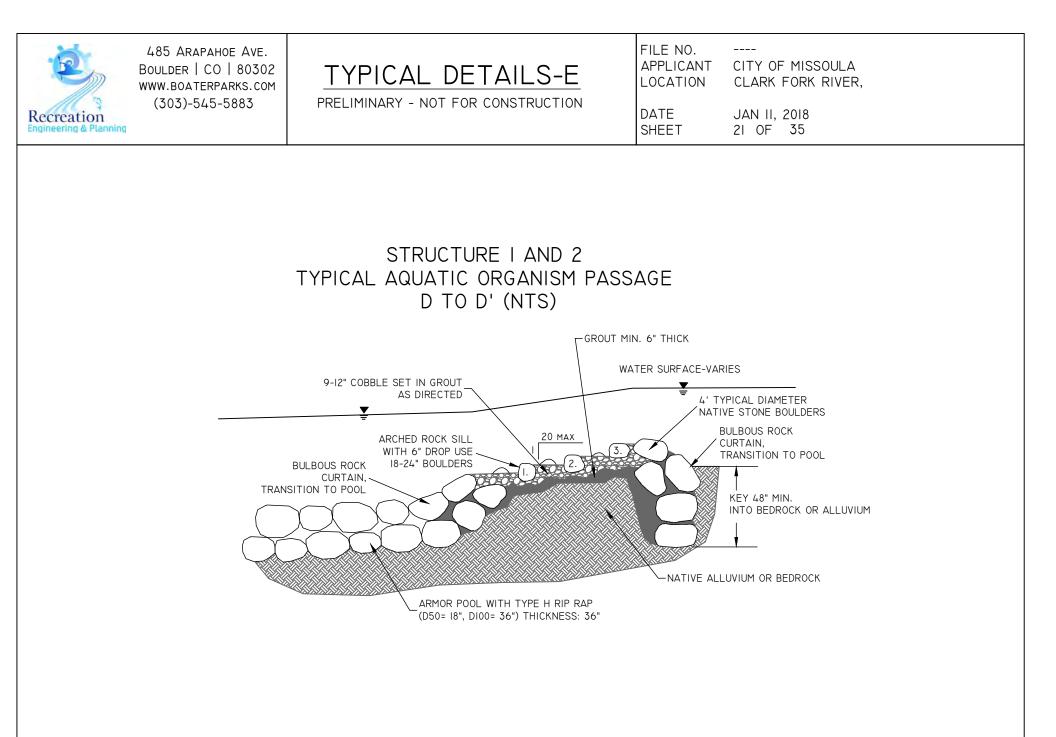


## TYPICAL DETAILS-D

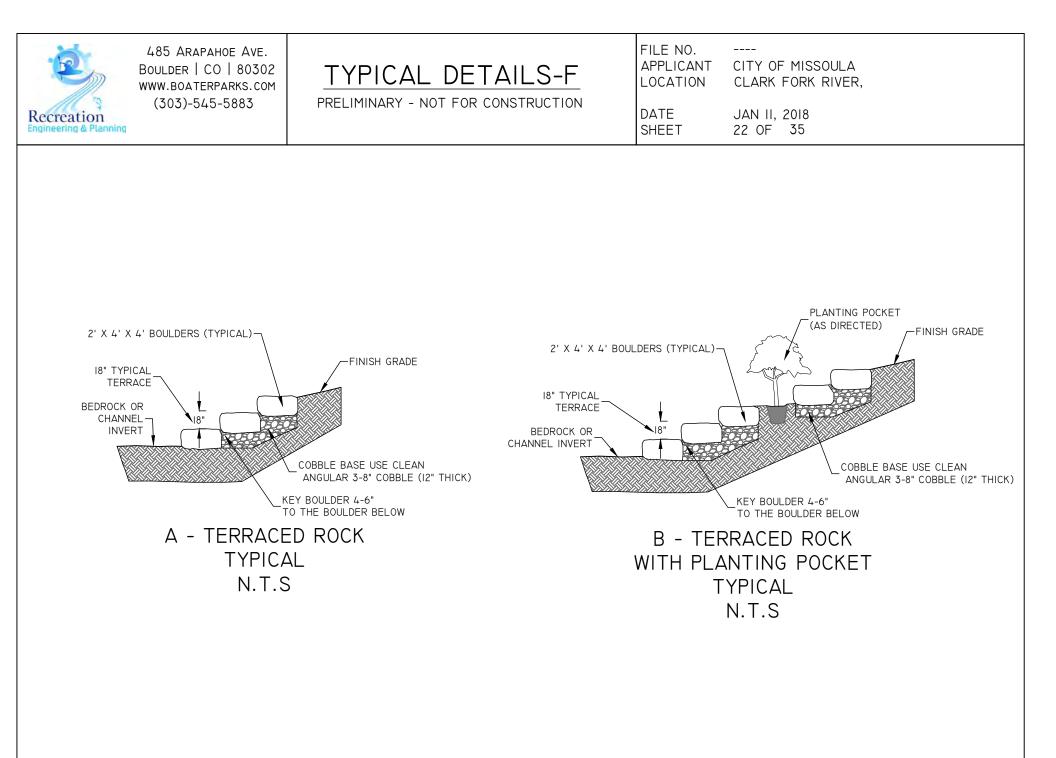
PRELIMINARY - NOT FOR CONSTRUCTION

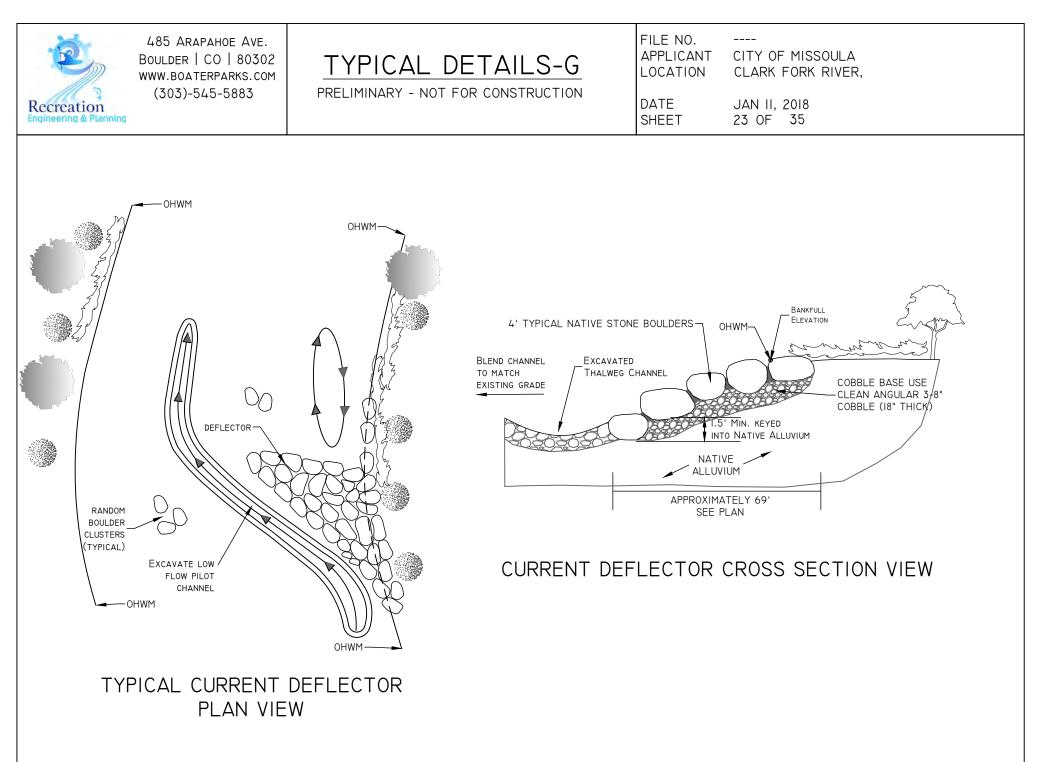
FILE NO. APPLICANT LOCATION	CITY OF MISSOULA CLARK FORK RIVER,
DATE SHEET	JAN II, 2018 20 OF 35





Page 62 of 329



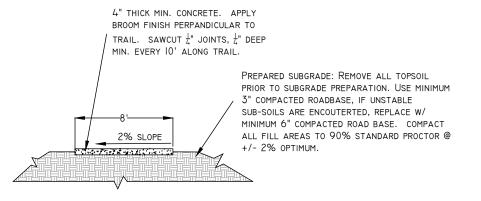




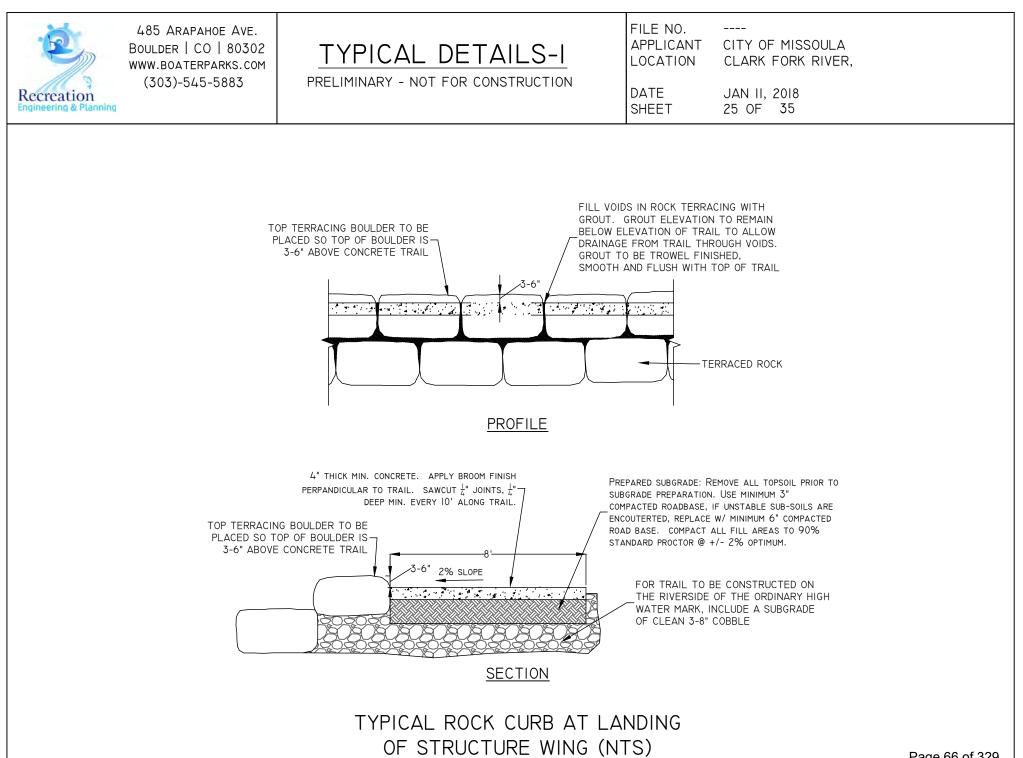


PRELIMINARY - NOT FOR CONSTRUCTION

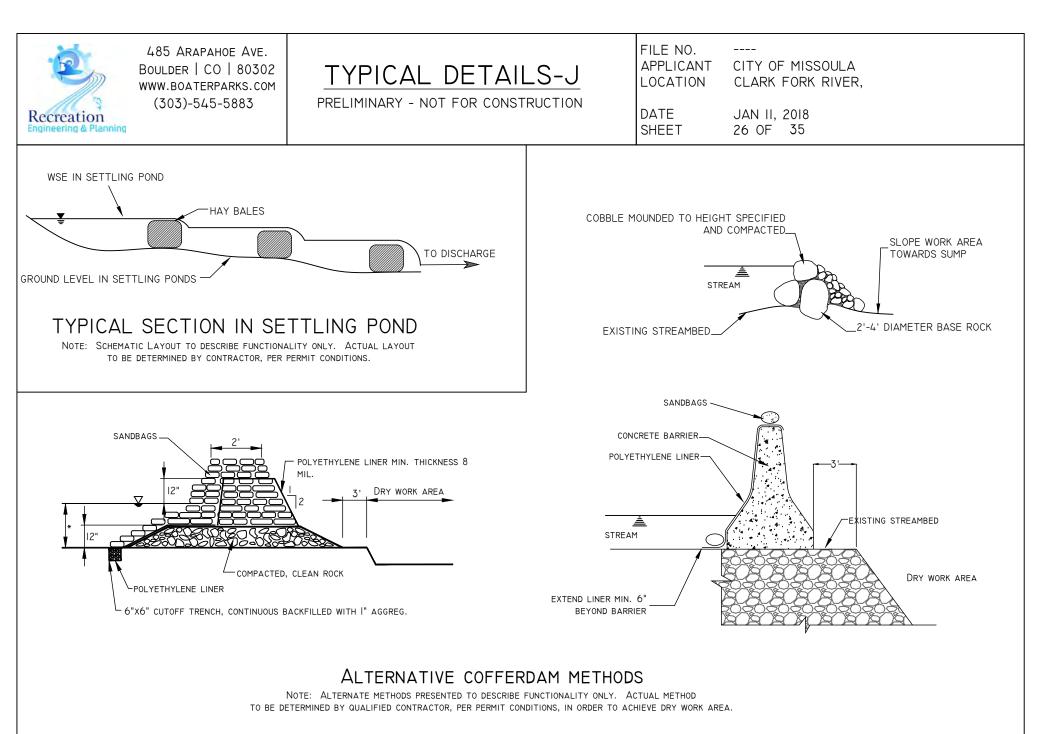
FILE NO. ----APPLICANT CITY OF MISSOULA LOCATION CLARK FORK RIVER, DATE JAN II, 2018 SHEET 24 OF 35



### TYPICAL CONCRETE TRAIL SECTION



Page 66 of 329



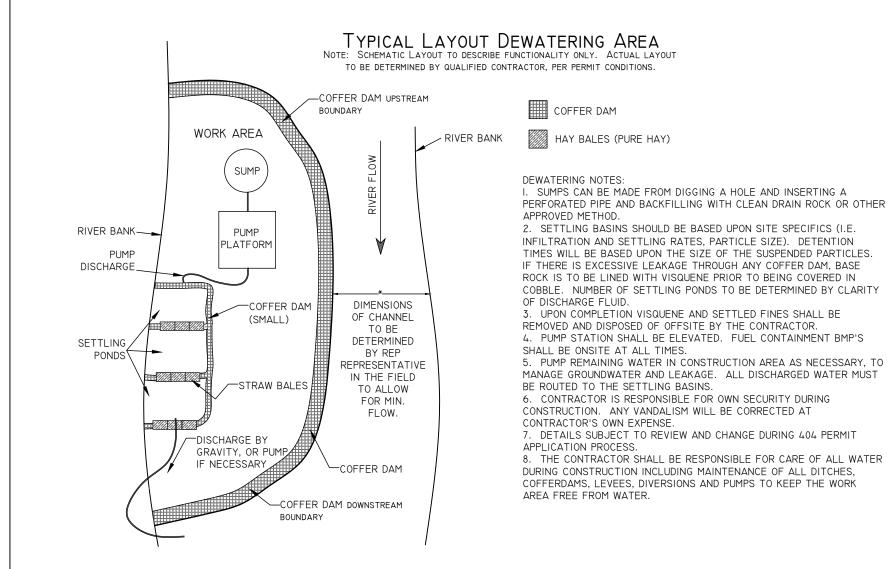
Page 67 of 329





PRELIMINARY - NOT FOR CONSTRUCTION

FILE NO. APPLICANT LOCATION	 CITY OF MISSOULA CLARK FORK RIVER,
DATE SHEET	JAN II, 2018 27 OF 35



Page 038 of 829NDI



SPECIFICATIONS

PRELIMINARY - NOT FOR CONSTRUCTION

#### FILE NO. \_\_\_\_ APPLICANT CITY OF MISSOULA LOCATION CLARK FORK RIVER, DATE JAN II. 2018 28 OF 35

SHEET

GENERAL NOTES

- ENGINEERS OVERSIGHT 1. THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY, AND IS NOT
- LIABLE FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY OR FOR PROBLEMS WHICH ARISE FROM OTHERS OR OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS.
- 2. ALL ELEVATIONS, DIMENSIONS, ALIGNMENTS AND ORIENTATION OF ALL ELEMENTS SHOWN IN THE PLANS MUST BE APPROVED BY THE REP ENGINEER OR REP ENGINEER'S REPRESENTATIVE (ENGINEER).
- 3. WORK SHALL NOT COMMENCE UNTIL AFTER THE DATE OF THE ON-SITE PRE-CONSTRUCTION MEETING WHICH WILL BE ATTENDED BY REPRESENTATIVES OF THE PROJECT OWNER, ENGINEER, CONTRACTOR AND ANY SUB-CONTRACTORS. IN THE EVENT THAT WORK DOES NOT BEGIN IMMEDIATELY FOLLOWING THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL PROVIDE REPRESENTATIVES OF THE PROJECT OWNER, ENGINEER, ANY SUB-CONTRACTORS, AND RELEVANT AGENCIES NOTED IN THE PERMITS, TWO WEEKS NOTICE BEFORE CONSTRUCTION COMMENCES.
- 4. ALL CONSTRUCTION WORK SHALL CONFORM TO THE CITY OF MISSOULA DESIGN AND SPECIFICATIONS. UTILITY CONSTRUCTION SHALL CONFORM TO THE AMERICAN PUBLIC WORKS ASSOCIATION, PUBLIC WORKS CONSTRUCTION MANUAL, LATEST EDITION. STANDARD SPECIFICATIONS OF MATERIALS FOR AGGREGATES AND SOIL AGGREGATE SUB-BASE. BASE AND SURFACE COURSES SHALL BE GOVERNED BY AASHTO DESIGNATION M147-65 (1993) OR LATEST REVISION. ALL CONSTRUCTION SHALL CONFORM TO CITY AND COUNTY STANDARDS AND SPECIFICATIONS AS APPLICABLE.
- 5. WHENEVER THE INCLUDED DRAWINGS ARE FOUND TO BE INCONSISTENT WITH ANY OTHER RESOLUTION, ORDINANCE, CODE, REGULATION, OR OTHER STANDARDS REFERENCED, THE ENACTMENT IMPOSING THE MORE RESTRICTIVE STANDARDS OR REQUIREMENTS SHALL CONTROL
- 6. THE CONTRACTOR SHALL NOT COMMENCE CONSTRUCTION WITHOUT CONSTRUCTION PLAN APPROVAL BY ALL RELEVANT AGENCIES. A COPY OF THE APPROVED PLANS SHALL BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES DURING WORKING HOURS.
- 7. THE ENGINEER IS TO BE NOTIFIED PRIOR TO ANY PLAN CHANGES OR ON-SITE DESIGN MODIFICATIONS. ALL PLAN CHANGES MUST BE APPROVED BY THE ENGINEER.
- 8. ALL EXISTING TOPOGRAPHIC SURVEY DATA SHOWN ON THESE PLANS HAS BEEN OBTAINED AND CERTIFIED BY OTHERS. THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THIS TOPOGRAPHIC INFORMATION, AND MAKES NO REPRESENTATION PERTAINING THERETO AND THEREFORE ASSUMES NO RESPONSIBILITY OR LIABILITY.
- 9. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS TO THE CONSTRUCTION LIMITS OF THE PROJECT AND IN NO WAY SHALL ENCROACHMENT OCCUR ONTO ADJACENT PROPERTIES UNLESS LEGAL EASEMENTS ARE OBTAINED. ALL FILL AND CUT SLOPES SHALL BE SETBACK FROM THE PROPERTY LINE IN ACCORDANCE WITH CHAPTER 70 OF THE UNIFORM BUILDING CODE. THE CONTRACTOR WILL BE HELD. RESPONSIBLE FOR ANY AGREEMENTS NECESSARY OR DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO PUBLIC OR PRIVATE PROPERTY, INCLUDING UTILITIES.

#### SURVEY

- 1. CONSTRUCTION SURVEY TO BE PROVIDED BY THE OWNER.
- 2. THE OWNER'S SURVEYOR SHALL VERIFY PROPOSED GRADES AND INVERT ELEVATIONS, FLOW LINES, ALIGNMENTS, SETBACKS AND TOPOGRAPHY PRIOR TO CONSTRUCTION.
- 3. THE OWNER IS RESPONSIBLE FOR COMPLETING AN AS-BUILT SURVEY. IF REQUESTED, FOLLOWING COMPLETION OF THE FINAL GRADES

UTILITIES

- 1. A MINIMUM OF 12 INCHES OF SEPARATION MUST BE MAINTAINED BETWEEN UTILITY LINES.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES AND SHOULD NOT RELY SOLELY ON THESE CONSTRUCTION PLANS FOR UTILITY LOCATIONS. CONTRACTOR MUST COMPLETE ALL UTILITY LOCATES PRIOR TO CONSTRUCTION. LOCATES CAN BE COORDINATED WITH THE LOCAL UTILITY NOTIFICATION CENTER. DAMAGE TO ANY EXISTING UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR

#### GENERAL ENVIRONMENTAL

- 1. WORK SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL AGENCIES' LAWS, RULES, REGULATIONS, AND PERMITS. ALL WORK SHALL BE SUBJECT TO INSPECTIONS AND SITE INVESTIGATION BY REGULATORY AGENCIES. FAILURE TO COMPLY WITH THESE REGULATIONS IS SUBJECT TO LEGAL ENFORCEMENT ACTION.
- 2. COPIES OF PERMITS OBTAINED BY THE OWNER WILL BE PROVIDED TO THE CONTRACTOR. CONTRACTOR SHALL MAINTAIN COPIES OF ALL PERMITS ON THE SITE AT ALL TIMES. THESE MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: CLEAN WATER ACT SECTION 404 PERMIT FROM THE U.S, ARMY CORPS OF ENGINEERS, SECTION 401 WATER QUALITY CERTIFICATION. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT, FLOODPLAIN DEVELOPMENT PERMIT, ANY APPROPRIATE LAND USE PERMITS, AND ANY RELEVANT CONSTRUCTION STORM WATER PERMITS.
- 3. A PRE-CONSTRUCTION MEETING WITH EQUIPMENT OPERATORS SHALL BE HELD TO DISCUSS THE PROJECT REQUIREMENTS AS THEY RELATE TO ENVIRONMENTAL PERMIT COMPLIANCE.
- 4. ON-SITE CONSTRUCTION REVIEWS SHALL BE CONDUCTED TO IDENTIFY MAINTENANCE NEEDS AND CHRONIC PROBLEMS THAT MAY BE OCCURRING. APPROPRIATE REMEDIAL ACTIONS SHALL BE IMPLEMENTED IN A TIMELY MANNER.
- 5. IF PREVIOUSLY UNKNOWN ARCHEOLOGICAL MATERIALS ARE DISCOVERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL STOP IMMEDIATELY AND THE ENGINEER AND OWNER SHALL BE CONTACTED. THE STATE HISTORIC PRESERVATION OFFICE WILL THEN BE CONTACTED BY THE ENGINEER OR OWNER FOR CONSULTATION.

#### GENERAL CIVIL

1. ALL DRAINAGE PIPE FOR ROADWAY PURPOSES SHALL BE EITHER HIGH DENSITY POLYETHYLENE (HDPE) OR REINFORCED CONCRETE PIPE (RCP) WITH A MINIMUM DIAMETER OF 18-INCHES AND A MINIMUM COVER OF 12-INCHES. THE PIPE SHALL BE ABLE TO WITHSTAND AASHTO HS-20 LOADING WITH TIRE CONTACT AREA DEFINED IN AASHTO 3.30.

#### SEDIMENT AND POLLUTION CONTROL

- 1. ALL APPROPRIATE SEDIMENT AND POLLUTION CONTROL MEASURES, AND BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE TO MINIMIZE SEDIMENTATION AND RIVERBED IMPACTS PRIOR TO INITIATING IN-RIVER / RIVERBANK WORK. SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THE URBAN DRAINAGE AND FLOOD CONTROL DISTRICT GUIDELINES AND ANY STORM WATER POLLUTION PREVENTION PLAN PROVIDED BY THE ENGINEER.
- 2. CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR THE DESIGN IMPLEMENTATION, AND PMAINTENANCE OF SEDIMENT AND EROSION CONTROLS IN CONFORMANCE WITH CONSTRUCTION STANDARDS AND THE REQUIREMENTS OF REGULATORY AGENCIES THROUGHOUT THE CONSTRUCTION PERIOD. THE ENGINEER WILL NOT BE ON-SITE TO APPROVE, REVIEW, OR MAINTAIN THE CONTROLS. STORMWATER MEASURES MAY BE REQUIRED TO BE INSTALLED AT ANY TIME DURING CONSTRUCTION AT THE DIRECTION OF THE ENGINEER OR OWNER.
- 3. IN ADDITION TO CONSTRUCTION BMP'S, TEMPORARY SEDIMENT AND EROSION CONTROLS (E.G., TEMPORARY SEEDING, MULCHING, SILT FENCE, STRAW WADDLE) SHALL BE IMPLEMENTED ON ALL DISTURBED AREAS WITHIN 2-DAYS IF DISTURBED AREAS ARE TO REMAIN DORMANT FOR MORE THAN 21-DAYS. PERMANENT SOIL STABILIZATION (E.G., PERMANENT SEEDING, EROSION CONTROL FABRIC) SHALL BE IMPLEMENTED ON DISTURBED AREAS WITHIN 2-DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE PROJECT AREA.
- 4. SPOIL PILES SHALL BE COVERED OR OTHERWISE MANAGED TO REDUCE SEDIMENTATION. ALL MATERIAL WHICH IS TO BE PLACED AT UPLAND SITE SHALL BE DISPOSED OF IN SUCH A WAY THAT SEDIMENT RUNOFF IS CONTROLLED AND MINIMIZED.
- 5. CONTRACTOR SHALL NOT STORE EQUIPMENT BELOW THE ORDINARY HIGH WATER LINE, AND TAKES FULL RESPONSIBILITY FOR ANY MATERIALS VANDALIZED, DAMAGED, BROKEN, OR LOST AS A RESULT OF RIVER EVENTS.
- 6. ALL FUELING OPERATIONS, LUBRICATING, HYDRAULIC TOPPING OFF. FUEL TANK PURGING, AND EQUIPMENT MAINTENANCE/REPAIRS SHALL BE PERFORMED AT AN UPLAND SITE OUTSIDE OF THE BANKS OF ANY SITE WATERWAYS AT A LOCATION TO BE DETERMINED BY THE ENGINEER OR OWNER. THESE ACTIVITIES SHALL TAKE PLACE ON AN APPROVED PAD WITH SPILL CONTROL/ COLLECTION DEVICES IN PLACE.
- 7. ALL CONSTRUCTION EQUIPMENT SHALL BE INSPECTED DAILY FOR HYDRAULIC AND FUELLEAKS LEAKS SHALL BE REPAIRED PRIOR TO OPERATION WITHIN THE 100-YEAR FLOODPLAN. WHEN NOT IN USE, FUEL AND HYDRAULIC FLUIDS SHALL BE STORED AT AN UPLAND SITE OUTSIDE OF THE 100-YEAR FLOODPLAIN. EMERGENCY SPILL RESPONSE DEVICES SHALL BE ON-SITE AT ALL TIMES DURING CONSTRUCTION IN WATERWAYS AND FLOODPLAINS AND SHALL BE READY TO DEPLOY IN THE EVENT OF A SPILL.
- 8. NO CHEMICALS, FUELS, LUBRICANTS, BRUSH, ETC. SHALL BE DISCHARGED OR DISPOSED OF INTO OR ALONGSIDE ANY STREAM. WATERCOURSE, OR FLOODPLAIN UNDER ANY CIRCUMSTANCES.
- 9. LITTER AND CONSTRUCTION DEBRIS SHALL BE CONTAINED DAILY. ALL CONSTRUCTION DEBRIS AND LITTER SHALL BE COMPLETELY REMOVED OFFSITE AND DISPOSED OF PROPERLY UPON PROJECT COMPLETION.
- 10.CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS NECESSARY TO PROVIDE ACCESS TO CONSTRUCTION AREAS FROM ALL EXISTING ROADWAYS AND PATHS TO MINIMIZE GROUND DISTURBANCE AND SEDIMENT TRACKING FROM VEHICLE TIRES. ADJACENT ROADWAYS AND PATHS SHALL BE VISUALLY INSPECTED DAILY TO ENSURE THAT SEDIMENT IS NOT BEING CARRIED OFF-SITE. IF SEDIMENT IS BEING CARRIED OFF-SITE, THE ADJACENT ROADWAYS AND PATHS SHALL BE SWEPT CLEAN DAILY.
- 11.BMP'S PLUS TEMPORARY SEDIMENT AND EROSION PONE 9 of 329



(303)-545-5883



PRELIMINARY - NOT FOR CONSTRUCTION

FILE NO. APPLICANT LOCATION	CITY OF MISSOULA CLARK FORK RIVER,
DATE	JAN II, 2018
SHEET	29 OF 35

SHALL BE MAINTAINED TO BE FUNCTIONAL UNTIL THE SITE HAS REACHED FINAL STABILIZATION. THE PROJECT AREA SHALL BE CONSIDERED TO HAVE REACHED FINAL STABILIZATION WHEN:

A. A PERENNIAL, VEGETATIVE COVER HAS GROWN TO A 80-PERCENT DENSITY

THROUGHOUT THE ENTIRE DISTURBED AREA.

B. ALL TEMPORARY SEDIMENT AND EROSION CONTROLS HAVE BEEN REMOVED

AND DISPOSED OF PROPERLY.

- C. ALL TRAPPED SEDIMENT HAS BEEN REMOVED AND PERMANENTLY STABILIZED TO PREVENT FURTHER REGISTOR
- D. ALL CONSTRUCTION ACTIVITIES HAVE CEASED.

#### BEST MANAGEMENT PRACTICES (BMP'S)

. BMP'S SUCH AS DRAINAGE CHANNELS, PERIMETER FENCING, DETENTION BASINS, AND VEHICLE TRACKING CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITIES. EFFECTIVE EROSION CONTROL REQUIRES ADAPTATION AND CHANGES DURING CONSTRUCTION THAT CANNOT BE DESIGNED OR ANTICIPATED PRIOR TO CONSTRUCTION. A QUALIFIED SUPERVISOR SHOULD CHECK ALL BMP'S REGULARLY AND NOTIFY THE ENGINEER IF THERE ARE QUESTIONS OR CONCERNS. THE ENGINEER ACCEPTS NO LIABILITY FOR THE PLACEMENT, EFFECTIVENESS, MAINTENANCE, OR CHOICE OF BMP ON THE SITE IF THE ENGINEER AND/OR ENGINEER'S REPRESENTATIVE ARE NOT PRESENT.2.

THE CONTRACTOR SHALL IMPLEMENT THE NECESSARY SITE EROSION CONTROL MEASURES FOR INHIBITING DUST, WIND, AND AIR SEDIMENT MOVEMENT OFFSITE DURING ALL PHASES OR STAGES OF CONSTRUCTION.

- 3. THE CONTRACTOR SHALL PROVIDE AN AREA TO STORE CONSTRUCTION DEBRIS WHERE IT WILL NOT BE A NUISANCE TO THE SURROUNDING NEIGHBORHOOD. ALL DEBRIS SHALL BE CONTAINED IN SUCH A MANNER THAT WILL PREVENT SCATTERING. ALL DEBRIS, INCLUDING TREES AND UNDERGROWTH SHALL BE DISPOSED OF PROPERLY. ALL DEBRIS SHALL BE REMOVED FROM THE SITE PRIOR TO FINAL SITE INSPECTION.
- 4. CONTRACTOR SHALL LIMIT THE AREAS OF DISTURBANCE AND COMPLETE CONSTRUCTION WITH PHASES IN MIND.
- 5. CONTRACTOR SHALL LIM IT DIRECTLY CONNECTED IMPERVIOUS AREAS (DCIA).
- 6. BUFFER STRIPS SHOULD BE USED DURING CONSTRUCTION TO LIMIT THE DCIA'S. WHEN POSSIBLE, TRANSITIONING CHANGES IN SLOPE, TERRACING LONGER SLOPES, SURFACE ROUGHENING, AND CONTOUR FURROWS SHOULD BE USED TO MINIMIZE CONSOLIDATED FLOW.
- 7. ANY STAGED GRADING MUST BE DONE TO DIRECT STORMWATER TOWARDS THE APPROPRIATE BMP'S.
- 8. DURING CONSTRUCTION, STRAW WADDLES, COMPACTED SOIL BERMS, AGGREGATE BAGS, OR SIMILAR MUST BE USED ON ALL DISTURBED SLOPES OF 3:1 AND GREATER THAN 20 FEET IN LENGTH.
- 9. SILT FENCING LOCATED ON THE PERIMETER OF DISTURBED AREAS SHOULD BE CHECK ONA DAILY BASIS, OR FOLLOWING SIGNIFICANT STORM EVENTS TO ENSURE IT IS WORKING PROPERLY.
- 10.INLET PROTECTION MUST BE INCLUDED AT ALL STORM, SEWER, AND CULVERT LINKS. APPROPRIATE BMP'S INCLUDE ROCK SOCKS, SEDIMENT CONTROL LOGS, OR SIMILAR.
- 11.SEDIMENT ENTRAINMENT FACILITIES SHOULD BE DESIGNED TO

STORE THE APPROPRIATE VOLUME OF STORM WATER DISCHARGE, BUT CONTAIN MINIMAL ADDITIONAL CAPACITY. THEY MUST BE MAINTAINED TO THE CALCULATED VOLUME AND DREDGED AS NECESSARY.

#### MATERIAL HANDLING

- 1. A LIST OF ALL POTENTIALLY TOXIC OR HAZARDOUS CHEMICALS THAT WILL BE USED OR STORED ON-SITE SHALL BE MAINTAINED WITH THE EROSION CONTROL SUPERVISOR. WARNING LABELS MUST BE ATTACHED. MATERIAL SAFETY DATA SHEETS (MSDS) AND OTHER SAFETY INFORMATION FOR A POTENTIALLY TOXIC OR HAZARDOUS SUBSTANCE MUST BE ON THE SITE WHILE THE SUBSTANCE IS USED OR STORED.
- 1. BMP'S SUCH AS DRAINAGE CHANNELS, PERIMETER FENCING, DETENTION 2. THE FOLLOWING MATERIALS MANAGEMENT PRACTICES MUST BE BASINS, AND VEHICLE TRACKING CONTROLS MUST BE INSTALLED PRIOR FOLLOWED:
  - a. THE QUANTITY OF FUEL AND LUBRICANT AT THE CONSTRUCTION SITE MUST BE MINIMIZED.
  - b. STRICT STORAGE PRACTICES (I.E. OFF-SITE STORAGE) ARE PREFERABLE. FUEL, HYDRAULIC OIL, AND FORM OIL MUST BE STORED OFFSITE.
  - c. MATERIALS STORED AT THE CONSTRUCTION SITE MUST BE PROPERLY PROTECTED FROM THE ELEMENTS.
  - d. MATERIALS MUST BE HANDLED IN ACCORDANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS AND MANUFACTURERS' INSTRUCTIONS.
  - e. CHEMICALS REGULATED UNDER THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA) WILL BE DOCUMENTED.

#### SPILL REMEDIATION PRACTICES

- 1. ALL CONSTRUCTION SITE PERSONNEL MUST FOLLOW SPILL PREVENTION AND CONTROL PRACTICES AS FOLLOWS:
  - a. THE SENIOR SAFETY MANAGER, DESIGNATED COORDINATORS, AND THE WATER QUALITY OFFICER WILL BE CONTACTED IMMEDIATELY FOLLOWING ANY SPILL. THE SENIOR SAFETY MANAGER (OR DESIGNEE) MUST IN TURN REPORT THE SPILL TO THE APPROPRIATE FEDERAL, STATE, OR LOCAL AGENCIES IN ACCORDANCE WITH APPLICABLE REGULATIONS.
  - b. PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE EQUIPMENT.
  - c. THERE MUST BE A DESIGNATED INDIVIDUAL ON THE SITE TRAINED IN THE APPROPRIATE CLEANUP PROCEDUARES FOR VARIOUS TYPES OF CHEMICALS AND THE LOCATION OF INFORMATION AND CLEANUP SUPPLIES.
  - d. THE MSDS OF ANY MATERIAL SHOULD BE CONSULTED ON THE EVENT OF A SPILL. THE MSDS FOR ALL CHEMICALS USED ON THE SITE WILL BE KEPT ON THE SITE, AND WORKERS WILL BE REQUIRED TO REVIEW MSDS'S.
  - e. SPILL KITS MUST BE LOCATED ON-SITE. SUBCONTRACTORS MUST BE NOTIFIED OF THEIR LOCATION AND INSTRUCTED HOW TO USE THEM WHEN NECESSARY.
  - f. SPILLS MUST BE CLEANED UP PROMPTLY AFTER DISCOVERY, AND MATERIALS USED FOR CLEANUP MUST BE DISPOSED OF

OFF-SITE AT AN APPROVED FACILITY.

#### WORK LIMITS AND LAYDOWN

- 1. WORK LIMITS, ACCESS, STAGING, LAYDOWN, AND STOCKPILE AREAS SHALL BE LOCATED WHERE SHOWN ON THE CONSTRUCTION DRAWINGS OR OTHERWISE AS APPROVED BY THE ENGINEER OR OWNER.
- 2. ALL CONSTRUCTION ACTIVITIES SHALL OCCUR WITHIN CURRENTLY DISTURBED AREAS TO THE EXTENT POSSIBLE.
- 3. DISTURBED/ EXPOSED RIVERBANKS AND STAGING AND PROJECT ACCESS AREAS SHALL BE PROPERLY STABILIZED (SEEDED, MULCHED, OR OTHERWISE) WITH NATIVE VEGETATION IMMEDIATELY AFTER GRADING TO PREVENT EROSION AND ESTABLISHMENT OF INVASIVE PLANT SPECIES.
- 4. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO VEGETATION OR PROPERTY OUTSIDE THE WORK LIMITS RESULTING FROM CONSTRUCTION OPERATIONS.
- 5. ALL AREAS TEMPORARILY DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, SLOPES, AND ELEVATIONS, UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DRAWNGS.

#### UTILITIES

- 1. THE CONTRACTOR SHALL LOCATE ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION.
- NO EXCAVATION SHALL OCCUR IN THE AREA SURROUNDING A UTILITY CROSSING. NO IMPROVEMENTS THAT MAY CAUSE SCOUR, ARE TO BE PLACED IN THE VICINITY OF AN AT-GRADE, ABOVE OR BELOW GRADE, UTILITY CROSSING.
- 3. IF UTILITIES ARE IDENTIFIED WITHIN THE PROJECT AREA, A MINIMUM BUFFER OF NO DISTURBANCE, APPROVED BY THE ENGINEER OR OWNER, IS TO BE MAINTAINED ON ALL UTILITY CROSSINGS.

#### ROCK QUALITY

- 1. INDIVIDUAL STONE BOULDERS SHALL BE DENSE, SOUND AND FREE FROM CRACKS, SEAMS AND OTHER DEFECTS CONDUCIVE TO ACCELERATED WEATHERING.
- 2. AT A MINIMUM EXPOSED ROCK SHOULD HAVE ONE FLAT SURFACE AND THIS SHOULD BE THE ONLY EXPOSED SURFACE.
- 3. THE ROCK SHALL HAVE THE FOLLOWING PROPERTIES:
  - BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) NOT LESS THAN 2.5.
  - b. ABSORPTION NOT MORE THAN 2% BY WEIGHT.
  - C. THE BULK SPECIFIC GRAVITY AND ABSORPTION SHALL BE DETERMINED BY ASTM METHOD C-127.
- 4. ROCK THAT FAILS TO MEET THESE REQUIREMENTS MAY BE ACCEPTED ONLY IF SIMILAR ROCK FROM THE SAME SOURCE HAS BEEN DEMONSTRATED TO BE SOUND AFTER FIVE YEARS OR MORE OF SERVICE UNDER CONDITIONS OF WEATHER, WETTING AND DRYING, AND EROSIVE FORCES SIMILAR TO THOSE ANTICIPATED. ALTERNATIVELY NATIVE OR IMPORTED STONE, ALREADY AT THE SITE AND MEETING THE STANDARDS OUTLINED ABOVE, MAY BE USED.
- 5. THE ENGINEER RETAINS RIGHT OF REFUSAL FOR APGOCT (POPUS) TO THE SITE WHICH IS NOT SUITABLE AND DOES NOT MEET THE ABOVE

Recreation

485 ARAPAHOE AVE. BOULDER | CO | 80302 WWW.BOATERPARKS.COM

(303)-545-5883



PRELIMINARY - NOT FOR CONSTRUCTION

# FILE NO. ----APPLICANT CITY OF MISSOULA LOCATION CLARK FORK RIVER, DATE JAN II. 2018

30 OF 35

SHEET

CRITERIA AND/OR SHOWS EXCESSIVE WEATHERING, CRACKING OR DEFORMATION.

- 6. MINIMUM ROCK DIMENSIONS FOR "QUARRIED STONE" SHALL BE 2'X2'X4' FOR DROP STRUCTURES. MINIMUM ROCK DIMENSIONS FOR ALL POOL ARMORING AND CRIB FILL TO BE RIP RAP WITH A D50 OF 9-INCHES.
- 7. ALL RIP RAP TO MEET ASTM C-535-69, AASHTO TEST 103 AND HAVE A SPECIFIC GRAVITY OF 2.65 AS WELL AS MEETING THE IOWA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS. THE ENGINEER TAKES NO RESPONSIBILITY FOR MATERIAL USED NOT MEETING THESE SPECIFICATIONS OR NOT APPROVED ON-SITE BY THE ENGINEER OR OWNER.

#### SITE PREPARATION-ROCK EXCAVATION

1. CONTRACTOR SHALL USE SUITABLE EXCAVATION TECHNIQUES THAT INCLUDE RIPPERS, STANDARD BUCKET EXCAVATION, AND HYDRAULIC BREAKERS. NO BLASTING OR EXPLOSIVES MAY BE USED WITHOUT PRIOR APPROVAL.

#### SITE PREPARATION- STONES PLACED IN CHANNEL

- 1. NO ROCK PLACEMENT SHALL OCCUR IN CHANNEL UNTIL APPROPRIATE WATER CONTROL MEASURES ARE IN PLACE (AS OUTLINED IN THE WATER CONTROL TYPICALS).
- 2. AFTER SHEET PILING (OR APPROPRIATE CUTOFF WALLS) IS IN PLACE NATIVE ALLUVIUM SHALL BE EXCAVATED TO DEPTH OF FIVE FEET. CLEAN CRIB FILL SHALL BE PLACED UP TO THE SUBGRADE ELEVATION.
- 3. QUARRIED STONE SHALL BE PLACED AS SHOWN ON THE DRAWINGS WITHOUT ANY GAPS, SO THAT EACH BOULDER TOUCHES THE NEXT ONE.
- 4. EACH STONE SHALL BE PLACED TO THE FINAL POSITION BY SUITABLE EQUIPMENT FOR HANDLING MATERIAL AND, IF NECESSARY; THE STONE SHALL BE PICKED UP AND REPOSITIONED.
- 5. IT SHOULD BE ANTICIPATED THAT RE-HANDLING OF INDIVIDUAL STONES, AFTER INITIAL PLACEMENT WILL BE REQUIRED TO ACHIEVE REQUIRED SLOPES, GRADES, ELEVATIONS AND POSITION.
- 6. THE ENGINEER SHALL OBSERVE AND APPROVE CONTRACTOR'S METHOD FOR STONE PLACEMENT IN A REPRESENTATIVE AREA FOR EACH PROJECT COMPONENT.

#### SITE PREPARATION-ROCKS PLACED IN STONE TERRACING

- 1. ALL ROCKS PLACED AS STONE TERRACING MUST BE PLACED WITH FLAT SIDE FACING UP AND BE CLEAN OF ALL SHARP PROTRUSIONS THAT COULD CREATE A SAFETY HAZARD.
- 2. IT SHOULD BE ANTICIPATED THAT RE-HANDLING OF INDIVIDUAL STONES, AFTER INITIAL PLACEMENT WILL BE REQUIRED TO ACHIEVE REQUIRED SLOPES, GRADES, ELEVATIONS AND POSITION.
- 3. ALL PLACED ROCKS MUST BE KEYED IN 12-INCHES IN BOTH THE HORIZONTAL AND VERTICAL DIRECTIONS.
- 4. ALL STONE TERRACING SHALL BE PLACED WITH SUITABLE GEOTEXTILE UNDERLYING THE MATERIAL (IF INCLUDED IN THE DESIGN) AND BACKFILLED WITH CLEAN NATIVE FILL.
- 5. ALL PLACED STONES SHALL BE PLACED ON SUITABLE SUBGRADE APPROVED BY ENGINEER. IF UNSUITABLE SUBGRADE IS EXPERIENCED,

CONTRACTOR MUST INCLUDE SUITABLE SUBGRADE MATERIAL SUCH AS ROAD BASE GRAVEL.

#### CONCRETE MATERIALS

- 1. CONCRETE SHALL CONSIST OF PORTLAND CEMENT, SAND, AND GRAVEL, THOROUGHLY MIXED WITH WATER TO PRODUCE A THICK, CREAMY CONSISTENCY. THE MINIMUM AMOUNT OF WATER SHOULD BE USED TO PREVENT EXCESS SHRINKAGE OF THE CONCRETE AFTER PLACEMENT.
- 2. THE AGGREGATE, FOR CONCRETE, SHALL CONSIST OF 70 PERCENT SAND AND 30 PERCENT 3/8-INCH ROCK. MAXIMUM AGGREGATE SHALL BE 3/8 INCH.
- 3. ALL CONCRETE SHALL BE PRODUCED FROM TYPE II PORTLAND CEMENT WITH LESS THAN 5% TRICALCIUM ALUMINATE. CONCRETE SHALL HAVE MINIMUM CEMENT CONTENT OF 7 GALLONS PER SACK.
- 4. STRENGTH OF THE CONCRETE SHALL BE 3,000 PSI IN 28 DAYS. THE WATER CEMENT RATIO SHALL NOT EXCEED 0.48. A STIFFER MIX SHALL BE USED FOR STEEPER APPLICATIONS. AIR ENTRAINMENT SHALL BE USED FOR STEEPER APPLICATIONS. AIR ENTRAINMENT SHALL BE 6% TO 9%, AND SLUMP SHALL BE 5-INCHES TO 9-INCHES, EXCEPT AS APPROVED OR DIRECTED. AIR ENTRAINING AGENTS SHALL CONFORM TO ASTM C260 AND WATER REDUCING AGENTS SHALL CONFORM TO ASTM C494.
- 5. SUBGRADE, BASE MATERIAL, AND SURFACE COURSE IS TO BE COMPACTED TO 95% STANDARD PROCTOR WITH A MOISTURE CONTENT WITHIN 2% OF OPTIMAL PER ASTM D1558 AND AASHTO T180.

#### COLD WEATHER PLACEMENT

- 1. CONTRACTOR MUST FOLLOW RECOMMENDATIONS SET IN THE AMERICAN CONCRETE INSTITUTE COMMITTEE 306 (ACI 306R-88). WHEN PLACING CONCRETE AFTER THE FIRST FROST OR WHEN THE MEAN DAILY TEMPERATURES ARE BELOW 40° F.
  - a. HEAT AGGREGATES AND WATER IN ORDER TO PLACE FLOW FILL AT TEMPERATURES BETWEEN 50° F AND 80° F.
  - b. PLACING OF CONCRETE MAY BEGIN IN MORNING, BUT SHALL BE DISCONTINUED AT 3:00 PM OF SAME DAY IF FREEZING WEATHER THREATENS.
  - c. AFTER CONCRETE IS PLACED, PROVIDE SUFFICIENT PROTECTION SUCH AS COVER, CANVAS, FRAMEWORK, HEATING APPARATUS, ETC., TO ENCLOSE AND PROTECT FLOW FILL AND MAINTAIN TEMPERATURE OF 70° F FOR 3 DAYS OR 50° F FOR 5 DAYS AFTER PLACING.
  - d. IF FLAKING OR SPAWLING IS FOUND, THAT PORTION OF THE CONCRETE DID NOT APPROPRIATELY CURE AND WILL BE RE-DONE AT THE EXPENSE OF THE CONTRACTOR.
  - e. IF IN THE OPINION OF OWNER'S REPRESENTATIVE PROTECTION IS NOT ADEQUATE, CEASE PLACEMENT UNTIL CONDITIONS OR PROCEDURES ARE SATISFACTORY TO OWNER'S REPRESENTATIVE.

#### GROUT MATERIALS

- 1. THE MIXTURE WILL USE PORTLAND CEMENT: TYPE I/TYPE II, AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION C150.
- 2. FLY ASH: CLASS FOR C AND SHALL CONFORM TO THE REQUIREMENTS

- OF ASTM C618. GROUND GRANULATED BLAST FURNACE SLAG (GGBFS): SHALL CONFORM TO THE REQUIREMENTS OF ASTM C989.
- 3. COARSE AGGREGATE: NORMAL-WEIGHT AGGREGATE THAT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C33. MAXIMUM AGGREGATE SIZE: 1-INCH DIAMETER. COARSE AGGREGATE MAY BE REDUCED TO 3/8-INCH DIAMETER PEASTONE TO PROMOTE PUMPABILITY, PROVIDED THE REQUIRED COMPRESSIVE STRENGTH CAN BE ACHIEVED.
- 4. FINE AGGREGATE: NORMAL-WEIGHT AGGREGATE THAT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C33. FINE AGGREGATE SHALL BE NON-REACTIVE TO ALKALINITY FROM THE CEMENT-BASED GROUT.
- 5. WATER: SHALL BE POTABLE AND CONFORM TO THE REQUIREMENTS OF ASTM C94.
- 6. AIR-ENTRAINMENT: SHALL CONFORM TO THE REQUIREMENTS OF ASTM C260.
- 7. ADMIXTURES: SHALL BE USED FOR ADJUSTING FLOW AND WORKABILITY, AS REQUIRED, AND COULD CONSIST OF WATER-REDUCERS, RETARDERS, PLASTICIZERS, SUPERPLASTICIZERS, OR NONCHLORIDE ACCELERATORS. ALL ADMIXTURES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C494 AND ASTM C1017 AS APPLICABLE
- 8. THE CONTRACTOR IS REQUIRED TO FINISH ALL GROUT WITHIN THE INSTREAM STRUCTURES AND TERRACING USING THE FOLLOWING TECHNIQUE: 1) FOLLOWING INITIAL PLACEMENT OF GROUT, A TROWEL WILL BE USED TO REMOVE ALL SPILLED, SPLATTERED, AND DUMPED MATERIAL FROM ROCK FACES AND EXPOSED SURFACES. 2) ONCE THE MATERIAL HAS BEEN REMOVED BY A TROWEL, ALL SURFACES ARE TO BE TROWEL FINISHED AND SMOOTHED. 3) FOLLOWING TROWEL WORK, WET BROOMS AND BRUSHES ARE TO BE USED IN COMBINATION WITH BUCKETS OF WATER TO CLEAN ALL EXPOSED SURFACES AND TRANSITIONS FROM ROCK TO GROUT WITH THE INTENTION OF MAKING THE GROUT BLEND WITH THE ENVIRONMENT.

#### GROUT MIX

- 1. DESIGN MIXTURE FOR GROUT SHALL BE PROPORTIONED ON THE BASIS OF LABORATORY TRIAL MIXTURE OR FIELD TEST DATA IN ACCORDANCE WITH ACI 301.
- 2. MAXIMUM FLY ASH CONTENT: 25 PERCENT.
- 3. MAXIMUM GGBFS CONTENT: 25 PERCENT.
- 4. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
- 5. MAXIMUM WATER-CEMENT RATIO: 0.55
- 6. MINIMUM CEMENT CONTENT: 517 POUNDS PER CUBIC YARD.
- 7. MINIMUM SLUMP: 5 INCHES.
- 8. MAXIMUM SLUMP: 9 INCHES.
- 9. ENTRAINED AIR-CONTENT: 3 TO 5 PERCENT.



485 ARAPAHOF AVE. BOULDER | CO | 80302 WWW.BOATERPARKS.COM (303)-545-5883

**SPECIFICATIONS** 

PRELIMINARY - NOT FOR CONSTRUCTION

FILE NO.	
APPLICANT	CITY OF MISSOULA
LOCATION	CLARK FORK RIVER
DATE SHEET	JAN II, 2018 31 OF 35
SHELI	51 01 55

F

D

#### GROUT MIXING AND PLACEMENT

- 1. MEASURE, BATCH, MIX, AND DELIVER GROUT ACCORDING TO ASTM C94. USE ADMIXTURES ACCORDING TO THE MANUFACTURERS' WRITTEN INSTRUCTIONS.
- 2. THE CONTRACTOR MAY SUBMIT MIX ADJUSTMENTS TO THE DESIGNER FOR THEIR REVIEW AND APPROVAL WHEN CIRCUMSTANCES SUCH AS CHANGED PROJECT CONDITIONS. UNFAVORABLE WEATHER, OR UNFAVORABLE RESULTS OCCUR. INCLUDE NECESSARY SUPPORTING DOCUMENTS (LABORATORY AND/OR FIELD TEST DATA) WITH ANY MIX ADJUSTMENT REQUESTS. MIX ADJUSTMENTS, IF ACCEPTABLE TO THE DESIGNER. SHALL BE PERFORMED AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 3. THE MIXER, WHEN OPERATING AT CAPACITY, SHALL BE CAPABLE OF COMBINING THE INGREDIENTS OF THE GROUT MIX INTO A THOROUGHLY MIXED AND UNIFORM MASS, AND OF DISCHARGING THE MIX WITH A SATISFACTORY DEGREE OF UNIFORMITY. THE MIXER SHALL BE OPERATED WITHIN THE LIMITS OF THE MANUFACTURER'S GUARANTEED CAPACITY AND SPEED OF ROTATION.
- 4. IF REQUIRED TO PROMOTE PUMP-ABILITY. UP TO 20 GALLONS OF POTABLE WATER PER FULL (10CY) LOAD (OR PROPORTIONED ACCORDINGLY) MAY BE ADDED (AND THOROUGHLY MIXED) ONSITE. ADDING WATER TO THE MIX ON-SITE (IF REQUIRED) MUST OCCUR WITHIN 60 MINUTES OF THE TIME OF BATCHING. ALL REQUIREMENTS FOR THE GROUT MIX, AS STATED IN THIS SPECIFICATION, APPLY REGARDLESS OF WHETHER OR NOT WATER IS ADDED ON-SITE.
- 5. THE TIME INTERVAL BETWEEN GROUT BATCHING AND PLACEMENT SHALL BE 90 MINUTES. OR. THIS REQUIREMENT MAY BE WAIVED IF. AFTER 90 MINUTES. THE GROUT CAN STILL BE PLACED WITHOUT ADDING WATER (TO REDUCE SLUMP) TO THE BATCH. FIELD PACKS OF WATER REDUCING ADMIXTURES MAY BE ADDED TO THE BATCH TO INCREASE SLUMP/WORKABILITY. MAXIMUM TIME INTERVAL, REGARDLESS OF SLUMP. SHALL BE 180 MINUTES. FOR AIR TEMPERATURE GREATER THAN 80 DEGREES, MAXIMUM TIME INTERVAL SHALL BE REDUCED TO 120 MINUTES. FOR AIR TEMPERATURE GREATER THAN 90 DEGREES. MAXIMUM TIME INTERVAL SHALL BE REDUCED TO 90 MINUTES.
- 6. IN ANY CASE, GROUT SHALL BE CONVEYED FROM THE MIXER TO THE FINAL PLACEMENT AS RAPIDLY AS PRACTICABLE BY METHODS THAT WILL PREVENT SEGREGATION OF THE AGGREGATES AND/OR LOSS OF CEMENTITIOUS MATERIALS.
- 7. GROUT MIX SHALL NOT BE ALLOWED TO FREE FALL MORE THAN FIVE (5) FEET UNLESS SUITABLE EQUIPMENT IS USED TO PREVENT SEGREGATION.
- 8. THE GROUT MIX SHALL NOT BE PLACED UNTIL THE AFFECTED AREA HAS BEEN INSPECTED AND APPROVED BY THE DESIGNER FOR THE PLACEMENT OF GROUT.
- 9. GROUT MIX SHALL NOT BE PLACED WHEN THE DAILY AVERAGE TEMPERATURE IS LESS THAN 40 F UNLESS FACILITIES ARE PROVIDED TO ENSURE THAT THE TEMPERATURE OF THE MATERIALS IS MAINTAINED AT A MINIMUM TEMPERATURE OF 50 F AND NOT MORE

THAN 90 F DURING PLACEMENT AND THE CURING PERIOD.

- 10.GROUT MIX SHALL NOT BE PLACED ON FROZEN SURFACES. AT A MINIMUM, GROUT MIX SHALL NOT BE ALLOWED TO FREEZE FOR THE **INITIAL 24 HOURS AFTER PLACEMENT.**
- 11.FOR HOT WEATHER PLACEMENT, COMPLY WITH ACI 305.1 (SPECIFICATION FOR HOT WEATHER CONCRETING).
- 12.FOLLOW DESIGNER SPECIFICATIONS FOR SUBGRADE PREPARATION, GROUT PLACEMENT AND FINISHING, CURING, AND CLEAN-UP. SPECIFICALLY, FILL VOIDS ALONG UPSTREAM AND DOWNSTREAM TOE WITH GROUT. ALL ROCK TO BE CLEAN AND SWEPT AFTER GROUTING.
- 13.AFTER COMPLETION OF ANY GROUT PLACEMENT. NO INDIVIDUALS OR EQUIPMENT SHALL BE PERMITTED ON THE GROUTED SURFACE FOR A PERIOD OF TWENTY-FOUR (24) HOURS. THE GROUTED SURFACE SHALL BE PROTECTED FROM INJURIOUS ACTION BY THE SUN. RAIN. FLOWING WATER, MECHANICAL INJURY, OR OTHER POTENTIAL DAMAGING ACTIVITY.

#### GROUT AND CONCRETE PLACEMENT

- 1. GROUT SHALL BE PUMPED INTO VOIDS AS DIRECTED BY THE ENGINEER OR OWNER.
- 2. ALL GROUT IN "WING" AND "ISLAND" SHOULD BE HELD BACK 4-6 INCHES
- 3. ALL EXPOSED VISIBLE GROUT SHALL BE SMOOTHED WITH TROWEL OR BRUSHED FINISH, EVEN IN VOID SPACES.
- 4. AT COMPLETION OF GROUT PLACEMENT ALL ROCK SHOULD BE CLEANED OF GROUT AND GROUT RESIDUE. SMALL BRUSHES HAVE BEEN PROVEN TO BE THE MOST EFFECTIVE TECHNIQUE FOR REMOVING CONCRETE GROUT RESIDUE.
- 5. GROUT SHALL NOT BE PLACED UNLESS APPROPRIATE WATER CONTROL MEASURES ARE IN PLACE.
- 6. FOLLOWING COMPLETION OF GROUT PLACEMENT, THE WORK AREA SHOULD BE FLOODED TO ENSURE OPTIMAL CURING TIME. THE WORK AREA SHALL BE ISOLATED TO ENSURE THERE IS NO CONTACT WITH THE LIVE RIVER. THE STATIC WATER LEVEL IN THE WORK AREA SHOULD EQUAL THE WATER LEVEL IN THE LIVE RIVER.
- 7. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF 48 HOURS PRIOR TO THE PLACEMENT OF CONCRETE OR GROUT. THE OWNER'S REPRESENTATIVE MUST APPROVE THE FORM WORK AND REINFORCEMENT PRIOR TO PLACEMENT OF CONCRETE OR GROUT.
- 8. ALL SAW CUT JOINTS MUST BE COMPLETED WITHIN 24 HOURS OF CONCRETE PLACEMENT. ANY CONCRETE SAWN AFTER THIS 24 HOUR PERIOD, WHICH IN THE OPINION OF THE OWNER'S REPRESENTATIVE HAS EXCESSIVE SHRINKAGE CRACKS, SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE

#### INSPECTING AND TESTING FRESH GROUT

1. THE GROUT MATERIAL SHALL BE CHECKED AND TESTED THROUGHOUT THE GROUTING OPERATION AT THE CONTRACTOR'S EXPENSE. SAMPLING OF FRESH GROUT SHALL BE CONDUCTED IN CONFORMANCE WITH ASTM C172. FIELD TESTING WILL BE DETERMINED BY METHODS PRESCRIBED IN ASTM C138. AT A MINIMUM, FIELD TESTING SHALL INCLUDE SLUMP, AIR CONTENT, UNIT WEIGHT. TEMPERATURE, AND COMPRESSIVE STRENGTH CYLINDERS (1 7D, 2 28D, AND 1 HOLD CYLINDER). A MINIMUM OF ONE SET OF TEST CYLINDERS SHALL BE CAST FOR EVERY 50 CUBIC YARDS OF GROUT PLACED.

- 2. THE ENGINEER SHALL HAVE FREE ACCESS TO ALL PARTS OF THE CONTRACTOR'S PLANT AND EQUIPMENT UTILIZED FOR MIXING AND PLACING GROUT DURING THE PERIOD OF THE CONTRACT. PROPER FACILITIES SHALL BE PROVIDED FOR THE ENGINEER TO SAMPLE MATERIALS AND VIEW PROCESSES IMPLEMENTED IN THE MIXING AND PLACING OF GROUT AS WELL AS FOR SECURING GROUT TEST SAMPLES. ALL TESTS AND INSPECTIONS SHALL BE SO CONDUCTED AS A MINIMUM OF INTERFERENCE TO THE CONTRACTOR'S OPERATION OCCURS.
- 3. FOR READY-MIXED GROUT, THE CONTRACTOR SHALL FURNISH TO THE ENGINEER A STATEMENT OF DELIVERY TICKET FOR EACH BATCH DELIVERED TO THE SITE. THE TICKET SHALL PROVIDE AS A MINIMUM: WEIGHTS IN POUNDS OF CEMENT, AGGREGATES (FINE AND COARSE), WATER; WEIGHT IN OUNCES OF AIR-ENTRAINING AGENT; TIME OF LOADING; AND, THE REVOLUTION COUNTER READING AT THE TIME BATCHING WAS STARTED.

#### REVEGETATION NOTES

- 1. ANY REVEGETATION OR PLANTING SHALL OCCUR WITHIN THE APPROPRIATE PLANTING WINDOWS AND IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THIS TIMEFRAME SHOULD NOT EXCEED 14 DAYS AFTER COMPLETION OF FINAL GRADES.
- 2. THE CONTRACTOR SHALL PLANT THE TYPE OF PLANT MATERIAL AND MIX OF SPECIES INDICATED FOR EACH PLANTING ZONE. BOUNDARIES OF PLANTING ZONES AND LOCATIONS OF TREE AND SHRUB PLANTINGS WILL BE MARKED IN THE FIELD UPON COMPLETION OF EARTHWORK BY THE ENGINEER AND MAY VARY FROM THOSE SHOWN ON THE DRAWING DUE TO ACTUAL SITE CONDITIONS.
- 3. ALL SUITABLE TOPSOIL SHALL BE STOCKPILED DURING CONSTRUCTION AND PLACED WITHIN THE SEEDED AREAS IN MINIMUM 3-INCH DEPTHS.
- 4. CONTRACTOR SHALL MAINTAIN ALL PLANT MATERIAL IN A VIABLE CONDITION UP TO THE TIME OF PLANTING AND SHALL NOT PLANT DEAD, DISEASED, OR DAMAGED PLANTS OR SEEDS.
- 5. NO PLANTING OR SEEDING SHALL OCCUR UNTIL THE AREA HAS BEEN PROPERLY PREPARED AND APPROVED BY THE ENGINEER (INCLUDING SOILS BEING SATURATED AND/OR FLOODED TO APPROPRIATE WATER DEPTHS).
- 6. PLANT MATERIALS SHALL BE INSTALLED USING STANDARD PRACTICES FOR THE TYPE OF MATERIAL. THE FOLLOWING DESCRIBES THE SPECIFIC METHODS TO BE USED FOR EACH TYPE OF PLANTING:
  - a. MINIMUM 3-CUBIC-INCH POTTED NURSERY STOCK: POTTED STOCK OF THE SPECIES SHOWN FOR EACH ZONE SHALL BE PLANTED RANDOMLY IN STAGGERED ROWS AT THE SPACING

Recreation

485 ARAPAHOE AVE. BOULDER | CO | 80302 WWW.BOATERPARKS.COM

(303)-545-5883



PRELIMINARY - NOT FOR CONSTRUCTION

# FILE NO.----APPLICANTCITY OF MISSOULALOCATIONCLARK FORK RIVER,DATEJAN II, 2018SHEET32 OF

INDICATED. PLANTS SHALL NOT BE PLANTED COMPLETELY SUBMERGED.

- b. <u>TREES AND SHRUBS</u>: TREES AND SHRUBS SHALL BE PLANTED AT THE LOCATIONS SHOWN ON THE PLAN.
- c. <u>SEEDING</u>: THE UPPER THREE (3) INCHES (MINIMUM) OF THE AREA TO BE SEEDED SHALL BE IN A LOOSE AND FRIABLE CONDITION SUITABLE FOR SEEDING. IF NECESSARY, AREAS TO BE SEEDED WILL BE TILLED TO RELIEVE COMPACTION PRIOR TO SEEDING. ONCE SEEDING IS COMPLETE, NO MORE THAN 0.5-INCHES OF SOIL MAY BE PLACED OVER THE SEED.
- 7. CONTROL ANY SURFACE FLOW TO ENABLE SEEDING.
- 8. THE SEED MIXES SPECIFIED SHALL BE BROADCAST SEEDED IN WETLAND PLANTING AND TRANSITION AREAS AND SHALL BE DRILL SEEDED IN OTHER AREAS. SEPARATE SEED BOXES SHALL BE USED AS NEEDED, TO ACCOMMODATE THE SEED SIZES IN THE MIXTURES.
- 9. 2 TONS PER ACRE OF STRAW MULCH SHALL BE APPLIED TO SEEDED AREAS IMMEDIATELY AFTER SEEDING, EXCEPT THAT 1 TON PER ACRE OF STRAW MULCH SHALL BE APPLIED TO SEEDED WETLAND CREATION AREAS.
- 10.MULCH SHALL BE CRIMPED OR TACKIFIER APPLIED TO PREVENT MOVEMENT. IF TACKIFIER IS USED, IT SHALL BE "M-BINDER" TACKIFIER APPLIED AT A RATE OF 100 POUNDS PER ACRE.
- 11.ALL PLANTED AND SEEDED AREAS SHALL BE ADEQUATELY WATERED WITHIN 4 HOURS AFTER SEEDING/PLANTING. THE FOLLOWING DESCRIBES THE REVEGETATION TO BE COMPLETED BY AREA:
  - a. <u>WETLAND CREATION AREAS</u>: A) BROADCAST SEED MIX FOR AREA B) APPLY 1 TON PER ACRE STRAW MULCH C) APPLY 100 POUNDS PER ACRE "M-BINDER" TACKIFIER D) PLANT POTTED STOCK 3-FOOT-ON-CENTER IN STAGGERED ROWS THROUGH MULCH.
  - b. <u>TRANSITION AREAS</u>: A) BROADCAST SEED MIX SPECIFIED, B) APPLY 2 TONS PER ACRE STRAW MULCH, C) APPLY 100 POUNDS PER ACRE "M-BINDER" TACKIFIER.
  - c. <u>EXCESS SOIL DISPOSAL AREA AND OTHER UPLAND AREAS:</u> A) BROADCAST SEED MIX SPECIFIED, B) APPLY 2 TONS PER ACRE STRAW MULCH, C) CRIMP MULCH TO SECURE.

#### WATER CONTROL

1. CONTRACTOR SHALL PREPARE A DEWATERING PLAN TO BE APPROVED BY THE ENGINEER OR OWNER PRIOR TO COMMENCEMENT OF ANY DEWATERING ACTIVITIES. ALL DEWATERING DISCHARGES MUST BE FILTERED TO REMOVE EXCESSIVE SEDIMENTS AND MUST BE DISCHARGED ONTO AN ENERGY-DISSIPATION DEVICE (E.G., PLUNGE POOL, SPLASH PUP, CONCRETE WEIGHT, OR EQUIVALENT) PRIOR TO DISCHARGE INTO ANY SURFACE WATER. FISH OR MUSSELS TRAPPED IN THE DRY AREA MUST BE PROPERLY RELOCATED TO A DOWNSTREAM SECTION OF THE RIVER BY A DESIGNATED/QUALIFIED INDIVIDUAL. 2. STEPS SHALL BE EMPLOYED THROUGHOUT THE COURSE OF THE PROJECT TO AVOID THE CREATION OF EXCESSIVE TURBIDITY WHICH MAY DEGRADE WATER QUALITY OR ADVERSELY AFFECT AQUATIC LIFE.

3. NO WASTEWATER SHALL BE DISCHARGED INTO THE RIVER

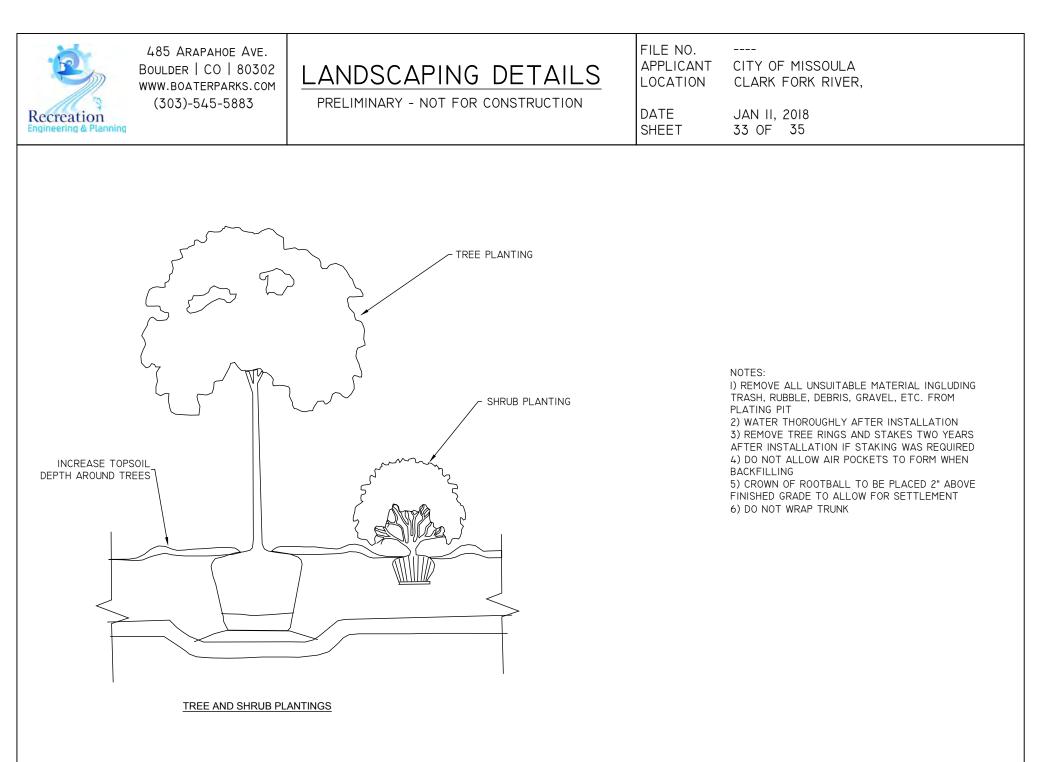
- 4. PRIOR TO CREATION OF COFFERDAMS OR DIVERTING WATER IN ANY MANNER, THE CONTRACTOR MUST REVIEW ALL RELEVANT PERMIT CONDITIONS AND INFORM THE ENGINEER OF THEIR TIMING, METHODS, AND TECHNIQUES FOR WATER CONTROL.
- 5. THE WATERWAY MAY EXPERIENCE FLOODING AND CHANGES IN WATER LEVEL AT ANY TIME. IT IS THE CONTRACTORS RESPONSIBILITY TO MONITOR AND ANTICIPATE CHANGES AND PLAN ACCORDINGLY. ANY DAMAGE, LOSSES, PERMIT CONDITION VIOLATIONS, ETC. AS A RESULT OF FLOODING IN THE WATERWAY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 6. ANY COFFERDAM FAILURE MUST BE REPORTED TO THE ENGINEER AND/OR OWNER IMMEDIATELY.
- 7. UNLESS PRIOR APPROVAL HAS BEEN GRANTED, THE CONTRACTOR MUST ONLY CONSTRUCT AND WORK WITHIN ONE COFFERDAM AT A TIME.

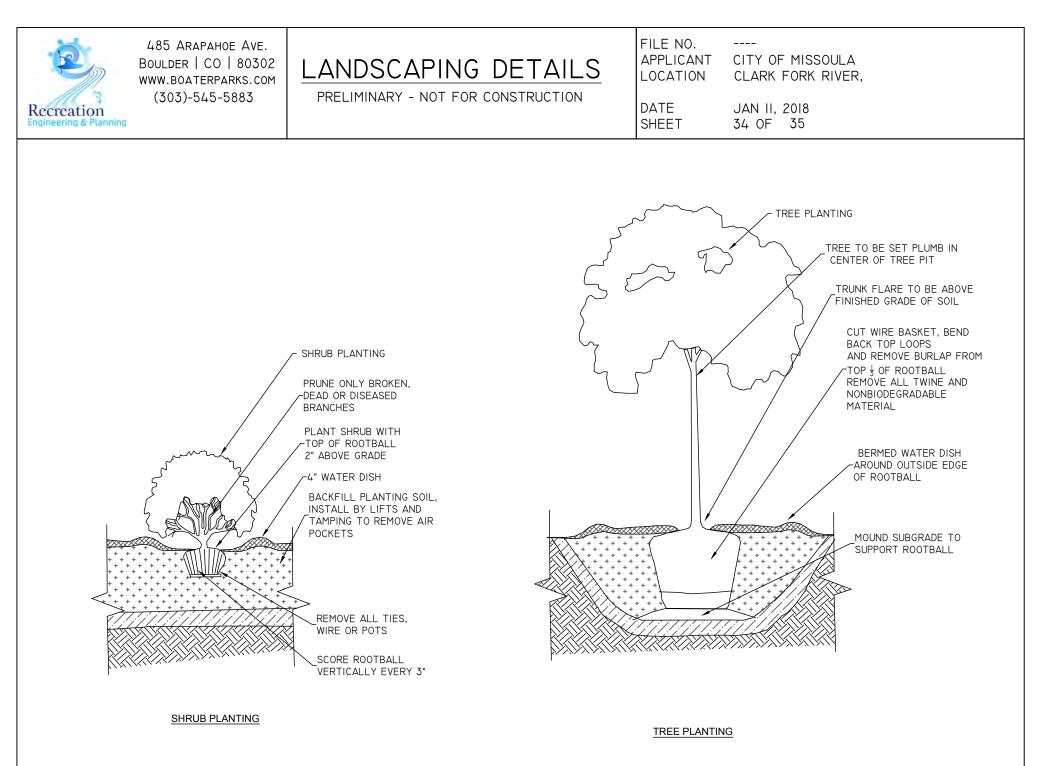
#### EMERGENCY PLANNING

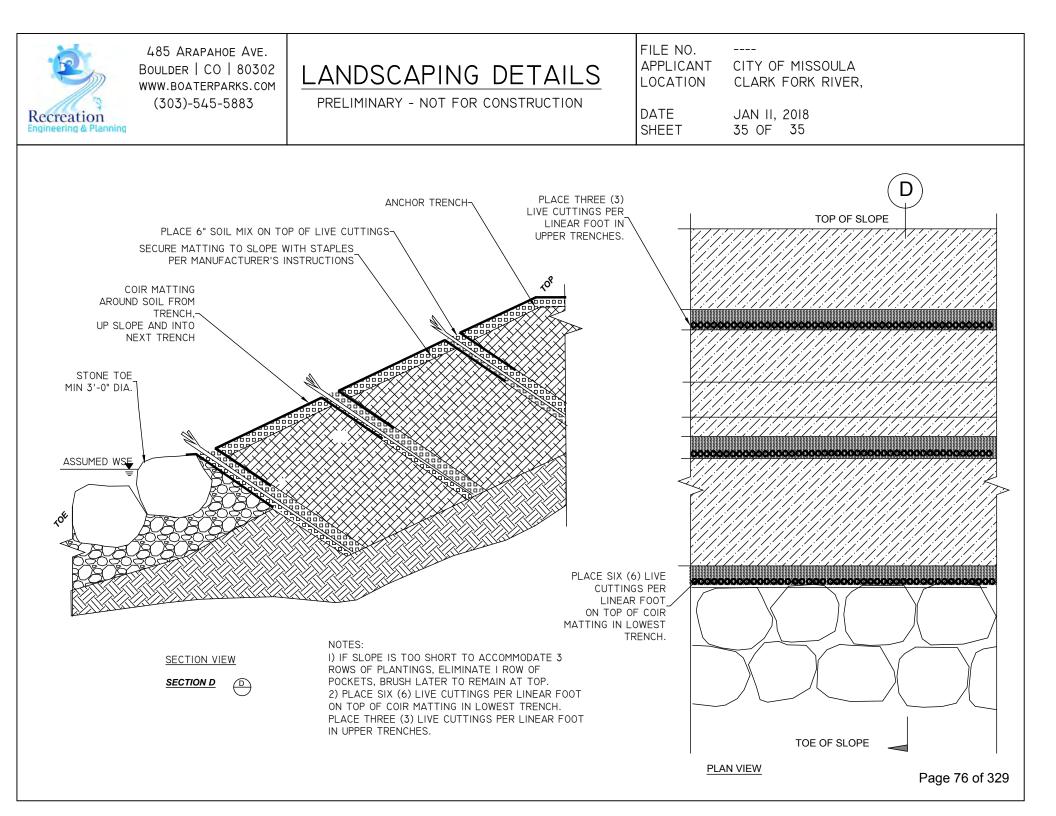
- 1. CONTRACTOR SHALL CREATE AND HOLD ON FILE AN EMERGENCY ACTION PLAN. THAT PLAN MUST INCLUDE CONTACT NUMBERS FOR ALL UTILITIES LOCATED WITHIN THE PROJECT SITE, IN ADDITION TO PHONE NUMBERS FOR ALL PERMIT AGENCY PROJECT MANAGERS.
- 2. THE ENGINEER AND THE OWNER MUST BE NOTIFIED IMMEDIATELY FOLLOWING AN EMERGENCY SITUATION.

#### OTHER

- 1. IN THE EVENT AN ITEM IS NOT COVERED IN THE SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND THEY MUST APPROVE ANY ADDITIONS OR MODIFICATIONS TO THE SPECIFICATIONS.
- 2. ALL WASTE MATERIAL AND/OR EXCESS EXCAVATION NOT USED AS PART OF THE WORK SHALL BE REMOVED FROM THE JOB SITE AND DISPOSED OF AT ACCEPTABLE LOCATIONS IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- 3. THE CONTRACTOR AT ALL TIMES DURING CONSTRUCTION SHALL PROVIDE WARNING SIGNS, BARRICADES, AND OTHER SAFETY DEVICES (INCLUDING TEMPORARY FENCING AROUND THE JOB SITE) TO PROTECT PUBLIC SAFETY AND HEALTH IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.







#### MAX WAVE PROJECT

# **OPERATION & MAINTENANCE**

# (O&M) MANUAL

#### March 2018

Prepared for

Brennan's Wave Inc. PO Box 9053 Missoula, MT 59807

and

City of Missoula Parks and Recreation 100 Hickory Street Missoula, MT 59801

and

Hellgate Valley Irrigation Company 4646 Buckhouse Lane Missoula, MT 59804

Prepared by



engineers - surveyors - planners - scientists 3011 Palmer Street, Missoula, MT 59808 Phone: 406-542-8880 Fax: 406-542-4801 MMI #: 5251.001.01

# TABLE OF CONTENTS

1	GEI	NERAL INFORMATION	.1
	1.1	Project Description	.1
	1.2	Location and Access	.1
	1.3	Roles and Responsibilities	.2
	1.4	Permit Compliance	.3
	1.5	Public Safety	.3
	1.6	Emergency Repair & Contacts	.3
2	OP	ERATING PROCEDURES	.4
	2.1	General	.4
	2.1.	1 Flynn-Lowney Diversion and Intake Canal	.4
	2.1.	2 Max Wave	.5
	2.2	Flood Operations	.5
3	МО	NITORING AND INSPECTIONS	.6
	3.1	Frequency of Inspections	.6
	3.2	Annual Inspections	.6
	3.3	Critical Event Inspections	.6
	3.4	Annual and Critical Event Inspection Tasks	.7
	3.4.	1 Deterioration, breaks, cracks, weathering in structure and grout	.7
	3.4.	2 Sediment, debris, or any blockage restricting flow capacity or operation	.7
	3.4.	3 Woody vegetation and perennials on structure	.7
	3.4.	4 Scour or dislodging of structure	.8
	3.4.	5 Documentation and Reporting	.8
	3.5	5-year Inspections and Monitoring	.8
	3.5.	1 Review and Analysis	.9
	3.5.	2 Field Tasks and Monitoring	.9

	3.5.	.3 Report	)
4		INTENANCE	
4	4.1	Periodic Maintenance10	)
4	1.2	Maintenance Funding1	

# LIST OF TABLES

Table 1: Emergency Contact List

# APPENDICIES

- Appendix A O&M Responsibility Exhibit
- Appendix B Recommended Access Route
- Appendix C Diversion and Dewatering Plan
- Appendix D Specifications
- Appendix E Record Drawings
- Appendix F Maintenance History Flynn Lowney Diversion
- Appendix G Approved Permits

#### **1 GENERAL INFORMATION**

This document is the Operation and Maintenance (O&M) Manual for Max Wave and Flynn-Lowney Diversion. The manual provides procedures and guidance for the operation and maintenance of the facilities associated. The purpose of the O&M Manual is to ensure adherence to approved operating procedures over long periods of time and during changes in operating personnel. The instructions will permit personnel unfamiliar with conditions associated with wave park facilities and diversions to conduct the operation and maintenance at times when regular operating personnel cannot perform their normal duties.

#### 1.1 **Project Description**

The Max Wave Project consists of whitewater drop structures, roughened channel, and diversion (headgate island) located at the Flynn-Lowney Diversion on the Clark Fork River near downtown Missoula, Montana. The project is located adjacent to Ogren Park Allegiance Field, adjacent to West Broadway Island, and immediately downstream from McCormick Park and the All-Abilities Playground. The location is in an urban setting with the surrounding area developed for commercial, residential, and recreational uses. The goals of the Max Wave Project are to provide a recreational venue while enhancing safe boater passage, providing safe access to those with accessibility needs, maintaining the ditch company's ability to divert flow, restoring heavily impacted streambanks, and maintaining passage for aquatic life.

The diversion was rebuilt using less rough boulders, less porous diversion, and more erosion resistant boulders than the original diversion. Along with these improvements, two whitewater drop structures and a roughened channel with a gradual hydraulic transition were installed. The roughened channel is located along the north bank, adjacent to West Broadway Island, designed for aquatic organism and novice boater passage. The project's design implements ADA-compliant river access as well as streamside improvements including removal of concrete debris slabs and replacement of noxious weeds with native vegetation.

#### 1.2 Location and Access

For operation and maintenance purposes, any repairs or maintenance to the project below the low water mark must be accessed within the areas defined by the DNRC Navigable Rivers Permit easement. Recommended access is shown on Appendix B.

# Max Wave Project O&M Manual

To the greatest extent possible, access to the site should protect natural resources, recreational infrastructure and minimize disturbance to the public. Access through West Broadway Island should be along the canal embankment on the south side of the canal, unless deemed unpractical. If public is present and heavy equipment is mobilized, then a flagger is recommended. Any damages from mobilizing equipment should be repaired within a reasonable timeframe.

# 1.3 Roles and Responsibilities

Max Wave involves numerous stakeholders including the Hellgate Valley Irrigation Company, Brennan's Wave Inc., and the City of Missoula Parks and Recreation Department. Hellgate Valley Irrigation Company is the owner of the diversion structure directly upstream of West Broadway Island. The owner of the lower wave feature is Brennan's Wave. The State of Montana owns the riverbed below the ordinary high water mark and the City of Missoula owns the land above the low water mark.

Each entity is responsible for operations and maintenance for various parts of the Max Wave. The rules and responsibilities are as follows:

- Hellgate Valley Irrigation Company is responsible for all operation and maintenance relative to the Flynn-Lowney Diversion and irrigation ditch. These areas include, but are not limited to, the channel to the existing headgate, diversion overflow, and headgate island.
- City of Missoula Parks and Recreation is responsible for all operation and maintenance above the low water mark. This includes, but is not limited to signs, vegetation, and access to Max Wave. This excludes structure islands within the river.
- Brennan's Wave Inc. is responsible for all operation and maintenance below the low water mark. This includes the roughened channel and drop structures. This does not include the diversion overflow.

An exhibit is prepared to illustrate areas of O&M responsibility and is included in Appendix A.

In the event of a structural emergency that affects the irrigation ditch and structures below the low water mark, Brennan's Wave Inc. and the Hellgate Valley Irrigation Company will work together to coordinate repairs. This includes, but is not limited to, structural damage to the aquatic organism passage and the novice boat passage.

#### **1.4 Permit Compliance**

All operating and maintenance procedures laid out in this manual have been approved by the following permitting agencies: City of Missoula Floodplain, Department of Natural Resources and Conservation (DNRC), United States Army Corps of Engineers (USACE), Department of Environmental Quality (DEQ), and Fish, Wildlife and Parks (FWP). Any operation and maintenance procedures outside of this document require additional permitting, review, and acceptance before procedures can be carried out.

All applicable permits have been attached in Appendix G for reference.

#### 1.5 Public Safety

Public safety at Max Wave is of the utmost importance. Stakeholders will promote public safety through the implementation of this Operation and Maintenance Plan and through the use of signs providing safety guidelines and recommendations on identifying dangerous conditions. Signs should be located at the two access ramps on the south bank of the Clark Fork River. Signs shall provide the following message with wording and coordination of signage agreed upon by the City of Missoula Parks and Recreation Department and Brennan's Wave, Inc.:

All Max Wave users should take proper safety precautions before entering the river and should observe hydraulic conditions before use. All users enter at their own risk.

#### 1.6 Emergency Repair & Contacts

An emergency repair may be warranted due to structural damage or operational inefficiencies to components of the Max Wave including, but not limited to, the aquatic organism passage or the novice boat passage. In the event of an emergency repair, the following steps should be followed:

- 1. All project stakeholders shall be notified.
- 2. Provide a courtesy call to permitting agencies notifying them of the need for emergency repair. Inform them that the O&M Manual provides them authority to perform the repairs in accordance with the design standards and guidelines set forth in the O&M Manual.

# Max Wave Project

#### O&M Manual

 Provide repairs to Max Wave in accordance with the O&M Manual and design standards. These sections include, but are not limited to, Sections 01150 and 02401, Environment Quality control and Diversion and Care of River.

An emergency contact list has been provided with this document. It is up to the involved parties to maintain and update this list as necessary.

Organization	Address	Representative/Contact
Brennan's Wave Inc.	PO Box 9053	Brennan's Wave Inc.
	Missoula, MT 59807	Jason Shreder 406-360-4436
City of Missoula Parks and	600 Cregg Lane	Director of Parks and Recreation
Recreation Department	Missoula, MT 59801	406-721-Path
Hellgate Valley Irrigation	4646 Buckhouse Lane	Hellgate Valley Irrigation
Company	Missoula, MT 59804	Company President
		Race Pruyn 406-370-7401

# 2 OPERATING PROCEDURES

#### 2.1 General

Max Wave is designed to function at all normal flows. Over the course of time the Clark Fork River's geomorphology will inevitably change. The effects of these changes are difficult to predict due to influences outside of this project and could result in changes to the functionality of the diversion structure, drop structure, and/or roughened channel. Design calculation for the project suggest aggregation will not be an issue within the project area. However, geomorphologic changes and their effects on the Max Wave Project should be monitored and noted.

# 2.1.1 Flynn-Lowney Diversion and Intake Canal

The Flynn-Lowney diversion is a hardened diversion that requires minimal operation of any structures to receive desired flows. If desired flows are not received, the diversion structure should be inspected. Operating procedures for the original diversion structure and intake canal have been incorporated into this document to provide references to typical maintenance and operating procedures. It is anticipated that operating and maintenance tasks for the diversion should be minimal, which is a vast improvement over the required operation over the past 20 years.

# Max Wave Project

# O&M Manual

The historic routine maintenance for the Flynn-Lowney diversion and intake canal includes, but is not limited to, the following activities:

- The intake channel needs to be maintained for an even flow of water without restriction from the diversion to the head gate.
- The intake channel needs to be kept free of debris and silt.
- The banks need to be maintained to prevent water returning to the river during normal flow events once diverted to the intake channel.
- The return structure boards need to be removed prior to an ice event and replaced during low water.
- An access shall be maintained along the intake channel for the equipment required for maintenance and cleaning.
- Periodic inspection will be completed by the Hellgate Valley Irrigation Company.

Record drawings can be found in Appendix E and a maintenance history can be found in Appendix F.

# 2.1.2 Max Wave

Drop structures and the roughened channel require no operation and, if functioning improperly or creating dangerous hydraulic conditions, the structures should be inspected.

At extremely low flow conditions, water will be directed down the roughened channel to provide stream flow and allow for fish passage. During these extreme low flow periods, the diversion will likely divert minimal flow and the drop structures will not convey water.

# 2.2 Flood Operations

During an extreme flood event such as in excess of a 100-year flood, no one should be permitted within 25 feet of the water line along either streambank or along Broadway Island. The flood event should be monitored from a safe distance and any emergency situations shall be reported and acted upon as soon as possible.

#### O&M Manual

#### 3 MONITORING AND INSPECTIONS

#### 3.1 Frequency of Inspections

Inspections and monitoring of the Max Wave Project shall occur with the following frequency:

- Annual: owner performs visual inspection and monitoring. Inspection to occur after the high water season.
- Critical Event: owner performs visual inspection and monitoring. Inspection to occur after critical event occurs.
- 5-year Inspection: Engineer performs 5-year inspection and monitoring.

#### 3.2 Annual Inspections

An owner inspection should be performed once a year after high water (typically between August-September). A table of percent daily exceedance and corresponding flow rates are provided in Appendix F. A lower percent exceedance indicates a higher flow event and a higher percent exceedance indicates a lower flow event. These flow rates can be used as a basis when determining what flow condition is present at any given time. The instantaneous flow of the project area can be estimated by taking the flow provided at the USGS gauging station located on the Clark Fork River above Missoula. <u>https://waterdata.usgs.gov/nwis/uv?site\_no=12340500</u>

Inspections at a greater frequency may be required in the event of a critical event or reported observation of uncharacteristic wave performance or flow diversion.

# 3.3 Critical Event Inspections

Max Wave should be inspected as soon as reasonably safe following the occurrence of a critical event. Critical events include severe rain or wind, earthquakes, and floods or periods of extremely high water exceeding a 25-year event. All inspection procedures outlined in the section above, periodic inspections, should be followed.

In the event of an earthquake event, a decrease in the structural integrity of all structures could occur. This could result in a change in monitoring schedules that should be studied and changed if necessary. The need for a change in inspection schedules will be on a case-by-case basis dependent on the severity of the critical event.

Max Wave Project

#### O&M Manual

# 3.4 Annual and Critical Event Inspection Tasks

The inspection should include a systematic review of the conditions of the diversion structure, each drop structure, roughened channel, and streambank along the Max Wave's entirety. Photographs of each structure should be included with each inspection. The inspection should include review of past photographs to monitor for changes in the shape and condition of the structures.

# 3.4.1 Deterioration, breaks, cracks, weathering in structure and grout

The structures should be visually inspected for deterioration, breaks, cracks and weathering in structure and grout. The visual inspections do not warrant dewatering and only includes review of features above water or viewable through the water surface. If visual inspections identify deterioration, breaks, cracks, weathering in structure and grout and/or if review of photographs identify changes in the shape and condition of the structure, then a professional engineer should be consulted to determine risk associated with failure or the need to repair. The engineer may require survey of the structures to assess the risk and make recommendations for repair and/or maintenance. If survey is requested by the engineer, the survey should consider the elevations of the structures as noted in the record drawings provided as Appendix E of this document.

# 3.4.2 Sediment, debris, or any blockage restricting flow capacity or operation

If visual inspections identify sediment, debris, or any blockage restricting flow capacity or operation, such as woody vegetation and perennials on structure, then items should be removed.

Sediment transport is a natural process of the river system. It is expected that sediment aggradation (deposition) will occur after large flow events. This process should be considered normal and insignificant unless it effects the stability of the structure or partially blocks water delivery to the irrigation canal, aquatic organism passage (AOP) or wave features. The site is not functioning in a normal capacity if sediment aggradation is effecting the quality of the wave features or blocks passage through the AOP or irrigation canals.

# 3.4.3 Woody vegetation and perennials on structure

General inspection items include vegetation above the ordinary high water mark, vandalism, and signage.

#### O&M Manual

#### 3.4.4 Scour or dislodging of structure

The structures should be visually inspected for scour or dislodging of the structure. The visual inspections do not warrant dewatering and only includes review of features above water or viewable through the water surface. If visual inspections identify scour or dislodging of the structure and/or if review of photographs identify changes in the shape and condition of the structure, then a professional engineer should be consulted to determine risk associated with failure or the need to repair. The engineer may require survey of the structures to assess the risk and make recommendations for repair and/or maintenance. If survey is requested by the engineer, the survey should consider the elevations of the structures as noted in the record drawings provided as Appendix E of this document.

Sediment transport is a natural process of the river system. It is expected to witness sediment scour after large flow events and over time. This process should be considered normal and insignificant unless it effects the stability of the structure.

#### 3.4.5 Documentation and Reporting

The owner should keep record of annual inspection findings. The record should include the following:

- Person(s) who performed inspection
- Dates and Time of inspection
- Site conditions during inspection including flow of the river as noted on the USGS gaging station above Missoula
- Observations
- Photographs of all structures
- Actions taken, such as maintenance
- Summary of all maintenance costs since last inspection

#### 3.5 5-year Inspections and Monitoring

Every five years, an engineer shall inspect the Max Wave Project. The engineer should perform the tasks identified for the annual inspection in addition to the tasks identified in this section.

**O&M** Manual

#### 3.5.1 Review and Analysis

Engineer should:

- Review previous inspection reports and available data on the design, construction, operation, and maintenance of the structures and its appurtenances.
- Review operation and maintenance procedures in Operation and Maintenance manual.
- Review inspection procedures employed by the owner. Does owner do a good job of their annual inspection? Could they use training or assistance? Are the owner's inspection reports helpful to you?
- Review aerial imagery over time periods applicable.

#### 3.5.2 Field Tasks and Monitoring

Engineer should:

- Provide recommendations based on data analysis. If data is limited and the condition warrants investigation, design a program for data acquisition.
- Conduct a visual inspection of the structures, its appurtenances, the downstream area, and all other areas affected by the structure.
- Conduct a visual inspection of the condition of surfaces and vegetation on the structures.
- Perform a grade survey on the crest of the wave features (2), crest of AOP channels (2), deflector, and headgate island.

#### 3.5.3 Report

Engineer should:

- Prepare a written report and photographic record of the inspection. Include the date and findings of the inspection.
- Include an assessment of the conditions structures based on visual observations, available data on the design, construction, operation, and maintenance of the structure, and hydrologic, hydraulic, stability, and other evaluation.

- Make recommendations for any critical or emergency measures or actions.
- Make recommendations for corrective measures or actions relating to design, construction, operation, maintenance, and inspection of the structure.
- Make recommendations for time periods appropriate for implementing any necessary emergency or corrective measures or actions to improve the safety of the site to an acceptable level.
- Make recommendations for additional detailed studies, investigations, and analyses, if warranted. In many cases, no additional study is necessary.
- Make recommendations for the time of the next inspection by an engineer
- The engineer shall deliver the report and discuss it with the owner within 60 days of the investigation.

#### 4 MAINTENANCE

#### 4.1 Periodic Maintenance

Periodic maintenance shall be performed upon the results of periodic inspections. Any items noted in the inspection report will be added to the maintenance work schedule and performed as soon as conditions, safety, and scheduling allow to prevent further damage or operational inefficiencies. Maintenance work shall be performed within a reasonable period after completion of inspection. Maintenance tasks performed should adhere to the following procedures:

- 1. Signs of hydraulic rollers, deeper than normal pools, etc. indicate erosion or scour holes that require fill with properly compacted cohesive native material or material compliant with original design specifications.
- 2. Any observations of deteriorated, cracked, or broken concrete or grout shall be repaired in accordance with Montana Public Works Specifications.
- 3. Any observations of displaced or damaged structures shall be repaired by addition, repair, or relocation of riprap where displacement or damage has occurred.

#### Max Wave Project

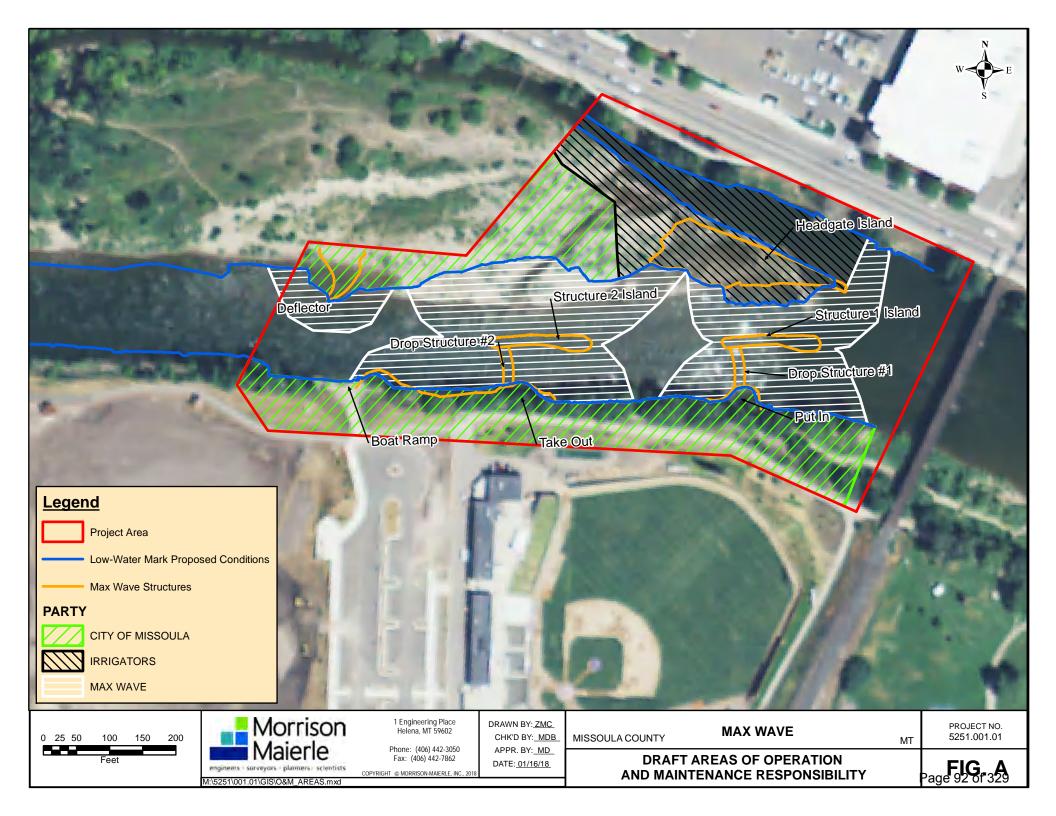
#### O&M Manual

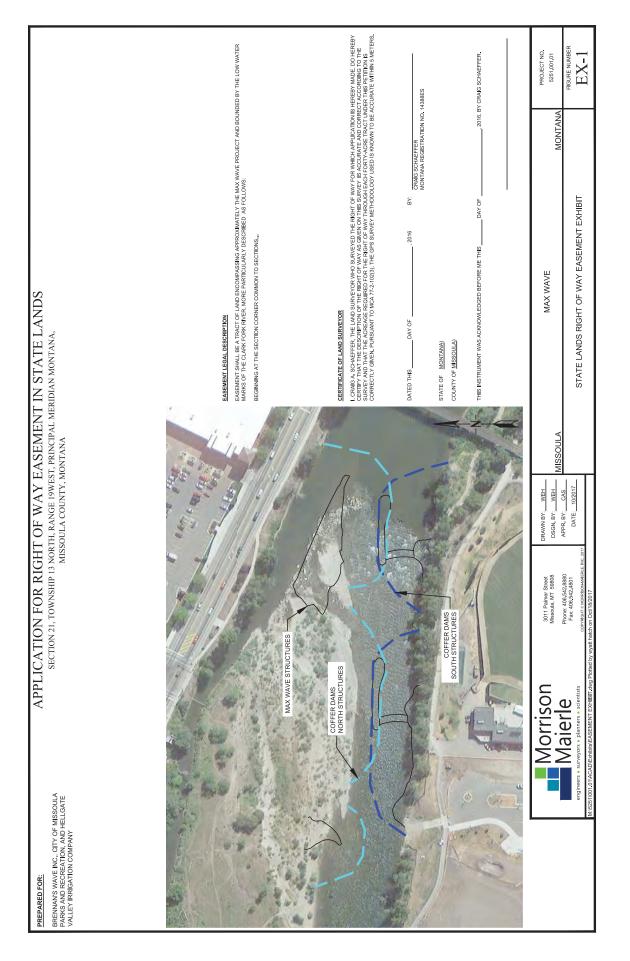
- 4. Any observations of sediment, debris, woody vegetation, perennials, or blockage of flow within 50 feet upstream or downstream of a structure shall be removed.
- 5. Indication of weeds and thinning or dying vegetation shall be maintained by spraying of weeds, fertilizing, replanting, and watering as needed.
- 6. Indication of damage or stolen or lost signs shall be repaired or replaced as needed.
- 7. Signs of vandalism to existing signs or structures shall be repaired as needed.

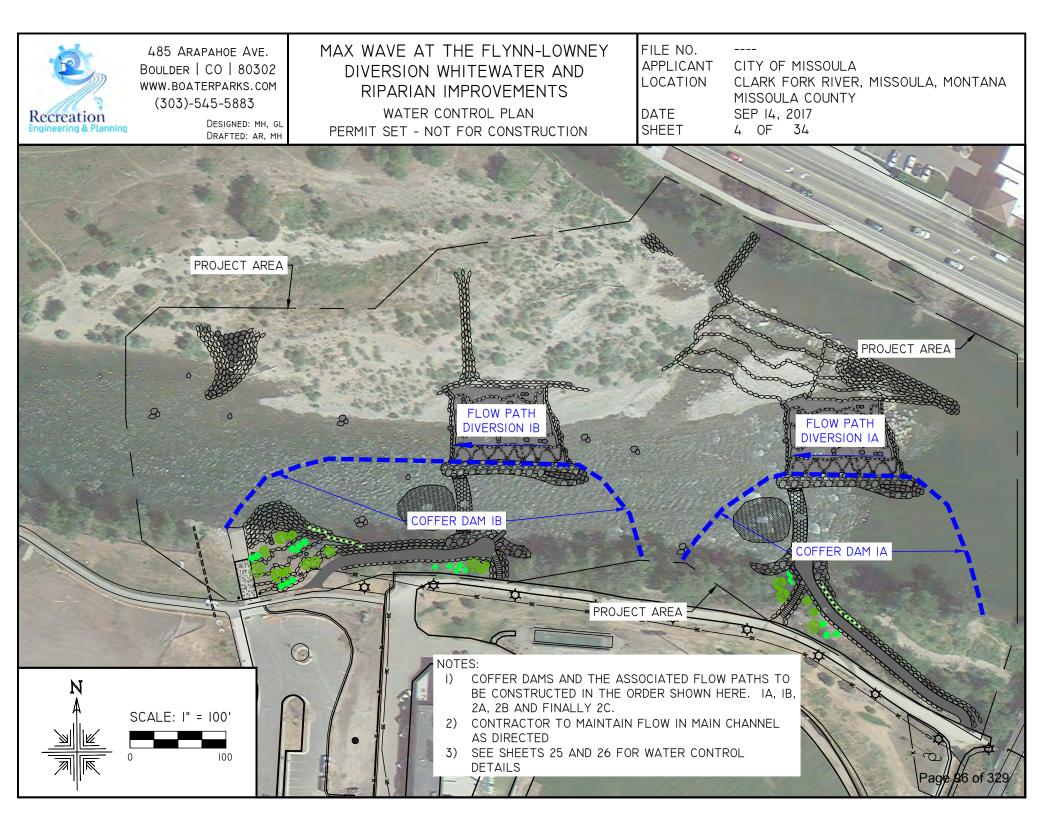
Any maintenance required shall adhere to original design specifications Sections 01150 and 02401, Environmental Quality Control and Diversion and Care of River located in Appendix D of this manual. Work requiring movement within the Clark Fork River will implement the diversion procedures approved in the permit. When diversion of water is required, sediment shall be monitored through use of sediment monitoring devices downstream of the diversion to ensure turbidity of the water is kept to a minimum.

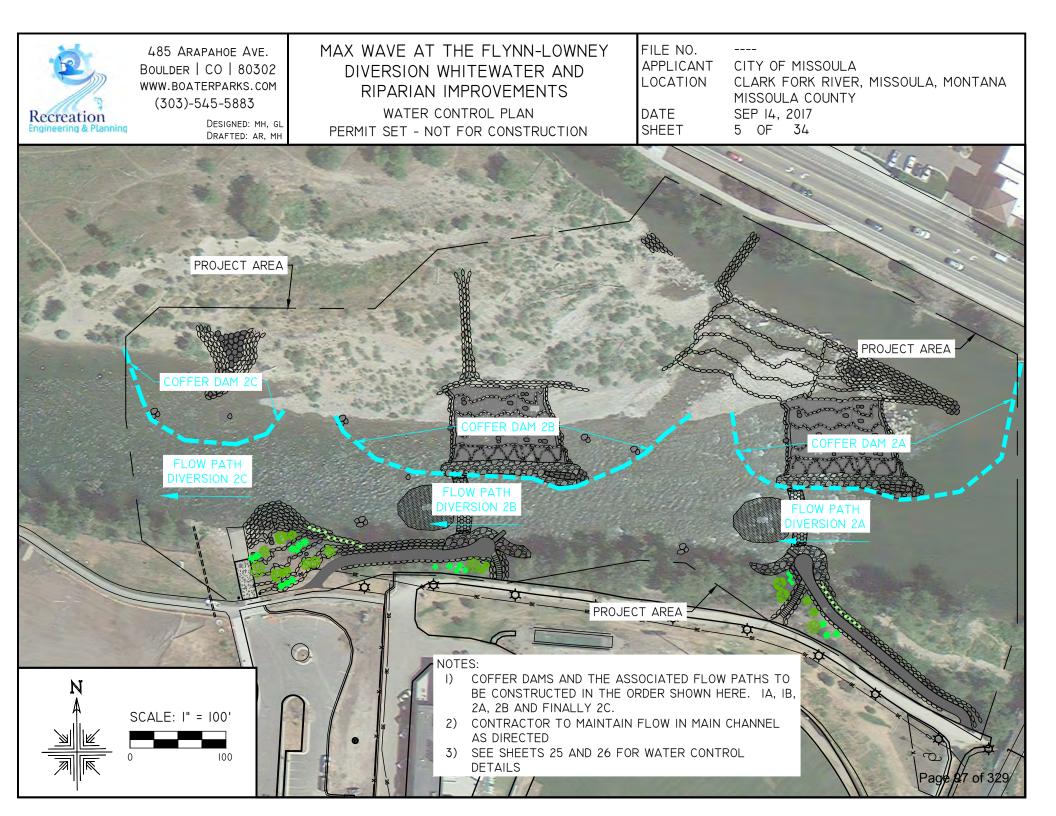
# 4.2 Maintenance Funding

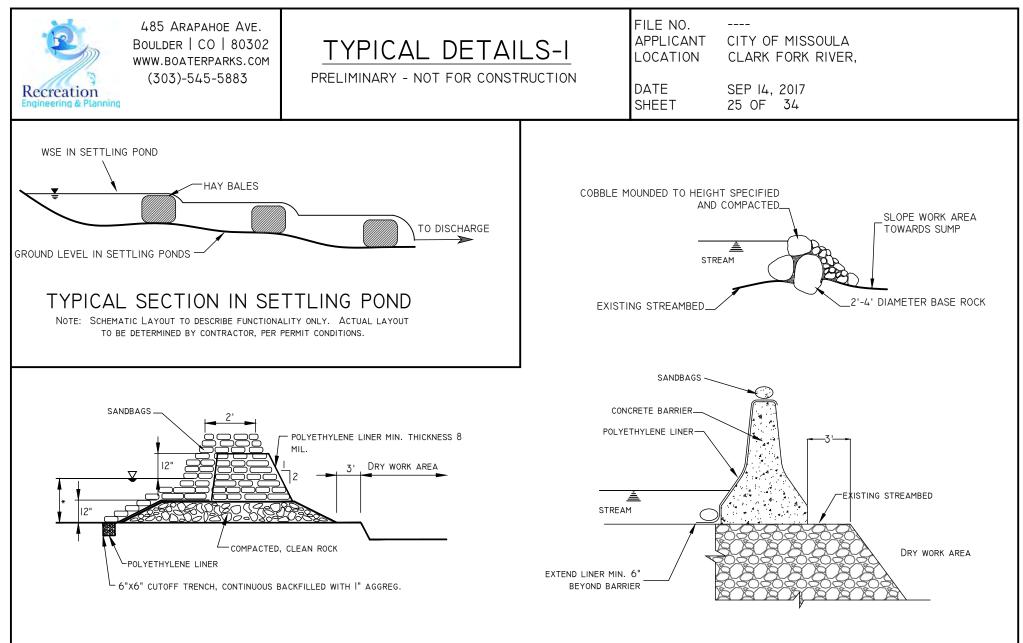
Maintenance tasks involved with the diversion structure below the ordinary high water mark and above the ordinary high water mark will be funded separately through each responsible entity. Maintenance required on the diversion structure will be performed by Hellgate Valley Irrigation Company through use of their own equipment and personnel. Tasks required above the low water mark will be performed by the City of Missoula Parks and Recreation Department funded through the city. Maintenance required below the low water mark will be performed by Brennan's Wave. Brennan's Wave Inc. has a dedicated maintenance fund and will add \$5,000 or more per year to fund with a goal of \$30,000 on hand for major emergencies. All entities' maintenance tasks will adhere to the permits associated with this document.











# ALTERNATIVE COFFERDAM METHODS

NOTE: ALTERNATE METHODS PRESENTED TO DESCRIBE FUNCTIONALITY ONLY. ACTUAL METHOD TO BE DETERMINED BY QUALIFIED CONTRACTOR, PER PERMIT CONDITIONS, IN ORDER TO ACHIEVE DRY WORK AREA.

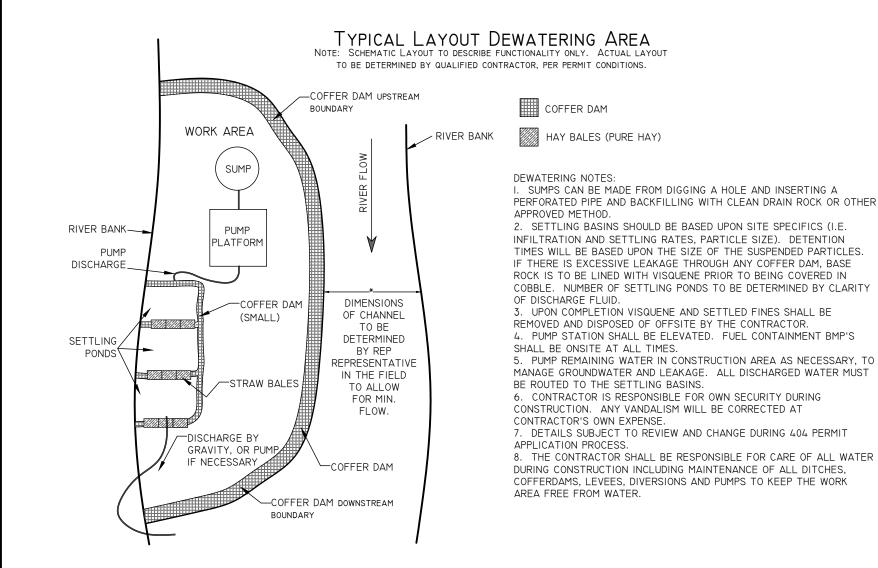


485 ARAPAHOE AVE. BOULDER | CO | 80302 WWW.BOATERPARKS.COM (303)-545-5883



PRELIMINARY - NOT FOR CONSTRUCTION

FILE NO. APPLICANT LOCATION	 CITY OF MISSOULA CLARK FORK RIVER,
DATE SHEET	SEP 14, 2017 26 OF 34



Page 9996 329ND

#### PART 1 GENERAL

#### 1.01 WORK INCLUDED

- A. The work shall consist of installing measures or performing work to control and protect the environmental quality of the project site and to minimize the pollution of the water and air during the construction operations in accordance with these specifications.
- B. The Owner has obtained the Environmental Permits found in Appendix A of this technical specification. The Contractor must comply with all the requirements of permits.
- C. Table 1 lists the approximate average monthly stream flows from the Clark Fork River that could be anticipated at the project. This information is obtained from the USGS gate located above Missoula, MT on the Clark Fork River. The gage is located approximately 4.6 river miles up-gradient of the project.

Month	Average Monthly Flow (cfs)	
January	1,330	
February	1,470	
March	1,890	
April	3,770	
Мау	7,880	
June	8,170	
July	3,130	
August	1,470	
September	1,380	
October	1,540	
November	1,550	
December	1,400	
Average Annual Stream Flow	2,915	

TABLE 1:

01560 – Page 1 of 14

#### **DIVISION 1 – GENERAL REQUIREMENTS**

D. Table 2 lists the approximate flood flows from the Clark Fork River that could be anticipated at the project. This information is obtained from the USGS gage located above Missoula, MT on the Clark Fork River. The gage is located approximately 4.6 river miles up-gradient of the project.

Recurrence Interval	Peak Flow (cfs)	
2-Year	14,900	
10-Year	25,900	
50-Year	35,000	
100-Year	38,600	
500-Year	46,800	

TABLE 2:
----------

#### 1.02 RELATED WORK SPECIFIED UNDER OTHER SECTIONS

- Α. Section 01400 - QUALITY CONTROL.
- Β. Section 01500 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS.
- С Section 02401 – DIVERSION AND CARE OF RIVER

#### PART 2 PRODUCTS (Not Used)

#### PART 3 EXECUTION

- 3.01 EROSION AND SEDIMENT CONTROL MEASURES AND WORKS
  - The erosion and sediment control work and measures shall include but not Α. be limited to the following and as shown in the Contract Documents.
    - 1. If surface disturbance exceeds one acre, which requires an EPA Stormwater Discharge Permit, the Contractor shall submit a written erosion control plan to the Engineer and Owner 15 days prior to

#### **DIVISION 1 – GENERAL REQUIREMENTS**

<u>start of construction.</u> The plan shall address, but not be limited to, erosion due to storm water runoff, dust abatement, etc.

- 2. Soil shall be slightly rounded over trenches to compensate for settling.
- 3. Provide sediment barriers (silt fence) along slopes greater than 5% grade and before stream crossings in accordance with Section 01560, 3.03 and all federal, state, and local requirements.
- B. Control of Earthwork Activities:
  - 1. The excavation and moving of soil materials shall be scheduled so that the smallest possible areas will be unprotected from erosion for the shortest time practical.
  - 2. Excavated materials or other construction materials shall not be stockpiled or deposited within 10 feet of stream banks, lake shorelines, or other watercourse perimeters where they can be washed away by high water or storm runoff or can in any way encroach upon the actual watercourse itself.
  - 3. All surplus dredged or excavated materials shall be placed on an upland site above the ordinary high water line in a confined area, not classified as a wetland, to prevent the return of such materials to the waterway.
  - 4. All earthwork operations on shore shall be carried out in such a manner that sediment runoff and soil erosion to the water are controlled.
- C. Seeding: Seeding to protect disturbed areas shall be used as specified in the Contract Documents and/or in Section 02480, FINISH GRADING, SEEDING, AND LANDSCAPING
- D. Mulching: Mulching shall be used to provide temporary protection to soil surfaces from erosion.

#### SECTION 01560 ENVIRONMENTAL QUALITY CONTROL

#### **DIVISION 1 – GENERAL REQUIREMENTS**

- E. Vegetation Conservation: Except where clearing is required for the permanent works, approved construction roads, or excavation operations, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the construction operations and equipment. The Contractor shall move equipment on access routes within the right-of-way in a manner which will prevent damage to crops, rangeland, or property.
  - 1. Undisturbed buffer strips of natural vegetation shall be left on banks and bottoms of waterways and at road crossings until start of construction.
- F. Diversions:
  - 1. Diversions shall be used to divert water away from work areas and/or to collect runoff from work areas for water quality treatment and safe discharge.
  - 2. Diversions or channel changes required by the Contractor to complete the work shall be completed in a manner to minimize erosion and to leave the drainage course essentially unchanged.
  - 3. The Contractor shall remove all diversions, culverts, bridges and other temporary work following completion of the work and shall restore the area disturbed to essentially the same configuration as it was prior to construction or to the final lines and grades as shown on the Contract Documents.
- G. River Crossings: The Contractor shall not be permitted to ford live streams. The Contractor shall install adequate culverts, temporary bridges, or other works so that all equipment and vehicles can operate and work without the equipment's tires or tracks entering the live stream channel. River crossings using fill material in the river is not allowable.
- H. Sediment Basins: Sediment basins shall be used to settle and filter out sediment from eroding areas, and to protect properties and streams below the construction areas.
- I. Temporary and permanent slope breakers and sediment barriers (e.g. soil berms or staked bales of hay) will be installed to reduce water erosion on slopes greater than five percent as at stream crossings.

#### **DIVISION 1 – GENERAL REQUIREMENTS**

#### 3.02 WATER POLLUTION CONTROL

- A. The Contractor's construction activities shall be performed by methods that will prevent the entrance, or accidental spillage, of solid matter, contaminants, debris, and other objectionable pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Such pollutants and wastes shall include, but are not restricted to, refuse, garbage, cement concrete, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailings, mineral salts, and thermal pollution. Servicing and refueling of construction equipment shall be restricted to areas more than 250 feet away from a water body.
  - 1. No herbicide shall be applied within 25 feet of water bodies unless specifically labeled for use in or next to water. Mechanical or biological control methods also can be used. Herbicide shall be applied in compliance with federal, state, and local regulations. Use of coil carriers with herbicides shall be avoided.
- B. Compliance with Applicable Laws and Regulations:
  - 1. The Contractor shall comply with all applicable Federal, State and local laws, orders, and regulations concerning the control and abatement of water pollution.
  - 2. Prior to the discharge of any wastewater or other pollutants, or any dredged or fill materials into navigable waters, the Contractor shall obtain the proper permits and provide a copy to the Engineer.
- C. Other Provisions:
  - 1. All construction debris shall be disposed of on land in such a manner that it cannot enter a waterway or wetland.
  - 2. Equipment for handling and conveying materials during construction shall be operated to prevent dumping or spilling the materials into the water except as approved herein.
  - 3. During construction and subsequent operation of this facility, no petroleum products, chemicals, or other deleterious materials shall be allowed to enter or be disposed of in such a manner so that they could enter the water and precautions shall be taken to prevent entry of these materials into the water.

# **DIVISION 1 – GENERAL REQUIREMENTS**

- 4. All work in waterways shall be performed in such a manner so as to minimize increases in suspended solids and turbidity, which may degrade water quality and damage aquatic life outside the immediate area of operation.
- 5. Only clean riprap materials shall be utilized in order to avoid the percolation of fines which would result in excessive local turbidity and the riprap shall be placed in such a manner so as to provide a reasonably solid mass with no appreciable variation in thickness or slope.
- 6. The Contractor shall maintain close coordination with downstream water users, advising them of any water quality changes to be caused by the construction.
- 7. Measures shall be employed to prevent wet concrete from entering the waterway.
- 8. Concrete trucks shall be washed at a site and in such a manner that wash water cannot enter the waterway.
- D. Dewatering Procedures:
  - 1. The Contractor shall construct, maintain, and operate cofferdams, channels, flume drains, sumps, pumps, or other temporary diversion and protection works. Furnish materials required, install, maintain, and operate necessary pumping and other equipment for environmentally safe removal and disposal of water from the various parts of the work. Maintain any foundations, trenches, pipelines, and parts of the work free from water.
  - 2. Where an excavation extends below the water table, dewater in a manner that will prevent loss of fines from the foundation. Maintain stability of slopes and bottom of the excavations, and perform construction operations in the dry. Use screened wells or equivalent methods for dewatering. Control seepage along the bottom of excavations, which may require ditches and pipe drains leading to sumps from which the water shall be pumped and properly discharged.

## 3.03 STORM WATER DISCHARGE PERMIT

A. Federal law requires an appropriate storm water discharge permit be obtained prior to the start of construction on any Work Delivery Order that will result in one (1) or more acres of surface disturbance. The Contractor shall meet all requirements for storm water discharges from construction activities as administered by the Montana Department of Environmental Quality (MDEQ).

The Contractor shall submit a Notice of Intent (NOI). Construction involving surface disturbance may begin after acknowledgement of receipt by MDEQ of the completed NOI Package is submitted to the OWNER and ENGINEER. The NOI shall be submitted to:

Department of Environmental Quality Water Protection Bureau PO Box 200901 Helena, MT 59620-0901 Telephone: (406) 444-3080 Website: http://deq.mt.gov/wqinfo/mpdes/stormwaterconstruction.mcpx

The Contractor shall also submit a Notice of Termination (NOT). The NOT must be submitted to MDEQ upon the completion of construction when all soil disturbing activities have ceased and the site has been stabilized as stated in the NOT.

- B. The Contractor shall also be responsible for developing a written sitespecific Storm Water Pollution Prevention Plan (SWPPP) in accordance with the USEPA guidance document entitled Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. A copy of the SWPPP may be requested for review by the USEPA. The SWPPP must comply with the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY effective date January 1, 2013.
  - 1. A copy of the SWPPP shall be submitted to the Owner and the Engineer prior to submittal to MDEQ.

## 3.04 CHEMICAL POLLUTION

A. The Contractor shall provide tanks or barrels to be used to dispose of chemical pollutants produced as a by-product of the project work such as

01560 – Page 7 of 14

drained lubricating or transmission oils, greases, soaps, asphalt, etc. At the completion of the construction work, storage tanks or barrels shall be removed from the site and properly disposed of.

- B. Sanitary facilities such as chemical toilets or septic tanks shall not be placed adjacent to live streams, wells, or springs. They shall be located at a distance of 200 feet or as required to prevent contamination of any well or watercourse.
- C. The term pesticide as used in these Specifications shall include all herbicides, insecticides, fungicides, and rodenticides. Should the Contractor find it necessary to use pesticides in the areas of work under this contract, he shall submit his plan for such use to the Engineer for written approval. The Contractor shall not proceed prior to approval by the Engineer.
- D. Pesticides used shall only be those registered with the Environmental Protection Agency in compliance with the Federal Environmental Pesticide Control Act of 1972 and other Federal pesticide acts. Pesticides names on the Department of the Interior's "Prohibited List" shall not be used.

## 3.05 AIR POLLUTION

- A. The Contractor shall comply with applicable Federal, State, and local regulations concerning the prevention and control of air pollution and the burning of brush, slash or other materials. In no case shall unapproved materials, such as tires, plastics, rubber products, asphalt products, or other materials that create heavy black smoke or nuisance odors, be burned. Trash burning will not be permitted and smoke of any kind shall be minimized.
- B. Fire prevention measures shall be taken to prevent the start or the spreading of fires resulting from the project work.
- C. In the conduct of construction activities and operation of equipment, the Contractor shall utilize such practicable methods and devices as are reasonably available to control, prevent, and otherwise minimize atmospheric emissions or discharges of air contaminates.
- D. Equipment and vehicles that show excessive emissions of exhaust gases shall not be operated until corrective repairs or adjustments are made.

## 3.06 DUST ABATEMENT

## SECTION 01560 ENVIRONMENTAL QUALITY CONTROL

## **DIVISION 1 – GENERAL REQUIREMENTS**

A. The Contractor shall prevent dust that has originated from his operation from damaging crops, cultivated fields, rangeland, trees, and dwellings, or causing a nuisance. The Contractor shall be held liable for any damage resulting from dust originating from his operations under these Contract Documents.

## 3.07 NOISE POLLUTION

- A. The Contractor shall comply with applicable Federal, State, and local laws, orders, and regulations concerning the prevention, control, and abatement of excessive noise.
- B. The use of jackhammers, pile driving, or other operations producing highintensity impact noise may not be performed at night unless the Contractor receives prior approval of the Owner and nearby property owners.

## 3.08 PRESERVATION OF HISTORICAL AND ARCHEOLOGICAL DATA

- A. Federal legislation provides for the protection, preservation, and collection of scientific, prehistoric, historic, paleontologic, and archeologic data (including relics and specimens) that might otherwise be lost due to alteration of the terrain as a result of any Federal construction project.
- B. The Contractor agrees that, should he or any of his employees in the performance of this contract discover evidence of possible scientific, prehistoric, historical, paleontologic, or archeologic data, he will cease work and notify the Owner or Engineer immediately giving the location and nature of the finding. Written confirmation shall be forwarded immediately. The Owner will issue stop-work orders should the Contractor encounter any of the above-mentioned resources. The Contractor shall exercise care so as not to damage artifacts or fossils uncovered during excavation operations and shall provide the cooperation and assistance necessary to preserve the findings for removal.
- C. Where appropriate by reason of a discovery, the Engineer may order delays in the time of performance, or changes in the work, or both. If such delays, or changes, or both, are ordered, the time of performance and contract price shall be adjusted in accordance with the applicable clauses in the General Provisions.
- D. The Contractor agrees to insert this paragraph 3.08 in all subcontracts which involve the performance of work on the project site.

## 3.09 WASTE MATERIAL DISPOSAL

- A. Excess excavated material not required or suitable for backfill, and other waste material, must be disposed of in licensed landfills or at other sites for which local, county, or state approval is obtained.
- B. Unacceptable disposal sites include, but are not limited to, sites within a wetland land or critical habitat and sites where disposal will have a detrimental effect on surface water or groundwater quality.
- C. Contractor may make his own arrangements for disposal subject to submission of proof that the owner(s) of the proposed site(s) has(have) a valid fill permit issued by the appropriate governmental agency.
- D. Maintain areas covered by the Contract and affected public properties free from accumulations of waste, debris, and rubbish caused by construction operations. Remove excavated materials from the site, or stockpile where shown or directed by Engineer.
- E. Cleaning and disposal shall comply with local ordinances and pollution control laws. Do not burn or bury rubbish or waste materials on the project site. Do not dispose of volatile wastes such as mineral spirits, oil, chemicals, or paint thinner on-site or in storm or sanitary drains. Disposal of wastes into streams or waterways is prohibited. Provide acceptable containers for collection and disposal of waste materials, debris, and rubbish.

## 3.10 MAINTENANCE, REMOVAL AND RESTORATION

- A. The Contractor shall, at all times, keep the construction area, including storage areas used by him, free from accumulations of waste materials and rubbish.
- B. Waste materials including, but not restricted to, refuse garbage, sanitary wastes, industrial wastes, and oil and other petroleum products, shall be disposed of by the Contractor. Materials must be disposed of by acceptable means such as an approved solid waste facility. It shall be the responsibility of the Contractor to make any necessary arrangements pertinent to the locations and regulations of such disposal. The Contractor shall pay any fees or charges required for disposal of materials.

## 3.11 OSHA REGULATIONS

A. General: Contractor will be required to comply with the Amendment to the Occupational Safety and Health Administration Construction Standards for Excavations, 29 CFR Part 1926, Subpart P printed Tuesday October 31, 1989 and effective January 2, 1990.

Any conflicting information between the OSHA document and these Contract Documents shall be revised to the OSHA document requirements supersede and take precedence over all other conflicting information. Contractor shall be required to obtain copies of the OSHA document and to complete review of the same to avoid misrepresentation of their regulations

- B. Trench Shoring
  - 1. Type 1 TRENCH EXCAVATION. Excavation performed as Type 1 need not have protective support. The sides of all trenches shall be sloped back according to the soil type and in accordance with other criteria as defined in OSHA STANDARDS, 29 CFR, PART 1926, SUBPART P. Contractor shall solely be responsible for determination of soil type and full compliance.
  - 2. TYPE 2 TRENCH EXCAVATION. Excavation performed as Type 2 shall provide a support system, shielded system or other system, if required, which adequately protects employees against cave-in and which is designed in accordance with OSHA STANDARDS as defined in 29 CFR, PART 1926, SUBPART P.

Note: OSHA regulations require that all trenches which are deeper than 20 ft. are to have the side slopes and/or the protective systems designed by a registered professional engineer.

## 3.12 HAZARDOUS ATMOSPHERES

A. Contractor shall prevent employee exposure to potentially harmful levels of atmospheric contaminants and assure acceptable atmospheric conditions by complying with the requirements of 29 CFR, Part 1926, Subpart P. Monitoring equipment shall be supplied as a requirement of this project.

## 3.13 CONTAMINATED MATERIALS

- A. General: If contaminants are encountered, Contractor shall provide notice to the Owner and Engineer.
- B. Procedures at Petroleum Contaminated Soils/Groundwater Site: Since the scope of the project is not designed as a cleanup, any contaminated soil material shall be separated during the excavation process from non-contaminated material, temporally stored and protected on the site, and then returned to the trench for use as backfill material. Measures shall be taken to address the following requirements.
  - 1. Contractor shall comply with all applicable OSHA regulations to protect the health and safety of their employees from known or suspected hazards in the work environment. For a Contractor working near any discovered contaminated areas during the process of the project, Contractor shall be required to demonstrate employee training <u>similar</u> to the requirements of 29 CFR 1910.120(e)(3) for "routine and non-routine site employees" on a hazardous waste site. Contractor shall be required to properly secure the site to protect and prevent exposure of the general public to the contaminated materials.
  - 2. The pipe zone and bedding zone shall be sealed at each end of the determined petroleum contaminated material zone with impervious soil/bentonite trench plugs  $(1x10^7 \text{ cm/sec}^2)$  to prevent migration of the contaminant from the area.
  - 3. The pipe materials shall be stored, handled and installed to prevent contact with any contaminants, and where directed by the Engineer, prevent migration of the contaminants from the area. Engineer may revise the pipe, gaskets, and other materials as necessary to protect the project from contaminants. The Contractor shall be compensated for the increased material and labor costs associated with these pipe modifications.
  - 4. The temporary site storage of the petroleum-contaminated material shall require securing the material from access by all unauthorized parties. The material shall be covered and provisions taken to prevent migration of the contaminants from the source material by rainstorms or other events. The material shall be placed on either an impervious liner material, or on an asphalt street surface. The material shall not be mixed with non-contaminated materials.
  - 5. All petroleum-contaminated soils shall be returned to the trench as backfill material. They shall be confined to the area from which

they came, and placed as near to their original depth as possible. The materials shall not be removed from the site.

All work related to training personnel in the handling of contaminated soils as per these specifications shall be done as incidental work and no separate payment shall be made.

- C. Procedures at <u>Other</u> Contaminated Soil Sites: When contaminants other than petroleum products are encountered during the project (such as hazardous substances or wastes), the situation will be addressed by the Owner at the time of discovery.
- D. Dewatering Activities: For areas where it is determined that the project will be in contaminated groundwater (containing hazardous materials), the dewatering procedure and progress of work on the project shall be addressed by the Owner at the time of discovery.

## 3.14 FIRE PROTECTION

A. Muffler systems on construction equipment shall have spark arresters to reduce risk of fire. A corridor along the pipeline may be moved in order to reduce the risk of fire. The Contractor shall maintain fire extinguishers and other fire fighting equipment to quickly respond in the event of a fire.

## 3.15 WETLANDS

- A. Wherever possible, construction shall avoid wetlands and riparian areas.
- B. The Contractor shall comply with all of Section 401 water quality certification conditions, and any additional federal water quality requirements/conditions.
- C. Construction equipment operating in wetlands shall be limited to that which is needed to excavate the trench, install the pipe, backfill the trench, and restore the ROW.
- D. Where required, vegetation removal in the right-of-way beyond the trench area shall be done at ground level, leaving existing root systems intact. Grading and stump removal in wetlands shall be limited to directly over the trench, where possible.

## SECTION 01560 ENVIRONMENTAL QUALITY CONTROL

## **DIVISION 1 – GENERAL REQUIREMENTS**

- E. Wide-track or balloon-tire construction equipment shall be used in saturated/inundated areas; timber pads, prefabricated equipment pads, or geotextile fabric overlain with gravel fill shall be used with normal equipment in such areas. All pads and temporary fill shall be removed following construction.
- F. Hay bales, berms, or other acceptable erosion/sedimentation control devices shall be installed at the edge of wetlands and other waters prior to construction. All exposed soils shall be permanently stabilized at the earliest practicable date.
- G. Hazardous materials, including fuels and lubricating oils, shall not be stored within 250 feet of wetlands. Additionally, construction equipment shall not be serviced or refueled within 250 feet of such areas.
- H. Topsoil from wetlands shall be stockpiled with intact roots, rhizomes and seed banks. Where possible, the topsoil shall be returned to its original horizon. At a minimum, the top one-foot of topsoil shall be replaced in the trench following pipeline placement.
- I. Wetland ground surfaces shall be re-contoured to maintain preconstruction wetland hydrology.
- J. When possible, disturbed wetlands shall be re-vegetated with native plant material obtained from local sources. Additionally, appropriate measures shall be taken to prevent the introduction/spread of noxious weeds into wetland areas.

## 3.16 THREATENED, ENDANGERED, CANDIDATE, AND SENSITIVE SPECIES AND HABITATS

A. The Contractor agrees that, should he or any of his employees in the performance of this contract, discover evidence of possible threatened, endangered, candidate, and sensitive species and habitats, he will cease work and notify the Owner and Engineer immediately, giving the location and nature of the finding. Written confirmation shall be forwarded immediately. The Owner may issue stop-work orders if construction encounters threatened, endangered, candidate, and sensitive species and habitats. Construction will continue only after consultation with the U.S. Forest Service and U.S. Fish and Wildlife Service.

## END OF SECTION

## PART 1 GENERAL

### 1.01 WORK INCLUDED

- A. The work included under this section consists of furnishing all construction plans, labor, equipment, and incidentals necessary for the diversion of flows from the Clark Fork River, dewatering of the project site, and the diversion and care of the river during construction of the Project. Note that dewatering and diversion and care of the river may require a system of pumping plants, pipelines and/or coffer dams. The work also includes complete removal of all diversion and dewatering equipment and structures from the project site and restoration of the project site following completion of the work.
- B. The Contractor shall be responsible for coordination with the Owner for any dewatering, diversion, and/or construction activity that may adversely affect the volume of water flowing through the project site or would have the potential to increase sediment discharge and turbidity of the Clark Fork River. Based on these factors the Contractor shall promptly perform the work within the limits of the river channel to resume normal flows through the project site in the shortest duration within the performance period of the Contract.
- C. The Contractor is responsible to satisfy themselves as to the extent and cost of all necessary diversion and dewatering in accordance with the Drawings and this specification.

### 1.02 QUALITY ASSURANCE

- A. The Contractor shall be responsible to research and satisfy themselves as to the size, type, and quality of the diversion and dewatering system. In the case of an event which exceeds the diversion and/or dewatering system's capacity; the Owner and Engineer shall not be held liable for the damages to the dewatering system, diversion system, and any portion of the completed work.
- B. It shall be the Contractor's responsibility to comply with all requirements and regulations of all federal, state or local agencies that govern the work affecting construction in and adjacent to the stream.

## 1.03 SUBMITTALS

A. The Contractor shall submit to the Engineer prior to the start of any work, any revisions to and supplemental information to dewatering plans including: 1) a detailed description of the diversion system, and dewatering system; 2) proposed equipment, layout, and capacity of the systems; 3) proposed operational procedures; 4) proposed materials; and 5) proposed schedule or work with regards to the diversion, and dewatering. Review shall be made by both the Owner and Engineer as to the proposed system. The review shall only be with respect to the basic principles of the methods the Contractor intends to employ to assure protection of water volume, structures and water quality. The Contractor shall be solely responsible for all aspects of the diversion system, dewatering including the arrangement, location and depths of the system necessary to

accomplish the work of dewatering and the protection of the stream, structures, and water quality.

## PART 2 PRODUCTS - NOT USED

## PART 3 EXECUTION

### 3.01 CONTRACTOR'S RESPONSIBILITY

- A. The Contractor shall furnish all necessary labor, equipment, and incidentals necessary for reservoir drawdown, dewatering of the project site, and diversion and care of the river during the period of construction.
- B. The Contractor shall keep the construction area free from water by diversion, pumping, berming, coffer-dams, sheet pile, or by other methods or combination thereof.

### 3.02 UPSTREAM AND DOWNSTREAM COFFERDAM

A. Upstream and downstream cofferdams may be constructed on existing grade above and below the existing measurement weir as required for the Contractor's Diversion and Dewatering Plan(s). Contractor shall implement coffer dam materials per the design drawings. At the Contractor's discretion, a liner may be added to the cofferdam to decrease permeability.

## 3.03 FISH SALVAGE

- A. Any fish found isolated within the diversion area should be salvaged and transported from isolation downstream of the diversion area.
- B. Fish shall be removed with a bait net, cast net, or scoop net. The area of the site will best determine the appropriate net for use. Use of bait or cast nets is not permitted without an additional permit.
  - 1. Improper handling of fish can harm fish through interference with mucus or scales.
  - 2. Nets used shall have fine, soft mesh free from knots.
  - 3. Use of hands is allowable if fish are handled with wet hands or a wet towel. Handling of fish with dry hands is prohibited.
- C. If the pool fish are found isolated in is considered too large for removal with nets, water level may be lowered to allow removal of fish. Water level should initially be lowered by 25% and as many fish as possible removed. Water level can then be lowered by another 25% again and again until all fish are removed safely.

D. Removal and transportation of fish from isolation to the river downstream of the diversion area shall be performed as quickly as possible.

## 3.04 COORDINATION DURING CONSTRUCTION

A. If any adverse effects are observed or reported due to diversion and dewatering related to water quantity or quality they shall be reported immediately to the Owner and Engineer. No work shall proceed prior to resolution of deficiency and flow past the site is approved by Owner.

### 3.05 REMOVAL

- A. The Contractor shall, when no longer needed or at the end of construction, completely remove all dewatering and stream diversion equipment from the project site and demolish any cofferdams or other dewatering structures constructed by the Contractor. Constructed cofferdam material must be completely removed from the work area to the pre-existing ground surface and the area reclaimed to pre-existing conditions as approved by the Engineer.
- B. The diversion and care of the river will no longer be needed when the new ramp flume can be operated to convey the stream flow as determined by the Engineer.

## 3.06 PROTECTION

A. At all times the Contractor shall provide sufficient protection to ensure the safety to personnel, equipment, materials, and existing structures, and to the public for activities relating to dewatering, water supply, and diversion and care of the stream.

## END OF SECTION



485 ARAPAHOE AVE. BOULDER | CO | 80302 WWW.BOATERPARKS.COM (303)-545-5883

**SPECIFICATIONS** 

PRELIMINARY - NOT FOR CONSTRUCTION

## FILE NO. ----APPLICANT CITY OF MISSOULA LOCATION CLARK FORK RIVER, DATE SEP 14, 2017 SHEET 27 OF 34

#### GENERAL NOTES

#### ENGINEERS OVERSIGHT

- 1. THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY, AND IS NOT LIABLE FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY OR FOR PROBLEMS WHICH ARISE FROM OTHERS OR OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS.
- 2. ALL ELEVATIONS, DIMENSIONS, ALIGNMENTS AND ORIENTATION OF ALL ELEMENTS SHOWN IN THE PLANS MUST BE APPROVED BY THE REP ENGINEER OR REP ENGINEER'S REPRESENTATIVE (ENGINEER).
- 3. WORK SHALL NOT COMMENCE UNTIL AFTER THE DATE OF THE ON-SITE PRE-CONSTRUCTION MEETING WHICH WILL BE ATTENDED BY REPRESENTATIVES OF THE PROJECT OWNER, ENGINEER, CONTRACTOR AND ANY SUB-CONTRACTORS. IN THE EVENT THAT WORK DOES NOT BEGIN IMMEDIATELY FOLLOWING THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL PROVIDE REPRESENTATIVES OF THE PROJECT OWNER, ENGINEER, ANY SUB-CONTRACTORS, AND RELEVANT AGENCIES NOTED IN THE PERMITS, TWO WEEKS NOTICE BEFORE CONSTRUCTION COMMENCES.
- 4. ALL CONSTRUCTION WORK SHALL CONFORM TO THE CITY OF MISSOULA DESIGN AND SPECIFICATIONS. UTILITY CONSTRUCTION SHALL CONFORM TO THE AMERICAN PUBLIC WORKS ASSOCIATION, PUBLIC WORKS CONSTRUCTION MANUAL, LATEST EDITION. STANDARD SPECIFICATIONS OF MATERIALS FOR AGGREGATES AND SOIL AGGREGATE SUB-BASE, BASE AND SURFACE COURSES SHALL BE GOVERNED BY AASHTO DESIGNATION M147-65 (1993) OR LATEST REVISION. ALL CONSTRUCTION SHALL CONFORM TO CITY AND COUNTY STANDARDS AND SPECIFICATIONS AS APPLICABLE.
- 5. WHENEVER THE INCLUDED DRAWINGS ARE FOUND TO BE INCONSISTENT WITH ANY OTHER RESOLUTION, ORDINANCE, CODE, REGULATION, OR OTHER STANDARDS REFERENCED, THE ENACTMENT IMPOSING THE MORE RESTRICTIVE STANDARDS OR REQUIREMENTS SHALL CONTROL.
- 6. THE CONTRACTOR SHALL NOT COMMENCE CONSTRUCTION WITHOUT CONSTRUCTION PLAN APPROVAL BY ALL RELEVANT AGENCIES. A COPY OF THE APPROVED PLANS SHALL BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES DURING WORKING HOURS.
- 7. THE ENGINEER IS TO BE NOTIFIED PRIOR TO ANY PLAN CHANGES OR ON-SITE DESIGN MODIFICATIONS. ALL PLAN CHANGES MUST BE APPROVED BY THE ENGINEER.
- 8. ALL EXISTING TOPOGRAPHIC SURVEY DATA SHOWN ON THESE PLANS HAS BEEN OBTAINED AND CERTIFIED BY OTHERS. THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THIS TOPOGRAPHIC INFORMATION, AND MAKES NO REPRESENTATION PERTAINING THERETO AND THEREFORE ASSUMES NO RESPONSIBILITY OR LIABILITY.
- 9. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS TO THE CONSTRUCTION LIMITS OF THE PROJECT AND IN NO WAY SHALL ENCROACHMENT OCCUR ONTO ADJACENT PROPERTIES UNLESS LEGAL EASEMENTS ARE OBTAINED. ALL FILL AND CUT SLOPES SHALL BE SETBACK FROM THE PROPERTY LINE IN ACCORDANCE WITH CHAPTER 70 OF THE UNIFORM BUILDING CODE. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY AGREEMENTS NECESSARY OR DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO PUBLIC OR PRIVATE PROPERTY, INCLUDING UTILITIES.

#### SURVEY

- 1. CONSTRUCTION SURVEY TO BE PROVIDED BY THE OWNER
- THE OWNER'S SURVEYOR SHALL VERIFY PROPOSED GRADES AND INVERT ELEVATIONS, FLOW LINES, ALIGNMENTS, SETBACKS AND TOPOGRAPHY PRIOR TO CONSTRUCTION.
- 3. THE OWNER IS RESPONSIBLE FOR COMPLETING AN AS-BUILT SURVEY, IF REQUESTED, FOLLOWING COMPLETION OF THE FINAL GRADES

UTILITIES

- 1. A MINIMUM OF 12 INCHES OF SEPARATION MUST BE MAINTAINED BETWEEN UTILITY LINES.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES AND SHOULD NOT RELY SOLELY ON THESE CONSTRUCTION PLANS FOR UTILITY LOCATIONS. CONTRACTOR MUST COMPLETE ALL UTILITY LOCATES PRIOR TO CONSTRUCTION. LOCATES CAN BE COORDINATED WITH THE LOCAL UTILITY NOTIFICATION CENTER. DAMAGE TO ANY EXISTING UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.

#### GENERAL ENVIRONMENTAL

- 1. WORK SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL AGENCIES' LAWS, RULES, REGULATIONS, AND PERMITS. ALL WORK SHALL BE SUBJECT TO INSPECTIONS AND SITE INVESTIGATION BY REGULATORY AGENCIES. FAILURE TO COMPLY WITH THESE REGULATIONS IS SUBJECT TO LEGAL ENFORCEMENT ACTION.
- 2. COPIES OF PERMITS OBTAINED BY THE OWNER WILL BE PROVIDED TO THE CONTRACTOR. CONTRACTOR SHALL MAINTAIN COPIES OF ALL PERMITS ON THE SITE AT ALL TIMES. THESE MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING: CLEAN WATER ACT SECTION 404 PERMIT FROM THE U.S, ARMY CORPS OF ENGINEERS, SECTION 401 WATER QUALITY CERTIFICATION, NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT, FLOODPLAIN DEVELOPMENT PERMIT, ANY APPROPRIATE LAND USE PERMITS, AND ANY RELEVANT CONSTRUCTION STORM WATER PERMITS.
- 3. A PRE-CONSTRUCTION MEETING WITH EQUIPMENT OPERATORS SHALL BE HELD TO DISCUSS THE PROJECT REQUIREMENTS AS THEY RELATE TO ENVIRONMENTAL PERMIT COMPLIANCE.
- 4. ON-SITE CONSTRUCTION REVIEWS SHALL BE CONDUCTED TO IDENTIFY MAINTENANCE NEEDS AND CHRONIC PROBLEMS THAT MAY BE OCCURRING. APPROPRIATE REMEDIAL ACTIONS SHALL BE IMPLEMENTED IN A TIMELY MANNER.
- 5.IF PREVIOUSLY UNKNOWN ARCHEOLOGICAL MATERIALS ARE DISCOVERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL STOP IMMEDIATELY AND THE ENGINEER AND OWNER SHALL BE CONTACTED. THE STATE HISTORIC PRESERVATION OFFICE WILL THEN BE CONTACTED BY THE ENGINEER OR OWNER FOR CONSULTATION.

#### GENERAL CIVIL

1. ALL DRAINAGE PIPE FOR ROADWAY PURPOSES SHALL BE EITHER HIGH DENSITY POLYETHYLENE (HDPE) OR REINFORCED CONCRETE PIPE (RCP) WITH A MINIMUM DIAMETER OF 18-INCHES AND A MINIMUM COVER OF 12-INCHES. THE PIPE SHALL BE ABLE TO WITHSTAND AASHTO HS-20 LOADING WITH TIRE CONTACT AREA DEFINED IN AASHTO 3.30.

#### SEDIMENT AND POLLUTION CONTROL

- 1. ALL APPROPRIATE SEDIMENT AND POLLUTION CONTROL MEASURES, AND BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE TO MINIMIZE SEDIMENTATION AND RIVERBED IMPACTS PRIOR TO INITIATING IN-RIVER / RIVERBANK WORK. SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THE URBAN DRAINAGE AND FLOOD CONTROL DISTRICT GUIDELINES AND ANY STORM WATER POLLUTION PREVENTION PLAN PROVIDED BY THE ENGINEER.
- 2. CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR THE DESIGN, IMPLEMENTATION, AND PMAINTENANCE OF SEDIMENT AND EROSION CONTROLS IN CONFORMANCE WITH CONSTRUCTION STANDARDS AND THE REQUIREMENTS OF REGULATORY AGENCIES THROUGHOUT THE CONSTRUCTION PERIOD. THE ENGINEER WILL NOT BE ON-SITE TO APPROVE, REVIEW, OR MAINTAIN THE CONTROLS. STORMWATER MEASURES MAY BE REQUIRED TO BE INSTALLED AT ANY TIME DURING CONSTRUCTION AT THE DIRECTION OF THE ENGINEER OR OWNER.
- 3. IN ADDITION TO CONSTRUCTION BMP'S, TEMPORARY SEDIMENT AND EROSION CONTROLS (E.G., TEMPORARY SEEDING, MULCHING, SILT FENCE, STRAW WADDLE) SHALL BE IMPLEMENTED ON ALL DISTURBED AREAS WITHIN 2-DAYS IF DISTURBED AREAS ARE TO REMAIN DORMANT FOR MORE THAN 21-DAYS. PERMANENT SOIL STABILIZATION (E.G., PERMANENT SEEDING, EROSION CONTROL FABRIC) SHALL BE IMPLEMENTED ON DISTURBED AREAS WITHIN 2-DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE PROJECT AREA.
- 4. SPOIL PILES SHALL BE COVERED OR OTHERWISE MANAGED TO REDUCE SEDIMENTATION. ALL MATERIAL WHICH IS TO BE PLACED AT UPLAND SITE SHALL BE DISPOSED OF IN SUCH A WAY THAT SEDIMENT RUNOFF IS CONTROLLED AND MINIMIZED.
- 5. CONTRACTOR SHALL NOT STORE EQUIPMENT BELOW THE ORDINARY HIGH WATER LINE, AND TAKES FULL RESPONSIBILITY FOR ANY MATERIALS VANDALIZED, DAMAGED, BROKEN, OR LOST AS A RESULT OF RIVER EVENTS.
- 6. ALL FUELING OPERATIONS, LUBRICATING, HYDRAULIC TOPPING OFF, FUEL TANK PURGING, AND EQUIPMENT MAINTENANCE/REPAIRS SHALL BE PERFORMED AT AN UPLAND SITE OUTSIDE OF THE BANKS OF ANY SITE WATERWAYS AT A LOCATION TO BE DETERMINED BY THE ENGINEER OR OWNER. THESE ACTIVITIES SHALL TAKE PLACE ON AN APPROVED PAD WITH SPILL CONTROL/ COLLECTION DEVICES IN PLACE.
- 7. ALL CONSTRUCTION EQUIPMENT SHALL BE INSPECTED DAILY FOR HYDRAULIC AND FUEL LEAKS. LEAKS SHALL BE REPAIRED PRIOR TO OPERATION WITHIN THE 100-YEAR FLOODPLAN. WHEN NOT IN USE, FUEL AND HYDRAULIC FLUIDS SHALL BE STORED AT AN UPLAND SITE OUTSIDE OF THE 100-YEAR FLOODPLAIN. EMERGENCY SPILL RESPONSE DEVICES SHALL BE ON-SITE AT ALL TIMES DURING CONSTRUCTION IN WATERWAYS AND FLOODPLAINS AND SHALL BE READY TO DEPLOY IN THE EVENT OF A SPILL.
- 8. NO CHEMICALS, FUELS, LUBRICANTS, BRUSH, ETC. SHALL BE DISCHARGED OR DISPOSED OF INTO OR ALONGSIDE ANY STREAM, WATERCOURSE, OR FLOODPLAIN UNDER ANY CIRCUMSTANCES.
- 9. LITTER AND CONSTRUCTION DEBRIS SHALL BE CONTAINED DAILY. ALL CONSTRUCTION DEBRIS AND LITTER SHALL BE COMPLETELY REMOVED OFFSITE AND DISPOSED OF PROPERLY UPON PROJECT COMPLETION.
- 10.CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS NECESSARY TO PROVIDE ACCESS TO CONSTRUCTION AREAS FROM ALL EXISTING ROADWAYS AND PATHS TO MINIMIZE GROUND DISTURBANCE AND SEDIMENT TRACKING FROM VEHICLE TIRES. ADJACENT ROADWAYS AND PATHS SHALL BE VISUALLY INSPECTED DAILY TO ENSURE THAT SEDIMENT IS NOT BEING CARRIED OFF-SITE. IF SEDIMENT IS BEING CARRIED OFF-SITE, THE ADJACENT ROADWAYS AND PATHS SHALL BE SWEPT CLEAN DAILY.
- 11.BMP'S PLUS TEMPORARY SEDIMENT AND EROSIOP 800 TROLS OF 329



485 ARAPAHOF AVE. BOULDER | CO | 80302 WWW.BOATERPARKS.COM

(303)-545-5883



PRELIMINARY - NOT FOR CONSTRUCTION

FILE NO.	
APPLICANT	CITY OF MISSOULA
LOCATION	CLARK FORK RIVER,
DATE	SEP 14, 2017
SHEET	28 OF 34

SHALL BE MAINTAINED TO BE FUNCTIONAL UNTIL THE SITE HAS REACHED FINAL STABILIZATION. THE PROJECT AREA SHALL BE CONSIDERED TO HAVE REACHED FINAL STABILIZATION WHEN:

A. A PERENNIAL, VEGETATIVE COVER HAS GROWN TO A 80-PERCENT DENSITY

THROUGHOUT THE ENTIRE DISTURBED AREA.

B. ALL TEMPORARY SEDIMENT AND EROSION CONTROLS HAVE BEEN REMOVED

AND DISPOSED OF PROPERLY.

- C. ALL TRAPPED SEDIMENT HAS BEEN REMOVED AND PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION.
- D. ALL CONSTRUCTION ACTIVITIES HAVE CEASED.

#### BEST MANAGEMENT PRACTICES (BMP'S)

BASINS, AND VEHICLE TRACKING CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITIES. EFFECTIVE EROSION CONTROL REQUIRES ADAPTATION AND CHANGES DURING CONSTRUCTION THAT CANNOT BE DESIGNED OR ANTICIPATED PRIOR TO CONSTRUCTION. A QUALIFIED SUPERVISOR SHOULD CHECK ALL BMP'S REGULARLY AND NOTIFY THE ENGINEER IF THERE ARE QUESTIONS OR CONCERNS. THE ENGINEER ACCEPTS NO LIABILITY FOR THE PLACEMENT. EFFECTIVENESS, MAINTENANCE, OR CHOICE OF BMP ON THE SITE IF THE ENGINEER AND/OR ENGINEER'S REPRESENTATIVE ARE NOT PRESENT.2.

THE CONTRACTOR SHALL IMPLEMENT THE NECESSARY SITE EROSION CONTROL MEASURES FOR INHIBITING DUST, WIND, AND AIR SEDIMENT MOVEMENT OFFSITE DURING ALL PHASES OR STAGES OF CONSTRUCTION.

- 3. THE CONTRACTOR SHALL PROVIDE AN AREA TO STORE CONSTRUCTION DEBRIS WHERE IT WILL NOT BE A NUISANCE TO THE SURROUNDING NEIGHBORHOOD. ALL DEBRIS SHALL BE CONTAINED IN SUCH A MANNER THAT WILL PREVENT SCATTERING. ALL DEBRIS, INCLUDING TREES AND UNDERGROWTH SHALL BE DISPOSED OF PROPERLY. ALL DEBRIS SHALL BE REMOVED FROM THE SITE PRIOR TO FINAL SITE INSPECTION.
- 4. CONTRACTOR SHALL LIMIT THE AREAS OF DISTURBANCE AND COMPLETE CONSTRUCTION WITH PHASES IN MIND.
- 5. CONTRACTOR SHALL LIM IT DIRECTLY CONNECTED IMPERVIOUS AREAS (DCIA).
- 6. BUFFER STRIPS SHOULD BE USED DURING CONSTRUCTION TO LIMIT THE DCIA'S. WHEN POSSIBLE, TRANSITIONING CHANGES IN SLOPE, TERRACING LONGER SLOPES, SURFACE ROUGHENING, AND CONTOUR FURROWS SHOULD BE USED TO MINIMIZE CONSOLIDATED FLOW.
- 7. ANY STAGED GRADING MUST BE DONE TO DIRECT STORMWATER TOWARDS THE APPROPRIATE BMP'S.
- 8. DURING CONSTRUCTION, STRAW WADDLES, COMPACTED SOIL BERMS, AGGREGATE BAGS. OR SIMILAR MUST BE USED ON ALL DISTURBED SLOPES OF 3:1 AND GREATER THAN 20 FEET IN LENGTH.
- 9. SILT FENCING LOCATED ON THE PERIMETER OF DISTURBED AREAS SHOULD BE CHECK ONA DAILY BASIS. OR FOLLOWING SIGNIFICANT STORM EVENTS TO ENSURE IT IS WORKING PROPERLY.
- 10.INLET PROTECTION MUST BE INCLUDED AT ALL STORM, SEWER, AND CULVERT LINKS. APPROPRIATE BMP'S INCLUDE ROCK SOCKS, SEDIMENT CONTROL LOGS. OR SIMILAR.
- 11.SEDIMENT ENTRAINMENT FACILITIES SHOULD BE DESIGNED TO

STORE THE APPROPRIATE VOLUME OF STORM WATER DISCHARGE, BUT CONTAIN MINIMAL ADDITIONAL CAPACITY. THEY MUST BE MAINTAINED TO THE CALCULATED VOLUME AND DREDGED AS NECESSARY.

#### MATERIAL HANDLING

- 1. A LIST OF ALL POTENTIALLY TOXIC OR HAZARDOUS CHEMICALS THAT WILL BE USED OR STORED ON-SITE SHALL BE MAINTAINED WITH THE EROSION CONTROL SUPERVISOR. WARNING LABELS MUST BE ATTACHED. MATERIAL SAFETY DATA SHEETS (MSDS) AND OTHER SAFETY INFORMATION FOR A POTENTIALLY TOXIC OR HAZARDOUS SUBSTANCE MUST BE ON THE SITE WHILE THE SUBSTANCE IS USED OR STORED.
- 1. BMP'S SUCH AS DRAINAGE CHANNELS, PERIMETER FENCING, DETENTION 2. THE FOLLOWING MATERIALS MANAGEMENT PRACTICES MUST BE FOLLOWED:
  - a. THE QUANTITY OF FUEL AND LUBRICANT AT THE CONSTRUCTION SITE MUST BE MINIMIZED.
  - b. STRICT STORAGE PRACTICES (I.E. OFF-SITE STORAGE) ARE PREFERABLE. FUEL, HYDRAULIC OIL, AND FORM OIL MUST BE STORED OFFSITE.
  - c. MATERIALS STORED AT THE CONSTRUCTION SITE MUST BE PROPERLY PROTECTED FROM THE ELEMENTS.
  - d. MATERIALS MUST BE HANDLED IN ACCORDANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS AND MANUFACTURERS' INSTRUCTIONS.
  - e. CHEMICALS REGULATED UNDER THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA) WILL BE DOCUMENTED.

#### SPILL REMEDIATION PRACTICES

- 1. ALL CONSTRUCTION SITE PERSONNEL MUST FOLLOW SPILL PREVENTION AND CONTROL PRACTICES AS FOLLOWS:
  - a. THE SENIOR SAFETY MANAGER, DESIGNATED COORDINATORS, AND THE WATER QUALITY OFFICER WILL BE CONTACTED IMMEDIATELY FOLLOWING ANY SPILL. THE SENIOR SAFETY MANAGER (OR DESIGNEE) MUST IN TURN REPORT THE SPILL TO THE APPROPRIATE FEDERAL. STATE. OR LOCAL AGENCIES IN ACCORDANCE WITH APPLICABLE REGULATIONS.
  - b. PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE EQUIPMENT.
  - c. THERE MUST BE A DESIGNATED INDIVIDUAL ON THE SITE TRAINED IN THE APPROPRIATE CLEANUP PROCEDUARES FOR VARIOUS TYPES OF CHEMICALS AND THE LOCATION OF INFORMATION AND CLEANUP SUPPLIES.
  - d. THE MSDS OF ANY MATERIAL SHOULD BE CONSULTED ON THE EVENT OF A SPILL. THE MSDS FOR ALL CHEMICALS USED ON THE SITE WILL BE KEPT ON THE SITE, AND WORKERS WILL BE REQUIRED TO REVIEW MSDS'S.
  - e. SPILL KITS MUST BE LOCATED ON-SITE. SUBCONTRACTORS MUST BE NOTIFIED OF THEIR LOCATION AND INSTRUCTED HOW TO USE THEM WHEN NECESSARY.
  - f. SPILLS MUST BE CLEANED UP PROMPTLY AFTER DISCOVERY, AND MATERIALS USED FOR CLEANUP MUST BE DISPOSED OF

OFF-SITE AT AN APPROVED FACILITY.

#### WORK LIMITS AND LAYDOWN

- 1. WORK LIMITS, ACCESS, STAGING, LAYDOWN, AND STOCKPILE AREAS SHALL BE LOCATED WHERE SHOWN ON THE CONSTRUCTION DRAWINGS OR OTHERWISE AS APPROVED BY THE ENGINEER OR OWNER.
- 2. ALL CONSTRUCTION ACTIVITIES SHALL OCCUR WITHIN CURRENTLY DISTURBED AREAS TO THE EXTENT POSSIBLE.
- 3. DISTURBED/ EXPOSED RIVERBANKS AND STAGING AND PROJECT ACCESS AREAS SHALL BE PROPERLY STABILIZED (SEEDED, MULCHED, OR OTHERWISE) WITH NATIVE VEGETATION IMMEDIATELY AFTER GRADING TO PREVENT EROSION AND ESTABLISHMENT OF INVASIVE PLANT SPECIES
- 4. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO VEGETATION OR PROPERTY OUTSIDE THE WORK LIMITS RESULTING FROM CONSTRUCTION OPERATIONS.
- 5. ALL AREAS TEMPORARILY DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, SLOPES, AND ELEVATIONS, UNLESS OTHERWISE NOTED IN THE CONSTRUCTION DRAWNGS.

#### UTILITIES

- 1. THE CONTRACTOR SHALL LOCATE ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION.
- 2. NO EXCAVATION SHALL OCCUR IN THE AREA SURROUNDING A UTILITY CROSSING. NO IMPROVEMENTS THAT MAY CAUSE SCOUR, ARE TO BE PLACED IN THE VICINITY OF AN AT-GRADE, ABOVE OR BELOW GRADE, UTILITY CROSSING.
- 3. IF UTILITIES ARE IDENTIFIED WITHIN THE PROJECT AREA. A MINIMUM BUFFER OF NO DISTURBANCE, APPROVED BY THE ENGINEER OR OWNER, IS TO BE MAINTAINED ON ALL UTILITY CROSSINGS.

#### ROCK QUALITY

- 1. INDIVIDUAL STONE BOULDERS SHALL BE DENSE, SOUND AND FREE FROM CRACKS, SEAMS AND OTHER DEFECTS CONDUCIVE TO ACCELERATED WEATHERING
- 2. AT A MINIMUM EXPOSED ROCK SHOULD HAVE ONE FLAT SURFACE AND THIS SHOULD BE THE ONLY EXPOSED SURFACE.
- 3. THE ROCK SHALL HAVE THE FOLLOWING PROPERTIES:
  - a. BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) NOT LESS THAN 2.5.
  - b. ABSORPTION NOT MORE THAN 2% BY WEIGHT.
  - c. THE BULK SPECIFIC GRAVITY AND ABSORPTION SHALL BE DETERMINED BY ASTM METHOD C-127.
- 4. ROCK THAT FAILS TO MEET THESE REQUIREMENTS MAY BE ACCEPTED ONLY IF SIMILAR ROCK FROM THE SAME SOURCE HAS BEEN DEMONSTRATED TO BE SOUND AFTER FIVE YEARS OR MORE OF SERVICE UNDER CONDITIONS OF WEATHER, WETTING AND DRYING, AND EROSIVE FORCES SIMILAR TO THOSE ANTICIPATED. ALTERNATIVELY NATIVE OR IMPORTED STONE, ALREADY AT THE SITE AND MEETING THE STANDARDS OUTLINED ABOVE, MAY BE USED.
- 5. THE ENGINEER RETAINS RIGHT OF REFUSAL FOR PHOREO FIGER TO THE SITE WHICH IS NOT SUITABLE AND DOES NOT MEET THE ABOVE

Recreation

485 ARAPAHOE AVE. BOULDER | CO | 80302 WWW.BOATERPARKS.COM

(303)-545-5883



PRELIMINARY - NOT FOR CONSTRUCTION

## FILE NO. ----APPLICANT CITY OF MISSOULA LOCATION CLARK FORK RIVER, DATE SEP 14, 2017 SHEET 29 OF 34

CRITERIA AND/OR SHOWS EXCESSIVE WEATHERING, CRACKING OR DEFORMATION.

- 6. MINIMUM ROCK DIMENSIONS FOR "QUARRIED STONE" SHALL BE 2'X2'X4' FOR DROP STRUCTURES. MINIMUM ROCK DIMENSIONS FOR ALL POOL ARMORING AND CRIB FILL TO BE RIP RAP WITH A D50 OF 9-INCHES.
- 7. ALL RIP RAP TO MEET ASTM C-535-69, AASHTO TEST 103 AND HAVE A SPECIFIC GRAVITY OF 2.65 AS WELL AS MEETING THE IOWA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS. THE ENGINEER TAKES NO RESPONSIBILITY FOR MATERIAL USED NOT MEETING THESE SPECIFICATIONS OR NOT APPROVED ON-SITE BY THE ENGINEER OR OWNER.

#### SITE PREPARATION-ROCK EXCAVATION

 CONTRACTOR SHALL USE SUITABLE EXCAVATION TECHNIQUES THAT INCLUDE RIPPERS, STANDARD BUCKET EXCAVATION, AND HYDRAULIC BREAKERS. NO BLASTING OR EXPLOSIVES MAY BE USED WITHOUT PRIOR APPROVAL.

#### SITE PREPARATION- STONES PLACED IN CHANNEL

- 1. NO ROCK PLACEMENT SHALL OCCUR IN CHANNEL UNTIL APPROPRIATE WATER CONTROL MEASURES ARE IN PLACE (AS OUTLINED IN THE WATER CONTROL TYPICALS).
- 2. AFTER SHEET PILING (OR APPROPRIATE CUTOFF WALLS) IS IN PLACE NATIVE ALLUVIUM SHALL BE EXCAVATED TO DEPTH OF FIVE FEET. CLEAN CRIB FILL SHALL BE PLACED UP TO THE SUBGRADE ELEVATION.
- 3. QUARRIED STONE SHALL BE PLACED AS SHOWN ON THE DRAWINGS WITHOUT ANY GAPS, SO THAT EACH BOULDER TOUCHES THE NEXT ONE.
- 4. EACH STONE SHALL BE PLACED TO THE FINAL POSITION BY SUITABLE EQUIPMENT FOR HANDLING MATERIAL AND, IF NECESSARY; THE STONE SHALL BE PICKED UP AND REPOSITIONED.
- IT SHOULD BE ANTICIPATED THAT RE-HANDLING OF INDIVIDUAL STONES, AFTER INITIAL PLACEMENT WILL BE REQUIRED TO ACHIEVE REQUIRED SLOPES, GRADES, ELEVATIONS AND POSITION.
- 6. THE ENGINEER SHALL OBSERVE AND APPROVE CONTRACTOR'S METHOD FOR STONE PLACEMENT IN A REPRESENTATIVE AREA FOR EACH PROJECT COMPONENT.

#### SITE PREPARATION-ROCKS PLACED IN STONE TERRACING

- 1. ALL ROCKS PLACED AS STONE TERRACING MUST BE PLACED WITH FLAT SIDE FACING UP AND BE CLEAN OF ALL SHARP PROTRUSIONS THAT COULD CREATE A SAFETY HAZARD.
- IT SHOULD BE ANTICIPATED THAT RE-HANDLING OF INDIVIDUAL STONES, AFTER INITIAL PLACEMENT WILL BE REQUIRED TO ACHIEVE REQUIRED SLOPES, GRADES, ELEVATIONS AND POSITION.
- 3. ALL PLACED ROCKS MUST BE KEYED IN 12-INCHES IN BOTH THE HORIZONTAL AND VERTICAL DIRECTIONS.
- 4. ALL STONE TERRACING SHALL BE PLACED WITH SUITABLE GEOTEXTILE UNDERLYING THE MATERIAL (IF INCLUDED IN THE DESIGN) AND BACKFILLED WITH CLEAN NATIVE FILL.
- 5. ALL PLACED STONES SHALL BE PLACED ON SUITABLE SUBGRADE APPROVED BY ENGINEER. IF UNSUITABLE SUBGRADE IS EXPERIENCED,

CONTRACTOR MUST INCLUDE SUITABLE SUBGRADE MATERIAL SUCH AS ROAD BASE GRAVEL.

#### CONCRETE MATERIALS

- 1. CONCRETE SHALL CONSIST OF PORTLAND CEMENT, SAND, AND GRAVEL, THOROUGHLY MIXED WITH WATER TO PRODUCE A THICK, CREAMY CONSISTENCY. THE MINIMUM AMOUNT OF WATER SHOULD BE USED TO PREVENT EXCESS SHRINKAGE OF THE CONCRETE AFTER PLACEMENT.
- 2. THE AGGREGATE, FOR CONCRETE, SHALL CONSIST OF 70 PERCENT SAND AND 30 PERCENT 3/8-INCH ROCK. MAXIMUM AGGREGATE SHALL BE 3/8 INCH.
- 3. ALL CONCRETE SHALL BE PRODUCED FROM TYPE II PORTLAND CEMENT WITH LESS THAN 5% TRICALCIUM ALUMINATE. CONCRETE SHALL HAVE MINIMUM CEMENT CONTENT OF 7 GALLONS PER SACK.
- 4. STRENGTH OF THE CONCRETE SHALL BE 3,000 PSI IN 28 DAYS. THE WATER CEMENT RATIO SHALL NOT EXCEED 0.48. A STIFFER MIX SHALL BE USED FOR STEEPER APPLICATIONS. AIR ENTRAINMENT SHALL BE USED FOR STEEPER APPLICATIONS. AIR ENTRAINMENT SHALL BE 6% TO 9%, AND SLUMP SHALL BE 5-INCHES TO 9-INCHES, EXCEPT AS APPROVED OR DIRECTED. AIR ENTRAINING AGENTS SHALL CONFORM TO ASTM C260 AND WATER REDUCING AGENTS SHALL CONFORM TO ASTM C494.
- 5. SUBGRADE, BASE MATERIAL, AND SURFACE COURSE IS TO BE COMPACTED TO 95% STANDARD PROCTOR WITH A MOISTURE CONTENT WITHIN 2% OF OPTIMAL PER ASTM D1558 AND AASHTO T180.

#### COLD WEATHER PLACEMENT

- 1. CONTRACTOR MUST FOLLOW RECOMMENDATIONS SET IN THE AMERICAN CONCRETE INSTITUTE COMMITTEE 306 (ACI 306R-88). WHEN PLACING CONCRETE AFTER THE FIRST FROST OR WHEN THE MEAN DAILY TEMPERATURES ARE BELOW 40° F.
  - a. HEAT AGGREGATES AND WATER IN ORDER TO PLACE FLOW FILL AT TEMPERATURES BETWEEN 50° F AND 80° F.
  - b. PLACING OF CONCRETE MAY BEGIN IN MORNING, BUT SHALL BE DISCONTINUED AT 3:00 PM OF SAME DAY IF FREEZING WEATHER THREATENS.
  - c. AFTER CONCRETE IS PLACED, PROVIDE SUFFICIENT PROTECTION SUCH AS COVER, CANVAS, FRAMEWORK, HEATING APPARATUS, ETC., TO ENCLOSE AND PROTECT FLOW FILL AND MAINTAIN TEMPERATURE OF 70° F FOR 3 DAYS OR 50° F FOR 5 DAYS AFTER PLACING.
  - d. IF FLAKING OR SPAWLING IS FOUND, THAT PORTION OF THE CONCRETE DID NOT APPROPRIATELY CURE AND WILL BE RE-DONE AT THE EXPENSE OF THE CONTRACTOR.
  - e. IF IN THE OPINION OF OWNER'S REPRESENTATIVE PROTECTION IS NOT ADEQUATE, CEASE PLACEMENT UNTIL CONDITIONS OR PROCEDURES ARE SATISFACTORY TO OWNER'S REPRESENTATIVE.

#### GROUT MATERIALS

- 1. THE MIXTURE WILL USE PORTLAND CEMENT: TYPE I/TYPE II, AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION C150.
- 2. FLY ASH: CLASS FOR C AND SHALL CONFORM TO THE REQUIREMENTS

- OF ASTM C618. GROUND GRANULATED BLAST FURNACE SLAG (GGBFS): SHALL CONFORM TO THE REQUIREMENTS OF ASTM C989.
- 3. COARSE AGGREGATE: NORMAL-WEIGHT AGGREGATE THAT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C33. MAXIMUM AGGREGATE SIZE: 1-INCH DIAMETER. COARSE AGGREGATE MAY BE REDUCED TO 3/8-INCH DIAMETER PEASTONE TO PROMOTE PUMPABILITY, PROVIDED THE REQUIRED COMPRESSIVE STRENGTH CAN BE ACHIEVED.
- 4. FINE AGGREGATE: NORMAL-WEIGHT AGGREGATE THAT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C33. FINE AGGREGATE SHALL BE NON-REACTIVE TO ALKALINITY FROM THE CEMENT-BASED GROUT.
- 5. WATER: SHALL BE POTABLE AND CONFORM TO THE REQUIREMENTS OF ASTM C94.
- 6. AIR-ENTRAINMENT: SHALL CONFORM TO THE REQUIREMENTS OF ASTM C260.
- 7. ADMIXTURES: SHALL BE USED FOR ADJUSTING FLOW AND WORKABILITY, AS REQUIRED, AND COULD CONSIST OF WATER-REDUCERS, RETARDERS, PLASTICIZERS, SUPERPLASTICIZERS, OR NONCHLORIDE ACCELERATORS. ALL ADMIXTURES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C494 AND ASTM C1017 AS APPLICABLE
- 8. THE CONTRACTOR IS REQUIRED TO FINISH ALL GROUT WITHIN THE INSTREAM STRUCTURES AND TERRACING USING THE FOLLOWING TECHNIQUE: 1) FOLLOWING INITIAL PLACEMENT OF GROUT, A TROWEL WILL BE USED TO REMOVE ALL SPILLED, SPLATTERED, AND DUMPED MATERIAL FROM ROCK FACES AND EXPOSED SURFACES. 2) ONCE THE MATERIAL HAS BEEN REMOVED BY A TROWEL, ALL SURFACES ARE TO BE TROWEL FINISHED AND SMOOTHED. 3) FOLLOWING TROWEL WORK, WET BROOMS AND BRUSHES ARE TO BE USED IN COMBINATION WITH BUCKETS OF WATER TO CLEAN ALL EXPOSED SURFACES AND TRANSITIONS FROM ROCK TO GROUT WITH THE INTENTION OF MAKING THE GROUT BLEND WITH THE ENVIRONMENT.

#### GROUT MIX

- 1. DESIGN MIXTURE FOR GROUT SHALL BE PROPORTIONED ON THE BASIS OF LABORATORY TRIAL MIXTURE OR FIELD TEST DATA IN ACCORDANCE WITH ACI 301.
- 2. MAXIMUM FLY ASH CONTENT: 25 PERCENT.
- 3. MAXIMUM GGBFS CONTENT: 25 PERCENT.
- GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
- 5. MAXIMUM WATER-CEMENT RATIO: 0.55
- 6. MINIMUM CEMENT CONTENT: 517 POUNDS PER CUBIC YARD.
- 7. MINIMUM SLUMP: 5 INCHES.
- 8. MAXIMUM SLUMP: 9 INCHES.
- 9. ENTRAINED AIR-CONTENT: 3 TO 5 PERCENT.



485 ARAPAHOF AVE. BOULDER | CO | 80302 WWW.BOATERPARKS.COM

(303)-545-5883

**SPECIFICATIONS** 

PRELIMINARY - NOT FOR CONSTRUCTION

FILE NO. APPLICANT LOCATION	CITY OF MISSOULA CLARK FORK RIVER
DATE	SEP 14, 2017
SHEET	30 OF 34

#### GROUT MIXING AND PLACEMENT

- 1. MEASURE, BATCH, MIX, AND DELIVER GROUT ACCORDING TO ASTM C94. USE ADMIXTURES ACCORDING TO THE MANUFACTURERS' WRITTEN INSTRUCTIONS.
- 2. THE CONTRACTOR MAY SUBMIT MIX ADJUSTMENTS TO THE DESIGNER FOR THEIR REVIEW AND APPROVAL WHEN CIRCUMSTANCES SUCH AS CHANGED PROJECT CONDITIONS. UNFAVORABLE WEATHER, OR UNFAVORABLE RESULTS OCCUR. INCLUDE NECESSARY SUPPORTING DOCUMENTS (LABORATORY AND/OR FIELD TEST DATA) WITH ANY MIX ADJUSTMENT REQUESTS. MIX ADJUSTMENTS, IF ACCEPTABLE TO THE DESIGNER. SHALL BE PERFORMED AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 3. THE MIXER, WHEN OPERATING AT CAPACITY, SHALL BE CAPABLE OF COMBINING THE INGREDIENTS OF THE GROUT MIX INTO A THOROUGHLY MIXED AND UNIFORM MASS, AND OF DISCHARGING THE MIX WITH A SATISFACTORY DEGREE OF UNIFORMITY. THE MIXER SHALL BE OPERATED WITHIN THE LIMITS OF THE MANUFACTURER'S GUARANTEED CAPACITY AND SPEED OF ROTATION.
- 4. IF REQUIRED TO PROMOTE PUMP-ABILITY. UP TO 20 GALLONS OF POTABLE WATER PER FULL (10CY) LOAD (OR PROPORTIONED ACCORDINGLY) MAY BE ADDED (AND THOROUGHLY MIXED) ONSITE. ADDING WATER TO THE MIX ON-SITE (IF REQUIRED) MUST OCCUR WITHIN 60 MINUTES OF THE TIME OF BATCHING. ALL REQUIREMENTS FOR THE GROUT MIX, AS STATED IN THIS SPECIFICATION, APPLY REGARDLESS OF WHETHER OR NOT WATER IS ADDED ON-SITE.
- 5. THE TIME INTERVAL BETWEEN GROUT BATCHING AND PLACEMENT SHALL BE 90 MINUTES. OR. THIS REQUIREMENT MAY BE WAIVED IF. AFTER 90 MINUTES. THE GROUT CAN STILL BE PLACED WITHOUT ADDING WATER (TO REDUCE SLUMP) TO THE BATCH. FIELD PACKS OF WATER REDUCING ADMIXTURES MAY BE ADDED TO THE BATCH TO INCREASE SLUMP/WORKABILITY. MAXIMUM TIME INTERVAL, REGARDLESS OF SLUMP. SHALL BE 180 MINUTES. FOR AIR TEMPERATURE GREATER THAN 80 DEGREES, MAXIMUM TIME INTERVAL SHALL BE REDUCED TO 120 MINUTES. FOR AIR TEMPERATURE GREATER THAN 90 DEGREES. MAXIMUM TIME INTERVAL SHALL BE REDUCED TO 90 MINUTES.
- 6. IN ANY CASE, GROUT SHALL BE CONVEYED FROM THE MIXER TO THE FINAL PLACEMENT AS RAPIDLY AS PRACTICABLE BY METHODS THAT WILL PREVENT SEGREGATION OF THE AGGREGATES AND/OR LOSS OF CEMENTITIOUS MATERIALS.
- 7. GROUT MIX SHALL NOT BE ALLOWED TO FREE FALL MORE THAN FIVE (5) FEET UNLESS SUITABLE EQUIPMENT IS USED TO PREVENT SEGREGATION.
- 8. THE GROUT MIX SHALL NOT BE PLACED UNTIL THE AFFECTED AREA HAS BEEN INSPECTED AND APPROVED BY THE DESIGNER FOR THE PLACEMENT OF GROUT.
- 9. GROUT MIX SHALL NOT BE PLACED WHEN THE DAILY AVERAGE TEMPERATURE IS LESS THAN 40 F UNLESS FACILITIES ARE PROVIDED TO ENSURE THAT THE TEMPERATURE OF THE MATERIALS IS MAINTAINED AT A MINIMUM TEMPERATURE OF 50 F AND NOT MORE

THAN 90 F DURING PLACEMENT AND THE CURING PERIOD.

- 10.GROUT MIX SHALL NOT BE PLACED ON FROZEN SURFACES. AT A MINIMUM, GROUT MIX SHALL NOT BE ALLOWED TO FREEZE FOR THE INITIAL 24 HOURS AFTER PLACEMENT.
- 11.FOR HOT WEATHER PLACEMENT, COMPLY WITH ACI 305.1 (SPECIFICATION FOR HOT WEATHER CONCRETING).
- 12.FOLLOW DESIGNER SPECIFICATIONS FOR SUBGRADE PREPARATION, GROUT PLACEMENT AND FINISHING, CURING, AND CLEAN-UP. SPECIFICALLY, FILL VOIDS ALONG UPSTREAM AND DOWNSTREAM TOE WITH GROUT. ALL ROCK TO BE CLEAN AND SWEPT AFTER GROUTING.
- 13.AFTER COMPLETION OF ANY GROUT PLACEMENT. NO INDIVIDUALS OR EQUIPMENT SHALL BE PERMITTED ON THE GROUTED SURFACE FOR A PERIOD OF TWENTY-FOUR (24) HOURS. THE GROUTED SURFACE SHALL BE PROTECTED FROM INJURIOUS ACTION BY THE SUN. RAIN. FLOWING WATER, MECHANICAL INJURY, OR OTHER POTENTIAL DAMAGING ACTIVITY.

#### GROUT AND CONCRETE PLACEMENT

- 1. GROUT SHALL BE PUMPED INTO VOIDS AS DIRECTED BY THE ENGINEER OR OWNER.
- 2. ALL GROUT IN "WING" AND "ISLAND" SHOULD BE HELD BACK 4-6 INCHES
- 3. ALL EXPOSED VISIBLE GROUT SHALL BE SMOOTHED WITH TROWEL OR BRUSHED FINISH, EVEN IN VOID SPACES.
- 4. AT COMPLETION OF GROUT PLACEMENT ALL ROCK SHOULD BE CLEANED OF GROUT AND GROUT RESIDUE. SMALL BRUSHES HAVE BEEN PROVEN TO BE THE MOST EFFECTIVE TECHNIQUE FOR REMOVING CONCRETE GROUT RESIDUE.
- 5. GROUT SHALL NOT BE PLACED UNLESS APPROPRIATE WATER CONTROL MEASURES ARE IN PLACE.
- 6. FOLLOWING COMPLETION OF GROUT PLACEMENT, THE WORK AREA SHOULD BE FLOODED TO ENSURE OPTIMAL CURING TIME. THE WORK AREA SHALL BE ISOLATED TO ENSURE THERE IS NO CONTACT WITH THE LIVE RIVER. THE STATIC WATER LEVEL IN THE WORK AREA SHOULD EQUAL THE WATER LEVEL IN THE LIVE RIVER.
- 7. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF 48 HOURS PRIOR TO THE PLACEMENT OF CONCRETE OR GROUT. THE OWNER'S REPRESENTATIVE MUST APPROVE THE FORM WORK AND REINFORCEMENT PRIOR TO PLACEMENT OF CONCRETE OR GROUT.
- 8. ALL SAW CUT JOINTS MUST BE COMPLETED WITHIN 24 HOURS OF CONCRETE PLACEMENT. ANY CONCRETE SAWN AFTER THIS 24 HOUR PERIOD, WHICH IN THE OPINION OF THE OWNER'S REPRESENTATIVE HAS EXCESSIVE SHRINKAGE CRACKS, SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE

#### INSPECTING AND TESTING FRESH GROUT

1. THE GROUT MATERIAL SHALL BE CHECKED AND TESTED THROUGHOUT THE GROUTING OPERATION AT THE CONTRACTOR'S EXPENSE. SAMPLING OF FRESH GROUT SHALL BE CONDUCTED IN CONFORMANCE WITH ASTM C172. FIELD TESTING WILL BE DETERMINED BY METHODS PRESCRIBED IN ASTM C138. AT A MINIMUM, FIELD TESTING SHALL INCLUDE SLUMP, AIR CONTENT, UNIT WEIGHT, TEMPERATURE, AND COMPRESSIVE STRENGTH CYLINDERS (1 7D, 2 28D, AND 1 HOLD CYLINDER). A MINIMUM OF ONE SET OF TEST CYLINDERS SHALL BE CAST FOR EVERY 50 CUBIC YARDS OF GROUT PLACED.

- 2. THE ENGINEER SHALL HAVE FREE ACCESS TO ALL PARTS OF THE CONTRACTOR'S PLANT AND EQUIPMENT UTILIZED FOR MIXING AND PLACING GROUT DURING THE PERIOD OF THE CONTRACT. PROPER FACILITIES SHALL BE PROVIDED FOR THE ENGINEER TO SAMPLE MATERIALS AND VIEW PROCESSES IMPLEMENTED IN THE MIXING AND PLACING OF GROUT AS WELL AS FOR SECURING GROUT TEST SAMPLES. ALL TESTS AND INSPECTIONS SHALL BE SO CONDUCTED AS A MINIMUM OF INTERFERENCE TO THE CONTRACTOR'S OPERATION OCCURS.
- 3. FOR READY-MIXED GROUT, THE CONTRACTOR SHALL FURNISH TO THE ENGINEER A STATEMENT OF DELIVERY TICKET FOR EACH BATCH DELIVERED TO THE SITE. THE TICKET SHALL PROVIDE AS A MINIMUM: WEIGHTS IN POUNDS OF CEMENT, AGGREGATES (FINE AND COARSE), WATER; WEIGHT IN OUNCES OF AIR-ENTRAINING AGENT; TIME OF LOADING; AND, THE REVOLUTION COUNTER READING AT THE TIME BATCHING WAS STARTED.

#### REVEGETATION NOTES

- 1. ANY REVEGETATION OR PLANTING SHALL OCCUR WITHIN THE APPROPRIATE PLANTING WINDOWS AND IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THIS TIMEFRAME SHOULD NOT EXCEED 14 DAYS AFTER COMPLETION OF FINAL GRADES.
- 2. THE CONTRACTOR SHALL PLANT THE TYPE OF PLANT MATERIAL AND MIX OF SPECIES INDICATED FOR EACH PLANTING ZONE. BOUNDARIES OF PLANTING ZONES AND LOCATIONS OF TREE AND SHRUB PLANTINGS WILL BE MARKED IN THE FIELD UPON COMPLETION OF EARTHWORK BY THE ENGINEER AND MAY VARY FROM THOSE SHOWN ON THE DRAWING DUE TO ACTUAL SITE CONDITIONS.
- 3. ALL SUITABLE TOPSOIL SHALL BE STOCKPILED DURING CONSTRUCTION AND PLACED WITHIN THE SEEDED AREAS IN MINIMUM 3-INCH DEPTHS.
- 4. CONTRACTOR SHALL MAINTAIN ALL PLANT MATERIAL IN A VIABLE CONDITION UP TO THE TIME OF PLANTING AND SHALL NOT PLANT DEAD, DISEASED, OR DAMAGED PLANTS OR SEEDS.
- 5. NO PLANTING OR SEEDING SHALL OCCUR UNTIL THE AREA HAS BEEN PROPERLY PREPARED AND APPROVED BY THE ENGINEER (INCLUDING SOILS BEING SATURATED AND/OR FLOODED TO APPROPRIATE WATER DEPTHS).
- 6. PLANT MATERIALS SHALL BE INSTALLED USING STANDARD PRACTICES FOR THE TYPE OF MATERIAL. THE FOLLOWING DESCRIBES THE SPECIFIC METHODS TO BE USED FOR EACH TYPE OF PLANTING:
  - a. MINIMUM 3-CUBIC-INCH POTTED NURSERY STOCK: POTTED STOCK OF THE SPECIES SHOWN FOR EACH ZONE SHALL BE PLANTED RANDOMLY IN STAGGERED ROWS AT THE SPACING

Recreation Engineering & Planning

485 ARAPAHOF AVE. BOULDER | CO | 80302 WWW.BOATERPARKS.COM

(303)-545-5883



PRELIMINARY - NOT FOR CONSTRUCTION

FILE NO.	
APPLICANT	CITY OF MISSOULA
LOCATION	CLARK FORK RIVER,
DATE SHEET	SEP 14, 2017 31 OF 34
ONLET	01 01 04

F

INDICATED. PLANTS SHALL NOT BE PLANTED COMPLETELY SUBMERGED.

- b. TREES AND SHRUBS: TREES AND SHRUBS SHALL BE PLANTED AT THE LOCATIONS SHOWN ON THE PLAN.
- c. SEEDING: THE UPPER THREE (3) INCHES (MINIMUM) OF THE AREA TO BE SEEDED SHALL BE IN A LOOSE AND FRIABLE CONDITION SUITABLE FOR SEEDING, IF NECESSARY, AREAS TO BE SEEDED WILL BE TILLED TO RELIEVE COMPACTION PRIOR TO SEEDING. ONCE SEEDING IS COMPLETE. NO MORE THAN 0.5-INCHES OF SOIL MAY BE PLACED OVER THE SEED.
- 7. CONTROL ANY SURFACE FLOW TO ENABLE SEEDING.
- 8. THE SEED MIXES SPECIFIED SHALL BE BROADCAST SEEDED IN WETLAND PLANTING AND TRANSITION AREAS AND SHALL BE DRILL SEEDED IN OTHER AREAS. SEPARATE SEED BOXES SHALL BE USED AS NEEDED, TO ACCOMMODATE THE SEED SIZES IN THE MIXTURES.
- 9. 2 TONS PER ACRE OF STRAW MULCH SHALL BE APPLIED TO SEEDED AREAS IMMEDIATELY AFTER SEEDING, EXCEPT THAT 1 TON PER ACRE OF STRAW MULCH SHALL BE APPLIED TO SEEDED WETLAND CREATION AREAS
- 10.MULCH SHALL BE CRIMPED OR TACKIFIER APPLIED TO PREVENT MOVEMENT. IF TACKIFIER IS USED, IT SHALL BE "M-BINDER" TACKIFIER APPLIED AT A RATE OF 100 POUNDS PER ACRE.
- 11.ALL PLANTED AND SEEDED AREAS SHALL BE ADEQUATELY WATERED WITHIN 4 HOURS AFTER SEEDING/PLANTING. THE FOLLOWING DESCRIBES THE REVEGETATION TO BE COMPLETED BY ARFA.
  - a. WETLAND CREATION AREAS: A) BROADCAST SEED MIX FOR AREA B) APPLY 1 TON PER ACRE STRAW MULCH C) APPLY 100 POUNDS PER ACRE "M-BINDER" TACKIFIER D) PLANT POTTED STOCK 3-FOOT-ON-CENTER IN STAGGERED ROWS THROUGH MULCH.
  - b. TRANSITION AREAS: A) BROADCAST SEED MIX SPECIFIED, B) APPLY 2 TONS PER ACRE STRAW MULCH, C) APPLY 100 POUNDS PER ACRE "M-BINDER" TACKIFIER.
  - c. EXCESS SOIL DISPOSAL AREA AND OTHER UPLAND AREAS: A) BROADCAST SEED MIX SPECIFIED, B) APPLY 2 TONS PER ACRE STRAW MULCH, C) CRIMP MULCH TO SECURE.

#### WATER CONTROL

1. CONTRACTOR SHALL PREPARE A DEWATERING PLAN TO BE APPROVED BY THE ENGINEER OR OWNER PRIOR TO COMMENCEMENT OF ANY DEWATERING ACTIVITIES. ALL DEWATERING DISCHARGES MUST BE FILTERED TO REMOVE EXCESSIVE SEDIMENTS AND MUST BE DISCHARGED ONTO AN ENERGY-DISSIPATION DEVICE (E.G., PLUNGE POOL, SPLASH PUP, CONCRETE WEIGHT, OR EQUIVALENT) PRIOR TO DISCHARGE INTO ANY SURFACE WATER. FISH OR MUSSELS TRAPPED IN THE DRY AREA MUST BE PROPERLY RELOCATED TO A DOWNSTREAM SECTION OF THE RIVER BY A DESIGNATED/QUALIFIED INDIVIDUAL.

2. STEPS SHALL BE EMPLOYED THROUGHOUT THE COURSE OF THE PROJECT TO AVOID THE CREATION OF EXCESSIVE TURBIDITY WHICH MAY DEGRADE WATER QUALITY OR ADVERSELY AFFECT AQUATIC LIFE.

3. NO WASTEWATER SHALL BE DISCHARGED INTO THE RIVER

- 4. PRIOR TO CREATION OF COFFERDAMS OR DIVERTING WATER IN ANY MANNER, THE CONTRACTOR MUST REVIEW ALL RELEVANT PERMIT CONDITIONS AND INFORM THE ENGINEER OF THEIR TIMING, METHODS. AND TECHNIQUES FOR WATER CONTROL
- 5. THE WATERWAY MAY EXPERIENCE FLOODING AND CHANGES IN WATER LEVEL AT ANY TIME. IT IS THE CONTRACTORS RESPONSIBILITY TO MONITOR AND ANTICIPATE CHANGES AND PLAN ACCORDINGLY. ANY DAMAGE, LOSSES, PERMIT CONDITION VIOLATIONS, ETC. AS A RESULT OF FLOODING IN THE WATERWAY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 6. ANY COFFERDAM FAILURE MUST BE REPORTED TO THE ENGINEER AND/OR OWNER IMMEDIATELY.
- 7. UNLESS PRIOR APPROVAL HAS BEEN GRANTED, THE CONTRACTOR MUST ONLY CONSTRUCT AND WORK WITHIN ONE COFFERDAM AT A TIME

#### EMERGENCY PLANNING

- 1. CONTRACTOR SHALL CREATE AND HOLD ON FILE AN EMERGENCY ACTION PLAN. THAT PLAN MUST INCLUDE CONTACT NUMBERS FOR ALL UTILITIES LOCATED WITHIN THE PROJECT SITE. IN ADDITION TO PHONE NUMBERS FOR ALL PERMIT AGENCY PROJECT MANAGERS.
- 2. THE ENGINEER AND THE OWNER MUST BE NOTIFIED IMMEDIATELY FOLLOWING AN EMERGENCY SITUATION.

#### OTHER

- 1. IN THE EVENT AN ITEM IS NOT COVERED IN THE SPECIFICATIONS. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND THEY MUST APPROVE ANY ADDITIONS OR MODIFICATIONS TO THE SPECIFICATIONS.
- 2. ALL WASTE MATERIAL AND/OR EXCESS EXCAVATION NOT USED AS PART OF THE WORK SHALL BE REMOVED FROM THE JOB SITE AND DISPOSED OF AT ACCEPTABLE LOCATIONS IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- 3. THE CONTRACTOR AT ALL TIMES DURING CONSTRUCTION SHALL PROVIDE WARNING SIGNS, BARRICADES, AND OTHER SAFETY DEVICES (INCLUDING TEMPORARY FENCING AROUND THE JOB SITE) TO PROTECT PUBLIC SAFETY AND HEALTH IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

This information is pending.

To Molly

Here is a list of maintenance records I could find on the Hellgate Ditch regarding to the Diversion point in the Clarkfork River. Race

- 1. (2000) Mike Flynn river repair \$360
- 2. (2004) JTL hauled rock to south side of channel for riprap \$4800
- 3. (2008) Perkins Const. performed duties in river \$3700
- 4. (2013) Forney Const. placed jersey barriers in river diversion \$4400
- 5. (2016) Low Tide Const. removed silt from river and straightened up jersey barriers \$2000
- 6. Numerous canal (intake channel) breach repairs (2013, 2017)

This information is pending.

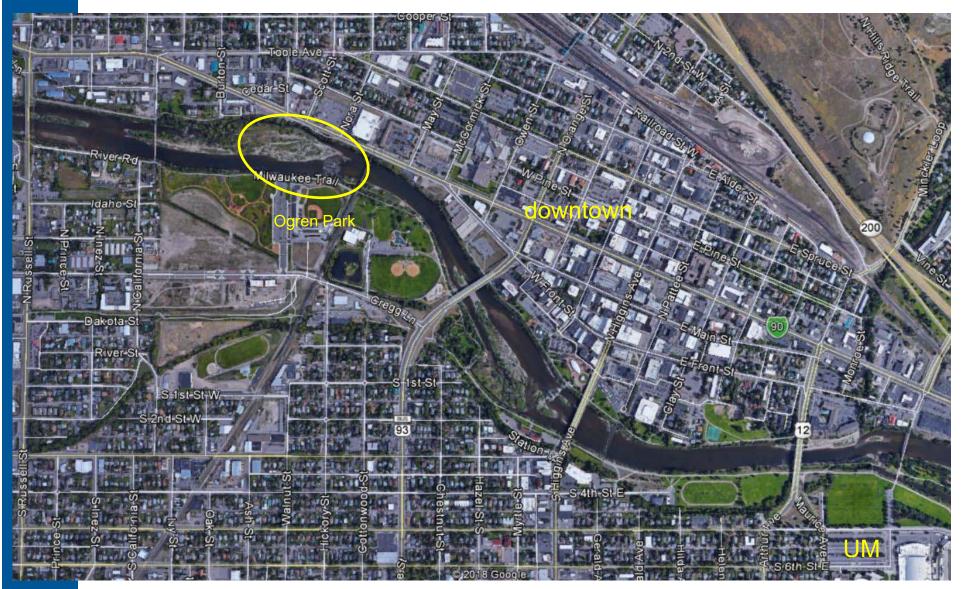


## Max Wave Project

## May 2018

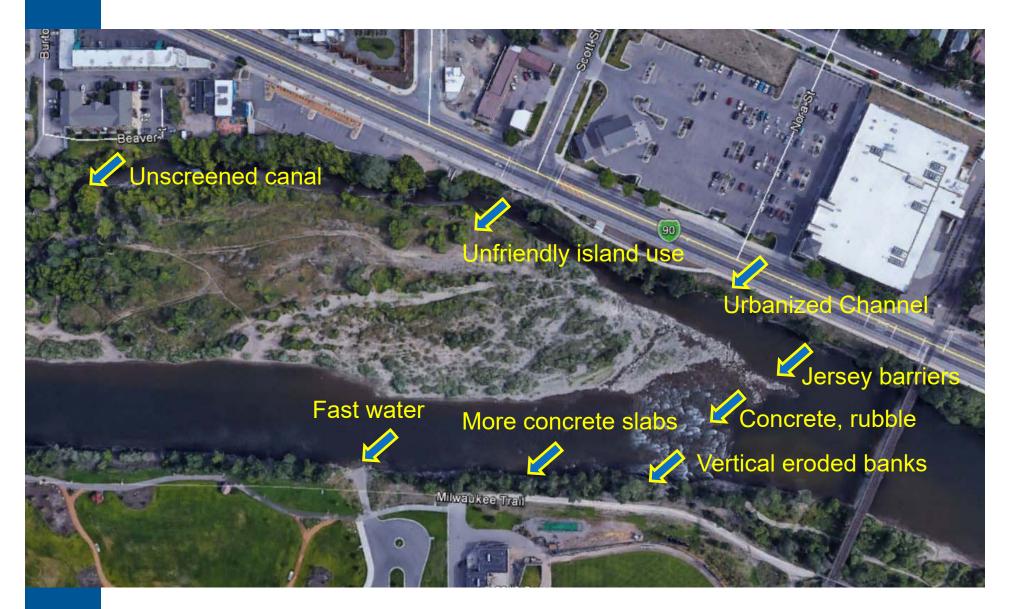






Max Wave Project

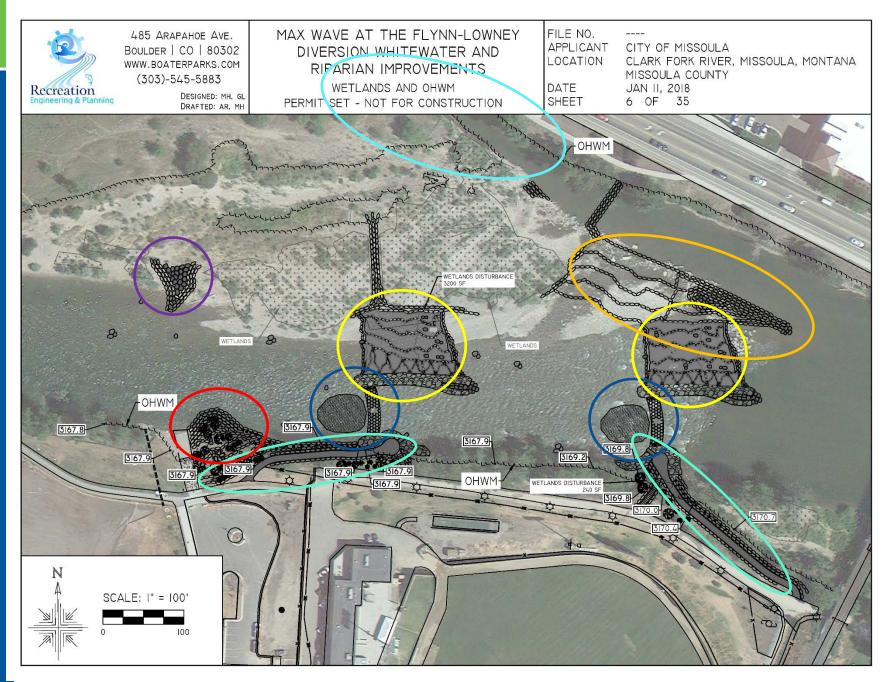






## Purpose

- More stable, permanent irrigation diversion structure
- Restore impacted channel and banks
- ADA access to the river
- Unique recreation opportunities
- Supports economic development
- Improves ecosystem



Max Wave Project



## Timeline

- 2012 Original design concept submitted
- 2014 MMI-REP team involved, new design concept developed based on comments, stakeholder meetings
- 2015 Permit application, review comments received, revised layout based on comments
- 2016 On-hold
- 2017 Revisions based on comments, 2D model
- 2018 Permits in process
- Summer 2018 Permit approvals
- Fall 2019 Construction



# Input

- City Council 2015
- USACE Public Comment 2015, 2018
- DNRC Public Comment 2018 (forthcoming)
- Floodplain/FEMA Public Comment 2018 (forthcoming)
- Water Quality Advisory Council
- Montana Trout Unlimited
- Clark Fork Coalition
- Department of Natural Resources and Conservation (Southwest Lands and Water Resources)
- Montana Fish, Wildlife and Parks
- Missoula Parks and Recreation
- US Fish and Wildlife Service (consultation open)

- Department of Environmental Quality
- Missoula Redevelopment Agency
- United States Army Corp of Engineers
- Hellgate Valley Water Users Association
- Missoula County Public Schools
- Missoula Downtown Association
- Friends of Missoula Parks
- Silver Summit
- Missoula Office of the Mayor
- Missoula Outdoor Recreation and Education
- Whitewater Rescue Institute
- Missoula Youth Homes
- FEMA



## **Advocates**

- John Lentz
- Jason Shreder
- Sue Larew
- Dave Ryan
- Steven Glaskill
- Race Pryun
- Max Wave Committee
- Sherene Ricci Amputee Extraordinaire
- Numerous Individuals and General Public
- Recreation Engineering and Planning
- Morrison-Maierle
- TetraTech
- GCM Services



## Modifications

- Elimination of a wave feature at the lower section.
- Reduce width of wave features.
- Increased complexity, variation and widening of the AOP channels.
- Reduction and limitation on the use of grout.
- Fish screen on the irrigation ditch.
- Additional riparian vegetation on banks, access trails and island.
- 2-dimensional hydraulic model.
- Modification of Aquatic Organism Passage channels to reduce velocities for fish passage.
- Reduction of trail width and incorporation of additional vegetation at the two access points.
- Reduction in size of the deflector on the north bank.



## **Questions?**



Bruce Farling 232 West Sussex Avenue Missoula, MT 59801 <u>brucefarling@gmail.com</u> 406-360-6208

30 April 2018

Dear Council Members DiBari and Von Lossberg:

I understand that the Missoula City Council will be discussing the proposed Max Wave at its early May meeting. I will be out of state at the time and unfortunately unable to attend. I write now to share my perspective on this proposed project. I hope you find this information informative.

I have a special affinity for the Clark Fork River after years of professional and personal experience. In May of 2017 I stepped down after 24 years as executive director of Montana Trout Unlimited (MTU). Prior to that, I was the conservation director of the Clark Fork Coalition for five years. In those positions, I spent considerable professional and personal time working for an improved Clark Fork River and its watershed by advocating for enhanced water quality and fisheries, instream flow preservation and streamside habitat protection and public access. Among other topics this involved issues surrounding Milltown, the Champion-Smurfit-Stone site, municipal wastewater discharges, phosphate detergent bans and the Salish-Kootenai Water Compact, among other items. I first fished and floated the Clark Fork River more than 45 years ago. I have a B.S. in environmental sciences, with an emphasis on hydrology and fisheries. Over the years I have witnessed a significant improvement in the river, its fisheries and the overall attractiveness of this blue ribbon as it wends through Missoula. The Max Wave project as currently conceived represents a step backward in this progress.

During my last few years with MTU, I met with the proponents of the Max Wave and their consultants, while also communicating my concerns, and those of the members I represented, with agency staff, Mayor Engen, several council members and local conservationists. The concerns I continue to harbor include:

• The Max Wave coupled with the existing Brennan's Wave would essentially convert much of the river downtown into a heavily engineered, artificial whitewater playground that primarily accommodates a small group of specialized recreationists, who may or may not be using the features in the future. Before additional heavy engineering in the river occurs, it seems reasonable to first ensure there is a wider conversation in Missoula about what the broader community desires from the downtown reach of river. This dialogue has not occurred, and it should *before* the City blesses any Max

Wave construction and potentially risks taking on future maintenance costs. Yes, some kayakers might prefer the engineered play wave future, but we should also consider the kid whose family can't afford a kayak, but who might want to instead ride his bike to the river near the Higgins Street Bridge and catch a trout, or float an old inner tube between Higgins and Russel Streets. Further, despite the purported but undocumented economic benefits the Max Wave will supposedly create, I am convinced a more natural river downtown, with fewer engineered features and more trout, is a much more marketable asset than artificial waves and the minimal economic benefits it might generate. According to economists at Montana FWP, rivers around Missoula currently generate tens of millions of dollars in annual economic activity from angling along. The river corridor downtown is a critical migratory reach for fish that use the upper and lower Clark Fork as well as Rock Creek, the lower Blackfoot and Bitterroot Rivers, and Rattlesnake Creek.

- A lot of questions as well as obligations surrounding Brennan's Wave remain unresolved. It is still unclear who owns it, who is responsible for maintaining it and who ultimately must prevent it from becoming a navigation hazard and liability. The feature has been degraded by high flows and though the county years ago directed the local non-profit that was awarded MRA funds for the structure to fix it, repairs have not been completed. It makes sense that the ownership, long-term liability, repairs and issues resolving establishment of a private permanent fund for maintenance for Brennan's Wave be resolved before the City blesses another more heavily engineered set of play waves downstream.
- Some of the justifications Max Wave proponents cite for their venture don't hold water. They claim they are primarily concerned with improving an unsafe situation at the Flynn-Lowney Diversion. But a review of the historical record of all three irrigation systems in downtown Missoula indicates major injuries and deaths haven't occurred at the diversions, but instead at the headgates and in the ditches, where over the past 100 years there have been a number of drowning fatalities. If safety is a primary concern, the focus is on the wrong part of the irrigation infrastructure. In addition, the current design of the two drop structures, placement of the proposed "aquatic organism and novice boat passage," and additional engineered features on the north side of the river channel, are going to make it difficult for tubers and neophytes in rubber duckies to skirt the drop structures and still get to the access ramp on the south side of the river at most flows. The result will be novices going through the drop structures, or, landing on the "island" on the north side, where the proponents previously told the U.S. Army Corps of Engineers they wanted to do riparian habitat enhancement as required mitigation for their in-channel disturbance. Maintaining a healthy riparian community will be impossible if floaters stomp out the area.

- The proponents argue that the Max Wave project will "clean up" the reach of river and banks it affects. However, the improvements that are cited -- such as dealing with unsightly bank stabilization material, or improving damaged riparian areas -- can occur without building two whitewater drop structures, in-channel rock veins, unnatural grouted structures and other engineered structures.
- Montana TU, Montana FWP, the U.S. Fish and Wildlife Service and I believe artificial structures placed in rivers for whatever purpose – irrigation, industry or recreation - should strive to accommodate upstream movement of all life-stages of all fish species occurring in that reach. That doesn't seem to be asking too much from a community with an abiding interest in the health of our local river. It is also what we accomplished as a community by supporting removal of Milltown Dam, and what the City and many community members hope to celebrate with eventual removal of the dam on lower Rattlesnake Creek. However, it is questionable, based on conditional hydrological data that have been collected and the recent designs proponents have developed, whether the current proposal achieves this criterion. The preliminary designs appear unlikely to meet hydrological or biological criteria for upstream passage, except perhaps for adult trout. It also appears that the proposed design might also cause fish traveling upstream as well as downstream to stray to the north, thereby risking being trapped in the ditch and lost to the river. The proponents have said they will commit to installing a fish screen in the ditch, but the designs apparently have not been forthcoming nor, as far as I've seen, has the ditch company approved a proposal. My experience with fish screens is that though they are sometimes necessary, they are almost always expensive and problematic to maintain. The City needs to take a hard look at all the short-and long-term impacts of the Max Wave project before it considers blessing it.
- It continues to be unclear as to who will ultimately own the Max Wave infrastructure, ensure it is maintained in a timely fashion, and assume liability for problems that could occur. You can pretty much guarantee at some point problems will emerge. As we were reminded in 2011, when Missoula witnessed a not unusual 20-year-flow event along the Clark Fork – an event that could be topped this year -- this river can roar and put the hurt to things we put in its way, including Brennan's Wave. DNRC owns the riverbed, the irrigation companies own the diversion structure and headgates, but the irrigators don't need an expensive play wave design to divert water for their use; MRA has contributed to both Brennan's and the Max Wave project on behalf of the City; the Army Corps of Engineers, Missoula Conservation District, City floodplain authorities and DNRC all have permitting responsibilities for siting the wave strucures; and, local non-

profits have raised money for building the features, but avoid claiming ultimate responsibility for them and have yet to demonstrate they have the financial wherewithal to build, maintain or prevent the structures from becoming hazardous. And so, it is unclear who ultimately is legally liable should something really expensive, or tragic, occur with these features. Liability could be with the county, DNRC, the Corps, the nonprofits or the City. The ultimate answer is unclear, though it appears the City of Missoula might be getting roped into taking charge and taking on what could be an expensive liability for the foreseeable future. I urge the City to think deeply and communicate with the broader community before doing that.

I strongly recommend that until the structural problems at Brennan's Wave are rectified, its ownership and liability firmly clarified, and a long-term, sufficient source of private maintenance funding established –- along with a demonstration the existing and proposed structures don't impede the river's fishery -- it is not appropriate for the City to support or finance a second wave project. Certainly, let's deal with the one we already have before signing off on another. I am pretty sure Montana Trout Unlimited, and, I believe, the Clark Coalition, share many if not all the concerns I express.

Finally, I have to note that I am not a no-fun recreationist. Besides being a life-long angler, I am also a whitewater enthusiast. I appreciate waves. But like most other river users, I prefer the features that nature provides, which we have in spades around Missoula on the Clark Fork and Blackfoot Rivers, as well as elsewhere around the state. It is hard to reconcile the strong support this community lent to ridding our backyard of the problematic Milltown Dam, to only then in turn plug the river with new, artificial structures.

Thanks for your consideration. I would be happy to further discuss these concerns at your convenience.

Sincerely,

Bun failing

**Bruce Farling** 

May 8, 2018

City Council Members of Missoula 435 Ryman Missoula, MT 59802

Dear Members of the Missoula City Council:

Montana Trout Unlimited's (MTU) mission is to conserve, protect and restore Montana's coldwater fisheries and their watersheds. It is in that spirit that I write today to share MTU's concerns with the proposed Max Wave in the Clark Fork River.

Foremost, while the current design presents a *model* that appears to accommodate upstream passage of fish, the realities of a living river do not always match modeled behavior. As you know, just today the Clark Fork River has 25% more cubic feet per second than any other day in the 89 years of record (at 24,800 compared to past max of 18,800 in 1947). Similarly, the model did not test passage at the kind of unprecedented low flows that are increasingly likely as climate has an impact on instream flow. The CSKT water compact requires an instream flow of 1200cfs at the confluence of the Blackfoot and Clark Fork Rivers above Missoula, which is significantly less than the 2080cfs the modeling used as its low end flows. In addition to the flow limitations of the modeling, there is a body of scientific evidence showing that realities of fish passage differ significantly from modeling. MTU has engaged an independent fisheries scientist who has studied the discrepancies between whitewater park modeling for fish passage and habitat and actual surveys of those variables. Science will guide our position related to the fish passage concern and we trust that it will also be the guide for project planners and the city.

Paramount to MTU and our 4300 members statewide is the health of wild and native fish, and the addition of the Max Wave does not enhance habitat. But, the proposed removal of concrete, rebar, and other hard debris from the river and improvements that are included in the plan could certainly be implemented as a stand-alone project. Max Wave is not necessary for cleaning up the Clark Fork through downtown Missoula.

River health matters to this community and the idea of the introduction nearly 5000 cubic yards of hard material in the Clark Fork river below the high water mark, plus another large quantity of rock and concrete within the riparian area is and should be a concern. This possible addition of man-made structures seven miles from the former Milltown dam site seems antithetical to the Missoula ethos. In researching my book,

Restoring the Shining Waters: Superfund Success at Milltown, Montana, I spent a great deal of time learning about Missoula's deep conviction for a natural, free-flowing river. Is there data to support that Max Wave and its possible threats to fish passage is really wanted by more than a small group of specialized recreationists? A more robust community discussion about the future of this iconic, free-flowing river through downtown Missoula is warranted before moving ahead with this project.

The question of what Missoulians deem important for the river miles that run through town should be discussed and decided upon before any public or private entity irreversibly changes any reach of the Clark Fork. I recognize that it would not be fair or prudent if a group of passionate anglers proposed forever changing the river in a way that only benefited their fishing opportunities and possibly negatively affected the channel for others. With that in mind, I am not confident that the myriad factors that should be considerations (economic impact, environmental impact, voice of Missoulians) have been taken into account.

Of the more than \$900 million that angling added to the Montana economy in 2014, roughly 10% (\$90 million) of the angling days were spent on the Blackfoot, Bitterroot or Clarkfork watersheds. Gravely altering fish passage for migratory fish, at the heart of these watersheds could surely hurt Missoula's economy. MTU advocates for wider conversation about what different constituencies (not simply white water enthusiasts) want their downtown river to look like. Anglers, bike riders, float tubers, hikers and birders (to name a few) may not agree that the Max Wave is the best use for all, and more importantly, there is no evidence that the conversation has even taken place.

Montana Trout Unlimited cannot support the Max Wave while we still have questions about how this artificial structure will impact fish and fishing. While we are independently seeking data and information, we also welcome any additional scientific data that exists about fish passage, and any records of public meetings that focus on Clark Fork River corridor usage and planning.

Please feel free to contact me with questions or suggestions. Thank you for your service as a Council Member.

Kind Regards,

1 Pul

Dr. David Brooks Executive Director, Montana Trout Unlimited Missoula, Montana

home

Legislation T 📑 Contact us

Item Information							°% 🔊
Title:		Max	Wave P	roject and Permitting	Update		
Item #:						Status:	Held in Committee
Туре:						#:	COW
Version:		3 <sup>rd</sup>				Sponsor:	Bryan von Lossberg
Meeting Date:		<u>1/1/2050</u>				Ward:	
Meeting Type:		COW Referrals Held in Committee				Video:	No Video Available
Attachm	ents:						
Text							
No Text A	Available						
History							
	Version	Item #	Туре	Status	Meeting Date	Meeting Type	
	<u>1<sup>st</sup></u>				<u>5/7/2018</u>	City Council	
	<u>2<sup>nd</sup></u>			Held in committee	<u>5/9/2018</u>	COW	
	_						

#### **Vote Records**

No voting recorded

#### City of Missoula, Montana Item to be Referred to City Council Committee

Committee:	COW
Item:	Missoula Economic Partnership Update
Date:	October 14, 2016
Sponsor:	Marilyn Marler
Prepared by:	Kirsten Hands
Ward(s) affected:	All

#### **Action Required:**

None, discussion only.

#### Recommended Motion(s): N/A

#### Timeline:

Referral to committee: Committee discussion: October 14, 2015 Quarterly Update

#### **Background and Alternatives Explored:**

Quarterly update to the City Council on the activities of the Missoula Economic Partnership.

#### **Financial Implications:**

List any financial implications here.

#### Links to external websites:

www.missoulapartnership.com

## MISSOULA CITY COUNCIL MEP Activity Update

May 23, 2018



AND LES

Page 147 of 329

### THE TEAM



Jeff Fee, Interim Director



Jenni Graff, Economic Development Director



Nicole Rush, Grants Manager



Lindsey Wallace, Business and Communications Manager



Molly Cook, Graduate Fellow



## 2017-2018 BUSINESS RETENTION & EXPANSION

Hind Hind Meetings



÷



Revenues



**8%** Missoula County Workforce

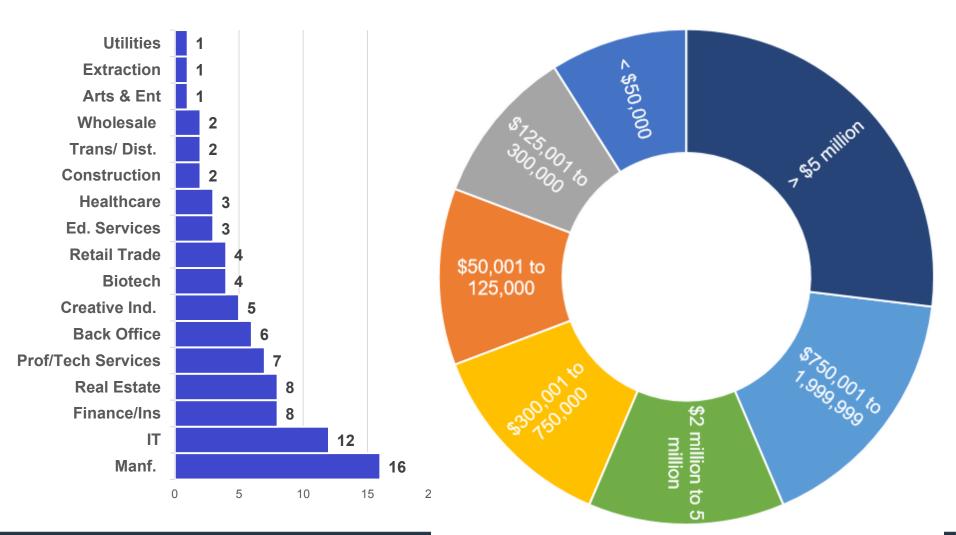








## SURVEY OVERVIEW



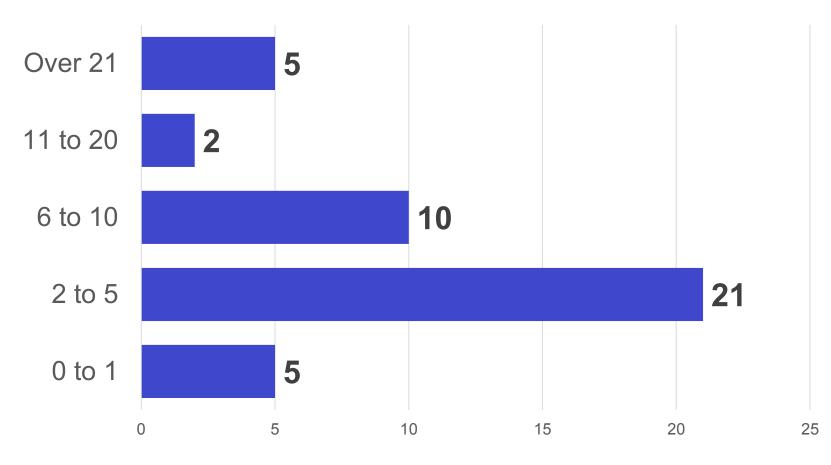
-:-

-¦-;



## **EMPLOYMENT GROWTH**

### # of Employees Businesses Plan to Hire in 6-12 Months

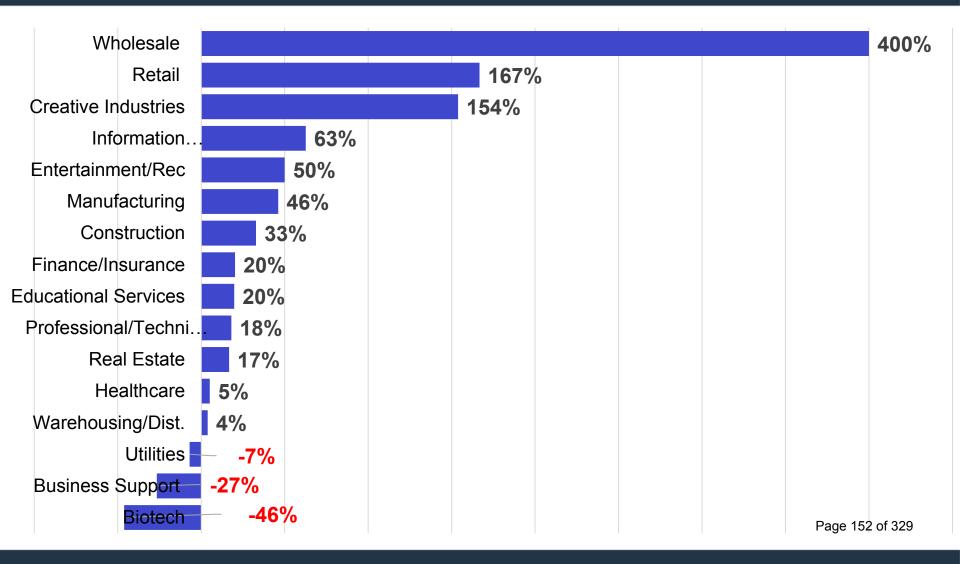


Page 151 of 329

•÷

-:-

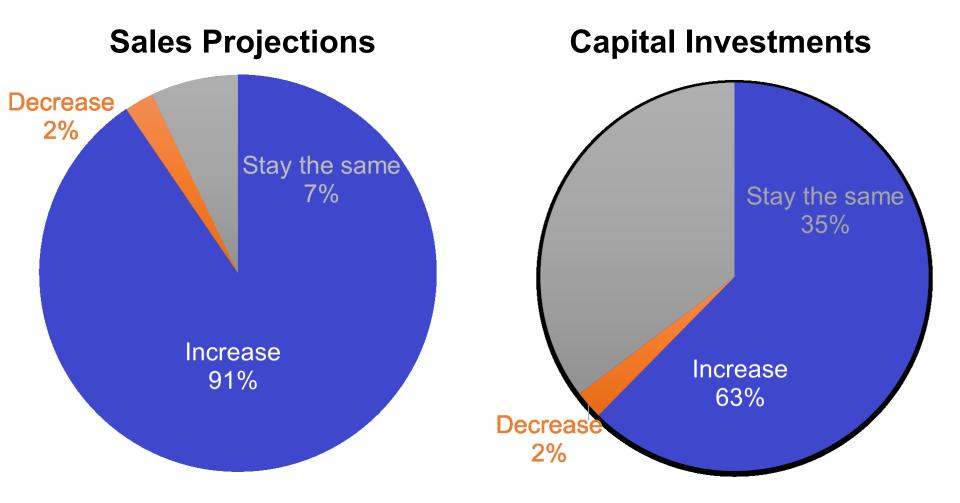
## 3 Year Growth by Industry



-:-

-:-

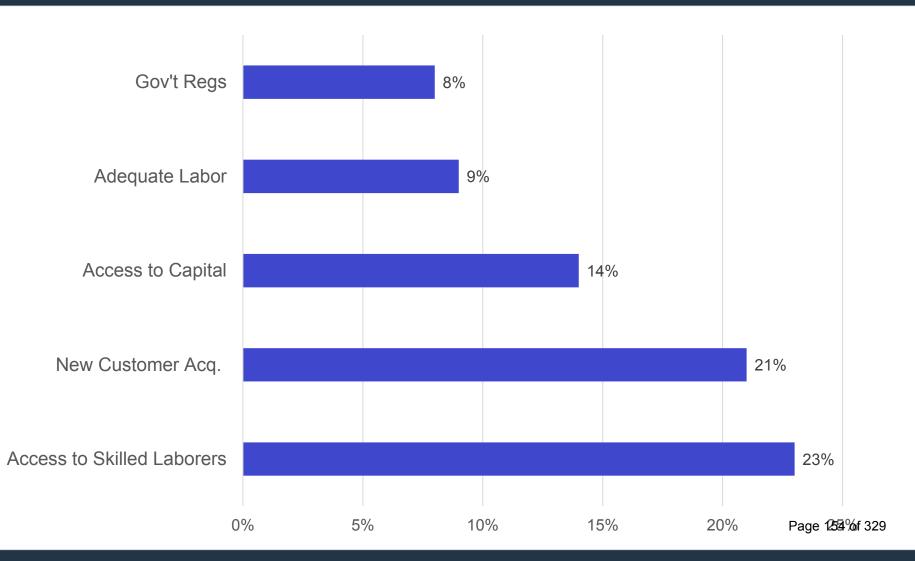
## SALES PROJECTIONS + CAPITAL INVESTMENTS







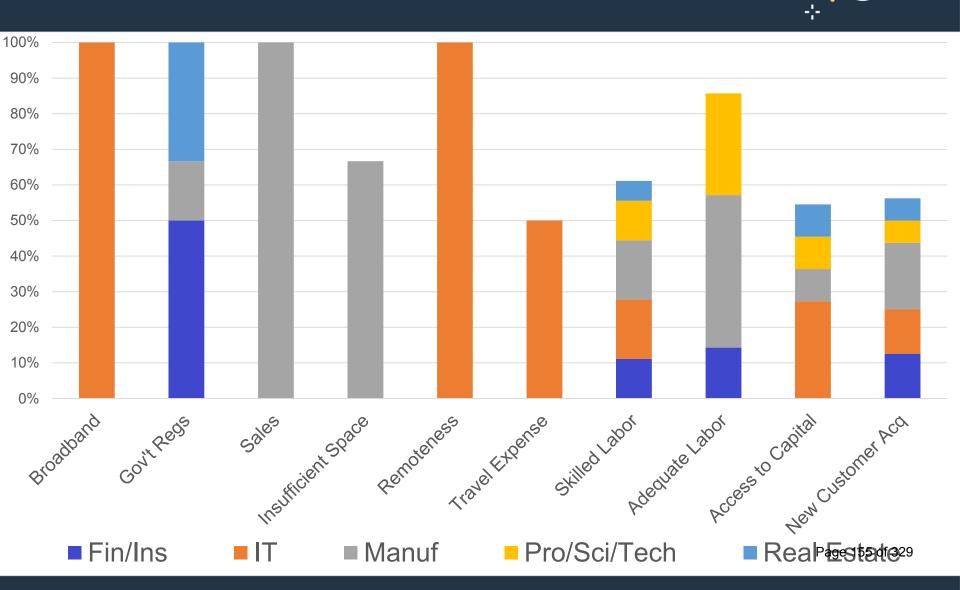
## **BUSINESS CHALLENGES**



\_ -¦-

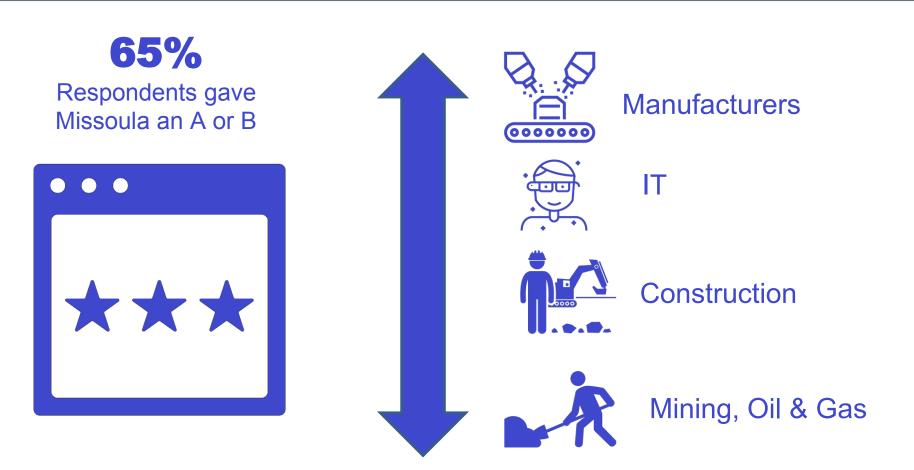
÷-

## CHALLENGES BY INDUSTRY



-:-

## AVERAGE GRADE BY INDUSTRY

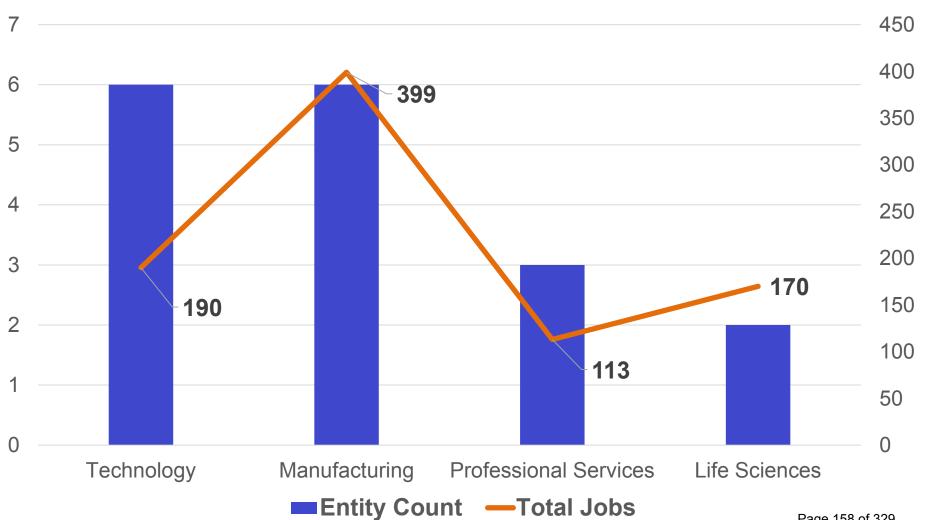


-!-





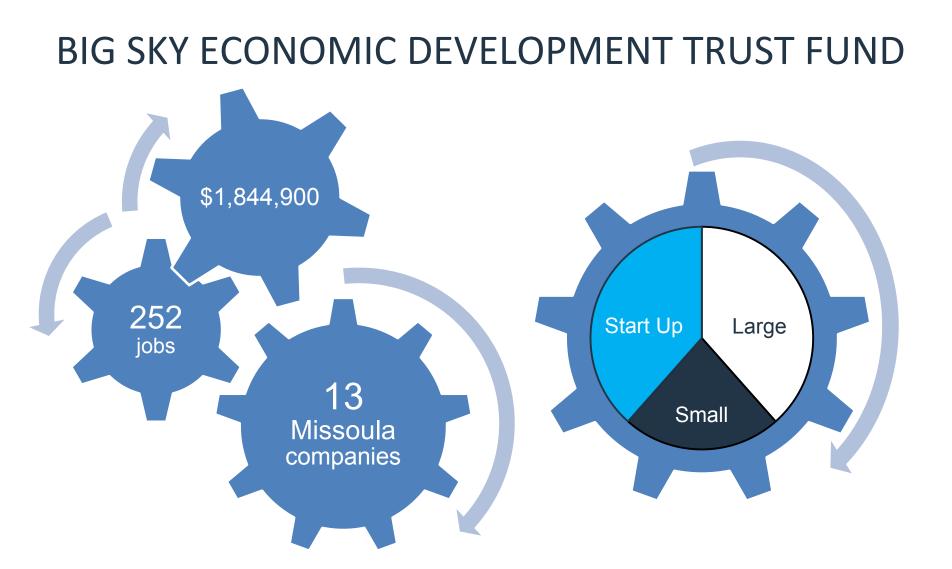
## **BUSINESS ATTRACTION**



Page 158 of 329

-:-

-:-



-¦-;

-;-

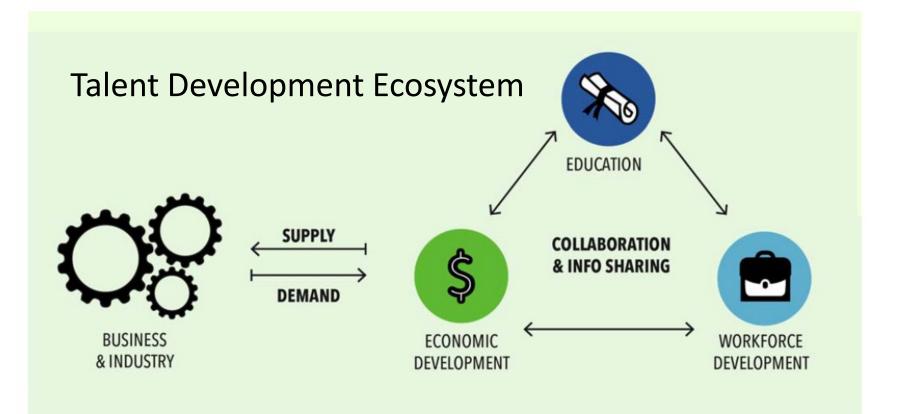


### Air Service Task Force





## Workforce Development



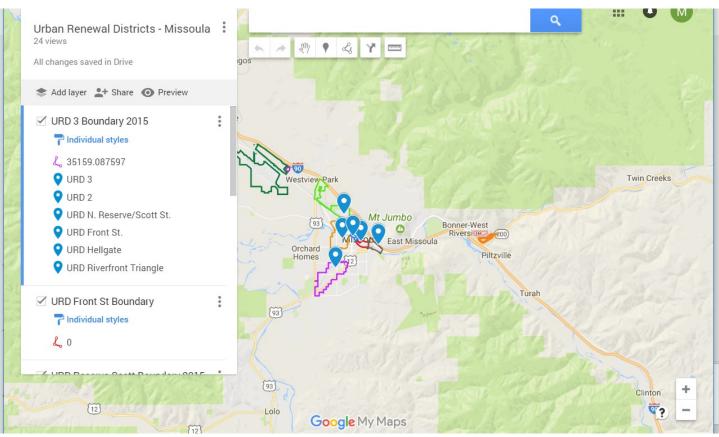


## Workforce Development Action Plan

- Create resource guides for employers and job seekers; incorporate into MEP website re-design and MEP business retention and expansion visits and follow up (Goal 1).
- Work with Destination Missoula, Missoula Chamber of Commerce, and other partners to develop strategy and marketing plan for talent attraction campaign (Goal 1).
  - Web-based relocation guide/website
  - Hello West Michigan events/model
- Support Missoula County Public Schools in implementation of recommendations following Career and Technical Education Review (Goal 3).
- Work with University of Montana, Missoula College, and strategic partners (Chamber WDERC) to increase the number of registered apprenticeships and internships at Missoula companies (Goal 3).
- Complete at least 4 presentations or workshops for employers on internships/apprenticeships, recruiting, training, retention and diversity (Goal 1).
- Update the State of the Workforce by end of 2018 to include an employee survey by BBER, employer survey by MEP, 3 employer focus groups, and updated data through MTDOL, Census, and U.S. Bureau of Economic Analysis.



## **TIF Map**







### **TIF Report**



Missoula County Development Park TIF

#### **Missoula County**

Website: https://www.missoulacounty.us/government/communitydevelopment/development-districts/missoula-development-park









## INTERIM DIRECTOR'S UPDATE

## THANK YOU FOR YOUR SUPPORT





### THOMAS P. MILLER & ASSOCIATES

# State of the Workforce

Talent Attraction. Talent Development. Talent Retention.



## The Challenge







Missoula employers are pulling from a **shrinking** pool of applicants to fill an **increasing** number of jobs.



## Talent Attraction a community or organization to draw in talent.

University of Montana enrollment has decreased by 21.6% since 2011.

## Population growth declined by 0.65% between 2015 and 2016.

62.9% of employers indicated they were recruiting talent outside of Missoula.



## **Talent Attraction**

**Barriers**:



### 2015 Median Home Value



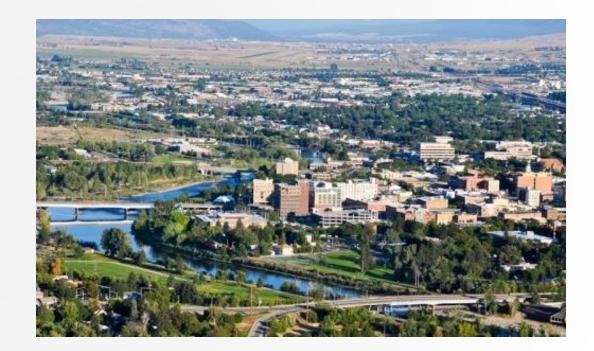
2015 Median Household Income



## **Talent Attraction**

### Successes:

- Quality of Life
- Relocation Guide
- Business Involvement





## Talent Retention ability of a community or organization to retain its talent.

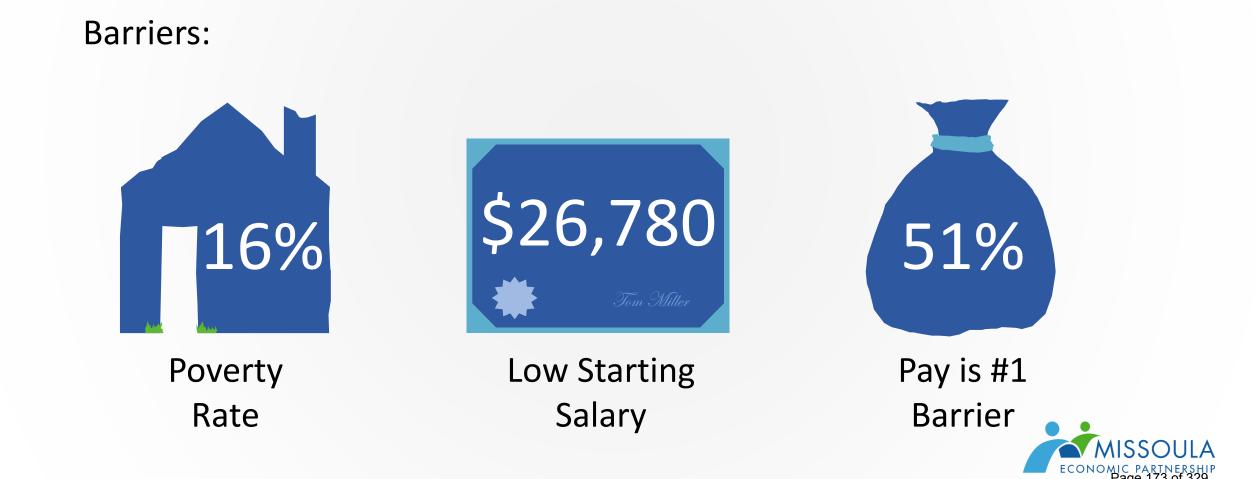
66.09% Of University of Montana graduates are employed in Montana within at least 1 quarter.

After one year, 33.91% are still not employed or are employed outside Missoula.

This gap is an **opportunity**.



## **Talent Retention**



## Talent Retention ability of a community or organization to retain its talent.

### Successes:

- Production of graduates in top occupations
  - Registered Nursing
  - Postsecondary Teachers
  - Business-related Occupations
- Proactive Business Retention





### **Talent Development** The ability of a community or organization to improve the skills of individuals in the workforce.



More than

1,100 training opportunities exist in the Missoula area.



## Talent Development





## Talent Development

### Successes:

- Strong K-12 System
- Large number of training opportunities and partners, including online opportunities
- A highly-educated population
- Significant tourism industry





## **Goals and Strategies**

1

Establish Missoula as a premier destination for **diverse talent and opportunities** at all levels.

Strategies:

- Create talent recruitment and retention brand
- Develop career opportunities website
- Establish 'welcoming concierge' system
- Collaboratively address housing cost



## **Goals and Strategies**

2

Position the Missoula Economic Partnership as a hub for **workforce development** in the Missoula region.

Strategies:

- Coordinate talent development system partners
- MEP serve as voice for talent development
- Promote talent development opportunities



## **Goals and Strategies**

3

Develop, implement, and scale comprehensive **career pathway programs** for students at all levels through Missoula's talent development system.

Strategies:

- Lead career pathway efforts and ensure alignment
- Publicize occupational opportunities in Missoula
- Expand 'Learn and Earn'
- Explore 'inter-sector' career pathways
- Leverage and scale entrepreneurship in the K-12 system



## **Goals and Strategies**

4

**Diversify and expand resources** available for talent development among employers, educators, and talent development system partners throughout the Missoula region.

Strategies:

- Launch funding campaign for talent development
- Pursue additional funding through grants, foundations, and other opportunities





## With a proactive, collaborative approach, we can turn Missoula's

## challenges into talent opportunities.





## **Steering Committee**

Clint Reading, Missoula College Margaret McManus, Allegiance Benefit Plan Management Karyn Trainor, Providence Health & Services Robert Farmer, Missoula Federal Credit Union Wolf Ametsbichler, Missoula Job Service Sam Sill, Missoula Organization of Realtors Leanne McManus, ikuw Solutions, Missoula Chamber of Commerce Workforce Development Committee Chair Linda Abreu, LC Staffing Wendy Koster, Diversified Plastics Carey Davis, Advanced Technology Group Jodie L. Rasmussen, Missoula County Public Schools, President-elect of Big Sky Society of Human Resource Managers Kim Latrielle, President and CEO, Missoula Chamber of Commerce Kimberly Hannon, Director of Operations, Missoula Chamber of Commerce Missoula Chamber of Commerce Workforce Development, Education and Recruitment Committee

## Thank you





## Read the full report: missoulapartnership.com/mep-state-of-the-workforce-study







### Nicole Rush

### nrush@missoulapartnership.com

Grants Manager Missoula Economic Partnership



## Nate Klinck

### nklinck@tpma-inc.com

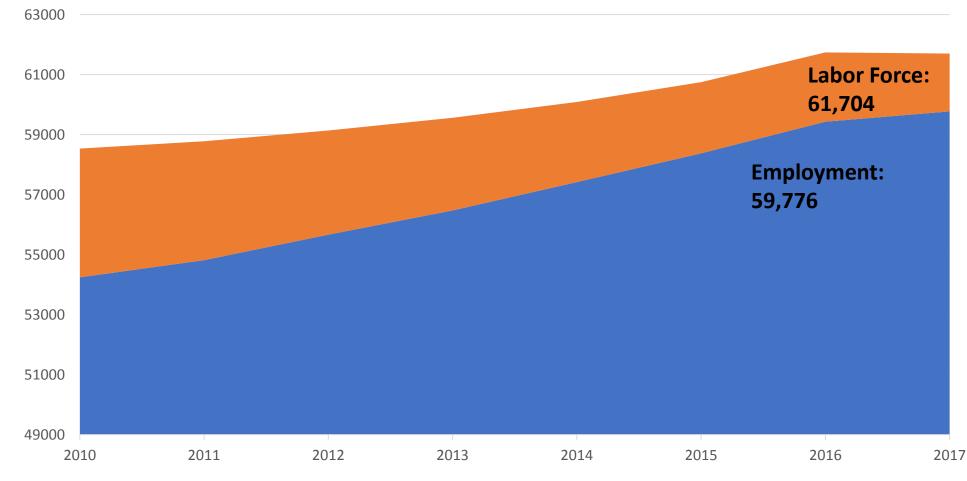
Vice President, Workforce Development Thomas P. Miller & Associates

# MISSOULA ECONOMIC PARTNERSHIP

# MISSOULA CITY COUNCIL JULY 26, 2017

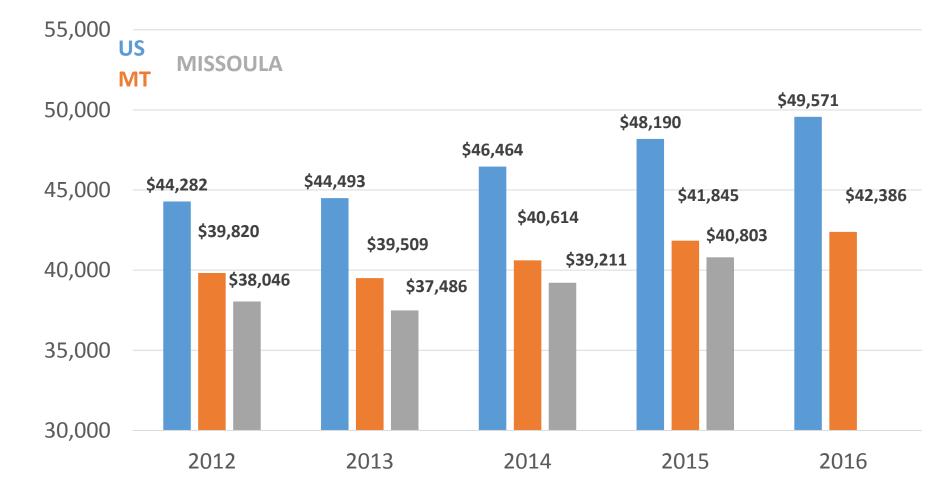


# Employment and Labor Force Growing in Missoula County



Source: Local Area Unemployment Statistics (LAUS) from www.lmi.mt.gov

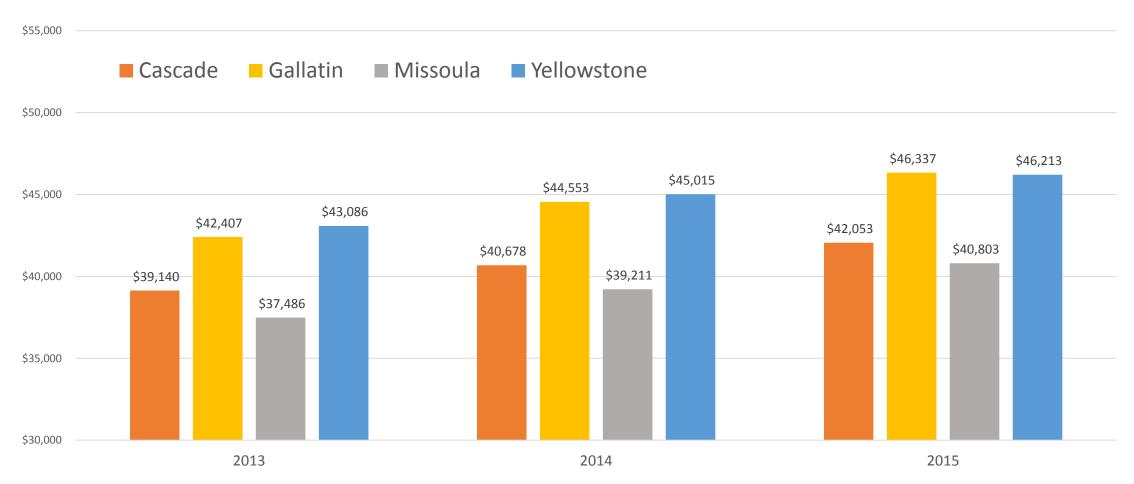
## Strong Personal Income Growth



Between 2012 and 2015 Missoula's per capita personal income rose about \$1,800 Missoula per capital income has remained between 95-97% of MT per capita income since 2012

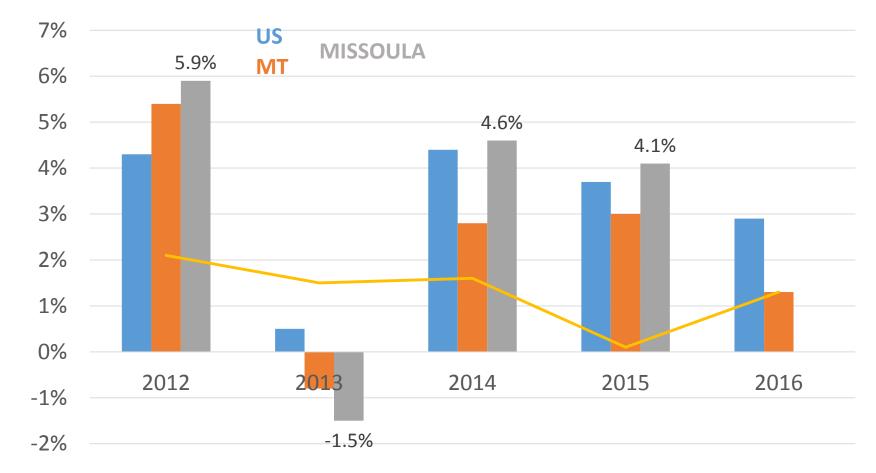
Source: US Bureau of Economic Analysis, from www.bea.gov

## Personal Income Growth County Comparison



### Missoula's per capita personal income lags behind other Montana metropolitan areas

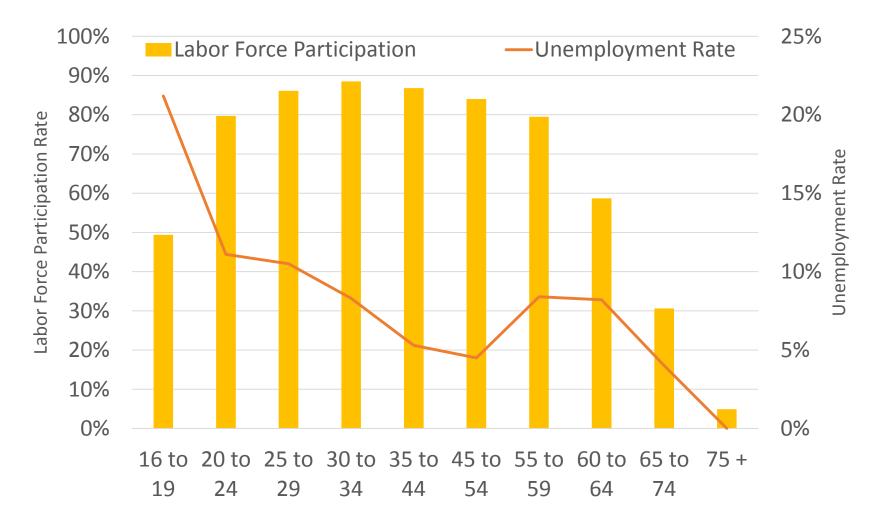
### Real Income Growth



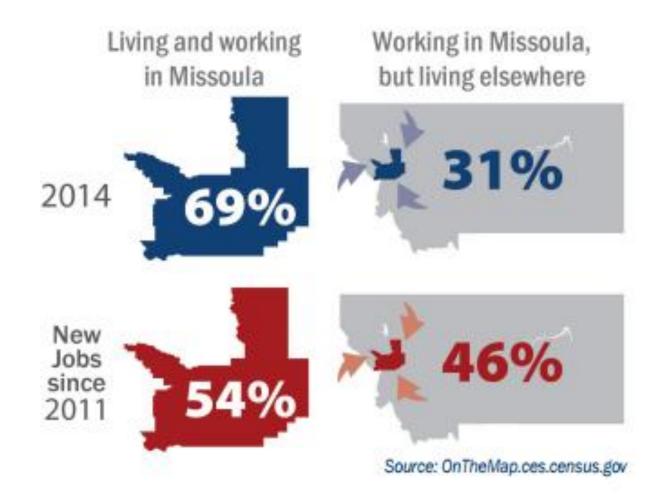
## From 2011-2015 Missoula was 119<sup>th</sup> out of 382 Metropolitan Areas in the U.S. for personal income growth

Source: Personal Income from Bureau of Economic Analysis at www.bea.gov and Inflation from U.S. Bureau of Labor Statistics accessed at www.lmi.mt.gov

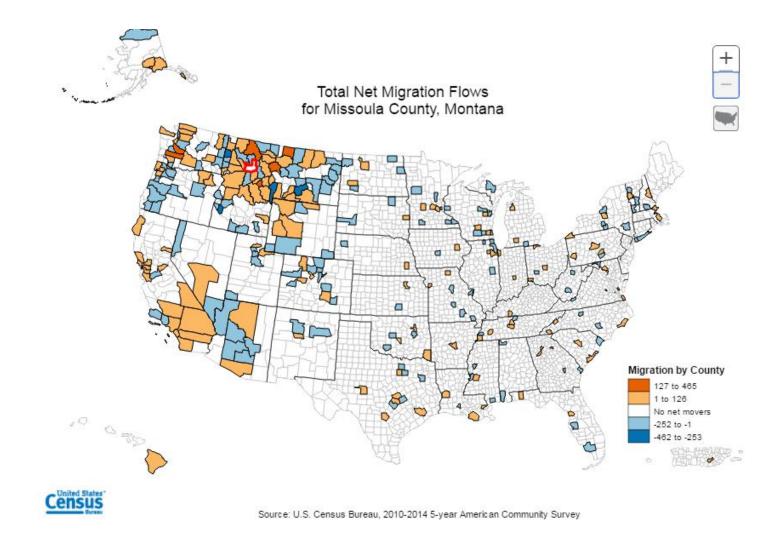
## Labor Force Participation by Age



### Workers from Outside Missoula County



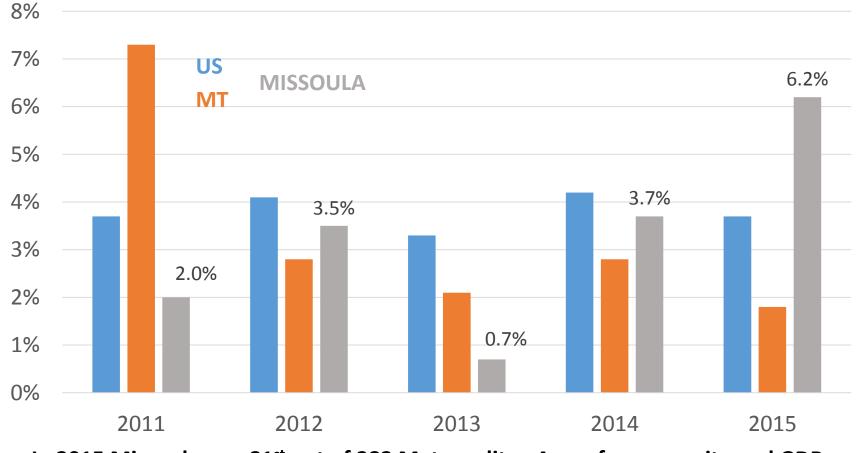
## New Workers from Migration?



Missoula Averaged a net of +357 people per year

Page 193 of 329

## Growing Momentum in GDP Growth



In 2015 Missoula was 81<sup>st</sup> out of 382 Metropolitan Areas for per capita real GDP growth

## Highlights

Missoula's economy is doing well.
Unemployment rates are low, but not the lowest in the state

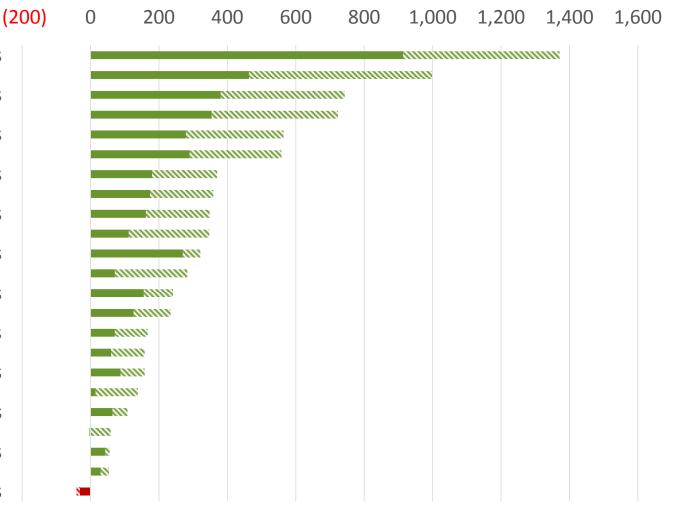
Personal income is growing faster than the state and nation, but remains overall lower than other MT metro areas
In the top third fastest growth among US metro areas 2011-2015

GDP is growing faster than the state as well
 In the top quarter fastest growing among US metro areas in 2015

# Specific Industry Employment Changes, 2011-2016

Top 10 Job Adding Industries: Missoula County	Jobs Added		Average Annual Wage
Food Services and Drinking Places	913	20%	\$15,236.00
Ambulatory Health Care Services	858	27%	\$52 <i>,</i> 936.00
Specialty Trade Contractors	225	17%	\$42,744.00
Accommodation	196	16%	\$22,620.00
Religious, Grantmaking, Civic, Professional,	186	14%	\$26,884.00
Motor Vehicle and Parts Dealers	178	19%	\$47,216.00
Insurance Carriers & Related Activities	175	26%	\$60,996.00
Merchant Wholesalers, Nondurable Goods	166	26%	\$44,512.00
Food and Beverage Stores	163	14%	\$22,204.00
Construction of Buildings	142	29%	\$44,200.00

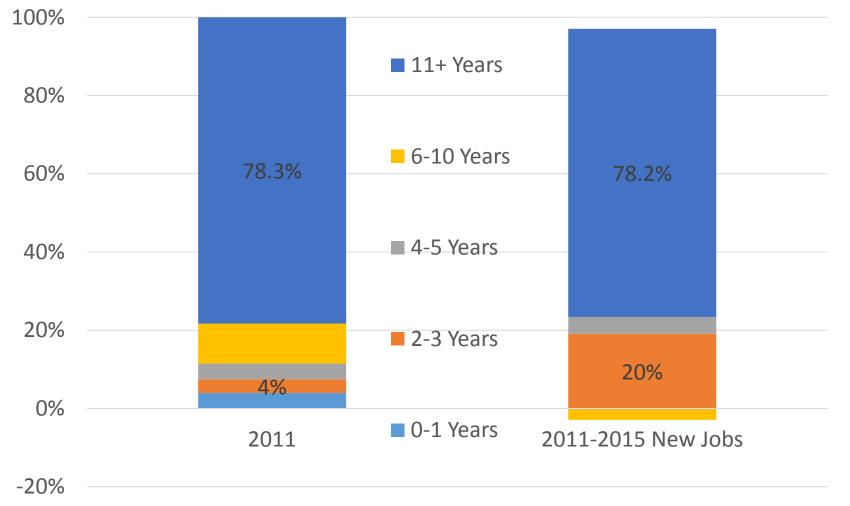
## Historic and Projected Growth, 2017



Food Preparation and Serving Related Occupations Personal Care and Service Occupations Sales and Related Occupations Management Occupations **Business and Financial Operations Occupations Construction and Extraction Occupations** Installation, Maintenance, and Repair Occupations Transportation and Material Moving Occupations Architecture and Engineering Occupations Legal Occupations Farming, Fishing, and Forestry Occupations Military occupations

# Growth of Young Businesses

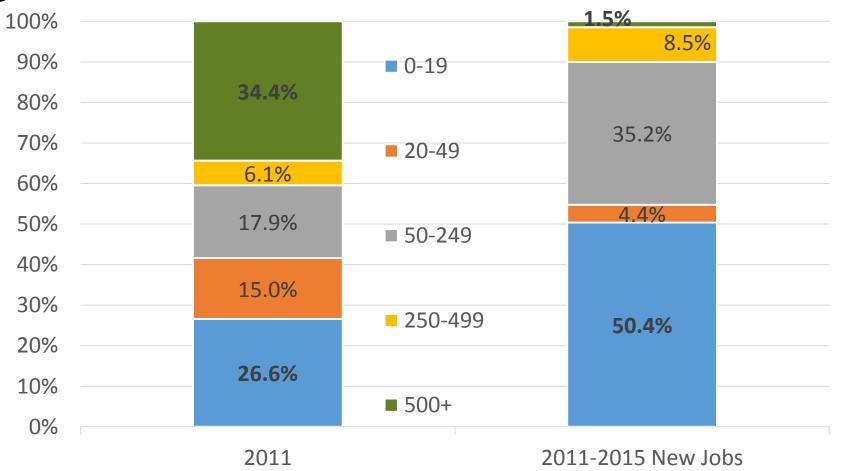
Even though companies 2-3 years old were only 4% of total employment they added 20% of new jobs



Source: Quarterly Workforce Indicators (QWI) accessed at www.qwiexplorer.ces.census.gov

## Small and Medium Size Firms Adding Jobs

Companies with fewer than 20 employees created 50% of new jobs between 2011-2015



Source: Quarterly Workforce Indicators (QWI) accessed at www.qwiexplorer.ces.census.gov

## Real Estate

\$248.7 million in building permits (1,529 total) issued in 2016
Stockman Bank \$16.2 million
Southgate Mall Carmike Theater \$7.9 million
Missoula County Public Schools \$12 million
Grizzly Champions Center \$10 million

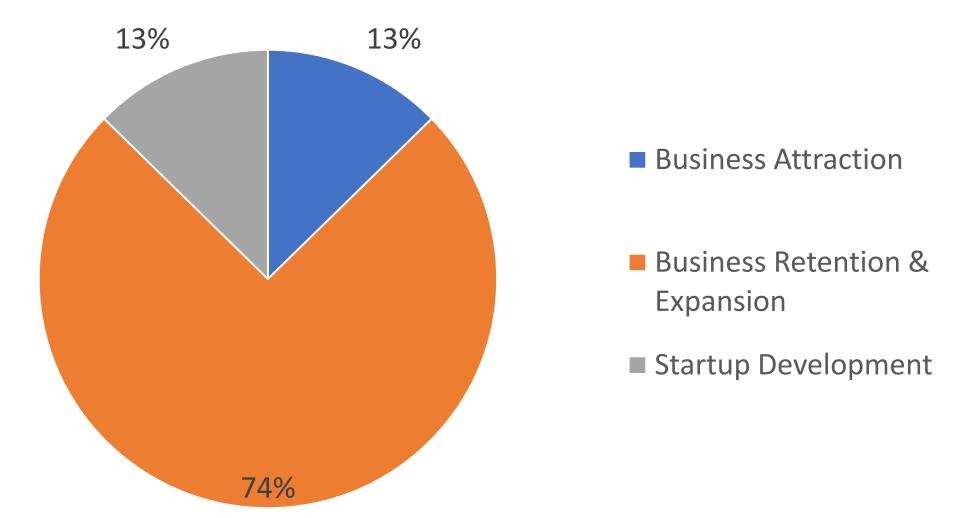
S

S

## MEP Activities 2016-2017

- MEP assisted 79 companies (July 2016 June 2017)
  5 site relocation visits from businesses outside MT
  53 companies assisted with business retention and expansion
- Applied to leverage more than \$2 million in state and federal incentive grants for job creation, business planning and training

# MEP Economic Development Activities 2016-2017



## Grant Activity

 MEP took over BREDD's portfolio of Big Sky Economic Development Trust Fund grants in July 2016

 BREDD had 6 job creation and 6 planning grants totaling \$2.4 million in assistance in July

 Since July, MEP has submitted 20 new grant applications requesting a total of \$2MM to help Missoula companies create more than 275 new jobs and assist 7 businesses with expansion planning

 BREDD and Missoula County have leveraged more than \$7.5 million in grants to assist Missoula businesses since the BSTF program began

# Community Leadership and Outreach

- MonTec Board
- Missoula Downtown Association Board
- Missoula Midtown Association Board
- Missoula Chamber of Commerce Board
- UM School of Business Administration Advisory Board

- John Ruffato Business Startup Challenge
- United Way of Missoula County Campaign Committee
- Montana Economic Developers Association Board
- UM President Search Committee



## Planning, Events and Speaking Engagements

- Innovate Montana Symposium
- Market Montana Symposium
- Seeley Lake Resource Team
- Last Best Conference Planning Team
- Quest Montana Marketing Analytics Forum
- MEDA Rotunda Day
- City of Missoula Community Needs Assessment
- Hellgate Venture Network
- One Million Cups
- Development Community Meetings
- Montana High Tech Business Alliance Member Receptions
- Montana High Tech Business Alliance Kauffman Missoula Design Standards Forum Foundation Entrepreneurship Event

- Missoula Chamber Shared Resource Guide
- Ignite MT
- Missoula Sunrise Rotary Club
- Montana Tech Tour
- Missoula Chamber State of the Community
- **BBER Economic Outlook Seminar**
- Leadership Missoula
- USDA Small Business Resource Conference
- Innovate UM
- Masters of Science in Business Analytics Cohort Presentation
- City Club Missoula

# Strategic Initiatives

• Air Service Revenue Guarantee

**DELTA** UNITED **FRONTIER** 



Missoula Workforce Study

11.7

Missoula Housing Study





## Sources

• Chris Bradley, Economist, Montana Department of Labor & Industry • US Census Bureau • US Bureau of Labor Statistics • US Bureau of Economic Analysis • Thomas P. Miller & Associates, Missoula State of the Workforce (preliminary)

**Home** 

Legislation **T** Contact us

<u>1/1/2050</u>

# Item Information Title: Missoula Economic Partnership Update Item #: Status: Type: #: Version: 10<sup>th</sup> Sponsor:

COW Referrals Held in Committee

Status:Held in Committee#:COWSponsor:Bryan von LossbergWard:AllVideo:No Video Available

°% 🔊

#### Text

No Text Available

Meeting Date:

Meeting Type:

Attachments:

### History

 -						
	Version	ltem #	Туре	Status	Meeting Date	Meeting Type
	<u>1<sup>st</sup></u>				<u>10/17/2016</u>	City Council
	<u>2<sup>nd</sup></u>			Held in committee	<u>10/19/2016</u>	COW
	<u>3<sup>rd</sup></u>			Held in committee	<u>1/11/2017</u>	COW
	<u>4<sup>th</sup></u>			Held in committee	<u>4/12/2017</u>	COW
	<u>5<sup>th</sup></u>			Held in committee	<u>7/26/2017</u>	COW
	<u>6<sup>th</sup></u>			Held in committee	<u>11/1/2017</u>	COW
	<u>Z<sup>th</sup></u>			Held in committee	<u>1/17/2018</u>	COW
	<u>8<sup>th</sup></u>			Held in committee	<u>5/23/2018</u>	COW
	<u>9<sup>th</sup></u>			Held in committee	<u>5/8/2019</u>	COW
•	10 <sup>th</sup>			Held in Committee	<u>1/1/2050</u>	COW Referrals Held in Committee

### **Vote Records**

No voting recorded



### City of Missoula, Montana Item to be Referred to City Council Committee

Committee:	Committee of the Whe	ole	
Item:	Water Litigation Upda	ite	
Date:	June 4, 2020		
Sponsor(s):	Dale Bickell		
Prepared by:	Jessica Miller		
Ward(s) Affected:	<ul> <li>□ Ward 1</li> <li>□ Ward 2</li> <li>□ Ward 3</li> <li>□ All Wards</li> </ul>		Ward 4 Ward 5 Ward 6 N/A

### Action Required:

Discuss the current status of water litigation.

### **Recommended Motion(s):**

I move the City Council: N/A

Timeline:	
Referral to committee:	June 8, 2020
Committee discussion:	June 10, 2020
Council action (or sets hearing):	N/A
Public Hearing:	N/A
Deadline:	N/A

### Background and Alternatives Explored:

City administration will provide updated information on the status of litigation in the condemnation case, the Department of Revenue litigation, and the bad faith arbitration.

**Financial Implications:** 

Links to external websites:

### City of Missoula, Montana Item to be Referred to City Council Committee

Committee:	Committee of the Whole
Agenda item title:	Water utility litigation update
Date:	06/07/2019
Sponsor/Contact:	Bryan von Lossberg
Prepared by:	Bryan von Lossberg
Ward(s) affected:	All

Action Required: Discussion only.

Recommended Motion: N/A

### Timeline:

Referred to committee:	5/18/18
Committee discussion:	06/12/2019
Public hearing (if necessary):	NA
Deadline:	NA

### Background and Alternatives Explored:

Water utility litigation update.

### Financial Implications: N/A

#### City of Missoula, Montana Item to be Referred to City Council Committee

Committee:	Land Use and Planning
Agenda item title:	Urban Fringe Development Area Yearbook: 10-Year Lookback
Date:	Sept 12, 2018
Sponsor:	Development Services
Prepared by:	Garin Wally, GIS Analyst/Planner
Ward(s) affected:	All

### Action Required: None

**Informational Presentation:** Presentation of the Urban Fringe Development Area Yearbook that discusses 2016 and 2017 data as well as a look at data collected over the past ten years. The presentation will cover recent growth in infrastructure, residential building construction, entitled lots, subdivisions, parks and open space, and transit, bike, and pedestrian infrastructure.

#### Timeline:

Referred to committee:	Sept 13, 2018
Committee discussion:	Sept 19, 2018

### **Background:**

The Urban Fringe Development Area project (UFDA) was initiated in 2007 to envision where the next 15,000 new residential units would develop within the Missoula Urban Services Area. Maps and documents within UFDA provide the public and decision makers with growth pattern information including new residential units and new or maintained infrastructure. The project resulted in a Growth Policy Amendment and Map passed by both City and County governing bodies in 2008. The 2035 City Growth Policy references the UFDA material and encourages the continued monitoring of residential growth, infrastructure, and associated impacts. Annually, staff has created a yearbook depicting development patterns, urban growth metrics and impacts of that growth. Similar to other UFDA reports, this year's report will focus on 2016 and 2017, but also includes an assessment of data collected over the past ten years.

After acquiring and analyzing ten years of data, our next step is to take a look forward by considering past trends and updating datasets and methods. The end goal of this "look-forward" is to consider the Growth Policy's "Focus Inward" goals in producing a map and other information that will shows development capacity, capability, and suitability; a map of where, can, and should development occur.

Financial Implications: None

Links: 2016-2017 UFDA Yearbook home

Legislation T 📑 Contact us

#### Item Information

°8 🔊

Title:	Our Missoula Development Guide	- Looking Forward	
Item #:		Status:	Held in Committee
Туре:		#:	Land Use & Planning
Version:	3 <sup>rd</sup>	Sponsor:	Garin Wally, GIS Analyst/Planner
Meeting Date:	<u>1/1/2050</u>	Ward:	Ward 1, Ward 2, Ward 3, Ward 4, Ward 5, Ward 6
Meeting Type:	PAZ Referrals Held in Committee	Video:	No Video Available
Attachments:			

### Text

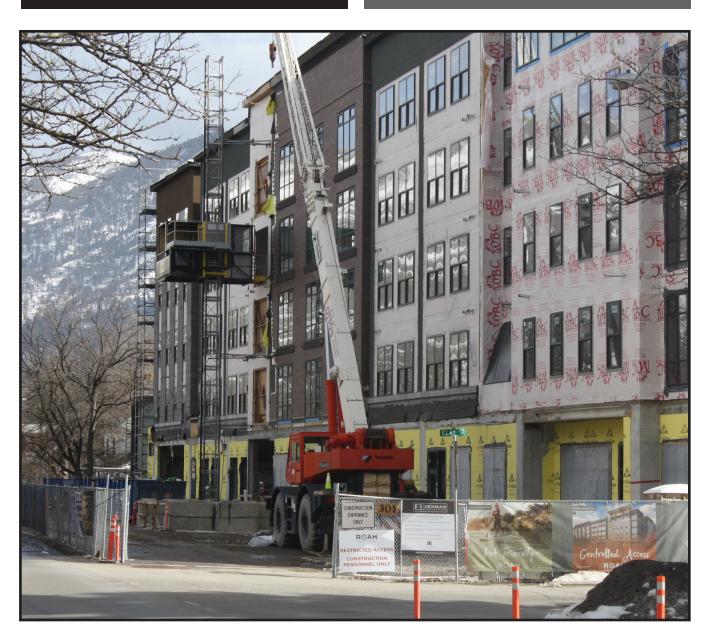
No Text Available

### History

	Version	Item #	Туре	Status	Meeting Date	Meeting Type
	<u>1<sup>st</sup></u>				<u>9/17/2018</u>	City Council
	<u>2<sup>nd</sup></u>			Held in committee	<u>9/19/2018</u>	PAZ
•	3 <sup>rd</sup>			Held in Committee	<u>1/1/2050</u>	PAZ Referrals Held in Committee

### **Vote Records**

No voting recorded



# Urban Fringe Development Area Project



2016 - 2017 UFDA Yearbook & 10-Year Review

Introduction	2
UFDA Boundary & Regions	3
Summary	4
Quick Facts	4
Residential Building Permits	5
Multi-Dwelling	7
Subdivision & Entitled Lots	
Townhome Exemptions	.11
10-Year Development Review	.13
Annexation	.17
Natural Resource Impacts	.19
Parks & Conservation	.20
Transportation Infrastructure	.21
Transportation	.22
Sewer & Water Infrastructure	.24
Residential Allocation	.25
Ten Years of Development	.27
Summary	.28



Scott Street Village. Photo by Garin Wally

Cover Photo of Roam by Tom Zavitz

#### Introduction

In 2007, the Office of Planning and Grants, now Development Services (est 2013), embarked on an annual process of updating community planning information with an emphasis on determining how the community should accommodate housing needed for the expected approximate increase in population over the next 20 years. It was expected that about 15,000 residential units would be needed. The result was the Residential Allocation Map that was incorporated through amendment into the City and County Growth Policy and the commitment to track residential development activity through the Urban Fringe Development Area Yearbook (UFDA).

This UFDA Yearbook contains the annual reports for 2016 and 2017 jointly, but also reviews trends over the past ten years. Like the earlier reports, this yearbook informs community policy primarily pertaining to housing, population, development, acquisitions, and infrastructure for the Missoula Urban Services Area, and tracks potential residential development opportunities through the Residential Allocation Map.

The Planning Division of Development Services is using the ten-year observations to inform a reset of the residential allocations with a look toward guiding residential development for the next ten years. The upcoming UFDA "look-forward" will specifically identify areas with beneficial development potential based on the 2035 Our Missoula Growth Policy objectives. By considering capacity for growth together with areas identified as suitable through Growth Policy objectives, the forthcoming composite map will better identify development potential expected by the Residential Allocation Map. This will in turn advise and help coordinate city planning for infrastructure, annexation and other city and agency services going forward.



Construction. Photo by Garin Wally

#### Credits:

Maps and Analysis were produced by Garin Wally: (406) 552-6631 or gwally@ci.missoula.mt.us

The UFDA Project Manager is Tom Zavitz: (406) 552-6632 or tzavitz@ci.missoula.mt.us

This project could not be possible without the on-going support of the various agencies that contribute valuable data and insight.

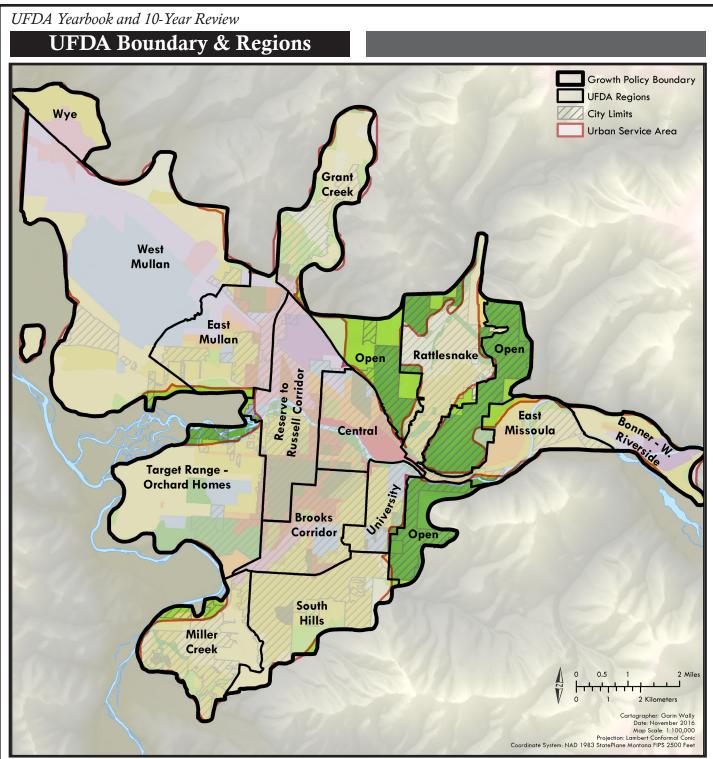
Past and current UFDA materials can be accessed at:

http://www.ci.missoula.mt.us/1526/UFDA



Tollefson Apartments. Photo by LM

Urban Fringe Development Area Yearbook



Previous UFDA Yearbooks have used the Urban Services Area (URSA, 33,000 acres) as the UFDA project study area. Beginning in 2015, the boundary was adjusted for consistency with the Growth Policy Boundary (40,253.25 acres) used for the Our Missoula 2035 City Growth Policy document and Future Land Use Designation Map.

The UFDA "Regions" are divisions of the study area that are used for analyzing the area's development patterns; they have no relation to Neighborhood Council Districts or other neighborhood associations. These areas were also updated to match boundaries defined by the Census, improving their ability to properly capture underlying demographic information such as population. The "Open" regions (4,283 acres) were added to fill most of the gap between the previous UFDA boundary and the Growth Policy boundary. The City should expect minimal development in these Open regions as their land use designations are predominantly Open and Resource, and Parks and Open Lands.

#### Summary

The original Urban Fringe Development Area Project Update and Staff Recommendation estimated a baseline count of 38,568 existing dwelling units in 2007. Since then we have added 4,905 units bringing us a new baseline of about 43,473 dwelling units.

Population was estimated from dwelling units using an average of 2.2 persons per household and a 3% vacancy rate (Missoula Organization of Realtors).

#### **Dwelling Unit Estimates per Year**

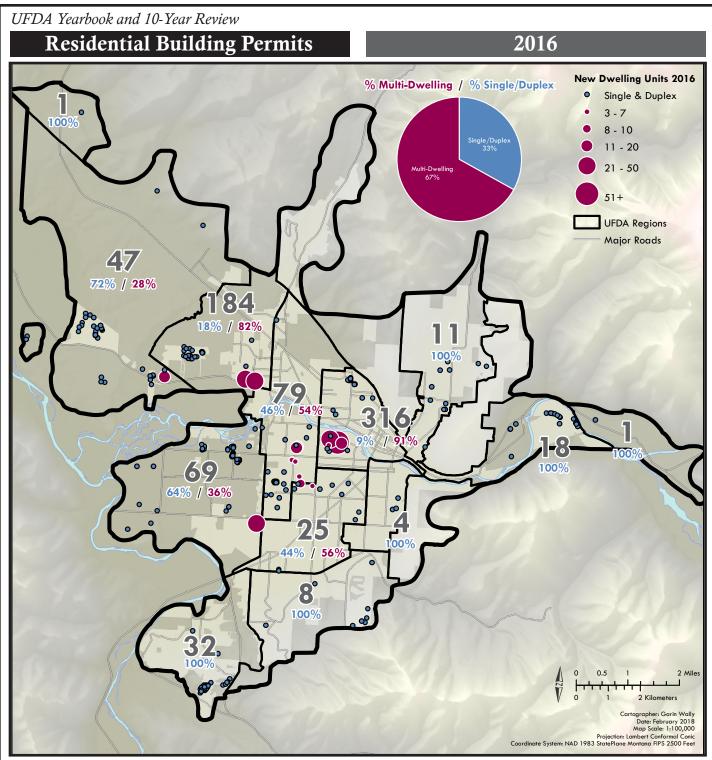
Year	Est Dwellings	Growth Rate
2007	38,568	Х
2008	38,903	0.87%
2009	39,101	0.51%
2010	39,407	0.78%
2011	39,945	1.37%
2012	40,233	0.72%
2013	40,779	1.36%
2014	41,295	1.27%
2015	41,828	1.29%
2016	42,623	1.90%
2017	43,473	2.01%
Average	491 / year	1.21%

#### **Quick Facts**

- UFDA Study Area (see page 4): 40,253 Acres
  - Est. Population: 92,700
- Est. Housing Units: 43,473
- Est. Gross Density: 1.0 Dwelling Unit per Acre
- Est. Net Density: 2.39 duac
- Annual Growth Rate of Dwellings: 1.21%
- 1,645 new residential units added in 2016-2017
- 4,905 residential units added since 2008
- 491 units added per year over a ten-year average
- New Major Subdivisions ('16 & '17): 1 City, 1 County
- Updated Entitled Lot Reserve: 4,241 lots/units



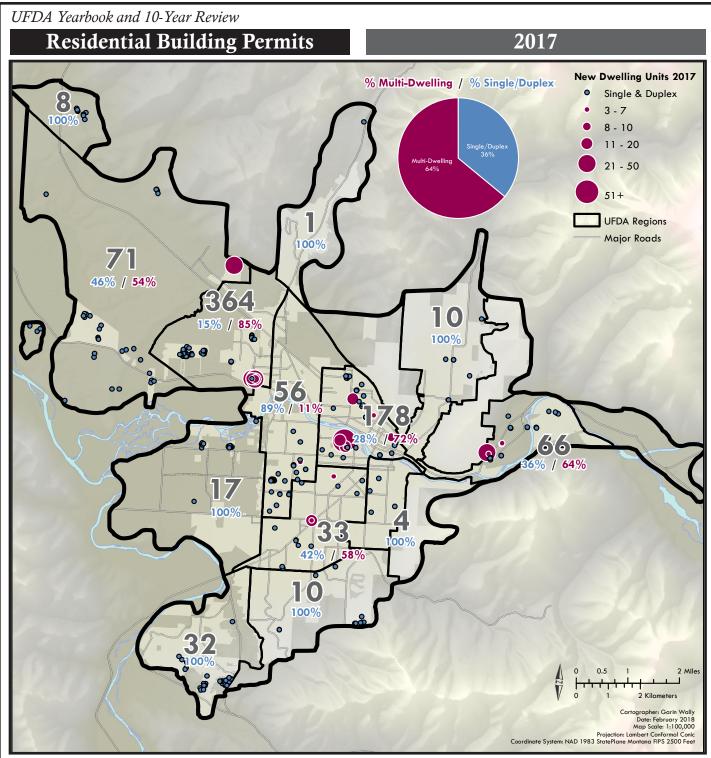
Scott Street Village. Photo by Garin Wally



In 2016, the City issued residential building permits for 221 single dwellings, 18 duplex units, and 532 units in 20 multi-dwelling developments. The County issued permits for 24 single dwellings. A total of 795 new units were permitted: 771 units in the City and 24 in the County.

The three largest projects in 2016 were the new ROAM student housing project at 305 E Front St (162 units), Cambium Place at 945 Wyoming St (69 units), and buildings 1-3 of the Halling Farms project on Clark Fork Lane (114 units).

Calendar year 2016 saw the total market value of construction reach \$248.7 million. This surpassed the previous year's by \$64.7 million.



In 2017, the City issued residential building permits for 232 single dwellings, 28 duplex units, and 502 units in 28 multi-dwelling developments. The County issued permits for 44 single dwellings, 2 duplex units, and 42 units in a multi-dwelling project in East Missoula. A total of 857 new units were permitted: 769 units in the City and 88 in the County.

The three largest projects in 2017 were 9 buildings of the Halling Farms project / Tollefson Apartments on Clark Fork Lane and Mullan Road (216 units), The Sawyer Student Living building at 775 Wyoming St (57 units), and Potter Park Apartments (38 units).

Calendar year 2017 saw the total market value of construction reach \$277 million. This surpassed the high value in 2016 by another \$28.3 million.

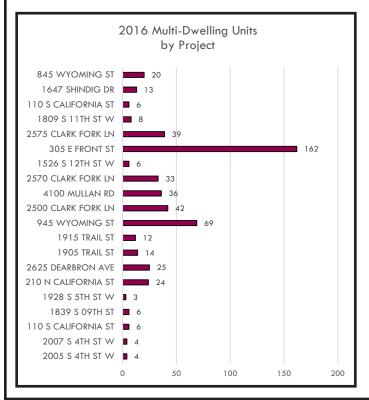
Residential development in the City has continued at a steady pace. Due to a few large projects in East Missoula in 2017, the number of developed units in the County (88) was nearly twice the average (36 per year).

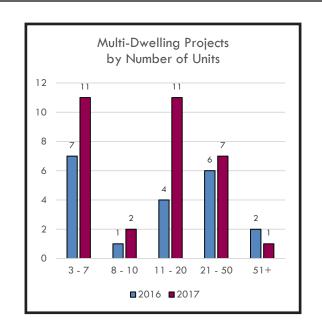
#### Multi-Dwelling

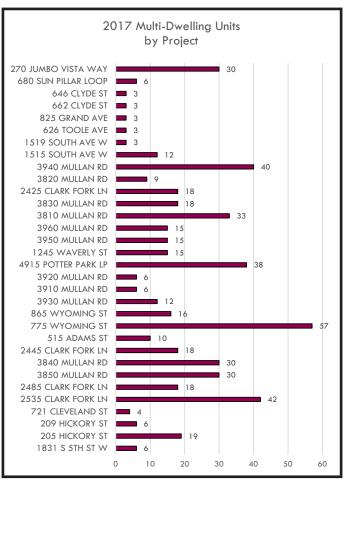
In 2016, multi-dwelling projects had an average of 27 units per project and an average of 40 dwelling units per acre (DUAC). In 2017, multi-dwelling projects had an average of about 17 units per project and about 23 units per acre. Further development of the "Old Sawmill District" has focused the majority of multi-dwelling construction to the City Core.

One major project of note is the 162-unit (101 DUAC) ROAM student housing and mixed use project located on Front Street (cover photo).

Between 2008 and 2017, eight major new affordable multi-dwelling projects were developed, providing a total of 299 dwelling units. This is approximately 6% of the total new dwelling units for the area. This only accounts for new multi-dwelling development, while other efforts to address housing affordability have also taken place including improvements to existing income-qualifying rentals, continued issuance of housing vouchers, efforts to address homelessness, retaining the current stock of income-qualifying rentals, and private-developer efforts to address work-force housing. A plan to address Missoula's housing needs is underway through the Office of Housing and Community Development. This, and future UFDA projects will help to inform those ongoing efforts.







### Multi-Dwelling



69 unit Cambium Place (34 DUAC). Photo by Garin Wally



10 unit Spruced Lofts (77 DUAC) on Spruce and Adams. Photo by Garin Wally



57 unit The Sawyer Student Living (65 DUAC). Photo by Garin Wally



Polley's Square Buildings C and D. Photo by Garin Wally

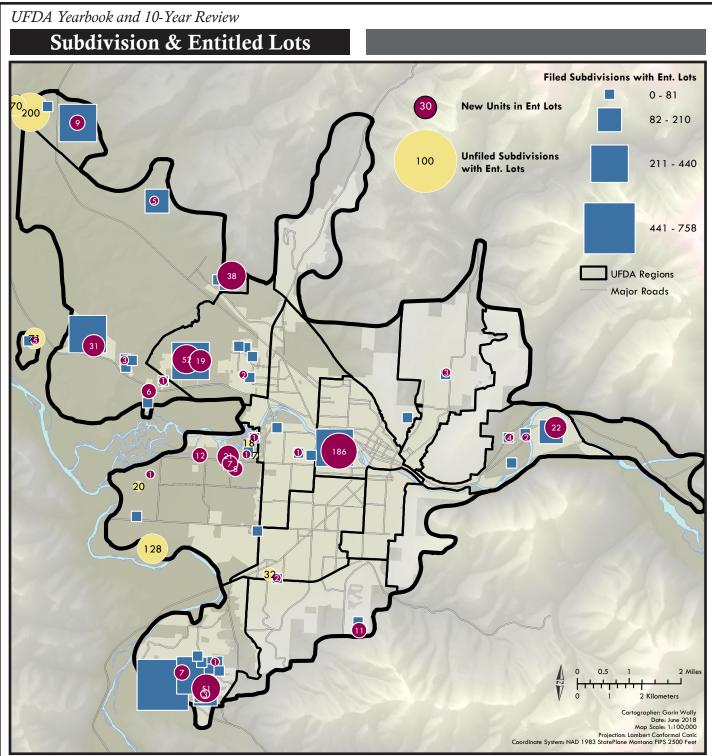


12 unit apts on South and Brooks (9 DUAC). Photo by Garin Wally



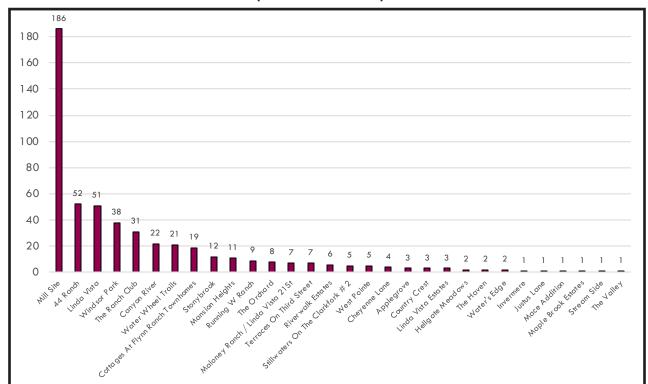
Tollefson Apartments. Photo by LM

Urban Fringe Development Area Yearbook



Entitled Lots consist of platted and expected residential lots and dwelling units planned for in preliminarily approved major subdivisions. Development is imminent for some, while other entitled lots exist only in future phases that have not yet been filed. If phases expire, the number of lots expected in that phase is dropped from the count. Lots where building permits are filed are also removed. The total undeveloped lots or units, and the remaining vacant and unplatted lots or units represent the updated count of Entitled Lots. Three subdivisions expired in 2016-2017 dropping their lots or units from the count. Those subdivisions were Southern Hills (47 lots; South Hills region), and Clark Fork Terrace #1 and #2 (38 and 33 lots; East Missoula region). Two new major subdivisions came online: Spurgin Ranch (20 lots; Target Range - Orchard Homes region) in the County, and Cowboy Flats (32 lots; Brooks Corridor region) in the City. Development that occurred on Entitled Lots includes 264 units built in 2016 (33% of development), and 251 units built in 2017 (30% of development).

#### Subdivision & Entitled Lots



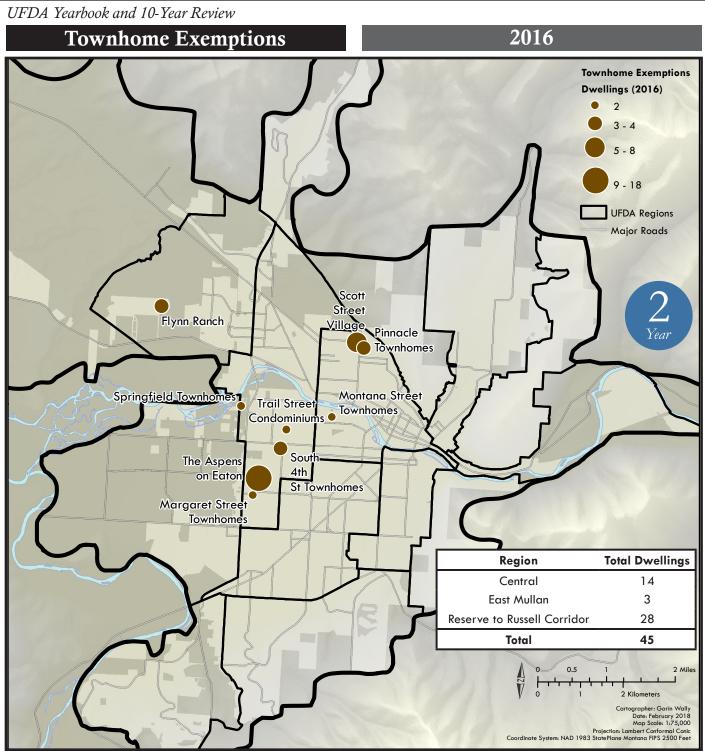
Units Developed on Entitled Lots per Subdivision

It has been a consistent pattern that approximately one third of development occurs on Entitled Lots, as shown in the past two years.

Considering these changes, the current estimate of Entitled Lots is about 4,241, with 546 of those in subdivisions that have not yet filed any phases (8 subdivisions). The majority of entitled lots from unfiled subdivisions (489) are in the County.

#### **Remaining Entitled Lots by Region**

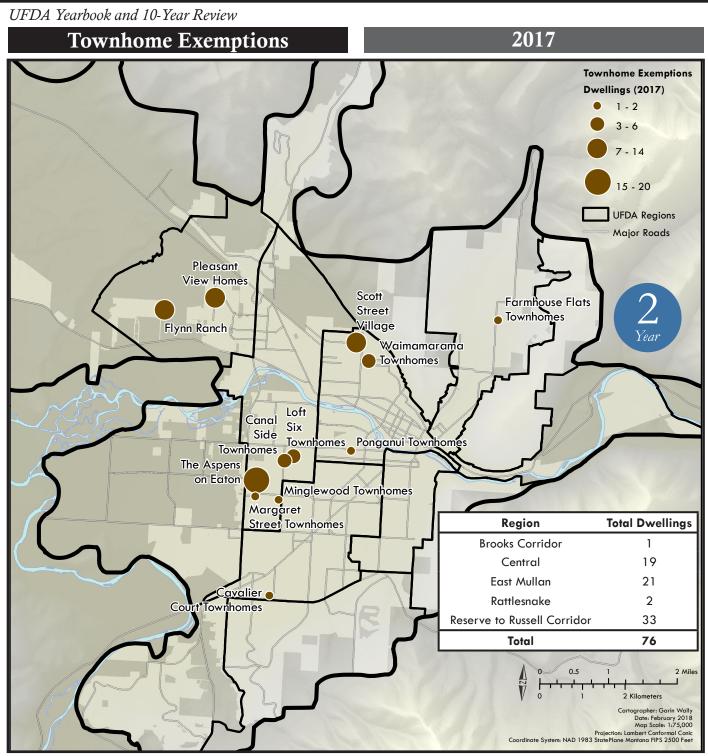
Region	New Units	Remaining
Brooks Corridor	2	34
Central	186	385
East Missoula	28	183
East Mullan	73	619
Miller Creek	62	1417
Rattlesnake	3	105
Reserve to Russell	1	107
Corridor	I	107
South Hills	11	34
Target Range -	<b>C</b> 1	000
Orchard Homes	51	222
West Mullan	89	556
Wye	9	579
Total	515	4241



In 2011, the state legislature passed House Bill #460 which allowed fee-simple development to occur without subdivision review in the same way that traditional condominium projects do not require subdivision review. In zoned areas, this allows the creation of unit ownership parcels, in effect allowing an alternative to the typical subdivision review process.

In April of 2016 Missoula created and adopted Townhome Exemption Development (TED) regulations which allowed residential TED developments by-right or conditionally approved depending on the size of development; developments of five or fewer are allowed by-right. Because the TED review process is faster and less expensive than subdivision review, TED development is expected to increase and potentially replace most subdivision projects in the future.

Missoula saw 45 TED units constructed in 2016 and 76 in 2017. The Aspens on Eaton and the Scott Street Village developments saw the highest number constructed in the past two years with Flynn Ranch and Pleasant View

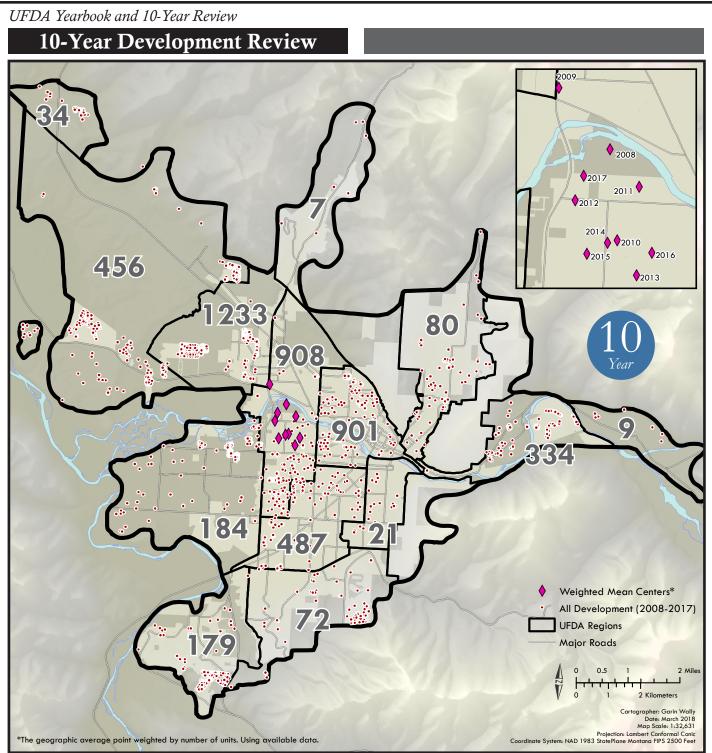


Homes also seeing significant numbers of units developed.

It is expected that this type of development pattern will continue to rise in popularity as developers realize the benefit of its streamlined approval process.

TED projects are being proposed in core areas of the city as a method of establishing home ownership opportunities on smaller infill parcels as well as some places along the edges of the city where developers are using the TED to explore new building types such as "patio homes." The

typical housing types associated with TED projects are 2-unit attached townhouses and small lot single dwellings.



The map above shows the 4,905 new residential units permitted over the past ten years. Also shown are the Weighted Mean Centers, or the geographic average point per year which is weighted by the number of units per point. Imagine if the Growth Policy boundary was a wooden board and new dwelling units were weights on the board, the mean centers are where the board would balance if suspended by string. They help depict the pattern of development over the past ten years. For example, the Weighted Mean Centers will drift to the north-west if development intensity continued in the East

Mullan region and wasn't balanced out by development to the south-east.

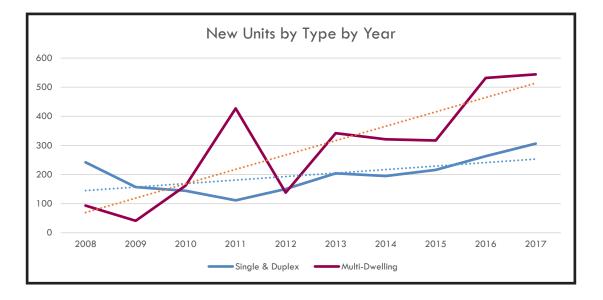
Despite significant fluctuations in the numbers, types, and locations of permitted residential units over the past ten years, the Weighted Mean Centers of residential development have remained tightly clustered in the River Road neighborhood in the Reserve to Russell Corridor region. These mean centers provide one potential method to objectively measure development patterns as the City continues to pursue its "Focus Inward" policy.

#### **10-Year Development Review**

#### **Development by Type**

Year	Single-Dwelling	%	Duplex	%	Multi-Dwelling	%	Total by Year
2008	220	65.7%	22	6.6%	93	27.8%	335
2009	149	75.3%	8	4.0%	41	20.7%	198
2010	122	39.9%	22	7.2%	162	52.9%	306
2011	97	18.0%	14	2.6%	427	79.4%	538
2012	138	47.9%	12	4.2%	138	47.9%	288
2013	196	35.9%	8	1.5%	342	62.6%	546
2014	183	35.5%	12	2.3%	321	62.2%	516
2015	204	38.3%	12	2.3%	317	59.5%	533
2016	245	30.8%	18	2.3%	532	66.9%	795
2017	276	32.5%	30	3.5%	544	64.0%	850
Total by Type	1830		158		2917		4905
		40.5%			<b>59.5</b> %		

#### Development by Type by Year



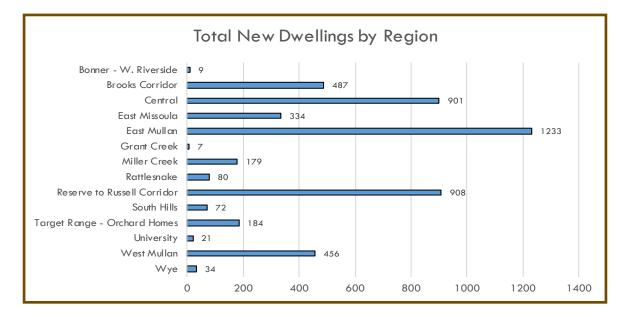
Trends in the Missoula home building market over the past ten years reflect the effects of the 2008 U.S. banking crisis and resulting recession-recovery in two ways. First, because credit (mortgages) for home buyers became difficult to obtain, the market for multi-dwelling units like apartments began to outpace the demand for single dwelling units. In Missoula the change meant that the percentage of building permits for multi-dwelling units doubled to two-thirds of all residential building permits while the percentage of single dwelling building permits fell to about one third of all residential building permit levels. Since the recession bottomed in 2009 these rates have remained steady as the economy recovered. Overall, the total of multi-dwelling and single dwelling building permits issued has varied year to year, but have been increasing at an average rate of about 15 - 20% per year since 2009. In 2009, permits were issued for 198 units. In 2017, after eight years of economic recovery, the City and County issued permits for 850 residential dwelling units within the UFDA area, of which 544 were multi-dwelling units. All told, there were 4,905 new dwelling units constructed in the Urban Service Area in the past ten years.

#### **10-Year Development Review**

#### **Development by Region**

Region	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	10-Year Avg	5-Year Avg	Total by Region
Bonner - W. Riverside	1	1	2	1	0	0	2	1	1	0	1	1	9
Brooks Corridor	24	9	62	66	23	109	115	21	25	33	49	61	487
Central	22	6	85	14	71	32	70	107	316	178	90	141	901
East Missoula	23	9	5	123	10	7	14	59	18	66	33	33	334
East Mullan	104	37	34	247	46	53	105	59	184	364	123	153	1233
Grant Creek	0	2	1	1	1	0	1	0	0	1	1	0	7
Miller Creek	4	2	3	1	10	28	30	37	32	32	18	32	179
Rattlesnake	11	3	5	7	2	12	14	5	11	10	8	10	80
Reserve to Russell Corridor	72	62	64	20	58	258	83	156	79	56	91	126	908
South Hills	11	5	4	5	7	4	11	7	8	10	7	8	72
Target Range - Orchard Homes	14	5	6	8	14	8	19	24	69	17	18	27	184
University	1	2	2	1	1	0	2	4	4	4	2	3	21
West Mullan	48	51	31	42	35	35	47	49	47	71	46	50	456
Wye	0	4	2	2	10	0	3	4	1	8	3	3	34
Total City	303	175	289	499	257	546	484	456	771	762	454	604	4542
Total County	32	23	17	39	31	0	32	77	24	88	36	44	363
Total by Year	335	198	306	538	288	546	516	533	795	850	491	648	4905





Over a quarter of residental development over the past ten years has occured in the East Mullan region, adding an average of 123 new units per year. Meanwhile, the Bonner - W. Riverside, Grant Creek, University, and Wye regions each constitute less than 1% of the past ten years of development, and average one to three new units per year. The Miller Creek region saw the most drastic change over time averaging only four units per year in the first five years of tracking by UFDA and then averaging 32 units per year in the last five years of UFDA tracking. The Central region has also seen a sharp increase over time, mostly due to a few large projects.

#### **10-Year Development Review**

New Units by Administration by Year

Year	City	County
2008	303	32
2009	175	23
2010	289	17
2011	499	39
2012	257	31
2013	546	NA
2014	484	32
2015	456	77
2016	771	24
2017	762	88
Total	4542	363

**Multi-Dwelling Projects by Number of Units** 

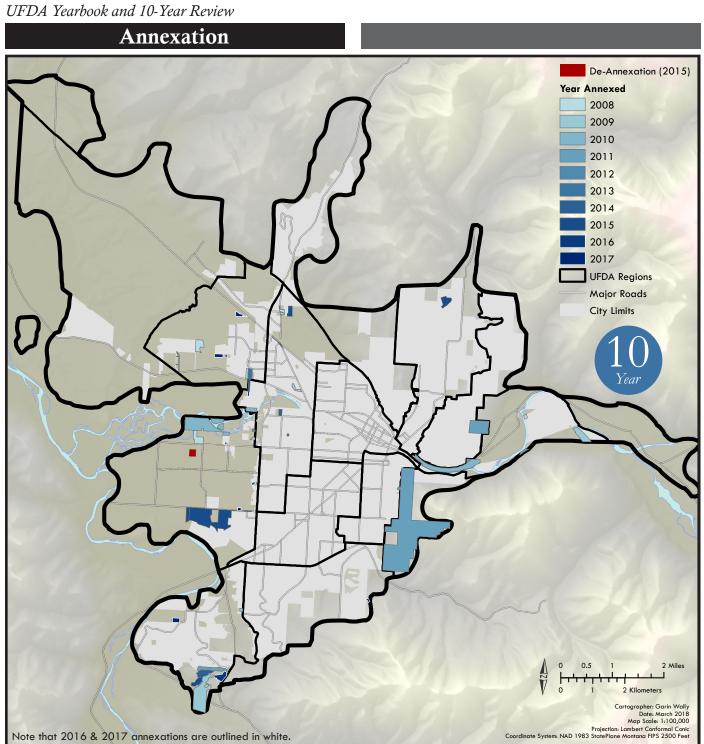
Year	3 - 7	8 - 10	11 - 20	21 - 50	51+
2008	6	1	2	2	0
2009	5	2	0	1	0
2010	7	0	3	3	0
2011	7	4	7	4	1
2012	5	0	4	2	0
2013	8	2	1	0	3
2014	14	4	2	4	1
2015	6	0	5	5	1
2016	7	1	4	6	2
2017	11	2	11	7	1
Total	76	16	39	34	9
5-Year Avg	9.2	1.8	4.6	4.4	1.6
10-Year Avg	7.6	1.6	3.9	3.4	0.9

Old Fence and Lilac. Photo by Emy Scherrer

The past two years have experienced an accelerated level of residential development. In particular, 2016 saw two projects of over 50 units each, and six 21 to 50-unit projects, second only to 2017 (seven projects) which also witnessed an impressive eleven 11 to 20-unit projects. This recent frequency of large projects is likely behind the observed development boom, yet the rental vacancy rate remains low at 3% for 2017 (Missoula Organization of Realtors Report 2018, pg. 10).

The number of projects in the 8 to 10 unit range have consistantly fallen short of the 3 - 7 and 11 - 20 ranges. This may suggest a shortage of this middle-housing development type. The density of multi-dwelling projects has varied between 9 DUAC and 101 DUAC over the past ten years. In recent years, the density of multi-dwelling development has increased on average and made better use of zoning capacities. For example, the ROAM student housing project (101 DUAC) maximizes the no minimum density provision of the Central Business District zone.

Missoula County's development within the UFDA area is up as well. Over nine years (no data for 2013), the County permitted an average of 40 units per year, constructing twice the average in 2017. Multi-dwelling projects in the East Missoula region account for this high number of County units.



Note that 2016 & 2017 annexations are outlined in white.

Over the past ten years, 41 annexations have added 1,355 acres to the city limits. The largest three additions were annexed as open space around Mount Sentinel (654.5 acres, 2011), at the Fort Missoula Regional Park (148.5 acres, 2015), and at Tower Street Open Space (122.5 acres, 2010).

The Target Range - Orchard Homes, Reserve to Russell Corridor, and East Mullan have seen the most annexations by number, but the largest in area have been in Missoula's open space areas. There is a slight upward trend in the

Region	Annexations	Acres
East Missoula	2	30.0
East Mullan	8	53.1
Miller Creek	7	177.1
Open	2	727.4
Rattlesnake	1	17.3
Reserve to Russell Corridor	9	37.1
South Hills	1	1.9
Target Range - Orchard Homes	11	311.1
Total	41	1355.0

#### Annexation



Fort Missoula Regional Park Masterplan of the 148.5-acre 2015 annexation.

Year Annexed	Number of Annexations	Acres	Total Units Built on Land Annexed '08-'17
2008	6	54.2	195
2009	7	146	3
2010	2	195.4	115
2011	2	678	55
2012	1	1.5	1
2013	1	9.9	216
2014	5	31.8	28
2015	5	190.1	39
2016	6	22.2	23
2017	6	25.9	2
Total	41	1355.0	677
10-Year Average	4	135.5	68
5-Year Average	5	55.98	62

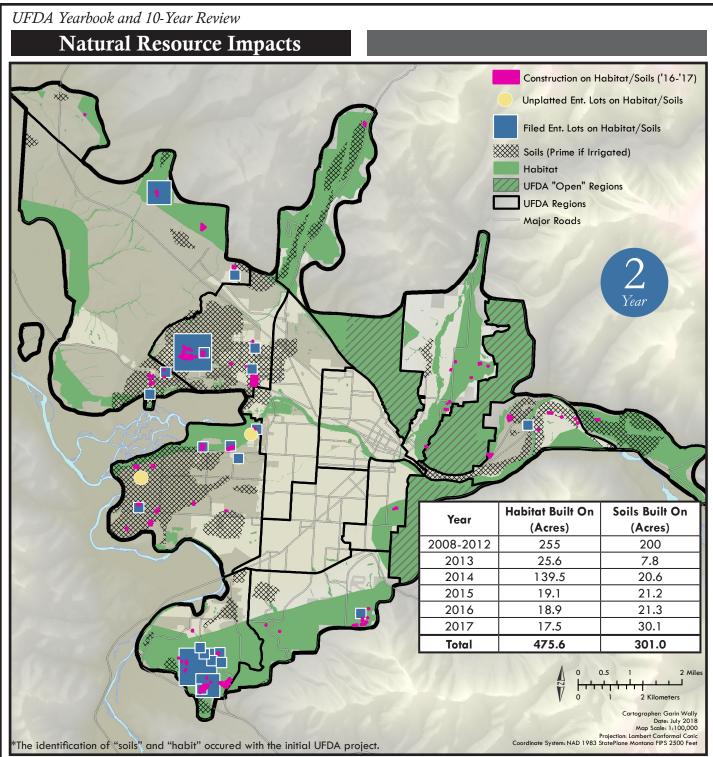
#### Annexations by Year

number of annexations per year, but a slight downward trend in acreage.

There have been 667 new units built on land annexed since 2008. An average of 68 new residential units per year are built on land annexed in the last ten years. This accounts for almost 14% of the total average new residential units per year (491 per year).

The City is developing an annexation strategy to better evaluate decisions on when and whether to annex new

property into City jurisdiction. The observations and recommendations from UFDA will be an important factor in any such strategy development.

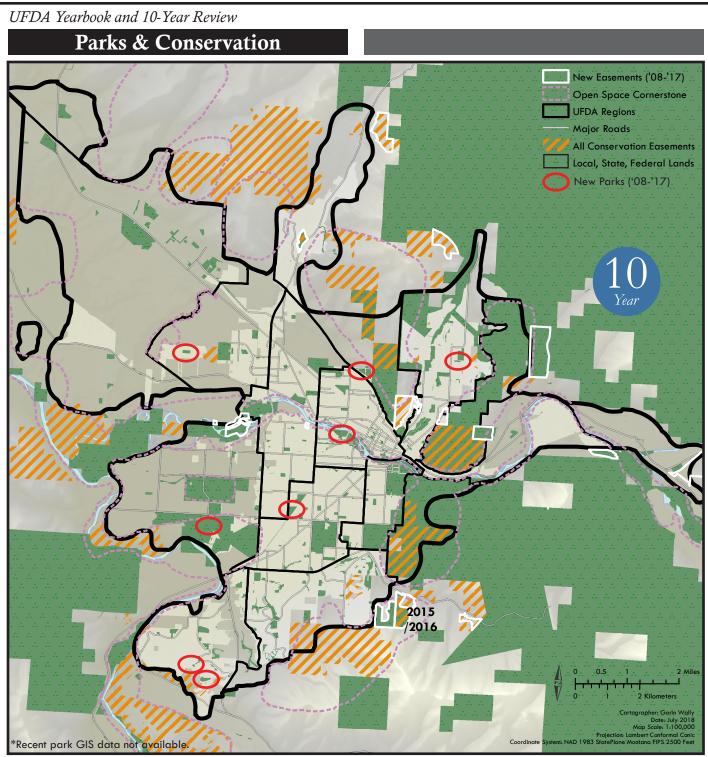


The map above depicts large areas around the edges of the city that have been defined as wildlife habitat or have soils defined as prime if irrigated. Currently there are 1,245 filed entitled lots and 38 unplatted entitled lots in either of these areas. Most of those entitled lots are in Miller Creek and East Mullan.

In 2016 and 2017, about 88 acres of these lands were impacted by 698 residential units permitted in the City and 55 in the County. These 753 new residential units equate to about 45% of residential development.

Over the past ten years, a total of about 776 acres have been impacted. Impacts to these lands are considered in the subdivision review process and conditions established to mitigate anticipated impacts.

The Our Missoula Growth Policy recognizes prime soils with an Urban Agriculture overlay that encourages cluster development to help conserve valuable soil. The objectives and actions further reflect the city's commitment to focus development inward and to protect air, soil, water, and natural areas to the greatest extent possible.



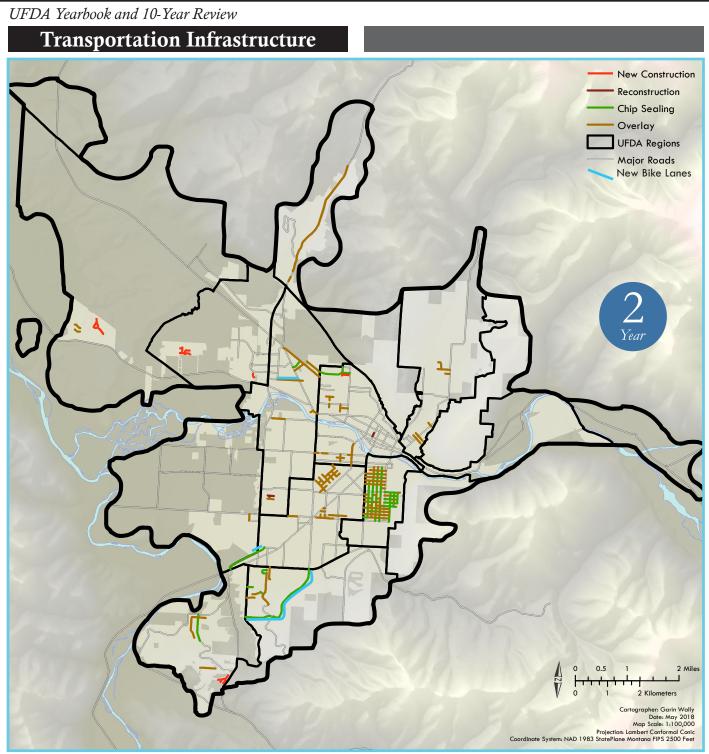
Since 2008, 571 acres of Conservation Easements were established. These areas are shown in the map above as highlighted in white. The UFDA area now has a total of 10,632 acres of Conservation Easements (including nearby areas shown on map).

In 2016, the South Hills Spur acquisition added 86.79 acres adjacent to the Barmeyer easement added to the system in 2015. In 2017, the 10.6 acre Kolendich-Grove Street project was annexed and 4.28 acres of it will be

acquired by the City as future parkland extends the trail system.

Over the 2016 - 2017 timeframe about 9.7 acres of parks were acquired. These include Syringa Park (2 acres), Orange Street Triangles (0.27 acres), Jeffrey Park (2.9 acres), and the new MRL Park (4.5 acres).

Over ten years, about 248 acres of new city parks and open space have been added for a total of about 1,465 acres of parkland.



During 2016 and 2017, 31.21 miles of roads were constructed or repaired. Of these, 1.98 miles were new roads; 0.25 miles were reconstructed; 10.14 miles were chip & sealed; and 18.84 miles were overlaid. Over 105 miles of road have been constructed or repaired over the past ten years.

Major additions to the bike network in 2016 and 2017 include the completion of the Missoula to Lolo Trail (~50 miles, mostly in the county), South Reserve Pedestrian Bridge, and Hillview Way reconstruction project. Bike lanes were striped on about  $\frac{1}{2}$  mile of Palmer St between Broadway and Reserve.

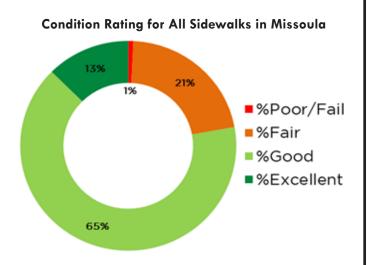
The Bicycle Facilities Master Plan, adopted in early 2017, recommends utilizing low-stress local streets for the bike network in addition to constructing bicycle facilities on and along main corridors for motor vehicles.

Within the first year of operation (April 28, 2017 through April 27, 2018), the South Reserve Pedestrian Bridge was used by 41,396 people. About two-thirds of these were

#### Transportation



Mountain Line Bus. Photo by Garin Wally.



#### Miles of Existing Sidewalk per UFDA Region

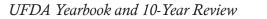
Region	Existing (Mi)	Missing (Mi)
Bonner - W. Riverside	0.9	*
Brooks Corridor	95.4	15.7
Central	59.3	22.5
East Missoula	7.5	3.4
East Mullan	33.8	5.1
Grant Creek	4.2	12.6
Miller Creek	30.0	17.1
Rattlesnake	18.1	37.3
Reserve to Russell Corridor	59.0	35.6
South Hills	39.0	36.7
Target Range - Orchard Homes	12.6	10.1
University	42.1	1.8
West Mullan	35.3	0.7
Wye	1.2	*
Total	438.4	198.6*

cyclists, and daily use averaged 114 people per day.

The Bitterroot Trail Extension Project was completed in early July after the acquisition of the new MRL Park. The project has been nicknamed the "Golden Spike" as this project completed the final missing link in the 50mile stretch of trail connecting downtown Missoula and Hamilton, Montana.

The Missoula Planning Organization (MPO) is undertaking a Pedestrian Facilities Master Plan that will comprehensively describe needs and priorities. As a part of that project, the MPO and City Engineering staff developed a rating system for the assessment of sidewalk conditions. Sidewalk condition ratings are assigned to entire block faces using values between one ("Failing") to ten ("New Sidewalk"). So far, nearly 420 miles of existing sidewalks have been mapped and evaluated with almost 200 miles considered missing. Only 1% of assessed blocks had an average rating of 'Poor' or 'Failing', and 65% averaged 'Good' or 'Very Good'. This will be covered in detail in the forthcoming Pedestrian Facilities Master Plan.

\* Missing sidewalk estimates in the County are incomplete or can include shared-use facilities.

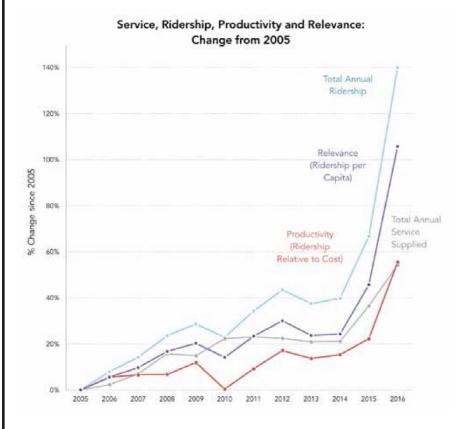


#### Transportation

#### Long Range Transportation Plan Mode Shift Goal



Mountain Line Ridership 2005-2016



- Reduces drive-alone commute share to **34% by 2045**
- 20,000 less drive-alone commute trips in 2045
- Generally triples bike, walk, and transit shares by 2045
- Small increase to carpool and work from home

#### Transporation System Scenario (from LRTP)

🗎 Roadway - \$47.6M



Fewer roadway capacity/expansion projects; emphasis on complete streets

# K 💑 Non-Motorized - \$21.9M

Expand investment in active modes; additional connections, intersection improvements and regional facilities.

Transit - \$15.2M

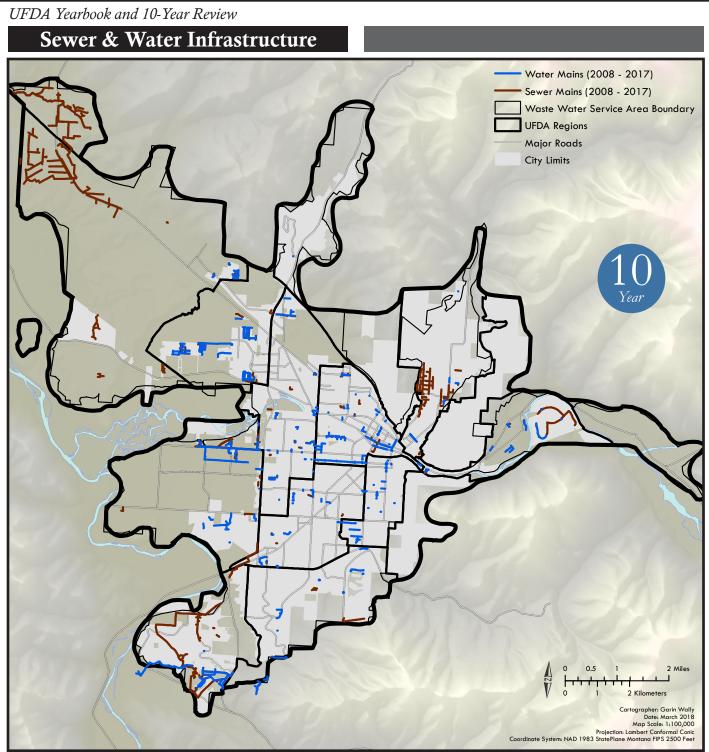
Additional investment in capital bus purchases to support Phase III (add BOLT service on Brooks St, SC Mall TC)

🌡 🏫 Other - \$13M

Funding for ITS, Transportation Options (MIM, Bike/Ped/Missoula-Ravalli TMA) and CTSP priority safety improvements

In 2017, the Missoula Planning Organization (MPO) approved the Activate Missoula 2045 Long Range Transportation Plan (LRTP). The Plan recommends that the community set an Ambitious Mode Shift Goal, which would reduce single occupancy vehicle transportation from 70% to 34% of all transportation trips, and follow the transportation system scenario (above) that allocates discretionary funding to each transportation category. The Plan considers funding, project prioritization, and recommends the update and adoption of a Sidewalk Master Plan (2006, never adopted), and the development of a Missoula Trails Master Plan to work as complements to the Bicycle Facilities Master Plan.

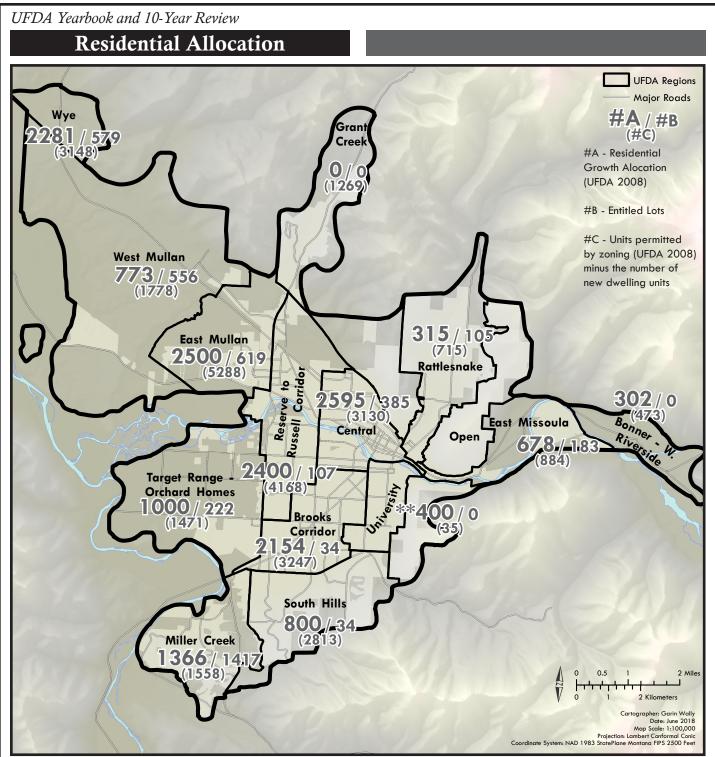
Mountain Line ridership rose from 1.4 million in the 2016 fiscal year to 1.6 million in 2017. Since the start of the Zero-Fare program in 2015, ridership has experienced a 70% increase. The pilot project has been renewed for another three years due to the support of 20 partner organizations. This extension of Zero-Fare will last through 2020.



Over 141,690 feet of water main and over 216,800 feet of sewer main were installed between 2008 and 2017. In 2016 and 2017, 29,060 feet of sewer was added, and 29,952 feet of water main was installed.

The City assumed ownership of the water system on June 23, 2017, setting the stage for closer coordination among the municipal water, wastewater and storm drainage objectives in planning and system improvements.

In early 2018, the Public Works Department began Facility Planning projects for the Water, Wastewater and Storm Water Utilities. Final reports for the various utilities will be complete on separate schedules between late summer 2018 and spring 2019. The effort includes the development or upgrade of computer models for the water distribution and wastewater collection systems. Population projections were prepared by Development Services and utilized as a common baseline for all these studies.

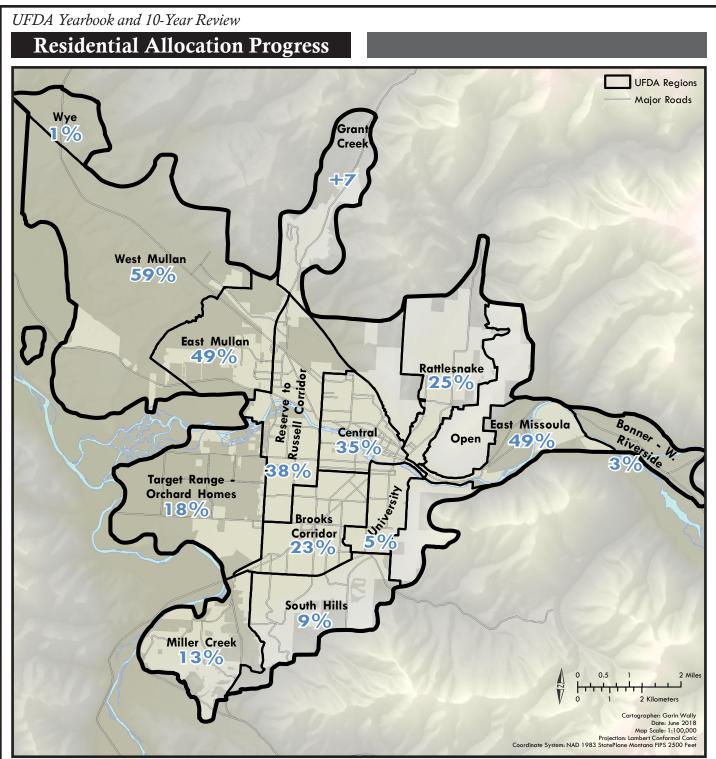


The first Residential Allocation Map in the UFDA Growth Policy Amendment adopted in 2008 was intended to guide how the next 15,000 housing units would be allocated in the Urban Service Area. That map has since been the baseline for annually updating entitled lots (#B) and remaining capacity by zoning in 2007 (#C) per region. The 2008 allocation (#A) remain constant. The Our Missoula 2035 City Growth Policy references this map (Map 7 Community Profile).

Of the original 15,000 units expected over a 20-year

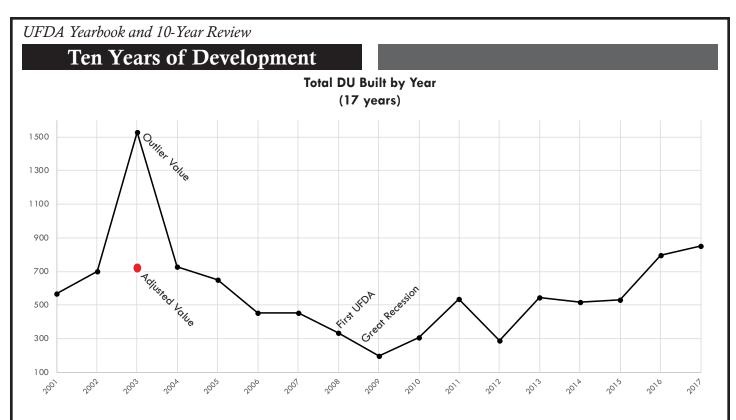
horizon, only 4,905 dwelling units were permitted in the past ten years. Despite a recent increase in residential development, the last ten years developed only 32.7% of the projected units in the 20-year timeframe set in 2007.

While the present allocation numbers provide a dynamic look at developing areas in and around Missoula, the forthcoming Opportunities Map will further define areas with significant capacity for new housing by combining growth policy goals and objectives with desired local circumstances.



The Residential Allocation Progress map above summarizes progress made toward each region's original housing unit allocation. The percentages shown are the number of units permitted divided by the 2008 allocation.

Theoretically, at this halfway point, each region would have reached nearly 50% of the allocation. The original 2008 allocations were likely higher than they should have been, and the following page analyzes why.



#### **Building Permit Activity Projections**

The 2018 UFDA yearbook assesses housing supply and the potential supply of residential land in the Missoula area through ten years of development data. The development data can also be used to track the progress of the Focus Inward goals of the Growth Policy by monitoring the number and location of residential units anticipated in the 2008 yearbook.

In 2008, the UFDA report projected that the Urban Service Area would need 15,000 housing units over the next 20 years, or about 750 units per year. Those 15,000 were allocated across the UFDA regions according to available entitled lots and zoning potential. In 2018, halfway through the 20-year horizon, 4,905 residential units have been permitted compared to the 7,500 units projected. There are a number of reasons that the 2008 projection was higher than the number of units built.

First, the 2008 estimate assumed that the population of the Urban Service Area would experience annual growth of about 2%. In fact, the annual population growth rate has been healthy, but closer to 1.2 to 1.5%.

Second, the 15,000-unit estimate was slightly overestimated. An average of 727 housing units per year were permitted in the Urban Services Area during the seven years from 2001 to 2007. That average was used to calculate the 20-year projection, althought it was skewed by an outlier that occurred in 2003 when an unusually high 1,500 units were permitted. If this outlier were more aligned with the building activity before and afterward, it could be adjusted to 713 and cause the adjusted annual average to fall from 727 to 610 units per year. When this adjusted average is projected forward ten years, it produces an adjusted estimate of 6,100 units expected by 2018; closer to the 4,905 units observed and reducing the deficit from 2,595 to 1,195 dwelling units (slightly less than two years of development).

Third, only 991 dwelling units were permitted when Missoula felt the most impact of the Great Recession (2008-2010). During this period, approximately 1,000 dwelling units were not realized.

Adjusting the previous projection and recognizing the potential effects of the recession on development narrows the divide between projected and actual dwelling units. Overall, these projections assume that supply will adjust to meet demand; however, a tightening housing market in Missoula over recent years suggests that housing starts have not kept pace with the demands of a growing population.

The Urban Services Area is experiencing increasing rates of construction: 491 units per year on average over ten years, 648 over the past five years, and 822 over the past two years (2016 and 2017). This may represent the start of a new trend, or that supply is catching up with demand.

#### Summary

#### Entitled Lots and Subdivision

Residential development occurred on entitled lots throughout the last ten years at the rate of 30 to 33% per year with the remaining development occurring on non-subdivided parcels. Because much of the residential development was multi-dwelling constructed on nonsubdivided parcels, the number of allocated units based on entitled lots did not prove to be an accurate predictor of multi-dwelling residential development. Other indicators will be explored in the forthcoming lookforward.

Subdivision activity, which creates entitled lots, slowed considerably over the ten-year period with no subdivisions approved in 2010, and 2012 through 2016. Much of this slowdown may be attributed to the recession and its lingering effects, and more recently to the newly available Townhome Exemption Development option, which has become an alternative to the traditional subdivision method of creating entitled residential lots not included in our current Entitled Lots count.

There was some correlation between predicted allocation of dwelling units and the location of new development across the UFDA areas limited mostly to the central areas of the City and East Mullan. Other areas such as the Wye, Bonner, the South Hills and Miller Creek developed at much slower rates than expected for reasons that are currently unclear. More attention should be given to this disparity in the look-forward.

#### **Geographic Distribution of Development**

Nearly half of the units added between 2008 and 2017 were built in areas west of Reserve Street, particularly the East Mullan area, which alone added 1,233 new units, although much of this area is on prime agricultural soils. The Mullan regions contain most of the developable green fields in the area and provide much of the single dwelling development. The remaining units were added throughout the City east of Reserve Street but concentrated in the Central, Brooks, and Reserve to Russell Corridor areas. Not surprisingly, most of this centrally located development was multi-dwelling.

#### **Multi-Dwelling Zoning Availability**

There is a lack of land specifically zoned for multidwelling developments within the City limits. This may be resulting in larger multi-dwelling developments to occur on commercially zoned lands. The effects of this on commercial development opportunity are not yet known. We also tend to under-develop density on sites that allow multi-dwelling zoning, which is why we see so much remaining capacity within existing zoning areas. Only recently are we seeing an increase in development that maximizes capacity.

#### Infrastructure

Because infrastructure and annexation has tended to follow private development in a piecemeal manner, there remains a significant element of inefficiency with regard to provision of infrastructure and utilities. In addition, much of the residential development outside of City limits either lacks infrastructure that meets City standards or exists at densities that make it difficult for the City to support improvement upon annexation.

With the recent acquisition of the water utility, the City can move forward with enhanced, proactive coordination of infrastructure.

If economic conditions continue as they have for the past few years, and regulatory conditions such as the Townhome Exemption Development and lack of multidwelling zoned lands also continue, the community should expect single dwelling development pressure in the agricultural county lands west of Reserve Street. Large multi-dwelling development is also expected to continue along commercial corridors within the development area with 3-8 unit infill development continuing in the central residential areas of the City.

Taking cues from the Focus Inward goals of the Our Missoula 2035 Growth Policy, patterns of development observed over the previous ten years of UFDA reporting, and the continuing regulatory environment, the next iteration of the UFDA development yearbook should better identify locations where housing (including affordable housing) can be efficiently developed. Criteria such as proximity to services and adequate infrastructure should be considered while at the same time avoiding promotion of costly low-density development and development that impacts natural resources. A composite map of these features will be featured in the lookforward.

# UFDA 2016-17 And Ten Year Lookback

- See Miller and Milling .......

# **Update to Land Use & Planning**

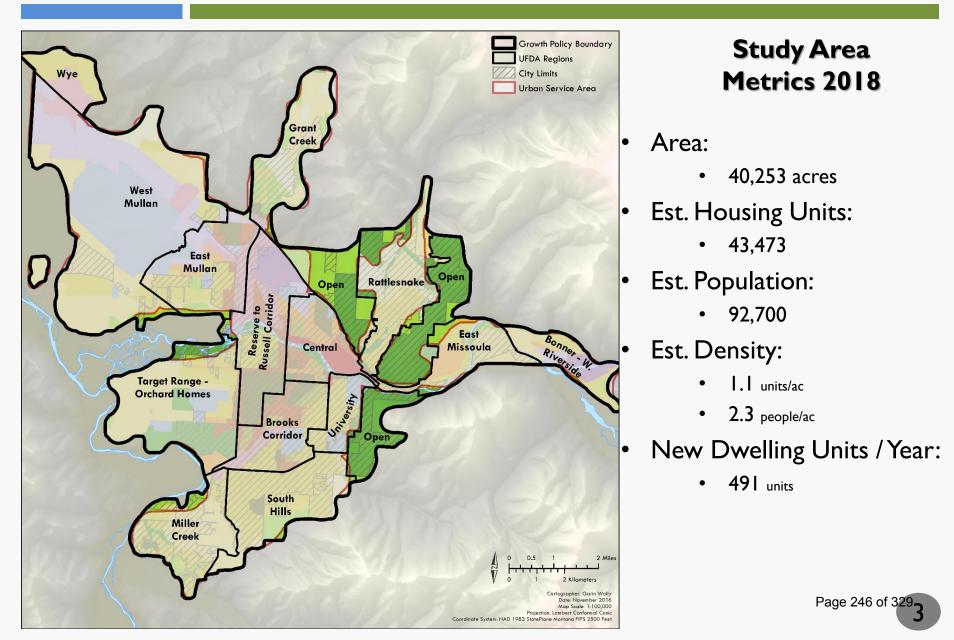
Garin Wally Development Services September 19, 2018





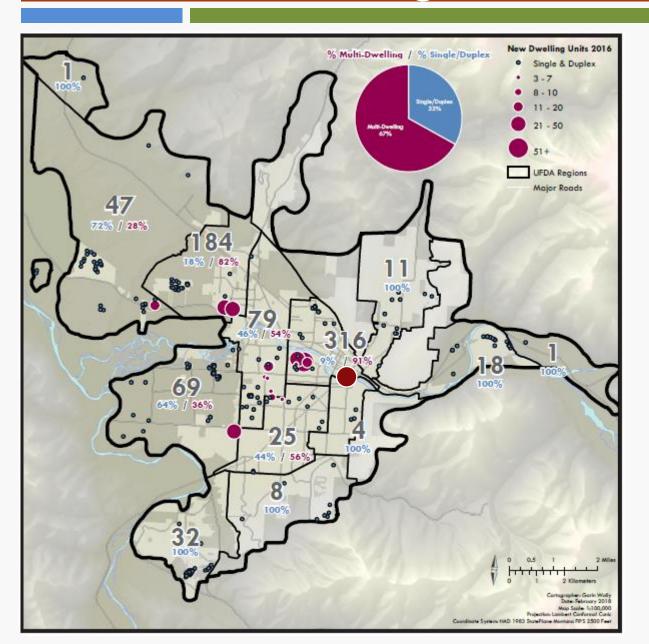
- First UFDA report in 2008
- It estimated that the area would develop 15,000 new dwellings in 20 years
- This 2018 yearbook marks the half-way point
- Analyzes two and ten year trends

# **UFDA Study Area Regions**



ISSO1

# Residential Building Permits '16



771 new units in the City24 in the County

### 795 total new units

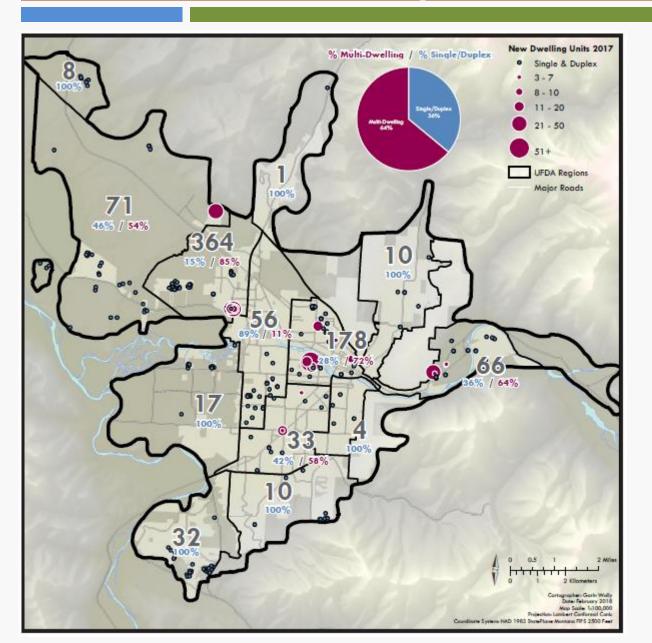
- Single-dwelling: 221
- Duplex: 18
- Multi-dwelling: 532
  - 20 projects
  - 27 units / project (avg)
  - 40 units / acre (avg)
  - 30% was ROAM

### Major Projects

- ROAM (162 units)
- Halling Farms (114 units)
- Cambium Place (69 units)

45 / 795 were TED units

# Residential Building Permits '17



769 new units in the City88 in the County

## 857 total new units

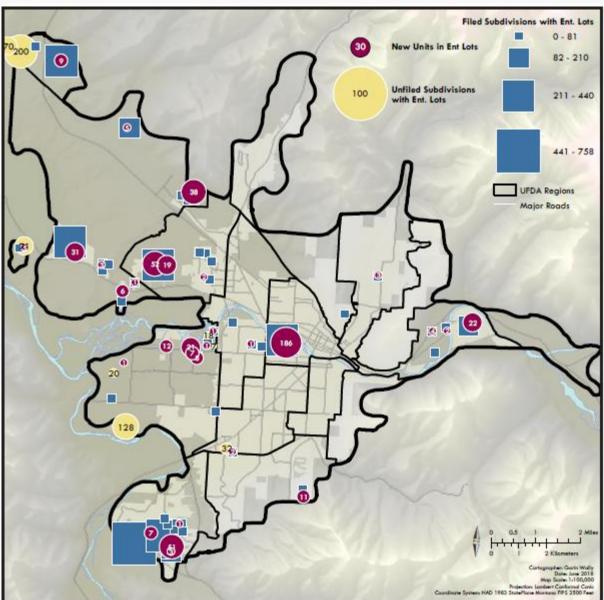
- Single-dwelling: 276
- Duplex: 30
- Multi-dwelling: 544
  - 28 projects
  - 17 units / project (avg)
  - 23 units / acre (avg)
  - 10% was The Sawyer

### Major Projects

- Halling Farms / Tollefson Apts (216 units)
- The Sawyer Student Living (57 units)
- Potter Park Apts (38 units)



# Entitled Lots ('16 - '17)



# Entitled Lot Reserve: 4,241

Down from a high of about 5,800

8 subdivisions, composed of 546 lots, haven't filed any phase to date.

### Expired:

- Southern Hills (47 lots)
- Clark Fork Terrace # 1 (38 lots)
- Clark Fork Terrace # 2 (33 lots)

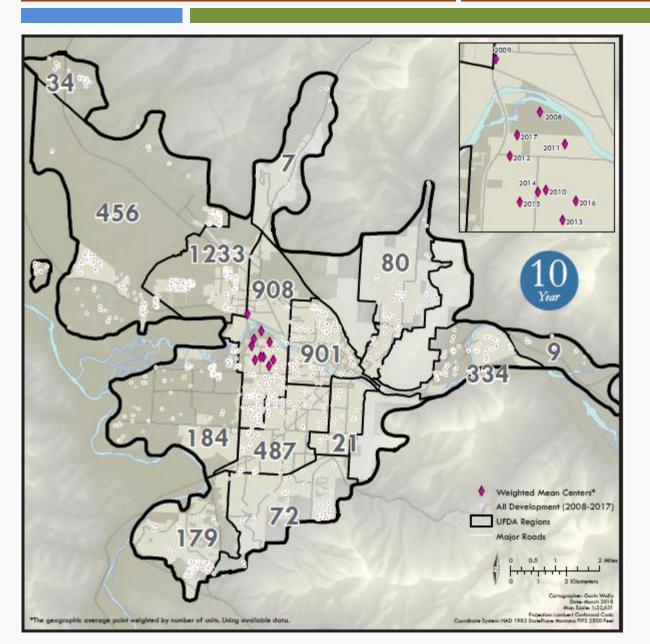
New Subdivisions:

- Spurgin Ranch (20 lots)
- Cowboy Flats (32 lots)

Consistent pattern that  $\sim 1/3$  of annual development occurs on Ent. Lots:

- 2016: 264 units (33%)
- 2017: 251 units (30%) of 329

# Ten Years of Development



Total Units Built: 4,905

022

4,542 units in the City363 in the County.

- Single-dwelling: 1,830
- Duplex: I 58
- Multi-dwelling: 2,917
- Affordable Units: 299 (6%)

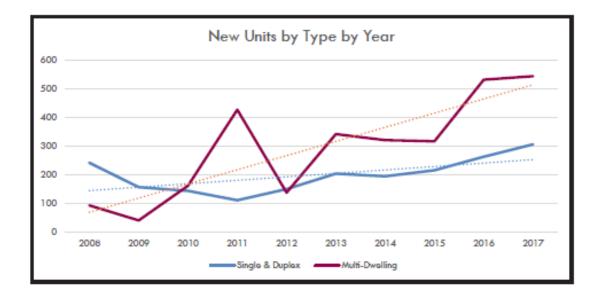
Page 250 of 329

# Development by Type

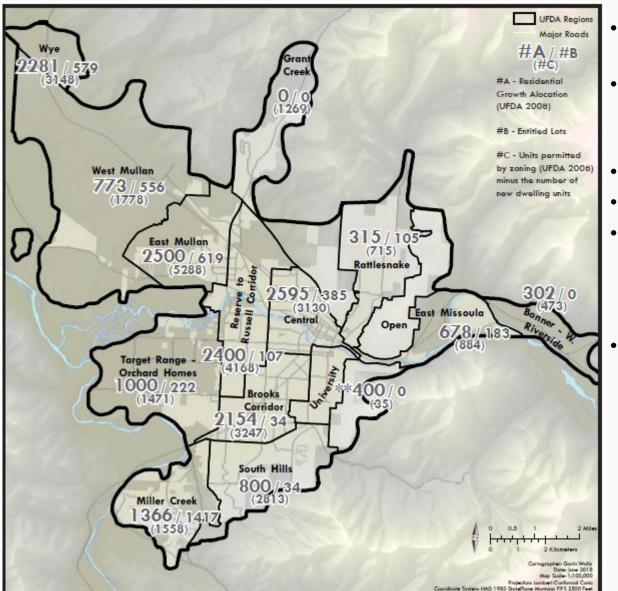


Year	Single-Dwelling	%	Duplex	%	Multi-Dwelling	%	Total by Year
2008	220	65.7%	22	6.6%	93	27.8%	335
2009	149	75.3%	8	4.0%	41	20.7%	198
2010	122	39.9%	22	7.2%	162	52.9%	306
2011	97	18.0%	14	2.6%	427	79.4%	538
2012	138	47.9%	12	4.2%	138	47.9%	288
2013	196	35.9%	8	1.5%	342	62.6%	546
2014	183	35.5%	12	2.3%	321	62.2%	516
2015	204	38.3%	12	2.3%	317	59.5%	533
2016	245	30.8%	18	2.3%	532	66.9%	795
2017	276	32.5%	30	3.5%	544	64.0%	850
Total by Type	1830		158		2917		4905
		40.5%			59.5%		

#### Development by Type by Year



## **Residential Allocation**



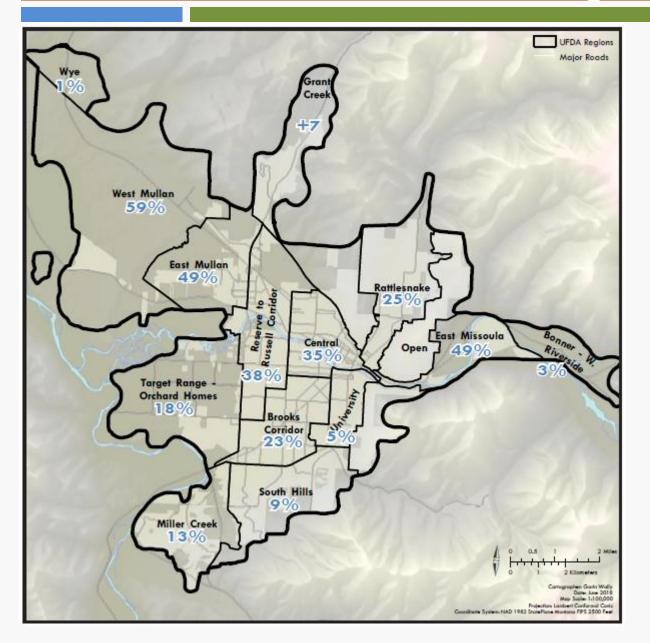
Allocated 15,000 units over 20 yrs

SSOL

Page 252 of 329

- Units built over 10 years: 4,905
- #A is the original allocation
- #B is the number of Ent. Lots
- #C is the 2008 zoning capacity reduced by the number of developed units
- Development could occur anywhere within a region

# **Residential Allocation Progress**



Should we be half-way?

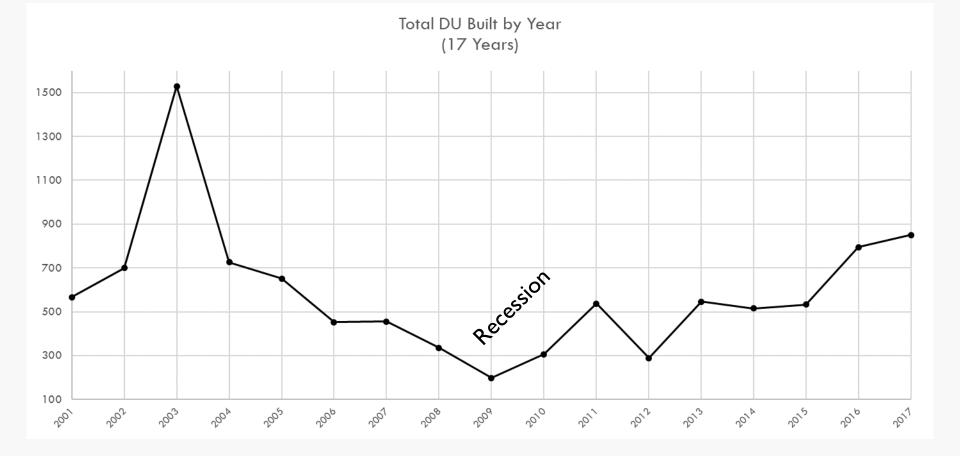
10221

Interesting observations:

- West Mullan developed its Entitled Lots faster than Miller Creek
- The Wye and Bonner W. Riverside developed much slower than expected

Page 253 of 329





Page 254 of 329

MISSOUL

In looking-forward, the next iteration of UFDA will:

- Consider improvements to methods
  - Reset and update base layers and underlying datasets
- Track TEDs vs subdivisions
- Improve the usefulness of the Residential Allocation Map
  - Better locate development potential in sub-areas of the UFDA regions
  - To inform housing, annexation, and other planning efforts

# Next Steps: "Opportunities" Map

Goal: Produce a map or series of maps showing:

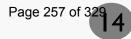
- Capability Where <u>can</u> development occur?
  - Locate the physical and social constraints to development
- Capacity Where is there room for development?
  - Vacancy vs Existing Units
  - Land Use
  - Zoning
- Suitability Where <u>should</u> development occur?
  - Utilize Growth Policy actions and goals
  - Near existing infrastructure, services, etc.





# Urban Fringe Development Area Yearbooks @ http://www.ci.missoula.mt.us/1526/UFDA

Garin Wally, GIS Analyst / Planner gwally@ci.missoula.mt.us September 19, 2018



#### City of Missoula, Montana Item to be Referred to City Council Committee

Committee:	LUP
Agenda item title:	MCPB update to the LUP committee
Date:	6/03/16
Sponsor/Contact:	John DiBari
Prepared by:	John DiBari
Ward(s) affected:	All

#### **Action Required: No**

Periodically a member of the Missoula Consolidated Planning Board attends a Land Use and Planning committee meeting to provide an update of planning board actions, as well as to share concerns and issues the planning board may have regarding exiting land use policy, regulations, ordinances, etc. The update also provides an opportunity for the planning board to discuss with the committee issues related to growth and development in our community.

#### Timeline:

Referred to committee: 6/3/16 Committee discussion: 6/8/16 Public hearing (if necessary): Deadline:

**Background and Alternatives Explored:** 

**Financial Implications:** None h Home

Legislation T 📑 Contact us

em Informa	tion					°% 🔊
Title:	MCF	B updat	e to the LUP committe	ee		
tem #:			Status:	Held in cor	nmittee	
Гуре:			#:	LUP		
Version:	22 <sup>th</sup>		Sponsor:	John DiBa	ri	
Meeting Date		<u>/2019</u>	Ward:	Ward 1, Ward 2, Ward 3, Ward 4, Ward 5, Ward 6		
Veeting Type			Video:	View V		
Attachments						
Гext						
CAL						
Show Tex	t 🛛 🗾 <u>Referr</u>	al - MCP	B update.docx			
History						
	rsion Item #	Туре	Status	Meeting Date	Meeting Type	
<u>1<sup>st</sup></u>		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Ongoing	<u>6/13/2012</u>	PAZ	
<u>2</u> n			Held in committee	6/20/2012	PAZ	
3 <u>rc</u>			Held in committee	<u>6/27/2012</u>	PAZ	
			Held in committee	7/11/2012	PAZ	
<u>5</u>			Held in committee	<u></u> <u>7/18/2012</u>	PAZ	
6 <u>th</u>			Held in committee	<u>8/8/2012</u>	PAZ	
Z <sup>th</sup>			Held in committee	<u>8/15/2012</u>	PAZ	
<u>8</u> th			Held in committee	<u>8/22/2012</u>	PAZ	
<u>9<sup>th</sup></u>			Held in committee	<u>9/5/2012</u>	PAZ	
<u>~</u>	<u>h</u>		Held in committee	<u>9/12/2012</u>	PAZ	
<u>-</u> 10			Held in committee	<u>9/19/2012</u>	PAZ	
<u>10</u>	<u>h</u>					
			Held in committee	<u>9/26/2012</u>	PAZ	
<u>10</u> 11	<u>h</u>			<u>9/26/2012</u> <u>10/10/2012</u>		
10 11 12	<u>h</u> <u>h</u>		Held in committee		PAZ	
10 11 12 13	<u>h</u> <u>h</u>		Held in committee Held in committee	<u>10/10/2012</u>	PAZ PAZ	
10 11 12 13 14	<u>հ</u> հ հ		Held in committee Held in committee Held in committee	<u>10/10/2012</u> <u>11/14/2012</u>	PAZ PAZ PAZ	
10 11 12 13 14 15	հ հ հ հ		Held in committee Held in committee Held in committee Held in committee	<u>10/10/2012</u> <u>11/14/2012</u> <u>11/28/2012</u>	PAZ PAZ PAZ PAZ	
10 11 12 13 14 15 16	<u>ь</u> <u>ь</u> ь ь		Held in committee Held in committee Held in committee Held in committee Held in committee	10/10/2012 11/14/2012 11/28/2012 12/5/2012	PAZ PAZ PAZ PAZ	
10 11 12 13 14 15 16 17	ћ ћ ћ ћ		Held in committee Held in committee Held in committee Held in committee Held in committee Held in committee	10/10/2012 11/14/2012 11/28/2012 12/5/2012 12/12/2012	PAZ PAZ PAZ PAZ PAZ	
10 11 12 13 14 15 16 17 18	<u>р</u> р р р р		Held in committee Held in committee Held in committee Held in committee Held in committee Held in committee Held in committee	10/10/2012 11/14/2012 11/28/2012 12/5/2012 12/12/2012 12/19/2012	PAZ PAZ PAZ PAZ PAZ PAZ	
10 11 12 13 14 15 16 17 18 19	<u>р</u> р р р р р		Held in committee Held in committee	10/10/2012 11/14/2012 11/28/2012 12/5/2012 12/12/2012 12/19/2012 1/27/2016	PAZ PAZ PAZ PAZ PAZ PAZ	

No voting recorded

#### City of Missoula, Montana Item to be Referred to City Council Committee

Committee:	Land Use and Planning		
Item:	Appointments to the Historic Preservation Commission		
Date:	February 27, 2020		
Sponsor(s):	Marty Rehbein		
Prepared by:	same		
Ward(s) Affected:			
	□ Ward 1		Ward 4
	□ Ward 2		Ward 5
	□ Ward 3		Ward 6
	□ All Wards	$\boxtimes$	N/A

#### Action Required:

Conduct interviews and make appointments

#### Recommended Motion(s):

I move the City Council: Appoint the following people to the Historic Preservation Commission: \_\_\_\_\_ as an at large member and \_\_\_\_ as Alternate 1 for terms commencing January 1, 2020 and ending December 31, 2022

#### Timeline:

Referral to committee:	March 2, 2020
Committee discussion:	March 4, 2020
Council action (or sets hearing):	March 10, 2020
Public Hearing:	n/a
Deadline:	n/a

#### **Background and Alternatives Explored:**

The City Clerk office received a note from Julia McCarthy-McLaverty that she was withdrawing her application for the Historic Preservation Commission and the Alternate 1 position on the board continues to be vacant. The City Clerk Office advertised on the city website and received applications from the following people:

#### Interview Schedule on 3/18 at LUP

9:45 Jamie Lockman (currently serves as Alt 2 and chairs the HPC) (Applied for the at large):10:00 Leif Fredrickson (Applied for the Alternate 1 position)

The terms for both positions are January 1, 2020 to December 31, 2022.

Below is information about the board and its current membership.

#### Purpose

The Historic Preservation Commission is charged with establishing a local historic preservation program, integrating historic preservation into local, state and federal planning and decision-making processes.

The historic preservation program is designed to promote the preservation of historic and prehistoric sites, structures, objects, buildings and historic districts. The Historic Preservation Commission is comprised of volunteers from Missoula's neighborhoods, businesses and preservation professionals, and was established by the Missoula City Council in 1989.

#### **Members**

- Seven regular members comprised of three professional members, a downtown representative, three at large members, and two at large alternates. All members must reside in Missoula County.
- Two-to-three-year terms staggered

Professional members must possess professional experience in such fields as architecture, history, architectural history, landscape architecture, archaeology, city planning, preservation law, historic preservation, American studies, cultural geography, or cultural anthropology or a closely related field. Professional members must, to the extent possible, meet the Secretary of Interior's Professional Qualification Standards found at 36 C.F.R 61 and the standards listed in the Montana Certified Local Government Manual.

The downtown representative must work or reside in downtown Missoula as shown on the <u>Historic Preservation Commission Geographic Region Map</u>.

Members	Start of Term	End of Term
James R. McDonald - Professional	Jan. 7, 2019	Dec. 31, 2020
Jamie Lockman - Alternate 2	Jan. 7, 2019	Dec. 31, 2020
Steve Adler - Professional	Jan. 7, 2019	Dec. 31, 2020
Kent Watson - At Large	Jan. 1, 2020	Dec. 31, 2022
Vacant - At Large	Jan. 1, 2020	Dec. 31, 2022
Paul Filicetti - Downtown	Jan. 1, 2020	Dec. 31, 2022
Cathy Bickenheuser - Professional	Jan. 1, 2020	Dec. 31, 2022
Vacant - Alternate 1	Jan. 1, 2020	Dec. 31, 2022
Bruce Haroldson – At Large	Jan. 7, 2019	Dec. 31, 2020

Historic Preservation Commission members are appointed by the City Council.

Financial Implications: N/A

Links to external websites: Historic Preservation Commission

Received 200210 - KE					
<b>APPLICATION FOR THE HISTORIC P</b>	RESERVATION COMMISSION				
	COUNCIL PACKETS AND ARE PUBLISHED ON THE CITY WEBSITE.				
DATE: February 6, 2020	APPLICATION DEADLINE: February 12, 2020				
I'M APPLYING FOR THE FOLLOWING POSITION AS	S A REPRESENTATIVE ( <u>CHECK ALL THAT APPLY</u> ):				
Alternate 2					
NAME: Jamie Ryan Lockman STREET ADDRESS: 3312 Hollis Street	DAYTIME PHONE NUMBER: (406) 546-6572				
ZIP CODE: 59801	MESSAGE PHONE NUMBER: EMAIL ADDRESS: jamieryanlockman@gmail.com				
MAILING ADDRESS: 3312 Hollis Street					
	IN WHICH WARD DO YOU RESIDE? <u>4</u> (1-6)				
ZIP CODE: 59801					
Are you a citizen of the U.S.AYes	Are you a registered voter? Yes				
How long immediately prior to this date have you b 20 years	een continuously a legal resident of the City of Missoula				
How long immediately prior to this date have you b <u>54 years</u>	een continuously a legal resident of the State of Montana_				
PLEASE PROVIDE THE FOLLOWING INFORMATIO	N (You may attach a separate sheet to this form.)				
<b>Brief resume of your educational background.</b> I earned an MA in Anthropology with an emphasis in Archaeology from the University of Montana and took historical preservation courses. I was part of a class led by Jim McDonald that recorded downtown Missoula properties as part of the nomination for listing of the Missoula Downtown Historic District in the National Register. Thesis: "Elemental analysis of nineteenth century lead artifacts from Lewis and Clark and Hudson's Bay sites of the Pacific Northwest." I have some graduate level Public Administration credits and also took National Park Service sponsored Section 106 training. I have a BS in Business Administration also from UM. I grew up in Missoula and attended Cold Springs Elementary, Meadow Hill Middle School, and Sentinel High School.					
Current Occupation: Executive Director	Current Employer: Montana Organic Association				
<b>Previous Community Service:</b> Currently serve on the appointed 2019. Served on the HPC as the MRA liaiso 2019), Montana Organic Association Board (MOA), (20 Grievance Committee Staff Rep (2010-11), UM Comm	Missoula Historic Preservation Commission as an alternate; n from 2006 –08). Chair, St. Francis Xavier Pastoral Council (2014- 016 – 2019), UM Staff Senate (2010-11), UM Discrimination				
PLEASE LIST TWO PERSONAL REFERENCES:					
Name: Steve Adler	Daytime Phone: (406) 549-4861				
Address: 385 Burlington Ave.	Missoula, MT				
Name: Jim MacDonald	Daytime Phone: (406) 721-5643				
Address: 222 N. Higgins Ave	Missoula, MT				
What is your interest in serving on this board? I sat on the Historic Preservation Commission previously as the liaison between the Missoula Redevelopment Agency and the HPC. I enjoyed this experience very much and regretted having to leave the position due to work commitments. I now have the time to return to the commission and am excited to be able to contribute my professional and volunteer training and knowledge. I grew up in Missoula (my parents still live in the house I grew up in) and believe I have a valuable perspective. Missoula is growing and changing at what seems like an accelerated pace; I'd like to assist in protecting our historical resources and facilitate incorporating them into new developments. I'm also interested in finding opportunities to draw visitors to Missoula and making the most of our historical and cultural resources.					
I worked as a research archaeologist for Historical Res historical property survey, historic and public record res evaluating properties for eligibility for listing in the Natio for the State Historic Preservation Office at UM under t believe would benefit HPC. I previously farmed (conver types of farmers and agricultural producers. I currently preservation and agriculture even in Missoula which is	ence that would qualify you for a position on this board? search Associates from 2005-08. This work included community and search, recording historic and prehistoric sites, taking oral histories, onal Historic Register, etc. I was the Archaeology Records Manager the direction of Dr. Thomas Foor. I have marketing experience that I intionally) and sat on the MOA board and work with many different work for the MOA and am struck by the intersections of historic a more urban environment. I believe this experience may also be of and building community gardens while considering historical delegation in Washington, DC (organic ag.).				

\*Please return your completed application and attachments to the City Clerk's Office, 435 Ryman, Missoula, 59802

#### Received 200211-11:30 Am-KE APPLICATION FOR THE HISTORIC PRESERVATION COMMISSION PLEASE NOTE: ALL APPLICATIONS ARE INCLUDED IN COUNCIL PACKETS AND ARE PUBLISHED ON THE CITY WEBSITE. DATE: February 5, 2020 APPLICATION DEADLINE: February 12, 2020 at 5 pm. I'M APPLYING FOR THE FOLLOWING POSITION AS A REPRESENTATIVE (CHECK ALL THAT APPLY): Alternate1 NAME: Leif Fredrickson STREET ADDRESS: 704 S. 1st. W. DAYTIME PHONE NUMBER: 406-531-9259 MESSAGE PHONE NUMBER: 406-531-9259 **ZIP CODE: 59801** EMAIL ADDRESS: leif1.fredrickson@umontana.edu MAILING ADDRESS: 704 S. 1st. W. IN WHICH WARD DO YOU RESIDE? 3 **ZIP CODE: 59801** Are you a citizen of the U.S.A. Yes Are you a registered voter? Yes How long immediately prior to this date have you been continuously a legal resident of the City of Missoula 2 How long immediately prior to this date have you been continuously a legal resident of the State of Montana 2 PLEASE PROVIDE THE FOLLOWING INFORMATION (You may attach a separate sheet to this form.) Brief resume of your educational background. BA – 2000 – Vassar College (Cognitive Science) MA - 2010 - University of Montana (History) PhD – 2017 – University of Virginia (History) Current Occupation: Visiting Asst. Prof. in History; Current Employer: University of Montana/Self-Employed Contract Historical Researcher **Previous Community Service:** Habitat for Humanity - Volunteer Helping Build Homes Montana Conservation Corps - AmeriCorps volunteer building trails, historical restoration (Grant Kohrs Ranch) Roots Fest Volunteer - Co-developed, set up, and helped run exhibit on the history of music in Missoula PLEASE LIST TWO PERSONAL REFERENCES: Davtime Phone: 406-243-2979 Name: Kyle Volk, Chair UM History Department Address: LA 256, Campus Dr., 59812 Daytime Phone: 406-543-4238 Name: Kalina Wickham, Unseen Missoula Address: 218 E. Main St., Suite C, 59802 What is your interest in serving on this board? I love Missoula and want to be involved in preserving its past in a way that also considers the present and future needs of the city. I am from Missoula and spent most of my life here. After leaving to get my PhD, my wife and I decided to return to raise our family here. My parents and other relatives also live in the city. My great grandfather worked in the Merc. So I have many personal historical and social connections to the city that make me interested in helping the city preserve its heritage. As noted below, I also have a professional interest in public history. I am particularly interested in the interpretive aspects of historic preservation. I would also like to get history students more involved in and aware of Missoula's historic places. Finally, I'm interested in how historic preservation can help Missoula achieve some of its other goals, such as affordable housing and environmental sustainability. Do you have special knowledge, interest or experience that would qualify you for a position on this board? As an academic historian, I specialize in urban history. My research focuses on the history of housing and transportation; social history (race, ethnicity, class and gender); and economic, environmental and technological change in cities. I have work on aspects of Montana history, specifically labor in Butte and the history of Flathead Lake. Research methods I use frequently include archival sources, oral history, and historical mapping (GIS). I have taught classes on: Urban Environmental Policy; 20th Century American West; and Public History. I am currently teaching a class at the University of Montana on Missoula History. I have worked on several public history projects, including: "Renewing Inequality," a digital public history of urban renewal; "Missoula Mosaic," an exhibit and oral history on rock music in Missoula; Unseen Missoula tours (guide and developer).

\*Please return your completed application and attachments to the City Clerk's Office, 435 Ryman, Missoula, 59802

#### **OSAC INTERVIEW QUESTIONS**

- 1. Describe your interest in serving on the Open Space Advisory Committee (OSAC).
- 2. What are the **benefits** to the City and the public of having a citizen Open Space Advisory Committee?
- 3. Describe any **personal or professional expertise** you have related to acquisition or management of public open space, conservation lands or lands for parks and trails.
- 4. The City has <u>approximately \$100,000 remaining</u> of its \$5,000,000 share of the 2006 Open Space Bond. Missoula County voters also recently passed a new 2018 open space bond, the City's portion of which is \$7.5 million. Generally, how do you think the **Open Space Committee should** prioritize spending these limited funds?
- 5. Open space bonds state specific purposes for which the funds can be spent (e.g. protecting wildlife habitat, agricultural land, access to rivers, lands for trails, etc.). The 2018 bond also allows funding for improvements to open space land, such as reconstructing trailheads, improving or repairing trails, planting trees. How should the City balance the variety of needs our community has related to open space?
- 6. If appointed, you will be working on a public board that may have different opinions, perspectives or ideas about how to allocate limited resources. Can you provide an example of a time when you have had to **compromise, collaborate or deal with conflict** and what were the results of your efforts?
- 7. In 2018, City voters passed a \$500,000 open space stewardship levy to help cover costs of maintaining and managing conservation lands. How should OSAC consider additional future **management and maintenance** needs and costs associated with preserving open space lands?
- 8. Many conservation easements on family farms and ranches do not provide for public access. What do you think about expending bond funds to protect open space that will have little to no public access?
- 9. **OSAC** presently meets once a month on the 2nd Thursday from 4:00 6:00 P.M. Occasionally, more time is needed from members to help with a particular issue or event. Are you willing to devote the **time needed to attend meetings and work on committee activities**?

- 10. The City and County offer Board training twice a year. The training covers good governance, open meetings, public participation and right to know, ethics, conflicts of interest, bylaws, minutes, and parliamentary procedures. The City Council feels it is very important that all city board members attend this training. (Have you attended/will you attend) the training?
- 11. The success of OSAC depends on the active engagement and participation of its members. Are you able to commit to **preparing for and participating** in meetings and other activities, including **asking discerning questions and constructively participating in deliberations**?

#### City of Missoula, Montana Item to be Referred to City Council Committee

Committee:	Public Safety and Health
Item:	Missoula Aging Services Initiatives and Services – Susan Kohler
Date:	October 14, 2015
Prepared by:	Kirsten Hands
Initiated by:	Jon Wilkins

#### **Action Required:**

No action, discussion only.

#### **Recommended Motion:**

No motion, discussion only

#### Timeline:

Referral to committee: Committee discussion: 10/05/2015 10/14/2015

#### **Background and Alternatives Explored:**

Susan Kohler of Missoula Aging Services will present the initiatives of and the services provided by the organization.

#### **Financial Implications:**

None

#### Links to external websites: None

#### EST. 1982 –

# 

#### City Council Presentation Presented By: Susan Kohler CEO

337 Stephens Avenue, Missoula, MT 59801 406.728.7682 senior@missoulaagingservices.org | missoulaagingservices.org ge 267 of 329

#### **Mission**



The mission of Missoula Aging Services is

#### to promote the **independence**,

#### dignity and health

of older adults and those who care for them.

# We Accomplish Our Mission Through...

#### **Education • Services • Volunteerism • Advocacy**







# Why Focus On Helping Individuals Stay in Their Homes?

- It is exactly what older adults and individuals with disabilities want.
- In most cases, it **costs much less** than institutional care.
- It reduces and/or delays both further disability and/or chronic disease.
- It is **preventive in nature** and builds on natural supports and strengths of the individual.
- It helps individuals **remain vital community members.**

#### **Resource Center**

- Information Assistance and Referrals
- Medicare/Medicaid Counseling
- Personalized Consultations
- Educational Classes and Materials.
- Ombudsman Services
- Caregiver supports





# MISSOULA aging SERVICES

Page 271 of 329

# **In-Home Services**

- Respite/Homemaking
  - Sliding Scale
- Care Transitions
  - Demonstration project through CMS
  - Community Hospital and St. Patrick Hospital
- Veterans Direct Home and Community Based Services

# **Community Engagement Programs**

#### • Nutrition Program

Meals on Wheels, Supplement, Congregate, Farmers Market and Rural Sites

#### • Senior Corp Programs:

RSVP, Foster Grandparents and Senior Companions





# Community Engagement Programs

- SMP Statewide
  - Prevention of Fraud and abuse of Medicare.
  - Volunteer Coordinator
    - Internal support of programs.

## **Property Tax Relief**

• Older people are often cited during debates about property taxes, bonds, and levies.

 When voters make their decision about bonds like those on November's ballot, they should take into account whether they qualify for property tax relief.

## **Property Tax Relief**

 Older people having difficulty affording their property taxes should look into property tax relief programs.

 The Resource Center at Missoula helps older adults and persons with disabilities to find out whether they qualify and apply for property tax relief.

# **Tax Relief Programs: 2EC**

The 2EC tax credit:

- Rent and property tax credit for older Montanans.
- Up to \$1,000 of rent or property tax.
- Can be filed for up to five previous tax years.
- Renters as well as homeowners can receive the credit.

# **Tax Relief Programs: 2EC**

To be eligible for the 2EC tax credit:

- At least one person in household 62 or older as of December 31 of tax year.
- Gross household income under \$45,000.
- Residing in Montana at least nine months.
- Rented or owned a home for at least six months.

# **Tax Relief Programs: PTAP**

Property Tax Assistance Program (PTAP) reduces property tax by a percentage, using this table:

2016 Income Guidelines For Property Tax Assistance Program						
Single Person	Married or Head of Household	Percent Multiplier				
\$0 - \$8,413	\$0 - \$11,217	80%				
\$8,414 - \$12,900	\$11,218 - \$19,630	50%				
\$12,901 - \$21,032	\$19,631 - \$28,043	30%				

\*The Federal Poverty Level is \$11,700 in an individual, \$15,930 for a family of 2, slightly higher than the 80% limit

## **Tax Relief Programs: PTAP**

Example: A person with a disability who receives SSI benefits has an annual income of \$8804. Their total property tax would be reduced 50%.

2016 Income Guidelines For Property Tax Assistance Program						
Single Person	Married or Head of Household	Percent Multiplier				
\$0 - \$8,413	\$0 - \$11,217	80%				
\$8,414 - \$12,900	\$11,218 - \$19,630	50%				
\$12,901 - \$21,032	\$19,631 - \$28,043	30%				

# **Tax Relief Programs: MDV**

Montana Disabled Veteran Or Spouses Of Montana Disabled Veterans (MDV)

- Available for 100% disabled veterans
- Available to surviving spouses of veterans who died on active duty or due to serviceconnected disability.

# **Tax Relief Programs: MDV**

2016 Income Guidelines For MDV Program						
Single Person	Married or Head of Household	Surviving Spouse	Percent			
\$0 - \$37,404	\$0 - \$44 <i>,</i> 885	\$0 - \$31,170	100%			
\$37,405 - \$41,145	\$44,886 - \$48,626	\$31,171 - \$34,911	80%			
\$41,146 - \$44,885	\$48,627 - \$52,366	\$34,912 - \$38,651	70%			
\$44,886 - \$48,626	\$52,367 - \$56,107	\$38,652 - \$42,392	50%			

# **Property Tax Relief**

Whether or not individuals qualify for property tax relief, the Resource Center at Missoula Aging Services can connect them with resources to help them pay for:

- Healthcare
- Long-term care
- Housing
- Food
- Energy



#### We're proud of our years!



#### MISSOULA aging SERVICES

Page 284 of 329

#### **Contact Us**

#### (406) 728-7682 www.missoulaagingservices.org



#### Thank you!

337 Stephens Avenue, Missoula, MT 59801 406.728.7682 senior@missoulaagingservices.org | missoulaagingservices.or<sup>gage 285 of 329</sup>



- MAS is in the early stages of developing our FY2018 budget. We will begin the 3<sup>rd</sup> year of our Four Year Strategic Plan.
- During FY2017, MAS implemented initiatives related to meeting the growing demand for information and emerging needs to address Elder Justice in a more direct way.
- MAS implemented a **Resource Call Center** staffed with 3.5 FTE. The Call Center is the gateway to all other programs and services in the agency. The Call Center allows MAS to holistically approach clients with multiple needs with one stop support navigating the senior and long term care system.
- Elder Justice, elder & disability law, legal document resources, financial exploitation, guardianships, elder abuse and family mediation, to name a few, are emerging issues that MAS has developed programing around. MAS has launched an Elder Justice Legal Service supported in part by volunteer attorneys, elder law interns and through referrals to practicing attorneys to address these areas of growing concern.
- **Care Transitions,** a program putting the eyes and ears in the home after a patient is discharged from hospitals or clinics, addresses the social determinants of health. Studies show that behaviors, social and economic factors and physical environment impact 80% of physical health. Tools used include a review of discharge plans and medications, and, connection with community resources to improve nutrition, economics, housing and more. MAS Care Transitions is recognized as one of the most successful models in the nation by CMS.
- Veterans Direct Home and Community Based Services is a successful Veterans Choice program offered by 3 Area Agencies in Aging in Montana to date. This powerful program offers qualified veterans the opportunity hire their own caregivers and determine their own care to meet their care needs at home and avoid costly Nursing Home care. MAS acts as the Coordinators of Care, the liaison with the VA and the Fiscal Agent to support the employer/employee responsibilities.

T 406.728.7682 F 406.728.7687 337 Stephens Ave | Missoula, MT 59801 MISSOULAAGINGSERVICES.ORG

- Expanding our **Congregate Dining** program to reach underserved areas beginning with East Missoula.
- **FY2018 Budget** includes 50 full and part time employees. MAS is funded by Federal, State, City and County governments, clients and fund raising activity. Governmental revenue is 65% of the budget, program revenue @ 20% and Fundraising activity is 15%.
- The FY2018 Revenue and Expense budget will be approximately **\$4,293,000**. This represents an increase of 5% over FY2017 budget. The FY2018 budget represents an additional 3.75 FTE staff and market based increases to wages and benefits.
- The FY2018 MAS budget does not include any Federal or State cuts to spending. The Federal government is still operating under a Continuing Resolution as congress has not passed their FY17 budget yet. The State of Montana budget for the 17-18 biennium will not be known until the Legislative session closes in April. These are uncertain times for any agency that relies on governmental support for programing.
- For this reason, MAS accumulates Reserves or Savings, over the course of time, to compensate for the uncertainty of governmental funding sources and the loss of grants and to develop new programs addressing critical community needs.
- **Program Development: Fiscal Agent services**. MAS will propose to all Area Agencies on Aging to become their Fiscal Agent for the **Veterans Choice** program. One of the barriers to program expansion across the state is the complexity of managing the budgets for the Veteran employer when dedicated staff and expertise is not in place. MAS developed the expertise, procedures and processes necessary to efficiently comply with all of the regulations.
- **Program Development: Fiduciary Services**. In high demand is the need for financial services for people with difficulty managing their income. A **Fiduciary**, **or Representative Payees**, help elders and adults with cognitive concerns, pay their bills and manage their finances in a way that supports their independence and protects them from exploitation. Fees are generated from SS, VA, Medicaid and private pay.
- **Program Development: Housing insecurity for seniors**. In its early stages of development, addressing housing issues is one of the most important issues facing low-income seniors. This initiative will have many facets and include community wide partners to begin to address the critical need.

Stored in FY2016 Stored in FY2016 Number of Meals on Wheels Served Served	Warm regards, Soan Kohler, MAS CEO Susan Kohler, MAS CEO Jonathan Weisul, MD Governing Board Chair	As we embark upon a new fiscal year, we recognize that <b>our work would</b> <b>not be possible without you and others with good hearts like yours.</b> We would not be able to meet the needs of the growing number of older adults in Missoula County without people like you, many foundations, businesses and government funding. Thank you for your generosity and support!	troubled teens and children with disabilities. These <b>substantial impacts are made possible with your help</b> and the dedication of more than 600 vibrant older adult volunteers.	Enrollment window. The Community Care Transitions program helped keep 863 newly discharged patients from returning to the hospital, and the Veteran-Directed Care program empowered 53 veterans to continue living at home. Plus <b>47 Foster Grandparents provided 39,751 hours of</b> <b>mentoring to 250 school children</b> suffering from abuse and neglect,	Thanks to you, Missoula Aging Services was able to serve 34,208 people in fiscal year 2016, including the statewide Senior Medicare Patrol program. We added staff in the Seeley Lake area, increased community education, advocated for older adults, and provided a whopping 100,329 Meals on Wheels. A new Call Center was launched, and 987 phone calls were returned by the end of the day during the two-month Medicare Open	You continue to make a tremendous, positive impact in the lives of older adults - thank you! This is our report to you, our supporters, and we are thankful for the opportunity to capture the highlights of the past year, present some compelling statistics and share Claire's story with you.	Dear Friends,
<ul> <li>Community Care Transitions Program</li> <li>Family Caregiver Support</li> <li>Respite &amp; Homemaking Services</li> <li>Veteran-Directed Care Program</li> <li>Information, Assistance &amp; Referrals</li> <li>Long-term Care Ombudsman Program</li> <li>Medicare &amp; Medicaid Counseling</li> <li>Options for Better Aging</li> </ul>	<ul> <li>Rural Nutrition Sites: Condon, Seeley L</li> <li>Senior Congregate Dining</li> <li>Volunteer Programs: RSVP, Foster Grai &amp; Senior Companions</li> <li>Montana SMP</li> </ul>	<b>PROGRAMS</b> Community Engagement Farmers' Market Coupon Program Liquid Nutritional Supplements Meals on Wheels	OF OLDER ADULTS AND THOSE WHO CAF	MISSION TO PROMOTE THE independence, digni			

- \_ake, Lolo
- ndparents

- **Resource Center**

20000

85000

**Transportation Options** 



# drug plans through staff consultations \$459,047 saved on Medicare prescription

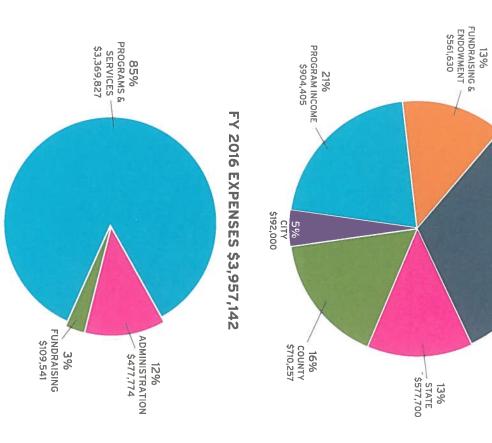




United Way of Missoula County Way.org

Programs of Missoula Aging Services are funded in part by the Administration for Community Living, the Corporation for National and Community Service, Montana Department of Health and Human Services, Missoula County, City of Missoula, the United Way of Missoula County, Center for Medicare & Medicaid Services and Veterans Administration.

Missoula Aging Services' complete Audited Financial Report and IRS Forr. 990 can be found at missoulaagingservices.org on the About Us page.



ty AND bealth

E FOR THEM.

**FISCAL YEAR 2016** 

Page 288 of 329

FY 2016 REVENUE \$4,321,899

32% FEDERAL \$1,375,907

## MACS MISSOULA aging SERVICES

### Mission

Missoula Aging Services promotes the independence, dignity and health of older adults and those who care for them.



"Five days a week a friendly person comes to see me, this brightens my life."

--Meals on Wheels client



337 Stephens Ave. Missoula, MT 59801 T (406) 728-7682 F (406) 728-7687





### Adult Services & Resources

MAS is an Aging and Disability Resource Center and so much more. Older adults, their families and caregivers are empowered through volunteer opportunities, services and education to remain living independently at home for as long as possible.

### 17,506 clients were served in Missoula County during FY 2016.

Senior Congregate Dining serves Missoula County residents who receive support at fixed sites in the following communities: Missoula, Seeley Lake, Lolo, Condon, Arlee and Alberton.

### 50,542 congregate meals were served last year.

Family Caregiver Support assists family members or others who provide unpaid in-home or distance care to older adults. Certified resource specialists help caregivers access services and can connect long-distance caregivers to services in communities across the country. A monthly support group for caregivers and semi-annual training titled "Powerful Tools for Caregivers" are offered by trained facilitators.

### 4,692 hours of respite were provided to caregivers.

Meals on Wheels serves housebound older adults and people with disabilities in Missoula County. Rural sites include Condon and Seeley Lake. Liquid nutritional supplements are also available.

### 101,329 Meals on Wheels were delivered by 100 volunteers to 800 housebound individuals.

**Ombudsman Program** Certified local ombudsmen work to protect resident rights of those whose home is a long-term care facility by helping them understand and exercise their right to good care. Ombudsmen are impartial mediators who investigate resident concerns and may provide information, suggest solutions and advocate for change on behalf of residents.

### Ombudsmen made 1,352 visits to residents in nursing homes පී assisted living facilities.

**The Resource Center** provides referrals, information and assistance for older adults and their caregivers, including adult children seeking referrals to services locally or from a distance. A database of more than 400 service sites is continually updated. Free packets are available on topics such as long-term care, estate planning, Medicare and Medicaid. A lender's library is available, plus free access to the internet.

\$459,047 were saved on Medicare prescription drug plans through staff consultations. Ragei289 of 329



"This organization consistently exceeds my expectations. I have turned to them time and again for assistance with a wide variety of issues and have always received kind, compassionate, expert help." --MAS Client







Susan Kohler, Chief Executive Officer



### Adult Services & Resources (continued)

The Farmers' Market Coupon Program provides older adults who meet income guidelines with vouchers to purchase fresh, locally grown fruit and vegetables at local markets.

485 seniors were served through the Farmers' Market Program.

Montana SMP (Senior Medicare Patrol), funded by the Administration on Aging, is a statewide program which engages trained volunteers to help reduce Medicare and Medicaid waste, fraud and abuse.

16,700 Medicare beneficiaries were educated by Montana SMP.

**Transportation Options** Missoula Aging Services actively works on solutions to transportation issues. Assistance includes a contract with the city bus service's special or para-transit system, and support for Opportunity Resources' Sunday service. Senior Companions and Caring Companions also help with transportation needs.

26,081 rides to older adults and people with disabilities were provided last year.

### **Senior Corps**

Foster Grandparent volunteers provide special care, attention and academic guidance to children of all ages in 25 Missoula County schools, agencies and pre-schools.

47 Foster Grandparents provide 39,751 hours of mentoring to 250 children with disabilities, troubled teens or children suffering from abuse and neglect.

Senior Companions assist older adults and people with disabilities with daily tasks such as grocery shopping, arranging for transportation and socialization for isolated individuals. These friendships often make the difference between living at home and moving to a nursing home prematurely.

38 Senior Companions gave 30,136 hours serving 173 clients.

Both Foster Grandparents and Senior Companions must meet income guidelines to receive a tax-free stipend in return for 15-40 hours of volunteer service each week.

**RSVP** members use their experiences to help address critical needs in our community.

414 volunteers served 31,949 hours with over 100 public, private and governmental agencies.

EST. 1982 MISSOULA aging SERVICES we're proud of our years Page 290 of 329 Home

Legislation **Contact us** 

### **Item Information**

Item Information			*** 🔊
Title:	Missoula Aging Services, Initiative	s and Services Up	date - Susan Kohler
Item #:		Status:	Held in Committee
Туре:		#:	PS&H
Version:	5 <sup>th</sup>	Sponsor:	Gwen Jones
Meeting Date:	<u>1/1/2050</u>	Ward:	Ward 1, Ward 2, Ward 3, Ward 4, Ward 5, Ward 6
Meeting Type: Attachments:	PSH Referrals Held in Committee	Video:	No Video Available

#### Text

No Text Available

### History

	Version	Item #	Туре	Status	Meeting Date	Meeting Type
	1 <sup>st</sup>				<u>10/5/2015</u>	City Council
	<u>2<sup>nd</sup></u>			Held in committee	<u>10/14/2015</u>	PSH
	<u>3<sup>rd</sup></u>			Held in Committee	<u>1/27/2016</u>	PSH
	<u>4<sup>th</sup></u>			Held in committee	<u>2/22/2017</u>	PSH
•	5 <sup>th</sup>			Held in Committee	<u>1/1/2050</u>	PSH Referrals Held in Committee

### **Vote Records**

No voting recorded

### City Council City of Missoula, Montana Item to be Referred to City Council Committee

Committee: Public Safety and Health Item: Health Department Update Date: 1/17/18 Sponsor: Michelle Cares Prepared by: Michelle Cares Ward(s) affected: All

Action Required: None

Recommended Motion(s): None

Timeline:	
Referral to committee:	1/3/18
Committee discussion:	1/17/18

Time Requested During Committee: 30 minutes

#### Background and Alternatives Explored:

"Please accept this referral request to slate a "Health Department Update" on the Public Safety and Health Committee on January 17. I expect it will take a half hour. Thank you. EL

Ellen Leahy, RN, MN, MPH Director & Health Officer"

I (Michelle Cares) asked Ellen the following but she is on vacation so I'm not sure we'll have any material to review. Stay tuned! **"Do you plan to have a presentation? Can you send it in by the Thursday prior (1/11/18)?** The committee generally appreciates having material to review prior so they can be prepared to ask better questions so I hope you will have something."

Financial Implications: None.

Links to external websites: https://www.missoulacounty.us/directory/health-department

### Health Department Update Public Safety and Health Committee January 17, 2018

Following are the topics the department proposes to bring to the attention of City Council Public Safety and Health Committee in summary fashion. Council's interest for more in-depth review of these and other topics could follow at a subsequent meeting.

- 1) Changes in Management Team
- 2) New Board Members
- 3) Move of Missoula Forum to Health Department
- 4) Effect of State Budget Cuts on Dept's Capacity to Serve Citizens
- 5) Community Health Assessment 2018
- 6) Wildfire Event Adaptation Planning
- 7) Upcoming Proposal for Revising City Smoking Ordinance
- 8) Current Quality Improvement Projects
- 9) Reaccreditation Efforts and Timeline



### Resolution

### A resolution of the Missoula City-County Board of Health to the Missoula City Council, the Mayor of Missoula and the Missoula County Commissioners recommending revisions to the Missoula Smoking Ordinance

**WHEREAS,** Environmental tobacco smoke contains over 7,000 chemicals and is a known carcinogen<sup>i</sup>; and,

**WHEREAS,** The Surgeon General of the United States has declared that smoking is the largest preventable cause of premature death and disability in the United States; breathing environmental tobacco smoke is a cause of disease, including lung cancer, stroke, asthma and heart disease, in nonsmokers; and,

**WHEREAS**, the vapor from alternative smoking devices (electronic cigarettes) can contain harmful and potentially harmful substances, including nicotine, heavy metals, volatile organic compounds and cancer-causing agents that can be inhaled by bystanders<sup>ii</sup>; and,

**WHEREAS**, the Food and Drug Administration, in 2016, deemed e-cigarette products to be subject to the Food, Drug and Cosmetic Act;<sup>iii</sup> and,

**WHEREAS,** in 1999, Missoula was the first community in Montana to adopt an ordinance to reduce nonsmoker's exposure to tobacco smoke that applies in the City and in the five-mile zone beyond city limits; and,

**WHEREAS,** in 2005, the Montana State Legislature adopted provisions in the Montana Clean Indoor Air Act that are more stringent than Missoula's current ordinance<sup>iv</sup>; and,

WHEREAS, more recently, the advent and expansion of electronic cigarette use has occurred; and,

**WHEREAS**, Missoula's Parks and Recreation Department desires to codify long-standing policy prohibiting smoking in public parks into ordinance for the protection of citizens using these amenities; and,

**WHEREAS**, the Missoula City-County Health Department desires to codify long-standing policy guiding the construction of smoking shelters into ordinance to clearly and consistently guide businesses in construction and use of allowable smoking shelters; and,

**WHEREAS**, several Montana localities have adopted ordinances that address smoking in outdoor public places and use of e-cigarette in public places in response to evolving tobacco delivery methods, science on health effects of tobacco use; and public expectations for limiting unwanted exposure to these harmful substances; and,

**WHEREAS**, statutory duties of the Missoula City-County Board of Health include "ameliorat[ing] conditions of public health importance"<sup>v</sup>; and,

**NOW, THEREFORE BE IT RESOLVED** that the Missoula City-County Board of Health recommends that the City of Missoula revise Missoula Municipal Code Title 8.37 as follows:

- Delete or amend provisions that are less stringent than the Montana Clean Indoor Air Act,
- Incorporate the Health Department's policy on smoking shelter requirements,
- Add use of e-cigarettes to the definition of smoking,
- Prohibit smoking in certain outdoor public spaces, and
- Provide managers of other outdoor public spaces the ability to restrict smoking; and
- Clarify enforcement procedures and penalties for violations of the ordinance,

**BE IT FURTHER RESOLVED** that, upon the City Council's adoption of an ordinance so revised, the Missoula City-County Board of Health, recommends the Missoula County Commissioners and Missoula Mayor join the Health Board acting to apply the ordinance to a five-mile zone outside city limits pursuant to 7-4-4306 (MCA) for the protection of public health.

**PASSED AND ADOPTED** this 17<sup>th</sup> day of January, 2018

Ross Miller, Chair

<sup>&</sup>lt;sup>i</sup> The Centers for Disease Control and Prevention

<sup>&</sup>lt;sup>ii</sup> <u>https://www.cdc.gov/tobacco/basic\_information/e-cigarettes/index.htm</u> (1-15-18)

<sup>&</sup>lt;sup>iii</sup> <u>https://federalregister.gov/a/2016-10685</u> (1-14-18)

<sup>&</sup>lt;sup>iv</sup> Montana Code Annotated, Title 50, Chapter 40

<sup>&</sup>lt;sup>v</sup> 50-2-116(1)(f) MCA

Home

Legislation | | Contact us

#### Item Information



Title:	Health Department update		
Item #:		Status:	Held in Committee
Туре:		#:	PSH
Version:	22 <sup>th</sup>	Sponsor:	Michelle Cares
Meeting Date:	<u>1/1/2050</u>	Ward:	Ward 1, Ward 2, Ward 3, Ward 4, Ward 5, Ward 6
Meeting Type:	PSH Referrals Held in Committee	Video:	No Video Available
Attachments:			

#### Text

No Text Available

### History

	Version	Item #	Туре	Status	Meeting Date	Meeting Type
	<u>1<sup>st</sup></u>			Held in committee	<u>6/13/2012</u>	PSH
	<u>2<sup>nd</sup></u>			Held in committee	<u>6/20/2012</u>	PSH
	<u>3<sup>rd</sup></u>			Held in committee	<u>6/27/2012</u>	PSH
	<u>4<sup>th</sup></u>			Held in committee	<u>7/25/2012</u>	PSH
	<u>5<sup>th</sup></u>			Held in committee	<u>8/29/2012</u>	PSH
	<u>6<sup>th</sup></u>			Held in committee	<u>9/12/2012</u>	PSH
	<u>Z<sup>th</sup></u>			Held in committee	<u>9/19/2012</u>	PSH
	<u>8<sup>th</sup></u>			Held in committee	<u>9/26/2012</u>	PSH
	<u>9<sup>th</sup></u>			Discuss	<u>10/10/2012</u>	PSH
	<u>10<sup>th</sup></u>			Held in committee	<u>10/31/2012</u>	PSH
	<u>11<sup>th</sup></u>			Held in committee	<u>11/28/2012</u>	PSH
	<u>12<sup>th</sup></u>			Held in committee	<u>12/5/2012</u>	PSH
	<u>13<sup>th</sup></u>			Held in committee	<u>12/12/2012</u>	PSH
	<u>14<sup>th</sup></u>			Held in committee	<u>1/9/2013</u>	PSH
	<u>15<sup>th</sup></u>			Discuss	<u>5/14/2014</u>	PSH
	<u>16<sup>th</sup></u>			Held in committee	<u>10/29/2014</u>	PSH
	<u>17<sup>th</sup></u>			Held in committee	<u>2/4/2015</u>	PSH
	<u>18<sup>th</sup></u>			Held in committee	<u>8/12/2015</u>	PSH
	<u>19<sup>th</sup></u>			Held in Committee	<u>1/27/2016</u>	PSH
	<u>20<sup>th</sup></u>			Held in committee	<u>7/26/2017</u>	PSH
	<u>21<sup>th</sup></u>			Held in committee	<u>1/17/2018</u>	PSH
•	22 <sup>th</sup>			Held in Committee	<u>1/1/2050</u>	PSH Referrals Held in Committee

#### Vote Records

No voting recorded

### City of Missoula, Montana Item to be Referred to City Council Committee

Committee:	Public Works
Item:	Discussion of Traffic Control Devices Including Marked Crosswalks Administrative Rule
Date:	December 10, 2015
Sponsor:	Kevin Slovarp, Development Services City Engineer
Prepared by:	Kevin Slovarp, Development Services City Engineer
Wards affected:	All

Action Required: None.

### Recommended Motion: None.

#### Timeline:

Referral to committee:	December 14, 2015
Committee discussion:	December 16, 2015
Council acts to set hearing:	NA
Public Hearing:	NA
Deadline:	NA

### **Background and Alternatives Explored:**

City staff desires to formalize in the form of an administrative rule the policy and procedure to handle requests for the installation or removal of traffic control devices including marked crosswalks within the city limits. Requests for traffic control devices including painting crosswalks generally are received from citizens but requests are also received from City Council members and City Administration. This rule outlines the procedure for processing these requests for a traffic control device and following through with the requesting citizen, City Council member or City Administration staff.

A draft copy of this rule was sent to traffic engineering experts working for consulting firms within the City of Missoula. These experts provided comments that were included in this draft administrative rule.

### **Financial Implications:**

Materials for and installation of traffic control devices are generally paid for through the operations budget of Traffic Services (general fund).

### Attachments:

Traffic Control Devices Including Marked Crosswalks Administrative Rule (DRAFT)



### Development Services Department Administrative Rule No.

### **Traffic Control Devices Including Marked Crosswalks**

Adopted:	
Revised:	

### **DEFINITIONS:**

<u>Crosswalk:</u> (1) that part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the roadway measured from the curbs or in the absence of curbs, from the edges of the traversable roadway, and in the absence of a sidewalk on one side of the roadway, the part of a roadway included within the extension of the lateral lines of the sidewalk at right angles to the center line; (2) any portion of a roadway at an intersection or elsewhere distinctly indicated as a pedestrian crossing by pavement marking lines on the surface, which might be supplemented by contrasting pavement texture, style, or color.

Note: Part (1) of the definition above refers to both unmarked and marked crosswalks and part (2) refers to marked crosswalks.

<u>Montana Department of Transportation's Sign Catalog:</u> Functions as a supplement to the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD). Most of the signs in this catalog can be found in the MUTCD, which specifies the application and location of each sign. Signs unique to Montana are marked with an asterisk.

<u>MUTCD:</u> Manual on Uniform Traffic Control Devices that is approved by the Federal Highway Administrator as the National Standard in accordance with Title 23 U.S. Code, Sections 109(d), 114(a), 217, 315, and 402(a), 23 CFR 655, and 49 CFR 1.48(b)(8), 1.48(b)(33), and 1.48(c)(2).

Note: The MUTCD is periodically updated. For the purposes of this administrative rule, the current version of the MUTCD is being used/referenced.

<u>School Zone:</u> A designated roadway segment approaching, adjacent to, and beyond school buildings or grounds, or along which school related activities occur.

<u>Standard</u>: For the purposes of this administrative rule, a standard is a statement of required, mandatory, or specifically prohibitive practice regarding a traffic control device.

<u>Traffic Control Devices</u>: All signs, signals, markings, and other devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, pedestrian facility, bikeway, or private road open to public travel by authority of a public agency or official having jurisdiction, or, in the case of a private road, by authority of the private owner or private official having jurisdiction. (Excluding atypical signs as provided for in Public Works Administrative Rule 500.)

<u>Warrants</u>: Adopted criteria for evaluation of a particular site and/or usage of a particular type of traffic control device prior to installation of said device.

### PURPOSE:

- 1. Define and discuss traffic control devices, their use, benefit, effectiveness, and guidelines.
- 2. Outline the policy and procedure for staff handling requests for the installation or removal of traffic control devices including marked crosswalks within the city limits.
- 3. Additionally, this policy identifies school zones as areas of special concern that require in-depth analysis to assure the effectiveness of any traffic control device(s) to be used, including marked crosswalks.

### **GENERAL DISCUSSION:**

- 1. Traffic control devices including marked crosswalks promote safety and efficiency by providing for the orderly movement of all road users on streets, highways, bikeways, and private roads open to public travel.
- 2. Traffic control devices including marked crosswalks notify road users of regulations and provide warning and guidance needed for effective and efficient operation of all elements of the traffic stream in a manner intended to minimize the occurrences of conflicts and crashes.
- 3. To be effective, traffic control devices including marked crosswalks, should be placed and operated in a consistent manner. A standard device used where it is not appropriate will reduce the effectiveness of the device at those locations where the device is needed and appropriate. Overusing a traffic control device leads to loss of credibility of the device and should not be used indiscriminately.
- 4. School Zones:
  - a. The purpose of a consistent approach to school area marked crosswalks and traffic control devices assures the use of similar controls for similar situations, which promotes appropriate and consistent behavior on the part of motorists, pedestrians, and bicyclists.
  - b. Regardless of the school location, the best way to achieve effective traffic control is through the application of policies, practices, and standards developed through current guidelines, engineering judgment and/or studies.
  - c. Procedures and devices that are not consistent might cause confusion among pedestrians and other road users, prompt wrong decisions, and contribute to conflicts and crashes. To achieve consistency of traffic control devices including marked crosswalks in school areas, comparable traffic situations need to be treated in a consistent manner.
- 5. Reasons for Painting a Crosswalk:
  - a. To call attention to motorists that a location has a higher pedestrian use (typically considered 50 pedestrians per hour), and where additional caution is necessary to enhance the safety of all users at that crosswalk location.
  - b. To channel pedestrians to the most used and safest location (perceived and/or actual) for crossing a street and at places where motorists can and should expect higher pedestrian use.
  - c. To meet motorists expectations regarding those locations where pedestrians frequently cross.
  - d. To encourage pedestrians to use a marked crosswalk, thereby increasing frequency of use and ultimately its effectiveness.
  - e. To keep street paint minimized to those locations where most needed so that the safety of the painted locations is not diminished.
  - f. If a crosswalk is approximately one quarter (1/4) mile from another marked crosswalk on collector/arterial corridors that also demonstrates a recognized need.
- 6. Marking a crosswalk should consider the number of vehicular lanes, presence of a center median, the distance from the nearest signalized or controlled intersection(s), pedestrian volumes and delays, the average daily traffic, speed of vehicles, geometry, lighting and other factors.

**APPLICABILITY:** This policy applies to the staff of the Development Services and Public Works Departments responsible for the design, selection, installation and removal of the City's traffic control devices and applying city standards relating to traffic control devices within new development.

**POLICY:** City staff will follow the standards, guidelines and recommendations provided in the Manual of Uniform Traffic Control Devices specifically when planning the installation or removal of any traffic control device including marked crosswalks. In addition, the MDT's Sign Catalog is available as a quick reference and includes signs that are unique to Montana (Sign Catalogue examples comply with requirements outlined in the MUTCD).

### SECTION 1: Citizen Requests

- 1. After receiving a citizen request to install or remove a traffic control device or marked crosswalk, staff shall place the item on the agenda for the weekly Traffic Services Team meeting. The Team will take the following actions:
  - a. Consult the MUTCD to identify any existing design or location standards that could potentially apply to the device.
  - b. Arrange to obtain the following:
    - i. The accident history of the subject site; then
    - ii. Review existing conditions at the site; and
    - iii. Identify the other traffic control devices in the surrounding area to determine consistency and compatibility of the request as it pertains to existing devices; and
    - iv. Evaluate the status of ADA compliance; and
    - v. Review the current right-of-way improvement projects planned for the future in case the site is included in an upcoming project; and
    - vi. Obtain traffic counts, if needed; then
    - vii. Identify alternative devices and/or any additional devices that may address the situation at the site in a more appropriate and/or compliant way.
  - c. Formulate a decision to: (1) approve as requested; (2) approve with modifications; (3) refer for an engineered solution or (4) deny the request.
- If denied, notify the citizen of the Team's decision and fully explain the reasons for denial. In the event the citizen does not accept the Team's decision, contact the Chief Administrative Officer (CAO) for advice on the best way to proceed.
- 3. If an engineered solution is necessary to address significant problems at the site, notify the citizen that the Team is making a referral to the City Engineering Division to add the project to the City's Capital Improvement Project or Maintenance Project list. Inform the citizen as to a reasonable timeline for resolution considering the number and prioritized ranking of projects on the list.
- 4. If the decision is to install a new device as requested, prepare a sketch or drawing depicting the device's appearance and dimensions and identify the potential best placement within the public right-of-way to achieve the intended purpose. Notify the citizen requesting the device to discuss the solution and inform of next steps. The next steps are as follows:
  - a. Notify the owners of private property adjacent to the site about the installation and provide the sketch or drawing for their understanding.
  - b. If there is a general consensus of the owners, proceed with the installation.
  - c. If there are problems encountered, return the issue to the Team to discuss resolutions to the concerns.
  - d. In the event there is no alternative, contact the CAO for further advice about the best way to proceed and notify the requestor of the delay.
- 5. If the decision is to remove an existing device as requested, notify the owners of adjacent private property and follow the steps outlined in Item 4 above excluding the sketch or drawing. Notify the citizen requesting removal of the device to discuss the solution.

6. If the evaluation indicates that another device or additional devices would provide better travel direction and solve the issue more appropriately, follow all of the steps outlined in Item 4 above including a sketch or drawing. Notify the citizen requesting the device to discuss the solution.

### SECTION 2 – Ward Representative and Administration Requests

- 1. Follow all steps outlined in Section 1 above. In addition:
  - a. Maintain ongoing contact with the Ward representative or CAO as the Team proceeds through the actions.
  - b. Provide a final summary of all findings and include the decision of the Team as well as the potential schedule for completion.
  - c. If the decision was to deny the request, provide a full explanation of the reasons for denial.

### SECTION 3 – Record of the Requests and Results

- 1. All contact with the requestor and the Team's efforts are to be kept electronically and/or by hardcopy and maintained in a file for historical reference.
- The records may be destroyed 2 years after the complaint has been resolved. This disposal schedule meets the requirement for complaints outlined in City Administrative Rule No. 16 Montana Local Government Records Committee Schedule No. 8.

**Recommended by:** 

**Reviewed by:** 

Drafted by:

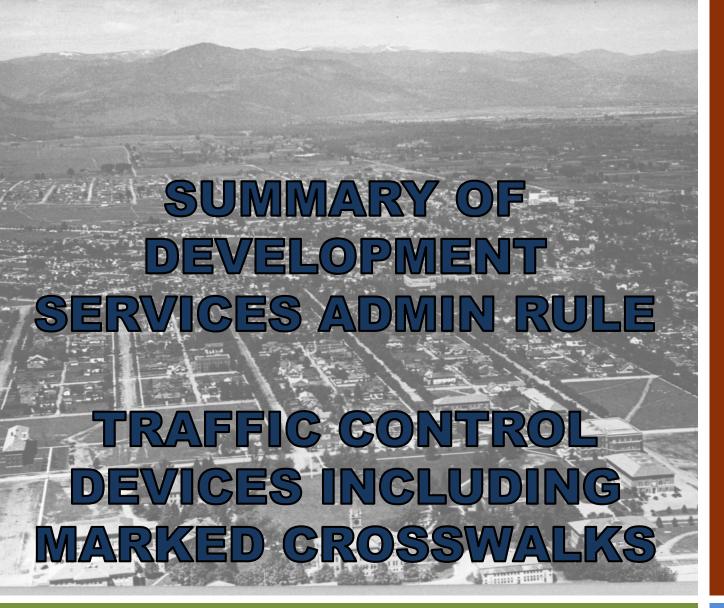
Carla Krause, Special Services Administrator

Approved by:

John Wilson, P.E., Public Works Director

Kevin Slovarp, P.E., City Engineer

Mike Haynes, Development Services Director



Kevin Slovarp, City Engineer Development Services December 16, 2015



### Introduction

### Administrative Rule – Traffic Control Devices Including Marked Crosswalks

- This Administrative Rule Includes
  - Definitions
  - Purpose
  - General Discussion
  - Method to Process Requests



- Previous discussions with citizens, City Council, and Administration
- Review of MUTCD and State Law
- Review of Admin Rule by PW Director, Engineering Staff, and local traffic engineering experts



- Crosswalk
  - Locations
  - Types (unmarked vs. marked)
- MUTCD Manual on Uniform Traffic Control Devices
  - Guidelines for signs, marking crosswalks, school zones, etc.
- Traffic Control Devices
  - Types
  - What they regulate
  - Location



- Discuss benefit, effectiveness and guidelines used for removal or installation
- Outline a policy and procedure for staff handling of requests for traffic control devices
- Identification of school zones as areas of special concern that require in-depth analysis

### General Discussion

- Traffic control devices:
  - Promote safety and efficiency
  - Provide for orderly movement of all road users
  - Notify road users of regulations
  - Provide warning and guidance
  - Minimize the occurrences of conflicts and crashes
  - Should be utilized / operated in a consistent manner
  - Inappropriate use can result in reduced effectiveness
  - Overuse leads to loss of credibility



### General Discussion, cont.

- School Zones:
  - Consistency promotes appropriate behavior of road users
  - Effectiveness is achieved through consistent use developed from appropriate guidelines, engineering judgment and/or studies
  - Inconsistent use might cause confusion among all road users and contribute to conflicts and crashes



### General Discussion, cont.

- Reasons for Marking a Crosswalk:
  - Call attention to motorists that a location has a higher pedestrian use (typically considered 50 pedestrians per hour)
  - Where additional caution is necessary to enhance the safety of all users
  - Channel pedestrians to the most used and safest location for crossing a street
  - To meet motorists expectations where pedestrians frequently cross
  - Encourage pedestrians to use a marked crosswalk to increase frequency of use and its effectiveness
  - Minimize painted locations so that the awareness and safety of the painted locations is not diminished
  - Marked crosswalk at approximate 1/4 mile intervals on collector/arterial roadways with a recognized need



### Method to Process Requests

- Citizen Requests:
  - Place item on the agenda for the weekly Traffic Services Team meeting.
  - The Team will take the following actions:
    - Review MUTCD, state law, municipal code, etc.
    - Obtain accident history, review existing conditions, identify other devices in the surrounding area to determine consistency and compatibility, evaluate ADA compliance, review planned improvement projects, traffic counts (if needed), and identify appropriate alternatives that may be more appropriate for the situation.
    - Formulate a decision to approve, approve with modifications, refer for an engineered solution or deny.



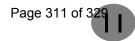
### Method to Process Requests, cont.

- If denied, then notify the citizen and fully explain the reasons. If necessary, contact CAO for advice on how to proceed.
- If engineering solution is necessary, then notify the citizen that the Team is adding the project to the CIP or maintenance project list.
- If approved, then prepare a drawing/sketch depicting appearance, dimensions, and location to achieve intended purpose. Notify the citizen to discuss the solution and inform of next steps. Next Steps include:
  - Notify the owners of private property adjacent to installation
  - If there is general consensus of the adjacent property owners, then proceed with installation
  - If there are problems encountered, return the issue to the Team to discuss resolutions to concerns
  - If no resolutions, then contact CAO for advice on how to proceed and notify the citizen of the delay. Page 310 of 329



### Method to Process Requests, cont.

- Request from Ward Representatives and Administration:
  - Follow all steps outlined in the Citizen Requests, and
  - Maintain ongoing contact with the Ward representative or CAO as the Team proceeds through the steps
  - Provide a final summary of all findings
  - Provide a schedule for completion
  - If denied, then provide a full explanation of the reason for denial.





- Currently a draft rule
- Would like to adopt (sign) after the first of the year

home

Legislation T 📑 Contact us

em Info	ormation								
Title:		Traffi	Traffic Control Devices Including Marked Crosswalks Administrative Rule						
tem #:						Status:	Held in Com	mittee	
Гуре:						#:	PW		
Version: 5 <sup>th</sup>						Jordan Hess	3		
Meeting	Date:	<u>1/1/2</u>	<u>050</u>						
Meeting	Туре:	PW F	Referrals	Held in Committee		Video:	No Video Av	/ailable	
Attachm	onte								
	ents.								
<b>Fext</b>									
<b>Fext</b>	Available								
<b>Text</b> Vo Text /		ltem #	Туре	Status	Meeting Date	Meeting Type			
<b>Text</b> Vo Text /	Available	Item #	Туре	Status	Meeting Date 12/14/2015	<b>Meeting Type</b> City Council			
<b>Text</b> Vo Text /	Available Version	ltem #	Туре	Status Held in committee	-				
<b>Text</b> Vo Text /	Available Version 1 <sup>st</sup>	Item #	Туре		12/14/2015	City Council			
<b>Text</b> Vo Text /	Available Version 1 <sup>st</sup> 2 <sup>nd</sup>	ltem #	Туре	Held in committee	<u>12/14/2015</u> <u>12/16/2015</u>	City Council PW			

No voting recorded



### **DEVELOPMENT SERVICES**

435 RYMAN | MISSOULA, MT 59802-4297 | 406.552.6630 | FAX 406.552.6053

	STREET VACATION REFERRAL	
Agenda item:	St. Patrick's Hospital W. Pine Street Right-of-Way Vacat Streets	ion Between May and McCormick
Report Date:	September 19, 2019	12 13 14 15 10 00
Location of request:	The southerly 33 feet of the W. Pine Street right-of-way between May and McCormick Streets.	10 10 10 10 10 10 10 10 10 10 10 10 10 1
Applicant:	St. Patrick Hospital Corp. (Phil Lafata – owner's designated representative)	TO No.
Representative:	Jeff Smith, PE with WGM Group, Inc.	9 8 These
Case Planner:	Mary McCrea, Planning Supervisor	
Report Reviewed & Approved By:	Mary McCrea, Planning Supervisor with review by City Engineering and Aaron Wilson, Transportation Planning Manager	15 10 11 10 10 10 10 10 10 10 10 10 10 10
Growth Policy:	The applicable regional plan is the 2035 Our Missoula: City Growth Policy, which recommends a land use designation of Urban Center.	Processed Vacations Parcel Boundaries 
SCHEDULE AND RECOM	MENDED MOTIONS	
Public Works (PW) Committee:	September 25, 2019	
PW recommended motion:	Adopt a resolution of intention to vacate the southerly thi Street right-of-way between May and McCormick Street described as Lots $11 - 20$ , Block 41 and Lots $1 - 10$ , Blo Addition in Section 21, Township 13 N, Range 19 W, P.N subject to the conditions of approval and set a public hea	adjacent to property legally ock 50 of W.J. McCormick's M.M., as shown in Exhibit A, and
Public Hearing (P/H):	October 28, 2019	
P/H recommended motion:	(Adopt/Deny) a resolution to vacate the southerly thirty-tright-of-way between May and McCormick Street adjace Lots 11 – 20, Block 41 and Lots 1 – 10, Block 50 of W.J. 21, Township 13 N, Range 19 W, P.M.M., as shown in E conditions of approval.	nt to property legally described as McCormick's Addition in Section

### I. CONDITIONS OF APPROVAL

- The developer shall prepare and file easements in the location of existing utility lines currently located within the portion of the W. Pine Street right-of-way to be vacated, subject to review and approval of the affected utility companies, Missoula Water, and the City Engineer. The easements shall be filed within sixty (60) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula.
- 2. The developer shall prepare plans for and relocate existing utility lines into the remaining W. Pine Street right-of-way, within one hundred and twenty (120) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula, subject to review and approval of the affected Utility companies, Missoula Water and the City Engineer. Building permits for structures within the vacated right-of-way shall not be approved until existing utility lines are relocated and the easements are vacated.
- 3. The developer shall provide a Revised W. Pine Street Conceptual Layout within sixty (60) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula, to show the southerly 33 feet of W. Pine Street right-of-way vacated, moving the southerly sidewalk, boulevard, curb, gutter and drive lanes to the south and adding the additional 7 feet of roadway to the north side, subject to review and approval of the City Engineer.
- 4. The developer shall enter into an agreement with the City of Missoula that stipulates St. Patrick's Hospital Corp. will pay for construction and maintenance of the round-about and if the round-about does not function appropriately at this intersection as determined by the City Engineer, St. Patrick's Hospital Corp. will pay to remove the round-about and restore this intersection to meet typical engineering road standards, subject to review and approval of the City Attorney and the City Engineer. The Agreement will be filed with the County Clerk and Recorder within sixty (60) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula.

### II. PROJECT SUMMARY

#### **Background & Introduction**

St. Patrick's Hospital Corp., represented by Phil Lafata, owner's designated representative and Jeff Smith, WGM Group, Inc., request to vacate the southerly thirty-three (33) feet of the W. Pine Street right-of-way between May and McCormick Streets. The applicant's purpose for the right-of-way vacation is to facilitate construction of a proposed parking structure and medical office building on the block south of W. Pine Street between May and McCormick Streets.

The applicant states the parking structure will provide approximately five hundred (500) new off-street parking spaces for hospital patients, visitors, and employees, and will reduce the hospital's parking demand on the existing on-street parking inventory in the neighborhood. The building geometry necessary to create a parking structure layout that allows for this large number of parking spaces requires that the building extend north into the existing W. Pine Street right-of-way.

The original submittal packet requested vacation of the southerly forty (40) feet of W. Pine Street between May and McCormick Streets. The applicant received comment from John Olson with CenturyLink, informing them that relocation of CenturyLink high density cables would create significant delays for the hospital project. The applicant's representative, Jeff Smith of WGM Group, Inc., informed DS Staff that they would like to limit the right-of-way vacation to the southerly thirty-three (33) feet of W. Pine Street between May and McCormick Streets in order to maintain the existing location of the CenturyLink facilities.

#### Property Information

General:

- 1. This is a request from Phil Lafata, St. Patrick's Hospital Corp. designated representative, to vacate the southerly thirty-three (33) feet of the W. Pine Street right-of-way between May and McCormick Streets.
- The full legal description of the area to be vacated is: the southerly thirty-three (33) feet of the W. Pine Street right-of-way between May Street and McCormick Street adjacent to property legally described as Lots 11 – 20, Block 41 and Lots 1 – 10, Block 50 of W.J. McCormick's Addition in Section 21, Township 13 N, Range 19 W, P.M.M.

- 3. If vacated, the street square footage will be permanently added to Lots 1 10, Block 50 of W.J. McCormick's Addition in Section 21, Township 13 N, Range 19 W.
- 4. The zoning of the subject property is C1-4 Neighborhood Commercial /DE-D Design Excellence Downtown Outer Core Overlay. Medical office use and a parking structure are permitted in the C1-4 zoning district.
- 5. The Our Missoula City Growth Policy 2035 is the applicable regional plan and recommends an Urban Center land use designation for the subject property.

### Utilities:

- 6. Northwestern Energy commented that they currently own facilities in area proposed to be vacated and requested a 10 foot wide utility easement for their natural gas main pipeline be reflected/recorded to protect their access rights. Upon completion of the natural gas main pipeline relocation, the easement could be extinguished.
- 7. Staff recommends a condition of approval requiring the developer to prepare and file easements in the location of existing utility lines currently located within the portion of the W. Pine Street right-of-way to be vacated, subject to review and approval of the affected utility companies, Missoula Water, and the City Engineer.
- 8. Missoula Water commented that the City has plans to abandon the existing 6 inch water main from 1914 in W Pine Street from McCormick Street to the railroad tracks and replace it with a new 12 inch main. The exact alignment of the proposed water main is not yet determined but it will not be the same alignment as the existing main. Missoula Water plans to bid the water main replacement project this winter and construct the new main in the spring of 2020.
- 9. The applicant will need to coordinate relocation of utilities with Missoula Water so that the relocated natural gas main pipeline is not near the proposed alignment of the new water main.
- 10. Staff recommends a condition of approval requiring the developer to prepare plans for and relocate existing utility lines into the remaining W. Pine Street right-of-way, subject to review and approval of the affected Utility companies, Missoula Water and the City Engineer. Building permits for structures within the vacated right-of-way shall not be approved until existing utility lines are relocated and the easements are vacated.
- 11. John Olson with CenturyLink requested that the original request to vacate the southerly 40 feet of the W. Pine Street right-of-way be revised to vacate the southerly 33 feet of the W. Pine Street right-of-way between May and McCormick Streets in order to keep their existing high density cables in their current location within the right-of-way.
- 12. Jeff Smith with WGM Group, Inc., requested to revise their request to accommodate the current location of the CenturyLink high density cables.
- 13. Staff recommends a condition of approval requiring the developer to revise the W. Pine Street layout to show the southerly 33 feet of W. Pine Street right-of-way vacated, moving the southerly sidewalk, boulevard, curb, gutter and drive lanes to the south and adding the additional 7 feet of roadway to the north side as a parallel parking lane, subject to review and approval of the City Engineer.

#### **Proposed Development**

- 14. The applicant's purpose for the right-of-way vacation is to facilitate construction of a proposed parking structure and medical office building on the block south of W. Pine Street between May and McCormick Streets.
- 15. The applicant states the parking structure will provide approximately five hundred (500) new off-street parking spaces for hospital patients, visitors, and employees, and will reduce the hospital's parking demand on the existing on-street parking inventory in the neighborhood.
- 16. The building geometry necessary to create a parking structure layout that allows for this large number of parking spaces requires that the building extend north into the existing W. Pine Street right-of-way.
- 17. The Air Program at the Missoula City-County Health Department did not express concerns regarding the rightof-way request. The Air Program requests that when the project is finalized, consideration for bike and pedestrian traffic be incorporated into the final design.
- 18. Development Services Transportation Division reviewed the request with a big picture look at traffic circulation and parking in the immediate area adjacent to the St. Patrick's Hospital Corp. campus. Transportation staff wanted the applicant and City Council to be aware of future near-term changes to Spruce Street which will result

in upgrades to Spruce Street including restriping to add bike lanes. Under the current Spruce Street configuration and curb-to-curb street width, there is currently insufficient width to accommodate the addition of bike lanes while still maintaining vehicle parking on both sides of the roadway.

- 19. Development Services Transportation Division noted that the W. Pine Street right-of-way vacation will result in the loss of thirty-six (36) on-street parking spaces on W. Pine Street between May and McCormick Streets. Additional on-street parking spaces will be lost along Spruce Street adjacent to the St. Patrick's Hospital property with the future changes to Spruce Street to add bike lanes, however parking pressures will be greatly relieved through St. Patrick's Hospital Corp. construction of a new structured parking facility.
- 20. Development Services Transportation Division provided the following reasons for the future near-term changes to Spruce Street:
  - a. Spruce St is a high priority project in the City and MPO's transportation plans. It is the 5<sup>th</sup> highest ranking non-motorized project in the Long Range Transportation Plan.
  - b. In the Long Range Transportation Plan, the Bicycle Facilities Master Plan, and in the draft Downtown Master Plan, Spruce Street between Orange St and Toole Ave is identified as a primary bicycle corridor requiring dedicated bicycle facilities.
  - c. Between the years of 2007-2017, there were three (3) identified bicycle crashes, all occurring between McCormick and May. The three (3) crashes led to two (2) serious/incapacitating injuries and one (1) possible injury. Given estimated bicycle volumes on Spruce Street, this indicates a potential safety issue with the current configuration.
  - d. The City's 2016 Complete Streets Policy calls for the following: "When there are conflicting needs among users and modes, the following prioritization will apply: (1) above all, safety is paramount, followed by mobility; (2) among modes, pedestrians shall come first city-wide, followed by the next most vulnerable types of users; and finally (3) seek balance among all modes involved.
  - e. Due to the crash trend and severity of injury to people on bikes, the limited right-of-way width of Spruce Street, and identified mobility need, the Complete Streets Policy supports that priority should be given to providing safe and comfortable bicycle facilities along Spruce Street.
  - f. Administrative Rule 415 requires the consideration of bicycle facilities on arterials and collectors designated as bike lanes or bike routes. The rule further requires the prioritization of bike lanes on these streets, and includes evaluation of "is there on-street parking which can be removed or reconfigured to make room for bike lanes?"
  - g. Spruce Street is functionally classified as a collector and is designated as a bike route. There is currently parking on both sides of Spruce Street between Orange and Toole (excepting the south side of the street between McCormick and Owen).
  - h. Bike lanes were precluded from previous restriping projects in part due to the need to maintain on-street parking near St. Patrick's Hospital Corp. campus.
  - i. The draft Missoula Downtown Master Plan update includes a recommendation that the City examine expansion of the Parking Commission jurisdiction to include the area between Orange St, Toole/Railroad, and W. Broadway. Expansion of the Parking Commission district could work in conjunction with planned St. Patrick's Hospital expansion and construction of structured parking to significantly reduce demand for onstreet parking. Expansion of the district could include metered parking on W. Pine Street and McCormick Street.
  - j. Long-term improvements to Spruce Street could include reconstruction to a complete street within a wide right-of-way of 90 feet to 100 feet that would include sidewalks, boulevards, bike lanes, parking and travel lanes, however no funding has been identified for these improvements.
- 21. Development Services Transportation Division commented that the W. Pine Street right-of-way does not impact planned improvements to Spruce Street directly. However, the need and demand for on-street parking often results in the public or adjacent property owners opposing implementation of the City's area transportation, facilities, and other master plans. The loss of on-street parking on W. Pine Street and in the future on Spruce Street should not prevent the installation or striping of bicycle facilities on Spruce Street, especially since there is

a demonstrated need for these important public health and safety improvements. Improvements to Spruce Street rely on a shift in parking from public on-street to private off-street structured lots and if the W. Pine Street right-of-way vacation is approved, it should be done with the understanding that it may further compound availability of public on-street parking once Spruce Street projects are implemented in the future. However, safety and long range planning goals should prioritize installation of a bike lane as soon as feasible and that parking will be provided through the new parking structure rather than on street.

- 22. The conceptual W. Pine Street layout includes a round-about at the intersection of W. Pine Street and McCormick Street. The round-about is smaller than typical engineering design for a round-about. The City Engineer is comfortable with the installation of the round-about to see whether this round-about design can function appropriately at this intersection, however the City Engineer requires the owner to install and maintain the round-about and pay for the cost to remove the round-about if the City Engineer determines it does not function well.
- 23. The City Engineer recommends a condition of approval requiring St. Patrick's Hospital Corp. enter into an agreement with the City of Missoula that stipulates St. Patrick's Hospital Corp. will pay for construction and maintenance of the round-about and if the round-about does not function appropriately at this intersection as determined by the City Engineer, St. Patrick's Hospital Corp. will pay to remove the round-about and restore this intersection to meet typical engineering road standards.

#### **Statutory Requirements:**

- 24. Section 7-14-4114(1) of Montana Code Annotated states that City Council may discontinue a street or alley or any part of a street or alley in a city or town, if it can be done without detriment to the public interest.
- 25. The St. Patrick's Hospital Corp. representative has submitted Petition #9984 in support of this vacation request.

### III. AGENCY COMMENT

#### Northwestern Energy:

Mike Cassidy comment: Northwestern Energy currently owns facilities in this proposed vacation area in the form of a natural gas main pipeline. We would respectfully request that our 10' wide easement for this pipeline be reflected/recorded in the amended plat in order to protect our access rights. It should be noted that Northwestern Energy and St. Patrick Hospital are working together to relocate this existing natural gas main pipeline into the Pine Street right of way that will remain after this partial vacation. Upon completion of the main pipeline relocation, the requested easement could be extinguished.

### Missoula Water:

Ross Mollenhauer comment: Missoula Water plans to abandon the existing 6" water main from 1914 in Pine St from McCormick Street to the railroad tracks and replace it with a new 12" main. The exact alignment of the proposed water main is not yet determined but will not be the same alignment as the existing main. It is likely that the alignment of the new water main will be approximately 8' south of the northern telephone lines. After reviewing the existing utilities in the vacated ROW, it looks as though Northwestern Energy will need to relocate their existing gas main that is currently within the vacated portion of the ROW. Missoula Water asks that this gas main not be relocated near the proposed alignment of our new water main. Missoula water plans to bid the water main replacement project this winter and construct this new main in the spring of 2020.

#### Century Link:

John Olson comment: CenturyLink would like to propose that the 40' right-of-way vacate be adjusted to a 33' along the southern edge of Pine St. in order to keep our existing facilities within right-of-way. At 40' this will have an impact on a number of high density cables that, if required to relocate, would create significant delays for the hospital project. **City Fire:** 

### Adam Sebastian comment: The Missoula Fire Department has no concerns with the proposed right-of-way vacation request.

#### **City-County Health Department – Air Program:**

Ben Schmidt comment: The Air Program at the Missoula City-County Health Department has no concerns or comments for the ROW vacancy on W. Pine ST. The Air Program does request that when the project is finalized, that consideration for bike and pedestrian traffic be incorporated into the final design.

Exhibit A—Map of Area to be Vacated Resolution of Intention to Vacate W. Pine Street Petition # 9984 Return to: City Clerk City of Missoula 435 Ryman Street Missoula MT 59802-4297

Resolution Number \_\_\_\_\_

A resolution closing and vacating public right-of-way being the southerly 33 feet of West Pine Street between May and McCormick Streets adjacent to Lots 11 – 20, Block 41 and Lots 1 – 10, Block 50 of W.J. McCormick's Addition in Section 21, Township 13 North, Range 19 West, P.M.M, as shown in Exhibit A, and set a public hearing on October 28, 2019.

#### Be it resolved by the City Council of the City of Missoula, Montana.

**SECTION I.** THAT it is the intention of the City Council of the City of Missoula, Montana, to close and vacate all that portion of right-of-way described below and shown on attached Exhibit A, subject to the four (4) conditions of approval noted in Section II:

The southerly 33 feet or West pine Street between May and McCormick Streets adjacent to Lots 11 - 20, Block 41 and Lots 1 - 10, Block 50 of W.J. McCormick's Addition in Section 21, Township 13 North, Range 19 West, P.M.M.

**SECTION II.** THAT the vacated right-of-way will revert to and combine with adjacent private property upon vacation approval and shall attach to the adjacent properties and the titled owners in accordance with Section 70-16-202 of the Montana Code Annotated as follows:

Lots 1 – 10, Block 50 of W.J. McCormick's Addition on file and of record in Missoula County, Montana, located in Section 21, Township 13 North, Range 19 West, P.M.M.

FURTHER, that the vacation is contingent upon the following four (4) conditions of approval for the vacation:

- The developer shall prepare and file easements in the location of existing utility lines currently located within the portion of the W. Pine Street right-of-way to be vacated, subject to review and approval of the affected utility companies, Missoula Water, and the City Engineer. The easements shall be filed within sixty (60) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula.
- 2. The developer shall prepare plans for and relocate existing utility lines into the remaining W. Pine Street right-of-way, within one hundred and twenty (120) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula, subject to review and approval of the affected Utility companies, Missoula Water and the City Engineer.
- 3. The developer shall revise the W. Pine Street layout within sixty (60) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula, to show the southerly 33 feet of W. Pine Street right-of-way vacated, moving the southerly sidewalk, boulevard, curb, gutter and drive lanes to the south and adding the additional 7 feet of roadway to the north side as a parallel parking lane, subject to review and approval of the City Engineer.

4. The developer shall enter into an agreement with the City of Missoula that stipulates St. Patrick's Hospital Corp. will pay for construction and maintenance of the round-about and if the round-about does not function appropriately at this intersection as determined by the City Engineer, St. Patrick's Hospital Corp. will pay to remove the round-about and restore this intersection to meet typical engineering road standards, subject to review and approval of the City Attorney and the City Engineer. The Agreement will be filed with the County Clerk and Recorder within sixty (60) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula.

**WHEREAS**, the City Council adopted on the 7<sup>th</sup> day of October, 2019 Resolution No. 8383 declaring the City Council's intention to close and vacate said right-of-way herein described; and

**WHEREAS**, the City Council heard, on the 28<sup>th</sup> day of October, 2019 hear all matters pertaining to the proposed closing and vacation of said right-of-way as herein described; and

WHEREAS, the property intended to be vacated is subject to any and all utility easements over and across said property in accordance with Section 7-14-4115 of the Montana Code Annotated to continue the installation, maintenance, and repair of any and all public utilities. The property owners benefiting from the vacated right-of-way assume all risk for the installation, placement or construction of any improvement over any easement in which a municipal utility is located and the City shall in no way be liable for any damage to those improvements occasioned by the repair and maintenance of any utilities.

FURTHER, in the event the conditions are not met, this vacation approval shall be withdrawn, the vacation will be declared null and void and the right-of-way shall be returned to public use.

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL** of the City of Missoula, Montana, that the aforesaid right-of-way as herein before described, be and the same is, hereby closed and vacated subject to the four conditions of approval noted herein and subject to any utility easements over and across said property to continue the installation, maintenance, and repair of any and all public utilities. The property owners benefiting from the vacated right-of-way assume all risk for the installation, placement or construction of any improvement over any easement in which a municipal utility is located and the City shall in no way be liable for any damage to those improvements occasioned by the repair and maintenance of any utilities.

**PASSED** by the City Council of Missoula, Montana, and approved by the Mayor this 28<sup>th</sup> day of October, 2019.

#### ATTEST:

### **APPROVED:**

Martha L. Rehbein, CMC City Clerk John Engen Mayor

(SEAL)

201914852B: 1017 P: 1387Pages: 4Fees: \$5.0009/04/2019 02:02:06 PMCity Vacation PetitionTyler R. Gernant, Missoula County Clerk & RecordereRecording

Return to:

City Clerk City of Missoula 435 Ryman Street Missoula MT 59802

PETITION NO BEFORE THE CITY C OF THE **CITY OF MISSOULA** 

PETITION TO VACATE PUBLIC RIGHTS-OF-WAY

**COME NOW the undersigned and respectfully petition** the City Council of the City of Missoula to consider vacating the herein described public rights-of-way.

The petitioner hereby:

- 1. Agrees to comply with any conditions described in the resolution that vacates the herein described public rights-of-way; and
- Recognizes the fact that non-compliance will result in the vacation becoming null and void and reverting to public right-of-way.

Petitioners have prepared a submittal package describing the particulars of the request according to Missoula Municipal Code 12.04 and have attached the same to this petition for City Council review.

Dated this 12 day of August, 2019.

### DESCRIPTION OF RIGHTS-OF-WAY SUBJECT TO THIS PETITION:

Those certain public rights-of-way within the City of Missoula, being the southerly 40-feet of the 102 foot wide public right-of-way known as Pine Street from the easterly right-of-way line of May Street to the westerly right-of-way line of McCormick Street, located in the Northeast 1/4 of Section 21, Township 13 North, Range 19 West, P.M.,M. The said public rights-of-way to be vacated are specifically shown on the attached exhibit entitled "Proposed Vacated Rights-of-Way Exhibit" and by this reference incorporated herein.

### **PETITIONER SIGNATURE:**

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals this  $\frac{\sqrt{7}}{\sqrt{7}}$  day of August, 2019.

St. Patrick Hospital Corporation

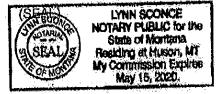
Authorized Official of St. Patrick Hospital Corporation Hospital By: Capition KIRK BODLOVIC By:

#### ACKNOWLEDGMENT

STATE OF MONTANA 1 ) ss. COUNTY OF MISSOULA

à

On the 2nd day of May, 2016, before me personally appeared Name, to be personally known, who being by me duly sworn did say he an Authorized Official of St. Patrick Hospital Corporation, the company that executed the within Instrument, known to me to be the person who executed the within instrument on behalf of said company therein named, and acknowledged to me that such company executed the within instrument pursuant to Its Operating Agreement.

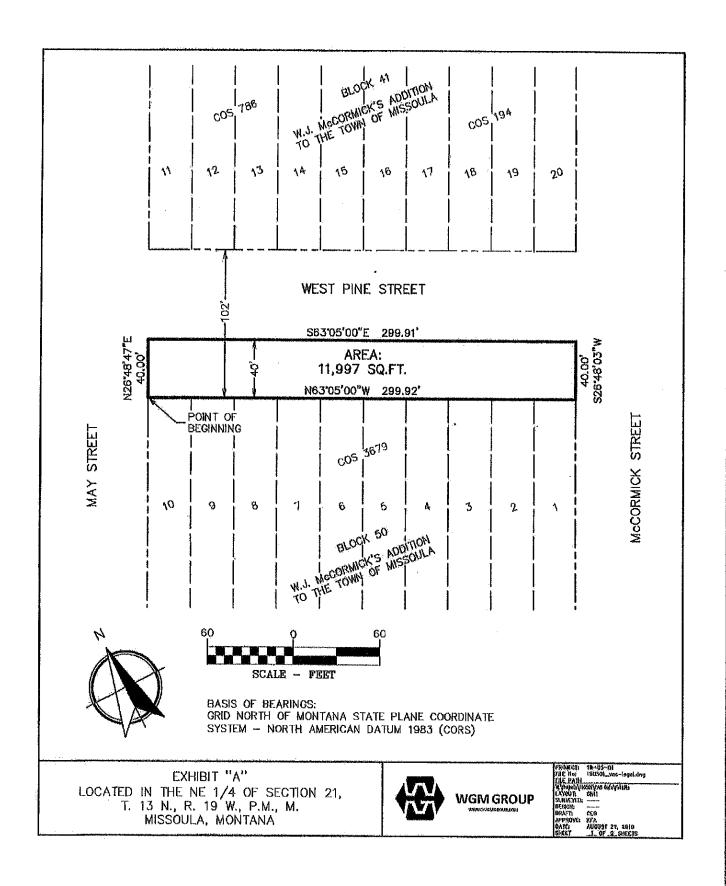


dom Sconce	
Printed Notary Name AUNN SCONCC.	
Notary Public for the State of MONTARACA	
Instant Instant	.ч.

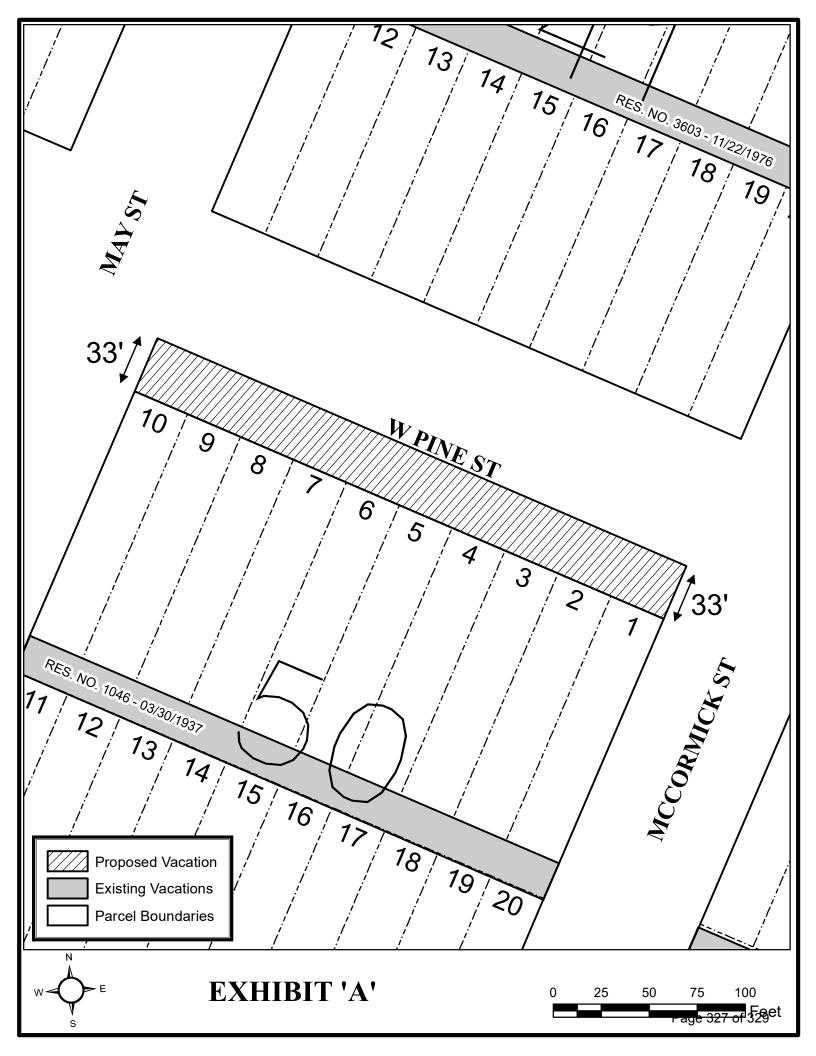
Residing at NU2014 My Commission Expires: MC

Page 2 of 2

201914852 Page 3 of 4 09/04/2019 02:02:06 PM



LEGAL DESCRIPTION \*\*\*\* A TRACT OF LAND BEING A PORTION OF THE WEST PINE STREET RIGHT-OF-WAY ADJOINING BLOCK 50 OF W.J. McCORMICK'S ADDITION TO THE TOWN OF MISSOULA, A RECORDED SUBDIVISION OF MISSOULA COUNTY, MONTANA; LOCATED IN THE NORTHEAST QUARTER OF SECTION 21, TOWNSHIP 13 NORTH, RANGE 19 WEST, PRINCIPAL MERIDIAN, MONTANA; MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE MOST NORTHERLY CORNER OF SAID BLOCK 50; THENCE N 26'48'47" E ALONG THE NORTHEASTERLY PROLONGATION OF THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF MAY STREET, 40.00 FEET TO A POINT ON A LINE PARALLEL WITH AND 40,00 FEET, MEASURED AT RIGHT ANGLES, NORTHEASTERLY OF THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF WEST PINE STREET; THENCE S 63'05'00" E ALONG SAID PARALLEL LINE, 299.91 FEET TO A POINT ON THE NORTHEASTERLY PROLONGATION OF THE NORTHWESTERLY RIGHT-OF-WAY LINE OF McCORMICK STREET; THENCE S 26'48'03" W ALONG LAST SAID NORTHEASTERLY PROLONGATION, 40.00 FEET TO THE MOST EASTERLY CORNER OF SAID BLOCK 50; THENCE N 63'05'00" W ALONG THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF WEST PINE STREET, 299,92 FEET TO THE POINT OF BEGINNING; CONTAINING 11,997 SQUARE FEET, MORE OR LESS. SURVEYOR'S STATEMENT\*\*\*\* NONTAN THIS EXHIBIT WAS PREPARED UNDER MY SUPERVISION. KIRK F. ADKINS 08/22/2019 KIRK F. ADKINS, P.L.S. DATE 16734 LS MONTANA LICENSE NO. 16734LS FOR WGM GROUP, INC. UNLESS SIGNED, SEALED, AND DATED, THIS IS A PRELIMINARY OR UNOFFICIAL DOCUMENT AND WALLANC **HANNING MAN** CANNOT BE RELIED UPON IN WHOLE OR PART. 10-03-01 100501, vos-tagolilas nE ho: 100001, vas-lag HE PADI Avident Shi2 EXHIBIT "A" AYOUT SHIZ LOCATED IN THE NE 1/4 OF SECTION 21, WGM GROUP OCSICH ORAFA APPROVE CEO KFA AUGUST 22, 2019 T. 13 N., R. 19 W., P.M., M. MISSOULA, MONTANA



Return to: City Clerk City of Missoula 435 Ryman Street Missoula MT 59802-4297

Resolution Number \_\_\_\_\_

A resolution declaring it to be the intention of the City Council of the City of Missoula, Montana, to close and vacate public right-of-way being the southerly 33 feet of West Pine Street between May and McCormick Streets adjacent to Lots 11 - 20, Block 41 and Lots 1 - 10, Block 50 of W.J. McCormick's Addition in Section 21, Township 13 North, Range 19 West, P.M.M, as shown in Exhibit A, and set a public hearing on October 28, 2019.

Be it resolved by the City Council of the city of Missoula, Montana.

**SECTION I**. THAT Petition #9984 requested vacation of the southerly 40 feet of the West Pine Street right-of-way, however due to the existing location of CenturyLink high density cables and request by CenturyLink that the cables remain in place and not be relocated, the petitioner revised their request to vacate only the southerly 33 feet of the West Pine Street right-of-way between May and McCormick Streets.

**SECTION II.** THAT it is the intention of the City Council of the City of Missoula, Montana, to close and vacate all that portion of right-of-way described below and shown on attached Exhibit A, subject to the four (4) conditions of approval noted in Section III:

The southerly 33 feet or West pine Street between May and McCormick Streets adjacent to Lots 11 - 20, Block 41 and Lots 1 - 10, Block 50 of W.J. McCormick's Addition in Section 21, Township 13 North, Range 19 West, P.M.M.

**SECTION III**. THAT the vacated right-of-way will revert to and combine with adjacent private property upon vacation approval and shall attach to the adjacent properties and the titled owners in accordance with Section 70-16-202 of the Montana Code Annotated as follows:

Lots 1 – 10, Block 50 of W.J. McCormick's Addition on file and of record in Missoula County, Montana, located in Section 21, Township 13 North, Range 19 West, P.M.M.

FURTHER, that the vacation is contingent upon the following four (4) conditions of approval for the vacation:

- The developer shall prepare and file easements in the location of existing utility lines currently located within the portion of the W. Pine Street right-of-way to be vacated, subject to review and approval of the affected utility companies, Missoula Water, and the City Engineer. The easements shall be filed within sixty (60) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula.
- 2. The developer shall prepare plans for and relocate existing utility lines into the remaining W. Pine Street right-of-way, within one hundred and twenty (120) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula, subject to review and approval of the affected Utility companies, Missoula Water and the City Engineer. Building permits for structures within the vacated right-of-way shall not be approved until existing utility lines are relocated and the easements are vacated.

- 3. The developer shall revise the W. Pine Street layout within sixty (60) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula, to show the southerly 33 feet of W. Pine Street right-of-way vacated, moving the southerly sidewalk, boulevard, curb, gutter and drive lanes to the south and adding the additional 7 feet of roadway to the north side as a parallel parking lane, subject to review and approval of the City Engineer.
- 4. The developer shall enter into an agreement with the City of Missoula that stipulates St. Patrick's Hospital Corp. will pay for construction and maintenance of the round-about and if the round-about does not function appropriately at this intersection as determined by the City Engineer, St. Patrick's Hospital Corp. will pay to remove the round-about and restore this intersection to meet typical engineering road standards, subject to review and approval of the City Attorney and the City Engineer. The Agreement will be filed with the County Clerk and Recorder within sixty (60) days of approval of the Resolution to Vacate, or the right-of-way vacation is null and void and will revert back to the City of Missoula.

**SECTION IV**. THAT the City Council will, at its regular meeting to be held on the 28<sup>th</sup> day of October, 2019 at the hour of 7:00 P.M., in the City Council Chambers at 140 West Pine Street, Missoula Montana, hear all matters pertaining to the proposed vacation as set out in Section II above.

THAT the property intended to be vacated is subject to any and all utility easements over and across said property in accordance with Section 7-14-4115 of the Montana Code Annotated to continue the installation, maintenance, and repair of any and all public utilities. The property owners benefiting from the vacated right-of-way assume all risk for the installation, placement or construction of any improvement over any easement in which a municipal utility is located and the City shall in no way be liable for any damage to those improvements occasioned by the repair and maintenance of any utilities.

**<u>SECTION V</u>**. THAT this resolution be noticed and notice of the hearing concerning the vacation of the medians as described herein be given as provided by law.

**PASSED** by the City Council of Missoula, Montana, and approved by the Mayor this 7<sup>th</sup> day of October, 2019.

### ATTEST:

APPROVED:

Martha L. Rehbein, CMC City Clerk John Engen Mayor

(SEAL)