



City of Union

Agenda

City Council Meeting

Monday, May 13, 2024 @ 7:00 PM

Leonard Almquist Council Chambers, 342 S. Main St,
Union, OR 97883

	Page
1. CALL TO ORDER, PLEDGE OF ALLEGIANCE, ROLL CALL:	
Mayor:	Hawkins
Councilors:	Farmer, Cox, Black, Blackburn, Middleton, and Boyer-Davis
2. CORRESPONDENCE PERTINENT TO AGENDA BUSINESS ITEMS:	
3. OLD BUSINESS:	
Public comment is welcome on each subject addressed under the public comment rules stated below.	
3.1. Law Enforcement Contract	4 - 13
2024-2028 Union County Contract - Pdf	
3.2. Fire EMS Rate	14 - 18
Fire EMS Rate Information - Pdf	
4. NEW BUSINESS:	
Public comment is welcome on each subject addressed under the public comment rules stated below.	
4.1. General Election Application Deadlines	19 - 20
Resolution 2024-06 Candidate Filing - Pdf	
4.2. Bucket Truck	21 - 32
Quotes - Pdf	
4.3. Fire Department Equipment	33 - 38
SCBA Quotes - Pdf	
4.4. Umpqua Bank Account Signers	
4.5. Diesel Spill on Right-of-Way	39 - 44
Union City Hall Estimate	
Diesel Spill	
Clean Up Contractors	
5. CONSENT AGENDA:	
5.1. Business/Special Meeting Minutes	
• April 8th, 2024 City Council Meeting	45 - 49
City Council - Apr 08 2024 - Minutes - Pdf	
5.2. Work Session Minutes	
• April 8th, 2024 Work Session	50 - 52
Council Work Session - Apr 08 2024 - Minutes - Pdf	

5.3. Information Reports

- Office Manager Report 53 - 70
[April 2024 - Pdf](#)
- Library Monthly Report 71 - 72
[April 2024 - Pdf](#)
- Fire/EMS Monthly Report
- Sheriff's Monthly Report 73 - 77
[April 2024 - Pdf](#)

6. CITY COUNCIL WORKING COMMITTEE UPDATES:

- 6.1. Water Sewer Committee 78
[April 2024 - Pdf](#)
- 6.2. Charter Committee
- 6.3. Zoning Committee
- 6.4. Trails Committee
- 6.5. Buffalo Flat Project Update 79 - 180
[May 2024 Buffalo Flat Design Project Update - Pdf](#)

7. CITY ADMINISTRATOR / PUBLIC WORKS REPORT:

- 7.1. Public Works Report 181 - 182
[April 2024 - Pdf](#)
- 7.2. April 2024 Wastewater Report 183 - 184
[April 2024 - Pdf](#)
- 7.3. City Administrator Report 185
[April 2024](#)

8. PUBLIC COMMENT

Audience members may bring any concern before the Council at this time.

Public comment rules:

All public comment is subject to 3 minutes per individual and time may be cut short by the Mayor if the information addressing the Council becomes redundant. All persons addressing the Council must speak at the lectern and prior to speaking must state their name and address.

9. UPCOMING MEETINGS AND SUGGESTIONS:

- 9.1. May 14th, 2024 - Trails Workgroup @ 6pm
- 9.2. May 15th, 2024 - Charter Committee @ 9am
- 9.3. May 15th, 2024 - Planning Commission @ 7pm
- 9.4. May 27th, 2024 - Memorial Day - Council Work Session?
- 9.5. June 3rd, 2024 - Water Sewer Committee @ 7:30pm
- 9.6. June 5th, 2024 - Charter Committee @ 9am

- 9.7. June 6th, 2024 - Zoning Committee @ 6pm
- 9.8. June 10th, 2024 - Council Work Session @ 6pm
- 9.9. June 10th, 2024 Council Business Meeting @ 7pm
- 9.10. June 10th, 2024 - Budget Hearing @ 7:15pm
- 9.11. June 24th, 2024 - Council Work Session - Parks Master Plan (Architects in attendance)

10. **ADJOURNMENT:**

The City of Union Regular Business Meeting will be streamed live on our Facebook page beginning at 7:00pm. Please like and follow our Facebook page (<http://www.facebook.com/cityofunion.ontheweb>), to be notified and view our live feed. The feed will be monitored and pertinent comments to all matters being discussed will be shared with Council. You may also email comments to admin@cityofunion.com during the meeting, which will be shared with Council at the appropriate time.

For any questions, please contact us at 541-562-5197.

Seating in the Leonard Almquist Chambers is open to the public.

If you have a disability that requires any special materials, services, or assistance, please contact City Hall at 541-562-5197 so we may arrange appropriate accommodations.



Memorandum

Subject: Law Enforcement Contract
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Celeste Tate, Administrator

BACKGROUND INFORMATION:

As previously presented, a proposed contract has been verbally agreed to by Sheriff Bowen and is presented to the council for consideration.

FINANCIAL IMPACT:

\$82,871.00 in the 2024-2025 year which is within the budgeted amount. Subsequent years include a 4% increase each year.

POLICY IMPLICATIONS:

A Law Enforcement contract for public safety in place the next 4 years.

RECOMMENDATION:

Approve the proposed contract, effective July 1, 2024

ATTACHED:

[24-28 Union County Draft clean copy](#)

[Exhibit A clean copy](#)

[Exhibit B clean copy](#)

INTERGOVERNMENTAL AGREEMENT FOR SHERIFF'S SERVICES

THIS AGREEMENT, made and entered into this 1st day of July, 2024, is between Union County, Oregon, "County," the Union County Sheriff, "Sheriff," and the City of Union, "City."

RECITALS

1. The City of Union desires to maintain a law enforcement presence to handle all public safety and law enforcement matters which the department has traditionally handled. The Sheriff has offered to provide the City with law enforcement by assigning deputies to patrol the City. These deputies would focus almost exclusively on the health and safety concerns of the citizens of the City of Union. The Agreement below will facilitate the goals of both the City and the Sheriff by governing the service to be provided by the Sheriff to the City and providing for compensation for such services to be paid to the County.

2. The City desires to contract with the Sheriff and the County and the Sheriff and County desires to contract with City to provide law enforcement, and safety services to the City under the terms and conditions stated in this agreement.

3. Oregon law allows for Cities to contract with the Sheriff and the governing body of the County for the provision of law enforcement, and safety services within cities. ORS 190.010 and 206.345.

NOW, THEREFORE, IN CONSIDERATION OF THE MUTUAL PROMISES AND COVENANTS HEREIN CONTAINED, IT IS MUTUALLY AGREED AS FOLLOW:

1. Sheriff agrees to provide law enforcement, health and safety protection and services in the following particulars as described below:
 - a. Services shall encompass duties and enforcement functions of the type coming within the jurisdiction of and customarily rendered by the Sheriff under the statutes of Oregon. Such services include, but are not limited to those involved in the field of public safety, criminal law enforcement, traffic enforcement, code enforcement or related fields within the power of the Sheriff to provide.
 - b. If CITY utilizes services for municipal ordinance enforcement, the CITY and SHERIFF will coordinate the activities of the assigned deputies and personnel providing service under this Agreement

with ordinance enforcement when law enforcement support is deemed necessary.

c. The sheriff will assign deputies to provide the principal service to the City under this Agreement. These deputies will be available to provide at least 120 hours per month of public safety coverage for the City. Public safety coverage means the Sheriff will have the deputy available and on patrol. Available and on patrol will include time spent at trials and hearings, report writing and attending City meetings. The term patrol includes those duties customarily and statutorily performed by certified police officers assigned to marked vehicle uniformed patrol. The term "patrol" includes random and non-directed vehicular or on-foot patrols through the streets, roads, parks, fields, buildings or other places or locations by a deputy sheriff. Deputy training, as well as regularly occurring time off due to vacations and sick leave will be the responsibility of the Sheriff, which will be done in accordance with the Sheriff's departmental policies. The parties of this agreement understand that officer training is essential to maintain both officer certification and high departmental standards. Furthermore, the parties of this agreement understand that officer training benefits not just the City but the county and department as a whole. In addition, deputies have the same contractually guaranteed benefits as do other employees in terms of vacation and sick leave. When an assigned deputy is attending training or is off due to vacation or sick leave, COUNTY will not back fill position with overtime staff and training time, vacation or sick leave WILL NOT count toward contract hours. However, all calls for service will be responded to and any responses WILL count towards contract hours.

Modification of the 120 hours per month minimum requirement may be made only by written agreement between CITY and SHERIFF as deemed necessary or appropriate for certain extraordinary reason including but not limited to special events, and for a period of time not to exceed one month.

d. The deputies assigned to fulfill the terms of this agreement shall be assigned to work within the city limits of the CITY unless needed for transports of City prisoners, out of the area hearings or trials involving city cases, or Sheriff's Office emergency. The deputies will not be assigned to fill in for other deputies with regular assignments with the Sheriff's office unless required by mutual aide or emergency situations such as SWAT or major crimes. In the case of emergencies or in situation where the assigned deputy must leave the City of Union patrol area, the Sheriff's office will provide the same emergency coverage the Sheriff's office provides the City on the date this agreement is signed. In addition, the time spent away from the City by the patrol deputy will not be counted against the total hours contracted for.

e. All citizen concerns or issues involving law enforcement services or individual or group citizen grievances received by the CITY should be referred to the SHERIFF or his designee.

f. In addition, a written monthly report of the deputies' activities will be made to City Council for City Council meetings.

g. The SHERIFF will meet with the Mayor and City Administrator on a quarterly basis to discuss any areas of concern and may advise the Sheriff whether the general level of service provided is within the expectations of this Agreement. If the expectations are not being met the Sheriff will endeavor to modify the patrols and services so the expectations are met. The SHERIFF will meet with the full Council bi-annually to review compliance with the terms of the Agreement. SHERIFF will notify Mayor and/or City Administrator of major crimes or events occurring in City when appropriate.

h. The Sheriff will rotate deputies who are assigned to the City. Outgoing and incoming deputies will meet with City Administrator to assist with information sharing and coordination of efforts.

i. The City Administrator shall be authorized to request of the SHERIFF aschedule modification to provide event coverage. A 7 day notice will be provided when at all possible.

2. The rendering of the services described above, standards of performance, the discipline of the officers, and all other matters incident to the performance of such services and control of personnel so employed shall remain in the control of the Sheriff, and otherwise under the control and responsibility of the COUNTY. The Sheriff and the City Administrator will work together to address issues of substandard performance and behavioral concerns of deputies brought to the City.

3. All requests for public records of activities performed by SHERIFF under the terms of this Agreement shall be the responsibility of SHERIFF and COUNTY, and nothing in this Agreement shall have the effect of the CITY serving as records custodian for SHERIFF, nor shall CITY be required to respond to public records requests on behalf of SHERIFF or defend any legal action or pay any damages as a result of any such public records request.

5. SHERIFF will furnish and supply all labor, supervision, personal equipment and supplies, and training necessary for the performance of the law enforcement services under this agreement. SHERIFF will provide all necessary

administrative and employer services for all assigned deputies and will comply with all federal, state, and collective bargaining laws and agreements. and to maintain the level of services hereunder.

6. The Sheriff and deputies are vested with full power and authority within the corporate limits of the City to enforce laws as set forth in Section 1 above, including the full power and authority to arrest for violations of municipal code and ordinances, and all rights of enforcement provided to CITY under federal or state law or county ordinance.

7. All persons employed in the performance of services and functions pursuant to this agreement shall be County employees, and no person employed hereunder shall have any City pension, salary, or any status or rights under the provisions as City employees.

8. The City shall not be called upon to assume any liability for the direct payment of any salaries, wages, or other compensation to any County or Sheriff personal performing services pursuant to this agreement, or any liability other than that specifically provided in this agreement. Except as otherwise herein specified, the City shall not be liable for compensation or indemnity to any County or Sheriff employee for any injury or sickness arising out of his/her employment.

9. To the extent permitted by Article XI, sections 9 and 10 of the Oregon Constitution, and within the limits of liability established in the Oregon Tort Claims Act, the City shall defend, indemnify and save the County, its officers, agents, and employees harmless from any and all claims, actions, costs or other damages resulting from injury to any person or damage to property caused by the negligence of the City performing under this agreement.

10. To the extent permitted by Article XI, sections 9 and 10 of the Oregon Constitution, and within the limits of liability established in the Oregon Tort Claims Act, the County shall defend, indemnify and save City, its officers, agents, and employees harmless from any and all claims, actions, costs or other damages resulting from injury to any person or damage to property caused by the negligence of the County performing under this agreement.

11. Each Party to this Agreement hereby covenants and agrees to indemnify and hold and save the other Party, its officers, agents, assigns and employees harmless from all claims whatsoever that might arise against the other Party, its officers, agents, assigns and employees by reason of any act of the first Party, its officers, agents, assigns or employees in the performance of the law enforcement

services or the administration thereof required by the terms of this Agreement, including any cost of defense and attorney's fees associated with such claims.

12. Each Party agrees to carry and keep current policies of insurance to cover liability for physical and personal property damage, false arrest, and civil rights claims which may arise from the performance of law enforcement duties of the SHERIFF

13. This agreement shall be effective the first day of July, 2024 and run to June 30, 2028 unless terminated as provided herein. Subsequent renewals of this contract will run from July 1, through June 30.

The agreement shall be reviewed and renewed on or before March 1, every two years. In any event, either party may terminate this agreement at any time for any failure or refusal on the part of the other to faithfully perform the contract according to its terms.

14. This Agreement may be terminated by either Party, without cause, after providing a minimum of 60 day's written notice of the intent to terminate.

In the event SHERIFF fails to provide law enforcement services for the minimum term of 120 hours per month for three consecutive months, CITY may terminate this Agreement on ten days written notice.

15. In consideration of the services provided for herein and above, the CITY agrees to pay the amounts set forth in the attached Exhibit B, billed and payable quarterly at the beginning of the 3-month period.

16. This agreement shall be governed by and construed in accordance with the laws of the State of Oregon. Each party shall perform its obligations in accordance with all applicable federal, state and local laws, rules, regulations and ordinances.

17. Any notice required to be given under this agreement shall be in writing and shall be given by personal delivery, mail or facsimile transmission. Any notice required by law shall be given in the manner specified by the applicable law.

18. No provision of this agreement shall be deemed waived unless such waiver is in writing and signed by the party waiving its rights. Any waiver of a breach, whether express or implied, shall not constitute a waiver of any other different or subsequent breach.

19. a. There shall be a default under this agreement if either party fails to perform any act or obligation required by this agreement within thirty days after the other party gives written notice specifying the breach with reasonable particularity. If the breach specified in the notice cannot be completely cured within the thirty-day period, no default shall occur if the party receiving the notice begins performance of the act or obligation within the thirty-day period and thereafter proceeds with reasonable diligence and in good faith to cure the breach as soon as practicable.

b. Notwithstanding subsection 19.a, either party may declare a default without allowing the other party an opportunity to cure if the other party repeatedly breaches the terms of this agreement.

c. In the event of default, before either party to this agreement may bring an action in any court concerning any obligation under this agreement, such party must first seek in good faith to resolve the issue through mediation or other non-binding alternative dispute resolution.

d. Pending final resolution of a dispute, or pending termination of this agreement under this section, the parties shall proceed diligently with the performance of this agreement.

e. If a default occurs and it is not resolved under subsection 19.c above, the party injured by the default may elect to terminate this agreement and pursue any equitable or legal right or remedy available under Oregon law.

f. Any litigation arising out this agreement shall be conducted in the Union County Oregon Circuit Court.

g. Should litigation or arbitration be brought to enforce the rights and obligations under this agreement, the prevailing party shall be entitled to its reasonable attorney's fees and other costs at arbitration, at trial, or on appeal.

20. If any provision of this agreement is held by any court to be invalid, such invalidity shall not affect any other provision of this agreement.

21. This agreement constitutes the entire agreement between the parties and supersedes all previous agreements. This agreement may be changed only by written modifications that are signed by both parties.

UNION COUNTY

CITY OF UNION

_____/_____
Union County Commissioner Date

_____/_____
City of Union Mayor Date

_____/_____
Union County Commissioner Date

_____/_____
City of Union City Administrator, Date

_____/_____
Union County Commissioner Date

_____/_____
Union County Sheriff Date

Exhibit A

Contract Services to be Provided:

Provide for public safety by maintaining order, responding to emergencies, protecting people and property, and enforcing motor vehicle and criminal laws, including:

(a) Proactive policing activities including routine and regular patrols of residential, industrial, and commercial areas of the City, including time frames other than during regular business hours, and not merely transient patrols while en route to other areas of the County;

(a) Identify, pursue, and arrest suspects and perpetrators of criminal acts;

(b) Record facts to prepare reports that document incidents and activities;

(c) Review facts of incidents to determine if criminal act or statute violations were involved, prepare written reports, and forward the same to the Union County District Attorney for the possible filing of criminal charges or violations;

(d) Assist the District Attorney and City Prosecutor and appear in Circuit and Municipal Courts, as needed to support legal proceedings;

(e) Conduct traffic patrol and monitor traffic to ensure motorists observe Oregon State and motor vehicle statutes and provisions of the Union City Code related to motor vehicle use, and issue citations or warnings to violators of the same;

(f) Investigate traffic accidents and other accidents to determine causes and to determine if a crime or violation has been committed;

(g) Direct traffic flow and reroute traffic in case of emergencies; and

(h) Investigate reports of City of Union ordinance violations that result in imminent risk to public safety or security of property;

(i) In coordination with municipal ordinance enforcement, enforce violations of municipal ordinances relating to noise violations; ATV operation on City streets; offensive littering; derelict vehicles or vehicles parked in a manner that is blocking traffic creating a hazard; and

(j) Posting or delivery of notices of code and/or nuisance violations that may result in imminent risk to public safety or security of property, or those which originated as a result of Sheriff's office investigations.

EXHIBIT B

COSTS OF SERVICES:

YEAR 1: \$82,871.00 for services including salary and benefits for a .75 FTE deputy

YEAR 2: \$86,186.00 for services including salary and benefits for a .75 FTE deputy

YEAR 3: \$89,633.00 for services including salary and benefits for a .75 FTE deputy

YEAR 4: \$93,219.00 for services including salary and benefits for a .75 FTE deputy



Memorandum

Subject: Fire EMS Rate
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Celeste Tate, Administrator

BACKGROUND INFORMATION:

As the May 21st election approaches, discussions continue in the community in regards to the proposed annexation and what that will mean for folks in the City of Union. As discussed in the public hearings in January and February, if the annexation ballot measure passes, the Fire and EMS Department User fee will no longer be charged by the City of Union once the annexation goes through. If the annexation fails, the Fire and EMS Department User Fee will increase to \$16.00 per Resolution 2024-05 which is attached. Per Ordinance 515 put in place on August 14th, 2008, the User Fee was established for Fire and Emergency Services Departments. This Ordinance also established the method of collection, and what the funds are to be used for which is to "train, supply, equip, maintain and operate the departments." The proposed budget for Fire and EMS for the 2024-25 year is \$227,612.00 for Fire and \$285,714.00 for EMS and includes turning over fund balance amounts in both of those funds to the URFPD if the annexation passes. The total operating costs for those departments are well below those amounts, at \$90,290 for the operating costs for the Fire department and \$109,923 for the operating costs for the EMS department. If the annexation passes, the operating expenses to provide Fire and EMS services will be reduced by approximately \$49,000 due to the current duplication of staff, insurance and other costs that are currently occurring. The potential new rate of \$16.00 per month is a higher rate than the current rate which has not been changed since 2013. This rate was determined after multiple meetings over several months in which public attended along with folks from the fire department and the city council. This rate will be needed if the annexation is not approved in order to fund the city department at the needed level in order to replace supplies and equipment when needed. In addition, the current system of two fire departments separately managed by two different groups of folks is in part what led to a drop in the ISO rating at the last review. This ISO rating affects homeowners insurance rates. Having one department will eliminate a large majority of the issues surrounding this ISO rate decrease. The tax base for the Union Rural Fire Protection District tax base is based upon their service area which includes area within the City of Union and also outside city limits. The estimated levy amounts that were listed on the ballot title were based upon the tax base of the URFPD just within the City of Union. The permanent tax rate for URFPD is \$1.2292/\$1,000 and per Measure 50 passed in 1997 will not increase.

RECOMMENDATION:

Continue to share information regarding the current and future funding of the Fire and EMS departments and increase transparency surrounding services, revenue and expenditures.

ATTACHED:

[Resolution 2024-05 Fire EMS Fee](#)

[ORD 515 imposing user fee FIRE EMS](#)

CITY OF UNION RESOLUTIONS

RESOLUTION NO. 2024-05

A RESOLUTION SETTING USER FEE FOR CITY OF UNION FIRE & EMS
DEPARTMENT

WHEREAS, the City Council for the City of Union has established that the City of Union Fire and EMS departments benefit all citizens of the City and that all citizens of the City should share in the costs of training, supplying, equipping, and maintaining of the departments; and

WHEREAS, administration for the City of Union has reviewed Fire and EMS revenues and expenditures over the past year; and

WHEREAS, administration has found the Fire and EMS User Fee has remained at the same rate since 2013 and has not kept up with the current rate of inflation on supplies and needed equipment replacements; and

WHEREAS, The City Council has passed an ordinance describing the need and basis for establishing a User Fee to cover certain costs and expenses of the departments with said Ordinance directing that the fee be set by Resolution; NOW, THEREFORE

BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF UNION:

Section 1: The Fire and EMS Department User Fee is hereby set at \$16.00 per month starting July 1st, 2024 for each residential and business unit as billed for water and sewer within the city limits.

Section 2: This fee shall be reviewed annually by City Council during a regular meeting for assessment during the following fiscal year.

Section 3: This Resolution shall be effective upon its passage by the Council and approval by the Mayor.

ADOPTED BY ____ members of the Common council voting therefore, and approved by the Mayor of the City of Union, this 8th day of April, 2024.

Approved:

Attest:

MAYOR

City Administrator

CITY OF UNION ORDINANCES
ORDINANCE NO. 515

AN ORDINANCE ESTABLISHING AND IMPOSING A **USER FEE** FOR
CITY OF UNION **FIRE AND EMERGENCY SERVICES**
DEPARTMENTS; **DEDICATING FEES TO THE EMERGENCY**
SERVICES FUND; AND SPECIFYING THE MANNER OF SETTING OF
THE FEE AND METHOD OF ENFORCEMENT

THE CITY OF UNION DOES ORDAIN AS FOLLOWS:

Section 1. PURPOSE AND POLICY: The City Council has determined that maintaining of City **fire and EMS departments** are of benefit to all citizens of the City, and finds that all citizens of the City should share in the costs of training, supplying, equipping, and maintaining of the departments. The City Council has held public hearings on this matter, and has determined that said citizens receive many benefits from the provision of **Fire and EMS services** within the City, including but not limited to insurance ratings that decrease property and casualty insurance rates, quicker response to emergencies, and improved quality of living. Although specific users of the services may be directly billed for specific use of the services, the City Council has determined that all citizens receive direct and consequential benefits from the services, and therefore should share in the expense of maintaining the services. This fee will be separate and distinct from any bills or fees submitted to users of the services. As a matter of policy, it is the intent of the Council that the fee will be set by resolution to reflect and collect funds for expenses to: train, supply, equip, maintain, and operate the departments.

Section 2. IMPOSITION; MANNER OF SETTING **FIRE AND AMBULANCE DEPARTMENT USER FEE:** There is hereby created a **Fire and EMS Department User Fee** to be charged within the City. The **Fire and EMS Department User Fee** for the City shall be as set forth in a Resolution duly adopted by the City Council, and charged to each residential and business unit as billed for water and sewer within the City limits. This fee shall be based upon the calculated need of the departments to operate in the next fiscal year. The Resolution setting this fee shall be reviewed by February 1 of each year for establishing and collection of the fee for the following fiscal year.

Section 3. COLLECTION: The **Fire and EMS Department User Fee** shall be billed and collected with and as part of the monthly water and/or sewer bill. In the event that funds received from the City utility billings are inadequate to satisfy in full all of the water, sewer and Fire and EMS Department User Fee, credit shall be first given to the **Fire and EMS Department User Fee**, second to the sewer charge, and third to the charges for water service. In the event that any Fire and EMS Department User Fee shall not be paid as provided herein, the City may proceed with all means available to the City for collection of delinquent utility bills, including but not limited to any court costs, attorney's fees, and other expenses associated with said collection efforts.

Section 4. DEDICATION OF FUNDS: The funds collected by the Fire and EMS Department User Fee shall be budgeted and allocated within the City's Emergency Services Department and shall be used for equipment, training, supplies and maintenance of the Fire and EMS departments.

Section 5. SEVERABILITY: The provisions of this ordinance are hereby declared to be severable. If any section, sentence, clause or phrase of this Ordinance is adjudged by a court of competent jurisdiction to be invalid, such decisions shall not affect the validity of the remaining portions of the Ordinance.

Section 6. EFFECTIVE DATE: This Ordinance shall become effective 30 days after its adoption by Council.

PASSED AND ADOPTED this 14th day of August, 2008, by the following vote: AYES: 6 NAYS: 0 ABSTENTIONS: 0

APPROVED by the Mayor this 14th day of August, 2008.

[Signature]
Mayor

ATTEST:

[Signature]
City Recorder



Memorandum

Subject: General Election Application Deadlines
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Celeste Tate, Administrator

BACKGROUND INFORMATION:

Ordinance 409 requires Council to set opening and closing dates to file for candidacy.

FINANCIAL IMPACT:

None

POLICY IMPLICATIONS:

To comply with Charter and Ordinances.

RECOMMENDATION:

Pass Resolution 2024-06 to declare dates for candidacy filing for local election.

ATTACHED:

[Resolution 2024-06 Candidate Filing](#)

**CITY OF UNION
RESOLUTION NO. 2024-06**

**A RESOLUTION ESTABLISHING THE DEADLINE FOR FILING OF
CANDIDACY FOR CITY ELECTIONS FOR THE NOVEMBER 5,
2024 GENERAL ELECTION**

WHEREAS, the general election will be held November 5, 2024; and,

WHEREAS, City of Union Ordinance 409 requires that the City Council establish by resolution, the filing deadline with the City Recorder for Mayoral and Councilor candidates; and,

WHEREAS, The Union County Clerk's office requires petitions to be checked prior to the County Clerk's deadline of August 27, 2024.

NOW THEREFORE, BE IT RESOLVED, by the governing body for the City of Union the following:

1. Declarations and petitions for candidacy filings open June 5, 2024.
2. Declarations and petitions for candidacy shall be received by the City Recorder no later than 5pm, August 15, 2024, allowing time for petition signatures to be checked and corrected prior to the Union County deadline.
3. The following positions are up for election:
 - a. Councilor Position 1 - (4-year term)
 - b. Councilor Position 3 - (4-year term)
 - c. Councilor Position 5 - (4-year term)
 - d. Mayor - (2-year term)

ADOPTED by ____ members of the Common Council voting therefore and approved by the Mayor of the City of Union, this ____ day of _____, 2024

Approved:

Attest:

Susan Hawkins, Mayor

Celeste Tate, City Administrator



Memorandum

Subject: Bucket Truck
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Paul Phillips, Public Works Lead

BACKGROUND INFORMATION:

As we move towards the end of the fiscal year, assess the needs for public works, and review the remaining funds available, public works has requested the purchase of a bucket truck. In reviewing budget documents for the 2023-2024 year, a bucket truck was originally identified as a need for the city. It's purchase would assist public works to safely and efficiently take care of pruning trees, installation and removal of banners on main street, hanging metal on higher buildings like the screw screen building and access to high areas. The city over the last few years has inquired of the state surplus department as to the availability of a bucket truck and as of yet, one has not become available. However, there has been a few listed online for sale. Quotes for 3 similar used trucks are attached including the quote that public works would like to move forward with. The budget for 2023-2024 included the purchase of a bucket truck in the vehicle reserve fund and there are sufficient funds to support this purchase.

FINANCIAL IMPACT:

\$12,500 for used bucket truck.

POLICY IMPLICATIONS:

The quotes attached need approved by Council in order to proceed given it is over the Administrator's \$5,000 threshold.

RECOMMENDATION:

To approve the quote for \$12,500 for the 2001 GMC 3500 Telsta bucket truck with 176,406 miles.

ATTACHED:

[2001 GMC 3500 12500 176406 miles](#)

[1994 Freightliner \\$17500 149000 miles](#)

[1995 Ford \\$10500 213580 miles](#)

GMC 3500 Telsta aerial lift truck - \$12,500 (ELGIN)

image 1 of 4



Clean, fully functional aerial lift truck with working reach of 34 feet. Knapheide locking utility box, ladder rack. Interior very nice, all glass intact. Cash only.





CL east oregon

post | account

for sale by owner

heavy equipment

favorite

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flag



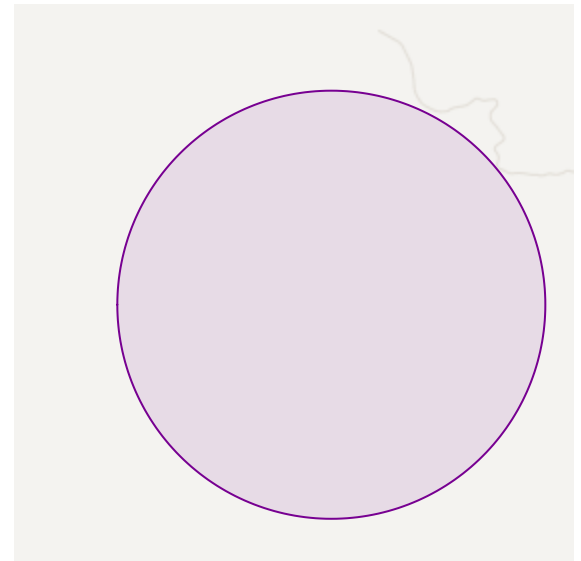
share

Posted about a month ago on: 2024-04-02 11:36

Contact Information:

94 Freightliner lineman/boom/bucket - \$17,500

image 11 of 12



condition: **excellent**

make / manufacturer: **freighTLINER**

model name / number: **f180**

ONE OWNER' 1994 freight liner 60' lineman/boom/bucket truck. cummings 8.3 with 12speed manual tranny. 149k miles. truck was very well maintained since new and everything works perfect. like new tires. altec AM855.

call me at 54one-659-four5four5

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Union, Oregon · Within 100 miles

Categories

Vehicles

Property Rentals

Apparel

Classifieds



About this vehicle

Exterior color: White · Interior color: Grey

Fuel type: Diesel

Seller's description

If it's up it's still available, if you ask I'll assume you don't know how to read and you will be ignored

1995 F Superduty (15k GVWR)

-7.3 Powerstroke Diesel Runs good 213580 miles

-Automatic Transmission

-Engine driven PTO system

-Lift bucket system

-Everything works

-4 new rear tires

-New pinion bearings in the rear axle, differential serviced and fresh gear oil installed.

-Drove it 700 miles from -California and ran amazing

If it's up it's still available See less

Send seller a message

Hi, is this available?





1995 F Superduty (15k GVWR)
-7.3 Powerstroke Diesel Runs good 213580 miles
-Automatic Transmission
-Engine driven PTO system
-Lift bucket system
-Everything works
-4 new rear tires
-New pinion bearings in the rear axle, differential serviced and fresh gear oil installed.
-Drove it 700 miles from -California and ran amazing

If it's up it's still available See less



Middleton, ID
Location is approximate

Seller information [Seller details](#)



Joined Facebook in 2009

[Send seller a message](#)

Hi, is this available?



1995 Ford f-superduty
\$10,500

Listed a week ago in Middleton, ID

[Message](#) [Bookmark](#) [Share](#) [More](#)

About this vehicle

Exterior color: White - Interior color: Grey
 Fuel type: Diesel

Seller's description

If it's up it's still available, if you ask I'll assume you don't know how to read and you will be i...
[See more](#)



Middleton, ID
Location is approximate

Seller information [Seller details](#)

[Send seller a message](#)

Hi, is this available?

[Send](#)





Memorandum

Subject: Fire Department Equipment
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Celeste Tate, Administrator

BACKGROUND INFORMATION:

As part of the review of the Fire and EMS Departments, an equipment list was put together with what equipment the departments currently have, and what is needed in the short term as well as long range planning. One of the equipment needs identified was SCBA packs. This was identified as an equipment item that the Fire Department would like to replace a few in this current 23-24 year.

FINANCIAL IMPACT:

The lowest quote found was \$29,569.83 for 4 SCBA packs.

POLICY IMPLICATIONS:

The quotes attached need approved by Council in order to proceed given it is over the Administrator's \$5,000 threshold.

RECOMMENDATION:

To approve the quotes from Curtis for \$29,569.83 for 4 SCBA packs.

ATTACHED:

[Curtis SCBA packs quote](#)

[Union SCBA 2024 \\$39800](#)

[SCOTT - Air Pak X3 Pro - QUO22982 \\$39620](#)

Ph: 801-486-7285
 TF: 800-426-0509
 Fax: 801-487-1278
slcsales@lncurtis.com
 UEI#: DDLSADSWN7U7



Intermountain Division
 1635 South Gramercy Road
 Salt Lake City, UT 84104
www.LNCurtis.com

Quotation

CUSTOMER:

Union City Fire Department,
 OR
 342 South Main Street
 Union OR 97883

SHIP TO:

Union City Fire Department OR
 342 South Main Street
 Union OR 97883

QUOTATION NO.	ISSUED DATE	EXPIRATION DATE
273810	04/18/2024	05/30/2024

SALESPERSON	CUSTOMER SERVICE REP
Shannon Crays scrays@lncurtis.com 208-863-9557	Shannon Crays scrays@lncurtis.com 208-863-9557

REQUISITION NO.	REQUESTING PARTY	CUSTOMER NO.	TERMS	OFFER CLASS
	Don George	C82080	Net 30	FR

F.O.B.	SHIP VIA	DELIVERY REQ. BY
SP	Standard Shipping	

NOTES & DISCLAIMERS

Thank you for this opportunity to quote. We are pleased to offer requested items below. If you have any questions, need additional information, or would like to place an order, please contact your Customer Service Rep as noted above.

Safety Warning Notice: Products offered, sold, or invoiced herewith may have an applicable Safety Data Sheet (SDS) as prepared by the manufacturer of the product. The SDS is provided with the product. In addition, manufacturer's safety and/or warning notices, instructions and information relating to the proper use and care of the product is provided with the product. All applicable SDS, safety and/or warning notices, instructions and other information provided with the product should be thoroughly read, reviewed, and understood prior to handling, distributing, using, reselling, or servicing any and all products provided by Curtis. Materials utilized to clean, repair, maintain and/or service your owned equipment, as well as Curtis owned equipment, may contain per-and polyfluoroalkyl substances (PFAS) to meet national standards or original equipment manufacturer specifications. For other important product notices and warnings, or to request an SDS, product specifications, manufacturer's safety notices, instructions and/or warning notices, please contact Curtis or visit <https://www.lncurtis.com/product-notices-warnings>

LN	QTY	UNIT	PART NUMBER	DESCRIPTION	PL	UNIT PRICE	TOTAL PRICE
1	4	EA	10175708 MSA	45Min 4500# G1 SCBA Low Profile Cylinder, With Air, With Quick Connect Remote Connection		\$1,208.72	\$4,834.88
2	1	EA	10009971 MSA	32oz.. Confidence Plus 2 Cleaning Solution	OM	\$70.75	\$70.75

Ph: 801-486-7285
 TF: 800-426-0509
 Fax: 801-487-1278
slcsales@lncurtis.com
 UEI#: DDLSADSWN7U7



Intermountain Division
 1635 South Gramercy Road
 Salt Lake City, UT 84104
www.LNCurtis.com

LN	QTY	UNIT	PART NUMBER	DESCRIPTION	PL	UNIT PRICE	TOTAL PRICE
3	4	EA	A- G1FS-442MB2C0L AA MSA	4500psig G1 Fire Service SCBA; * CGA Quick Connect Remote Cylinder Connection * Standard Harness with Chest Strap * Metal Band Cradle Type * Basic Lumbar Pad * Solid Cover Regulator Type, Left Shoulder (as Worn) * Continuous Regulator Hose Type * Left Chest (as Worn) Speaker Module * PASS Right Shoulder (as Worn) * Alkaline Battery WARNING: This product contains PFAS to reduce the risk of parts sticking or becoming inoperable. Promo Code B14		\$5,839.80	\$23,359.20
4	4	EA	10156459 MSA	Medium G1 Facepiece With Medium Nosecup, Includes: * 4-Point Adjustable Cloth Head Harness * Fixed Push-To-Connect Regulator Connection * Ato Number: A-G1Fp-Fm1M401 WARNING: This product contains PFAS to reduce the risk of parts sticking or becoming inoperable. Promo Code B14		\$326.25	\$1,305.00
5	4	EA	10175708 MSA	45Min 4500# G1 SCBA Low Profile Cylinder, With Air, With Quick Connect Remote Connection Promo Code B14		\$0.00	\$0.00

Ph: 801-486-7285
TF: 800-426-0509
Fax: 801-487-1278
slcsales@lncurtis.com
UEI#: DDLSADSWN7U7



Intermountain Division
1635 South Gramercy Road
Salt Lake City, UT 84104
www.LNCurtis.com

LN	QTY	UNIT	PART NUMBER	DESCRIPTION	PL	UNIT PRICE	TOTAL PRICE
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Small Business
CAGE Code: 5E720
SIC Code: 5099
Federal Tax ID: 94-1214350
UEI #DDLSADSWN7U7

This pricing remains firm until 05/30/2024. Contact us for updated pricing after this date.

Due to market volatility and supply shortages, we recommend contacting your local L.N. Curtis and sons office prior to placing your order to confirm pricing and availability. This excludes our GSA Contract and other Fixed Price Contracts which are governed by contract-specific prices, terms, and conditions.

Subtotal	\$29,569.83
Estimated Tax Total	\$0.00
Transportation*	\$0.00
*(to be added when order ships)	
Total	\$29,569.83

[View Terms of Sale and Return Policy](#)



(877) 637-3473

Quote

Quote # QT1818815
Date 05/10/2024
Expires 05/25/2024
Sales Rep Oberweiser, Brian
Shipping Method FedEx Ground
Customer Union Fire Department (OR)
Customer # C242042

Bill To

Union Fire Department
PO Box 529
Union OR 97883
United States

Ship To

Union Fire Department
342 S. Main
Union OR 97883
United States

Item	Alt. Item #	Units	Description	QTY	Unit Price	Amount
X8814021005304			Air-Pak X3 Pro SCBA (2018 Edition) with CGA, Parachute Buckles, 4.5, Standard, No Accessory Pouch, E-Z Flo+ Regulator with Continuous Hose, None, None, No, Pak-Tracker, No Case, 2 SCBA Per Box	4	\$6,850.00	\$27,400.00
804722-01			CYL&VLV ASSY,CARB,45MIN,4500	8	\$1,375.00	\$11,000.00
201215-22			AV3000 HT with Kevlar lining and 4-strap harness-Red, Medium	4	\$350.00	\$1,400.00

Subtotal \$39,800.00
Shipping Cost \$0.00
Tax Total \$0.00
Total \$39,800.00

This Quotation is subject to any applicable sales tax and shipping and handling charges that may apply. Tax and shipping charges are considered estimated and will be recalculated at the time of shipment to ensure they take into account the most current information.

All returns must be processed within 30 days of receipt and require a return authorization number and are subject to a restocking fee.

Custom orders are not returnable. Effective tax rate will be applicable at the time of invoice.



QT1818815

SeaWestern, Inc.P.O. Box 51,
Kirkland, WA 98083

SEAWESTERN

FIRE FIGHTING EQUIPMENT

Quote

 Phone: 425-821-5858
 Email: Info@seawestern.com
 www.seawestern.com

Bill To:		Ship To:		Date	05/09/2024
UNION RFPD PO BOX 529 UNION OR 97883 United States		UNION RFPD 214 S MAIN UNION OR 97883 United States		Customer No.	10866
				Quote No.	QUO22982
				Sales Rep	
Attention	Delivery	FOB	Expires	Mekel Hofman	
Don George			06/08/2024		

Qty	Unit	Part Number	Description	Unit Price	Extended Pri...
4	EA	SCOTT X3 Pro	3M Scott Air-Pak X3 Pro SCBA NFPA 1981/1982, 2018 Edition Ordering Part Number: X8814021005304	6,750.00	27,000.00
8	EA	SCOTT 804722-01	4500 psi, 45 minute cylinder with CGA valve	1,400.00	11,200.00
4	EA	SCOTT 201215-02	AV-3000 HT 5-ST, KEV, M	355.00	1,420.00

Total **\$39,620.00**

Pricing valid for above listed quantities
 Restocking fee up to 25% will apply on any non-stock merchandise
 Returns within 30 days of receipt
 Custom orders are non-cancellable, non-returnable
 Unless otherwise noted, pricing does not include shipping.
 Orders over \$2500 paid by credit card will have a 3% processing fee applied.

Steve Ritch Environmental & Construction, Inc.
PO Box 177
Baker City, OR 97814
srec.frontoffice@gmail.com



ADDRESS

Union City Hall
PO Box 529
Union, OR 97883

Estimate 2024-1004

DATE 04/15/2024

EXPIRATION DATE 05/15/2024

DESCRIPTION	QTY	RATE	AMOUNT
(2024-0840) 710 N. Bellwood (Union, OR) Diesel Fuel Release - Black Truck #606			
Supervisor - MS (Notifications & Permitting)	2	100.00	200.00
Day 1:			
Project Manager (SR)	8	130.00	1,040.00
Project Manager - Overtime	2	195.00	390.00
Supervisor - MS	8	100.00	800.00
Supervisor - Overtime	2	150.00	300.00
Technician - AC	8	72.00	576.00
Technician - Overtime	2	108.00	216.00
Technician - CG	8	72.00	576.00
Technician - Overtime	2	108.00	216.00
Technician - DB	8	72.00	576.00
Technician - Overtime	2	108.00	216.00
Technician - RK	8	72.00	576.00
Technician - Overtime	2	108.00	216.00
Truck #13-02 with Side Dump Trailer	10	188.00	1,880.00
Dump Truck # 07-37 with Pup	10	188.00	1,880.00
Dump Truck #01-10 with Pup	10	188.00	1,880.00
Dump Truck #07-12 with Pup	10	188.00	1,880.00
Dump Truck #07-38 with Tilt Deck Trailer	10	166.00	1,660.00
Service Truck with Tilt Deck Trailer	10	165.00	1,650.00

DESCRIPTION	QTY	RATE	AMOUNT
T595 Bobcat Compact Tracked Loader	4	180.00	720.00
JD 130 Excavator	9	202.00	1,818.00
Hydraulic Compactor (Day Rate)	1	375.00	375.00
Lighted Barricades	1	75.00	75.00
Day 2:			
Project Manager (SR)	5	130.00	650.00
Supervisor - MS	5	100.00	500.00
Technician - CG	5	72.00	360.00
Technician - DB	5	72.00	360.00
Technician - RK	5	72.00	360.00
Technician - AC	5	72.00	360.00
Truck #13-02 with Side Dump Trailer	5	188.00	940.00
Dump Truck # 07-37 with Pup	5	188.00	940.00
Dump Truck #01-10 with Pup	5	188.00	940.00
Dump Truck #07-12 with Pup	5	188.00	940.00
Dump Truck #07-38 with Tilt Deck Trailer	5	166.00	830.00
Service Truck with Tilt Deck Trailer	5	165.00	825.00
JD 130 Excavator	3	202.00	606.00
Hydraulic Compactor (Day Rate)	1	375.00	375.00
Technician - BR (Packing & Shipping Samples)	1	72.00	72.00
Vehicle	0.50	60.00	30.00
Packing & Shipping Supplies	1	25.00	25.00
UPS Next Day Freight	1	135.00	135.00
Cost + (19%)	135	0.19	25.65
Analytical - Neilson Research Corporation (Per Sample)	6	125.00	750.00
Cost + (19%)	750	0.19	142.50
T - Handle Sampler (Each)	6	5.00	30.00
Aggregate (Backfill Material) Per Ton	125	18.50	2,312.50
Cost + (19%)	2,312.50	0.19	439.38
Disposal of PCS - Per Ton	125	21.37	2,671.25
Cost + (19%)	2,671.25	0.19	507.54
Subcontracted - Sidewalk Repair if Needed	1	1,800.00	1,800.00
Cost + (19%)	1,800	0.19	342.00
Subcontracted Geologist - Sprecher Group	1	4,500.00	4,500.00
Cost + (19%)	4,500	0.19	855.00
Subcontracted - CTUIR - Resource Protection Monitoring (Pending Notifications)	0	0.00	0.00

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

SUBTOTAL

43,339.82

TAX

0.00

TOTAL	\$43,339.82
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Accepted By

Accepted Date

Celeste Tate

From: SMAF Enviro <smafenviro@gmail.com>
Sent: Wednesday, May 1, 2024 3:58 PM
To: Celeste Tate
Subject: Re: Oil Spill

Hello Celeste,

Union is out of our range. There is a company that we work with over there, SREC. Steve Rich will be your contact. He can be reached at 541-523-5559.

Thank you,
Juanita

On Wed, May 1, 2024 at 3:23 PM Celeste Tate <CelesteTate@cityofunion.com> wrote:

Good Afternoon-

We have been notified of an diesel spill on one of our right of ways. The approximate size is 10 feet x 40 feet. We have received one quote but due to the amount we need to reach out to others to determine if there are most cost effective options. Are you able to give us a quote?

Sincerely,

Celeste A. Tate

City of Union

City Administrator

PO Box 529

342 South Main St., Union, OR 97883

Phone: 541-562-5197

Email: celestetate@cityofunion.com

www.cityofunion.com

--

John Hill
SMAF Environmental, LLC
Environmental Operations manager
PO Box 672
Prineville, OR 97754
Office 541-447-5643
John's Mobile: 541-410-1642

Fax 541-447-2190

Celeste Tate

From: Paul Phillips
Sent: Thursday, April 4, 2024 6:30 AM
To: Celeste Tate
Subject: FW: Cleanup Contractors

I have a message in with Steve Ritch out of Baker City

From: LUNDY Cassandra * DEQ <Cassandra.CARLSON@deq.oregon.gov>
Sent: Wednesday, April 3, 2024 5:31 PM
To: Paul Phillips <paulphillips@cityofunion.com>
Subject: Cleanup Contractors

Greetings,

Below are three Cleanup Contractors that can be contracted for assistance in the cleanup of the reported spill.

SMAF Environmental	PO Box 672	800-875-7069
Scott Porfily (Owner)	Prineville, OR 97754	541-447-5643
John Hill – Operations Manager	WHHSmaf.com	541-410-1642
<u>smafenviro@gmail.com</u>		
Steve Ritch Environmental	2200 Oregon St.,	541-523-5559 24/7
Steve Ritch (Owner)	Baker City, OR 97814	
<u>srec.steve@gmail.com</u>		
US Ecology - Pasco Office	3425 King Ave.	800-899-4672
Shawn Estrada – ER Supervisor	Pasco, WA 99301	
<u>Shawn.estrada@usecology.com</u>		

Respectfully,

Cassandra Lundy
Ballast Water Inspector & Emergency Response Duty Officer
Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600, Portland, OR 97232
Email: cassandra.lundy@deq.oregon.gov
Cell: 503-926-1524



MINUTES

City Council Meeting

7:00 PM - Monday, April 8, 2024

Leonard Almquist Council Chambers, 342 S. Main St, Union, OR 97883

1. CALL TO ORDER, PLEDGE OF ALLEGIANCE, ROLL CALL:

Mayor:

Hawkins

Councilors:

Farmer, Cox, Black, Blackburn, Middleton, and Boyer-Davis

The City Council of the City of Union was called to order on Apr 08 2024, at 7:00 PM, in the Leonard Almquist Council Chambers, 342 S. Main St, Union, OR 97883, with the following members present:

PRESENT:

Susan Hawkins, Tim Cox, Anita Boyer-Davis, Dick Middleton, Jay Blackburn, and John Black

EXCUSED:

John Farmer

2. CORRESPONDENCE PERTINENT TO AGENDA BUSINESS ITEMS:

3. OLD BUSINESS:

Public comment is welcome on each subject addressed under the public comment rules stated below.

a) Main Street Union

There was a discussion on the incident on the park from last summer and the reason why this was tabled at the last council meeting. City Administrator went through the specifics on the incident and the discussions that she had with the sheriff's office. The incident is classified as a hit and run as there is no proof of who it was and the sheriff's office tracked down every lead they had been given and spent several weeks working with the city, looking at cameras. The discussion then turned to the previous handout that mainstreet had given with their budget for next year that supports their request of \$2,500. This amount comes from economic development. Councilor Boyer-Davis made a motion to approve the \$2,500 for main street union as requested. Councilor Cox seconded. This took it out of tabling. Councilor Cox thanked main street union for the grassroots and the block party and the other event they have started which he said has been awesome. There was a discussion on the new event Blues and Brews which will be happening. There was a discussion on needing to complete the lot line adjustment completed and allowing a fence to give a

sense of security. Motion passed unanimously.

b) Fire EMS Rate

Mayor Hawkins asked City Administrator Tate to go over the items. Tate went over the proposed Resolution as well as Ordinance 515 which gives the authority to set the Fire and EMS user fee. Also attached was the EMS rate history, the Fire EMS projection summary and a separate Fire equipment projection and EMS equipment projection that supports the \$16 per month user fee. This would only come into play if the annexation does not go through because the city needs to make sure they are ready to continue to support Fire and EMS and replace equipment when needed. The \$16 rate would allow the city to do that and the projection shows that with small increases annually, setting the rate at \$16 now would keep things going well for the next 12 years. The rate does need to be reviewed annually. If the annexation does not go through then the city would start working on an Ordinance to have automatic increases for the Fire EMS user fee in the future. The current suggestion for automatic increases are .75 cents per year which is what is in the projections. The \$16 rate would become effective in July. The current Fire EMS user fee has not been increased for 11 years. It has not changed since 2013. Councilor Cox read through the Resolution 2024-05. Councilor Blackburn made a motion to pass the Resolution 2024-05 and Councilor Boyer-Davis seconded. Motion passed unanimously.

c) Union County Truancy Ordinance

Read the Ordinance and Resolution through as a first read during the April Council meeting and consider for adoption at the May Council meeting.

4. NEW BUSINESS:

Public comment is welcome on each subject addressed under the public comment rules stated below.

a) Old West Federal Credit Union Bank Accounts

City Administrator Tate brought to council that the Old West Federal Credit Union is going to be offering a new municipal money market account and match the rate of the Local Government Investment Pool. This keeps the money in town but also helps the city earn the higher rate on almost all of the city money instead of just the money at the LGIP. Therefore the City Administrator would like approval to open up this new account. This account is only being offered to the City of Union at this time. Councilor Cox made a motion to approve the opening of a new municipal money market account at Old West Federal Credit Union. Councilor Blackburn seconded. Motion passed unanimously. Thank you to Debbie for advocating for the city.

5. CONSENT AGENDA:

Councilor Cox made a motion to accept the consent agenda as presented and Councilor Boyer-Davis seconded.

5.1. BUSINESS/SPECIAL MEETING MINUTES

5.1.1. March 11th, 2024

5.2. WORK SESSION MINUTES

5.2.1. March 11th, 2024

5.2.2. March 25th, 2024

5.3. INFORMATION REPORTS

5.3.1. Office Manager Report

5.3.2. Library Monthly Report

5.3.3. Sheriff's Monthly Report

Officer Whitty presented on both February and March activity as he was busy during the last meeting. There was a significant increase in calls for service, going from 27 in February to 40 in March which happens when the weather gets nicer. There were 3 arrests last month. There was a warrant arrest, one education on ATV use. The sheriff is getting a lot of reports of potential crimes that are happening. Officer wanted to urge people that no matter how insignificant it may seem, to reach out to him or the sheriff's office. It could be something that involved in something a lot more serious. There have been some reports of offensive littering in south union and if anyone has any information on that to reach out to him.

5.3.4. Animal Officer Monthly Report

5.3.5. Fire/EMS Monthly Report

6. CITY COUNCIL WORKING COMMITTEE UPDATES:

a) Water Sewer Committee Meeting

Councilor Cox said we need to let all citizens know that we need to stop having rage and non biodegradable items go down the system. Mayor Hawkins said some items say they are flushable and they are not. Blackburn said that it helps citizens pipes as well to not flush those items.

b) Charter Committee

The charter committee is up to chapter 6 and is trying to decide on presentation, how things look versus what it says. The committee meets on the 1st and 3rd Wednesday at 9am at city hall if anyone wants to join.

c) Zoning Committee

Councilor Black said there has only been one meeting so far. Went over the city zoning map and clarified some questions on why certain zones were the

way they were and if it is still meeting the city's needs. Councilor Blackburn said at the next meeting they are going to invite some local people that have some knowledge on the zoning. City Administrator Tate said the economic development plan from 2008-10 spoke to the need to redo the zoning so it was identified back then as well and to make it more consistent.

d) Buffalo Flat Project

City Administrator Tate spoke to Jim Webster on the phone, the project update is attached. Tate spoke to Jim Webster about a focus group meeting that Commissioner Beverage mentioned and he said that was a misunderstanding and that the next focus group meeting will not meet until the 80% design threshold is met. Tate also received a contact at the state on the flood mapping to discuss that process. Mayor Hawkins and councilor Middleton discussed that any costs caused by the project need to be born by that project. Any change to the flood plain and those costs need to be born by them. That FEMA should have a meeting so that the public can come and say their opinion. Mayor Hawkins wants it in writing that if they change the flow of the water to where it changes the flood plain in our city to where it changes who's in the flood plain and who is not, or puts people in who aren't currently in the flood plain, they need to address that in writing and say it is their responsibility, because they're the ones doing the change in the water not us. Councilor Cox said that is a good question to bring up to the national public insurance program coordinator.

e) Trails Committee Update

Councilor Blackburn said that the trails committee had a meeting and had a couple of questions for Celeste Tate on some right of way issues and how to work around those. There was discussion on the Rails to Trails and will be meeting next Tuesday at 6pm.

7. CITY ADMINISTRATOR / PUBLIC WORKS REPORT:

- a) Public Works Report
- b) March 2024 Wastewater Report
- c) City Administrator Report

8. PUBLIC COMMENT

Audience members may bring any concern before the Council at this time.

Public comment rules:

All public comment is subject to 3 minutes per individual and time may be cut short by the Mayor if the information addressing the Council becomes redundant. All persons addressing the Council must speak at the lectern and prior to speaking must state their name and address.

Leonard Flint made a comment suggesting that the fence at the hotel be put within 2 feet of the property line between the hotel and the city that would enable city staff the

ability to access on both sides.

Robin Church came forward and is running for Union County Commissioner, Donna's upcoming vacant position. Is the former Union County Clerk.

Brent Clapp also came forward and is also running for Union County Commissioner. Lives in Island City and owns EO alive and has been involved in local leadership since 1997.

9. UPCOMING MEETINGS AND SUGGESTIONS:

- a) April 9th, 2024 - Trails workgroup @ 6pm
- b) April 17th, 2024 - Charter Committee @ 9am
- c) April 17th, 2024 - Planning Commission @ 7pm
- d) April 22nd, 2024 - Council Work Session @ 6pm

There was a discussion to cancel this meeting as there are budget committee meetings on the 23rd-25th.

- e) April 23rd-April 25th, 2024 - Budget Committee @ 6pm
- f) May 2nd, 2024 - Zoning Committee @ 6pm
- g) May 6th, 2024 - Water Sewer Committee @ 7:30pm
- h) May 13th, 2024 - Council Work Session @ 6pm
- i) May 6th, 2024 - Council Business Meeting @ 7pm

10. ADJOURNMENT:

This meeting was adjourned at 8:08pm.

Mayor

City Administrator



MINUTES

Council Work Session Meeting

6:00 PM - Monday, April 8, 2024

Leonard Almquist Council Chambers, 342 S. Main St, Union, OR 97883

1. CALL TO ORDER AND ROLL CALL:

Mayor:

Hawkins

Councilors:

Farmer, Cox, Black, Blackburn, Middleton and Boyer-Davis

The City Council of the City of Union was called to order on Apr 08 2024, at 6:00 PM, in the Leonard Almquist Council Chambers, 342 S. Main St, Union, OR 97883, with the following members present:

PRESENT:

Susan Hawkins, Tim Cox, Anita Boyer-Davis, Dick Middleton, and John Black

EXCUSED:

Jay Blackburn and John Farmer

2. PRESENTATIONS:

a) Water Project Update - Bill Ledbetter

Bill Ledbetter of Anderson Perry gave an update on the Water Project. OTEC came and shut off the power on March 29th and Mike Becker Construction demoed the building and foundation. The new foundation has been staked out and Mike Becker Construction will pour the foundation. The old pump will be removed and replaced with a new pump. On the wastewater project, Lakeside manufacturer came out to the site because the screen just wasn't working as it should. They sent someone out from Chicago that really knew his stuff with the screen and got it all working really well and got the walkthrough. We raised the flow a little bit coming into the channel so everything is functioning as it should but there is still an issue with the rages building up that are coming in. We'll start working at identifying where most of the rags are coming from and see if the city can target some areas to put some fliers out. There is also some grease that is coming into the system. Those are some businesses that are cooking that maybe they have an issue with their grease traps. There was a discussion on water flow through the system and whether that is causing an issue with the rags which Mr. Ledbetter clarified that the lower flow levels are not the main issue. City Administrator Tate spoke to the information that the city has put out in the newsletter and the water sewer bills and Facebook on not flushing rags even though they say they can be flushed on the product

packages. Councilor Cox suggested putting out some individual fliers explaining that we have a new screen system in place and it is working but that there are non-flushable items getting caught in the system. Mayor Hawkins discussed the problems with the packaging saying that it is disposable and so people don't think not to flush it. Mr. Ledbetter discussed working with Lakeside to design a halfmoon plate with perforated holes in it, a shield if you will, that would keeps things running more smoothly but have Lakeside design it in order to keep the warranty in place. There was a discussion on reaching out to a town of similar makeup and size to see what they have done in regards to rags in their system. Mr. Ledbetter discussed the issue of not relying on too much water into the whole system to flush out the rags because then the system doesn't have time to break down all of the bacteria and work through the whole system like it should. There is a process and we don't want to generate unnecessary flows through the system as that causes other issues. There was a discussion on the grease balls and that there are a lot of buildings around the community that are older and haven't been updated and that may be causing the balls of grease.

b) Union Sanitation and Waste Pro - Donna Beverage

City Administrator Celeste Tate asked county commissioner Donna Beverage to attend and initially she was able to but last minute something came up. She did provide an informational handout on the history of the waste pro agreement. There will be future discussion to have a list of questions to get answers on in regards to the waste pro agreement.

c) City Council Goals progress

There was discussion on the handout on the 2024-2025 goals. The ordinance information was received from councilor Boyer-Davis so Administrator Tate will connect with Paige Sully on that. There was a discussion on the water and wastewater master plan and needing that completed and the streets master plan needing to be completed. Mayor Hawkins discussed the charter review and that there was one specific area that the group ran into where they don't necessarily want to make changes to what is in that part of the charter, but it would be nice to have a bulleted area so that it is much clearer and you don't have to read through all of the verbiage. There was a discussion on the parks master plan and concerns with the layout of the bathrooms. Wanting to make sure there there is a buffer between the hotel and the park and wanting to plan the future park to have bathrooms more centrally located in the park and not in the back where there has been graffiti.

d) Update on Training and SEI Reminder

City Administrator Tate gave a quick update on the required Statement of Economic Interest filing that city council members must complete by April 15th. She also mentioned that the new required training is not in place yet but that the ethics commission is always willing to do ethics training.

e) County Ordinances - City Ordinances

City Administrator Tate discussed the work she would like to complete on lining up the county ordinances with the city ordinances but that the county ordinances are not on the county website so that will be worked on in the future.

3. UPCOMING BUSINESS DISCUSSIONS:

4. COMMITTEE DISCUSSIONS:

5. ORDINANCE/CHARTER REVIEW:

6. OTHER:

7. ADJOURNMENT:

This meeting was adjourned at 6:55pm

Mayor

City Administrator



Memorandum

Subject: Office Manager Report
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Laura Dodds, Office Manager

ATTACHED:

[April 2024 AP's](#)

[Expenses April 2024](#)

[Office Manager Report April 2024](#)

[Revenues April 2024](#)

City of Union
Council Approval Report
(Council Approval Report)

4/10/2024 2:01pm

Vendor		Invoice Number	Date	Description	Due Date	Invoice Amt	Approved Amt	Account Number	Account Description	Budgeted \$	YTD Balance
4	Avista, 1411 E. Mission Ave, Spokane, WA, 99252-0001	Apr '24	04/10/24	city hall	04/12/24	\$92.91	\$92.91	100-110-5202501	Heat	\$1,300.00	\$652.45
			04/10/24	city hall	04/12/24	\$92.91	\$92.91	200-200-5202501	Heat	\$7,500.00	\$5,763.63
			04/10/24	city hall	04/12/24	\$92.91	\$92.91	300-300-5202501	Heat	\$4,000.00	\$1,728.00
			04/10/24	treatment plant/transfer station	04/12/24	\$19.38	\$19.38	300-300-5202501	Heat	\$4,000.00	\$1,728.00
			04/10/24	treatment plant	04/12/24	\$202.11	\$202.11	300-300-5202501	Heat	\$4,000.00	\$1,728.00
			04/10/24	library	04/12/24	\$160.13	\$160.13	600-600-5202501	Heat	\$2,500.00	\$1,256.82
			04/10/24	ranger station/389 hwy 203	04/12/24	\$126.34	\$126.34	800-800-5202501	Heat	\$3,000.00	\$1,968.35
			04/10/24	ranger station/299 hwy 203	04/12/24	\$11.48	\$11.48	800-800-5202501	Heat	\$3,000.00	\$1,968.35
150	Badger Meter, Box 88223, Milwaukee, WI, 53288-0223	80154419	04/10/24	ranger station/343 hwy 203	04/12/24	\$10.65	\$10.65	800-800-5202501	Heat	\$3,000.00	\$1,968.35
							\$808.82				
			04/08/24	meter reading program	04/12/24	\$29.43	\$29.43	200-200-5203800	IT/Computer/Software	\$7,500.00	\$111.41
			04/08/24	program license/annual	04/12/24	\$150.00	\$150.00	200-200-5203800	IT/Computer/Software	\$7,500.00	\$111.41
			04/08/24	program license/annual	04/12/24	\$150.00	\$150.00	300-300-5203800	IT/Computer/Software	\$8,500.00	\$472.32
			04/08/24	meter reading program	04/12/24	\$29.43	\$29.43	300-300-5203800	IT/Computer/Software	\$8,500.00	\$472.32
							\$358.86				
74	Bound Tree, 23537 Network Place, Chicago, IL, 60673	85280647	04/08/24	ambulance supplies	04/12/24	\$44.41	\$44.41	700-720-5202181	Supplies (Janitorial & Ope	\$14,000.00	\$6,086.90
			04/08/24	ambulance supplies	04/12/24	\$215.99	\$215.99	700-720-5202181	Supplies (Janitorial & Ope	\$14,000.00	\$6,086.90
							\$260.40				
41	Box R Water Analysis Lab, 567 N.W. 2nd Street, Prineville, OR, 97754	X057599	04/08/24	water sample testing	04/12/24	\$50.00	\$50.00	200-200-5202270	Water Testing	\$4,000.00	\$2,256.00
							\$50.00				
399	Burks Tractor, 220 Farmway Rd., Caldwell, ID, 83605	purchase order	04/09/24	skid steer snow blower	04/12/24	\$10,803.00	\$10,803.00	117-000-5404850	Vehicle/Equipment	\$143,800.00	\$132,092.45
							\$10,803.00				
6	Charter Communications, PO Box 7173, Pasadena, CA, 91109-7173	April '24	04/08/24	public works phone	04/12/24	\$53.53	\$53.53	200-200-5202570	Telephone/Cell	\$5,500.00	\$1,252.20
			04/08/24	city well phone	04/12/24	\$29.09	\$29.09	200-200-5202570	Telephone/Cell	\$5,500.00	\$1,252.20
			04/08/24	phone	04/12/24	\$53.52	\$53.52	500-500-5202570	Telephone/Cell	\$650.00	\$269.71
			04/08/24	library phone	04/12/24	\$69.35	\$69.35	600-600-5202570	Telephone/Cell	\$1,200.00	\$396.65
			04/08/24	library internet	04/12/24	\$86.19	\$86.19	600-600-5203800	IT/Computer/Software	\$3,500.00	\$1,621.22
							\$291.68				
8	D & B Supply, 3303 E. Linden, Caldwell, ID, 83605-6077	2202	04/08/24	water dept supplies	04/12/24	\$69.97	\$69.97	200-200-5202181	Supplies (Janitorial & Ope	\$37,500.00	\$15,429.15
							\$69.97				

City of Union Council Approval Report (Council Approval Report)

Vendor		Invoice Number	Date	Description	Due Date	Invoice Amt	Approved Amt	Account Number	Account Description	Budgeted \$	YTD Balance
427	Davenport, Chelsea Lyn, PO Box 946, Union, OR, 97883	24-03	04/08/24	ranger station contract services	04/12/24	\$1,013.83	\$1,013.83	800-800-5202190	Contract Services	\$24,000.00	\$16,278.15
							\$1,013.83				
402	Davenport, Chelsea, PO Box 946, Union, OR, 97883	reimb Apr '24	04/08/24	ranger station proj/house #2	04/12/24	\$219.76	\$219.76	115-000-5403203	Land/Buildings	\$435,710.00	\$266,622.48
		reimb Apr '24	04/08/24	airbnb supplies	04/12/24	\$93.16	\$93.16	800-800-5202181	Supplies (Janitorial & Op	\$3,000.00	\$905.95
							\$312.92				
9	Eagle Office Supplies, 1701 Adams Ave, La Grande, OR, 97850	93869	04/08/24	copy contract	04/12/24	\$6.34	\$6.34	100-110-5202190	Contract Services	\$7,500.00	(\$530.22)
		93869	04/08/24	copy contract	04/12/24	\$6.34	\$6.34	100-160-5202190	Contract Services	\$1,000.00	\$889.28
		93869	04/08/24	copy contract	04/12/24	\$25.36	\$25.36	200-200-5202190	Contract Services	\$5,000.00	\$3,195.91
		93869	04/08/24	copy contract	04/12/24	\$25.36	\$25.36	300-300-5202190	Contract Services	\$7,000.00	\$6,095.91
							\$63.40				
454	Eastern Oregon EMS Conference, PO Box 1281, Pendleton, OR, 97801	243	04/08/24	EMS conference in Pendleton/Pam Forrest, Tanya Forrest, James Hesse	04/12/24	\$750.00	\$750.00	700-720-5202010	Travel/Training	\$7,000.00	\$2,168.51
							\$750.00				
34	Fastenal, PO Box 1286, Winona, MN, 55987	ORLAG138378	04/08/24	city hall supplies	04/12/24	\$63.42	\$63.42	100-110-5202181	Supplies (Janitorial & Op	\$6,000.00	\$1,150.63
		ORLAG138378	04/08/24	parks supplies	04/12/24	\$318.59	\$318.59	100-130-5202181	Supplies (Janitorial & Op	\$5,000.00	\$2,870.62
		ORLAG138378	04/08/24	streets supplies	04/12/24	\$62.87	\$62.87	500-500-5202181	Supplies (Janitorial & Op	\$6,500.00	\$1,296.18
							\$444.88				
10	Hometown Hardware, PO Box 1024, Union, OR, 97883	59497	04/08/24	park supplies	04/12/24	\$68.50	\$68.50	100-130-5202181	Supplies (Janitorial & Op	\$5,000.00	\$2,870.62
		59111	04/08/24	water dept supplies	04/12/24	\$14.03	\$14.03	200-200-5202181	Supplies (Janitorial & Op	\$37,500.00	\$15,429.15
		59483	04/08/24	treatment plant supplies	04/12/24	\$115.00	\$115.00	300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$12,996.92
		59547	04/08/24	streets supplies	04/12/24	\$13.75	\$13.75	500-500-5202181	Supplies (Janitorial & Op	\$6,500.00	\$1,296.18
		59101	04/08/24	ranger station supplies	04/12/24	\$11.75	\$11.75	800-800-5202181	Supplies (Janitorial & Op	\$3,000.00	\$905.95
46	LEAF, PO Box 5066, Hartford, CT, 06102-5066	16244867	04/08/24	copier maint	04/12/24	\$29.96	\$29.96	100-110-5202190	Contract Services	\$7,500.00	(\$530.22)
		16244867	04/08/24	copier maint	04/12/24	\$44.94	\$44.94	200-200-5202190	Contract Services	\$5,000.00	\$3,195.91
		16244867	04/08/24	copier maint	04/12/24	\$44.94	\$44.94	300-300-5202190	Contract Services	\$7,000.00	\$6,095.91
		16244867	04/08/24	copier maint	04/12/24	\$7.49	\$7.49	500-500-5202190	Contract Services	\$3,000.00	\$2,912.11
		16244867	04/08/24	copier maint	04/12/24	\$7.49	\$7.49	700-710-5202190	Contract Services	\$350.00	\$262.03
		16244867	04/08/24	copier maint	04/12/24	\$7.49	\$7.49	700-720-5202190	Contract Services	\$500.00	\$291.99
		16244867	04/08/24	copier maint	04/12/24	\$7.49	\$7.49	800-800-5202181	Supplies (Janitorial & Op	\$3,000.00	\$905.95

City of Union

Council Approval Report
(Council Approval Report)

Vendor		Invoice Number	Date	Description	Due Date	Invoice Amt	Approved Amt	Account Number	Account Description	Budgeted \$	YTD Balance
458	Michael Becker General Contractor Inc., PO Box 1159, La Grande, OR, 97850	pymt #4 - final bill	04/08/24	screen project	04/12/24	\$142,742.40	\$149.80	310-000-5404550	Treatment Facility Improv	\$464,750.00	\$155,383.51
215	Mid-American Research Chemical, PO Box 927, Columbus, NE, 68602-0927	814602-IN	04/08/24	treatment plant supplies	04/12/24	\$1,851.84	\$142,742.40	300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$12,996.92
5	NAPA Auto Parts, PO Box 1425, Twin Falls, ID, 83303-1425	211806	04/08/24	medic 9	04/12/24	\$18.98	\$1,851.84	700-720-5202500	Vehicle Maintenance	\$2,500.00	\$871.53
16	Norco, Inc, PO Box 35144, Seattle, WA, 98124-5144	40304540	04/08/24	ambulance supplies	04/12/24	\$76.26	\$18.98	700-720-5202181	Supplies (Janitorial & Op	\$14,000.00	\$6,086.90
17	O'Reilly Enterprises, PO Box 248, Cove, OR, 97824	April '24	04/08/24	IT services	04/12/24	\$203.32	\$76.26	100-110-5203800	IT/Computer/Software	\$8,000.00	\$1,350.76
		April '24	04/08/24	IT services	04/12/24	\$10.00		100-140-5203800	IT/Computer/Software	\$250.00	\$52.72
		April '24	04/08/24	IT services	04/12/24	\$223.34		200-200-5203800	IT/Computer/Software	\$7,500.00	\$111.41
		April '24	04/08/24	IT services	04/12/24	\$223.34		300-300-5203800	IT/Computer/Software	\$8,500.00	\$472.32
		April '24	04/08/24	IT services	04/12/24	\$55.00		500-500-5203800	IT/Computer/Software	\$1,500.00	\$541.07
		April '24	04/08/24	IT services	04/12/24	\$55.00		600-600-5203800	IT/Computer/Software	\$3,500.00	\$1,621.22
		April '24	04/08/24	IT services	04/12/24	\$10.00		700-710-5203800	IT/Computer/Software	\$500.00	(\$17.59)
		April '24	04/08/24	IT services	04/12/24	\$10.00		700-720-5203800	IT/Computer/Software	\$1,000.00	(\$27.25)
		April '24	04/08/24	IT services	04/12/24	\$10.00		800-800-5203800	IT/Computer/Software	\$500.00	\$302.72
48	OTEC, PO Box 226, Baker City, OR, 97814	March '24	04/08/24	public works shop	04/12/24	\$174.62	\$800.00	200-200-5202540	Electricity	\$32,000.00	\$12,048.48
		March '24	04/08/24	city well #2	04/12/24	\$1,217.67		200-200-5202540	Electricity	\$32,000.00	\$12,048.48
		March '24	04/08/24	city well #3	04/12/24	\$875.69		200-200-5202540	Electricity	\$32,000.00	\$12,048.48
		March '24	04/08/24	oregon street lift station	04/12/24	\$60.32		300-300-5202540	Electricity	\$38,000.00	\$12,969.33
		March '24	04/08/24	fulton street pumphouse	04/12/24	\$395.00		300-300-5202540	Electricity	\$38,000.00	\$12,969.33
		March '24	04/08/24	street lighting	04/12/24	\$2,133.27		500-500-5202540	Electricity	\$27,500.00	\$9,878.03
		March '24	04/08/24	street lighting	04/12/24	\$83.06		800-800-5202540	Electricity	\$2,000.00	\$1,084.95
20	Oxarc, PO Box 2605, Spokane, WA, 99220-2605	12393587	04/08/24	water dept supplies	04/12/24	\$77.08	\$4,939.63	200-200-5202181	Supplies (Janitorial & Op	\$37,500.00	\$15,429.15
		12415121	04/08/24	treatment plant supplies	04/12/24	\$2,184.13		300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$12,996.92
		12420217	04/08/24	credit	04/12/24	(\$75.00)		300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$12,996.92

Council Approval Report (Council Approval Report)

Vendor		Invoice Number		Date	Description	Due Date	Invoice Amt	Approved Amt	Account Number	Account Description	Budgeted \$	YTD Balance
516	1	Roberts, Ladd, 235 E Roosevelt, Union, OR, 97883	04/08/24	airbnb rentals/wood for outdoor fire pits		04/12/24	\$180.00	\$2,186.21	800-800-5202181	Supplies (Janitorial & Op	\$3,000.00	\$905.95
132	1	Sully, P.C, Paige, 213 W Main, Enterprise, OR, 97828	04/08/24	admin legal fees		04/12/24	\$30.00	\$30.00	100-110-5202110	Legal/Attorney Services	\$5,000.00	\$1,179.60
14	1	TAL Building Centers, 203 SE Park Plaza Dr. Suite 250, Vancouver, WA, 98684	04/08/24	park bathroom locks		04/12/24	\$229.29	\$229.29	100-130-5202820	Maintenance (Building &	\$2,000.00	\$1,362.35
297	1	T-Mobile, PO Box 742596, Cincinnati, OH, 45274-2596	04/08/24	mobile internet		04/12/24	\$11.15	\$11.15	200-200-5203800	IT/Computer/Software	\$7,500.00	\$111.41
50	1	Tritech Software Systems, 12709 Collection Center Drive, Chicago, IL, 60693	04/08/24	billing/postage		04/12/24	\$284.46	\$284.46	200-200-5202640	Postage/Shipping	\$3,500.00	\$563.02
25	1	Umpqua Research Co - Table Rock Analytical Lab, PO Box 609, Myrtle Creek, OR, 97457	04/08/24	sewer testing		04/12/24	\$685.10	\$685.10	300-300-5204950	Sewer Testing	\$2,500.00	\$843.30
85	1	Union County Sheriff's Office, 1109 K Ave, La Grande, OR, 97850	04/08/24	contract hours		04/12/24	\$12,573.75	\$12,573.75	100-120-5202190	Contract Services	\$75,000.00	\$37,228.75

Council Approval Report
(Council Approval Report)

Vendor		Invoice Number	Date	Description	Due Date	Invoice Amt	Approved Amt	Account Number	Account Description	Budgeted \$	YTD Balance
	March '24		04/08/24	park supplies	04/12/24	\$61.42	\$61.42	100-130-5202181	Supplies (Janitorial & Ope	\$5,000.00	\$2,870.62
							\$107.36				
26				US Cellular, Dept. 0205, Palatine, IL, 60055-0205							
	April '24		04/08/24	on cell phone	04/12/24	\$27.06	\$27.06	200-200-5202570	Telephone/Cell	\$5,500.00	\$1,252.20
	April '24		04/08/24	on cell phone	04/12/24	\$27.06	\$27.06	300-300-5202570	Telephone/Cell	\$3,000.00	\$443.60
	April '24		04/08/24	ambulance cell phone	04/12/24	\$53.57	\$53.57	700-720-5202570	Telephone/Cell	\$850.00	\$367.98
							\$107.69				
1				Wex Bank, PO Box 6293, Carol Stream, IL, 60197-6293							
	March '24		04/08/24	white ford truck	04/12/24	\$119.11	\$119.11	200-200-5202490	Fuel	\$5,000.00	\$3,008.08
	March '24		04/08/24	prompt pay credit	04/12/24	(\$0.43)	(\$0.43)	200-200-5202490	Fuel	\$5,000.00	\$3,008.08
	March '24		04/08/24	white ford truck	04/12/24	\$97.97	\$97.97	200-200-5202490	Fuel	\$5,000.00	\$3,008.08
	March '24		04/08/24	lift basket fuel	04/12/24	\$21.95	\$21.95	300-300-5202490	Fuel	\$4,000.00	\$2,699.20
	March '24		04/08/24	prompt pay credit	04/12/24	(\$0.43)	(\$0.43)	300-300-5202490	Fuel	\$4,000.00	\$2,699.20
	March '24		04/08/24	white ford truck	04/12/24	\$89.03	\$89.03	500-500-5202490	Fuel	\$4,000.00	\$3,025.54
	March '24		04/08/24	chevy truck	04/12/24	\$57.17	\$57.17	500-500-5202490	Fuel	\$4,000.00	\$3,025.54
	March '24		04/08/24	fuel for pumps	04/12/24	\$21.10	\$21.10	700-710-5202490	Fuel	\$1,500.00	\$1,113.91
	March '24		04/08/24	engine 74	04/12/24	\$115.26	\$115.26	700-710-5202490	Fuel	\$1,500.00	\$1,113.91
	March '24		04/08/24	prompt pay credit	04/12/24	(\$0.21)	(\$0.21)	700-710-5202490	Fuel	\$1,500.00	\$1,113.91
							\$520.52				
321				ZiplyFiber, PO Box 740416, Cincinnati, OH, 45274-0416							
	April '24		04/08/24	park internet/cameras	04/12/24	\$80.00	\$80.00	100-130-5202181	Supplies (Janitorial & Ope	\$5,000.00	\$2,870.62
	April '24		04/08/24	phone/internet	04/12/24	\$81.43	\$81.43	300-300-5202570	Telephone/Cell	\$3,000.00	\$443.60
	Apr '24		04/10/24	airbnb/house #2	04/12/24	\$61.24	\$61.24	800-800-5202181	Supplies (Janitorial & Ope	\$3,000.00	\$905.95
							\$222.67				
							\$187,411.38				

Total Bills To Pay:

City of Union

Expenditures Register Approval

We, the Union City Council, do hereby certify and declare that we reviewed the demands enumerated and referred to in the foregoing expense pay list. We acknowledge the signature of the City Administrator indicates that he/she has reviewed and approved each of the foregoing expenditures. And, that the expenditures, as revise above, are to the best of our knowledge accurate and are just claims against the City, and that there are funds available for payment thereof in the City treasury.

Approved for distribution on this 10th day of April, 2024.

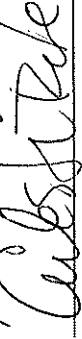
Council Member

 4/10/24

Council Member

 4-10-24

City Administrator



City of Union
Council Approval Report
 (Council Approval Report)

Vendor		InvoiceNumber	Date	Description	Due Date	Invoice Amt	Approved Amt	Account Number	Account Description	Budgeted \$	YTD Balance
41	X057921	Box R Water Analysis Lab, 567 N.W. 2nd Street, Prineville, OR, 97754	04/22/24	water testing	04/26/24	\$50.00	\$50.00	200-200-5202270	Water Testing	\$4,000.00	\$2,206.00
							\$50.00				
450	April '24	Boyer-Davis, Anita, 277 W Bryan, Union, OR, 97883	04/22/24	cleaning contract	04/26/24	\$180.00	\$180.00	100-110-5202190	Contract Services	\$7,500.00	(\$566.52)
			04/22/24	cleaning contract	04/26/24	\$180.00	\$180.00	500-600-5202190	Contract Services	\$3,500.00	\$1,572.24
402	Apr '24	Davenport, Chelsea, PO Box 946, Union, OR, 97883	04/22/24	ranger station proj/house #2	04/26/24	\$95.91	\$95.91	115-000-5403203	Land/Buildings	\$435,710.00	\$266,150.74
			04/22/24	airbnb supplies	04/26/24	\$30.98	\$30.98	800-800-5202181	Supplies (Janitorial & Op	\$3,000.00	\$552.31
64	Apr '24	La Grande Fire & Ambulance, 1806 Cove Ave, La Grande, OR, 97850	04/22/24	shared ALS ambulance/Feb '24	04/26/24	\$3,636.71	\$3,636.71	700-720-5202152	Billing/ALS Fees	\$13,500.00	(\$18,938.51)
							\$126.89				
15	21980706	McKesson Medical, PO Box 936279, Atlanta, GA, 31193-6279	04/22/24	ambulance medical supplies	04/26/24	\$85.32	\$85.32	700-720-5202181	Supplies (Janitorial & Op	\$14,000.00	\$5,750.24
							\$85.32				
442	UOMNCH-24-128	Museum of Natural & Cultural History, Education Department, 1224 University of Oregon, Eugene, OR, 97403	04/22/24	library programs	04/26/24	\$335.00	\$335.00	600-600-5203450	Library Programs	\$7,250.00	\$6,232.20
							\$335.00				
271	April '24	Old West Federal Credit Union, PO Box 2711, Omaha, NE, 68103-2711	04/24/24	office chair/admin	04/26/24	\$23.80	\$23.80	100-110-5202181	Supplies (Janitorial & Op	\$6,000.00	\$1,041.27
			04/24/24	cash back rewards	04/26/24	(\$16.06)	(\$16.06)	100-110-5202181	Supplies (Janitorial & Op	\$6,000.00	\$1,041.27
			04/24/24	adobe program/monthly	04/26/24	\$23.99	\$23.99	100-110-5202181	Supplies (Janitorial & Op	\$6,000.00	\$1,041.27
			04/24/24	zoom fee	04/26/24	\$5.11	\$5.11	100-110-5202181	Supplies (Janitorial & Op	\$6,000.00	\$1,041.27
			04/24/24	park supplies	04/26/24	\$39.76	\$39.76	100-130-5202181	Supplies (Janitorial & Op	\$5,000.00	\$2,342.11
			04/24/24	postage/Kennon appeal	04/26/24	\$5.00	\$5.00	100-160-5202640	Postage/Shipping	\$250.00	\$240.00
			04/24/24	training/conference/Paul Phillips	04/26/24	\$239.84	\$239.84	200-200-5202010	Travel/Training	\$2,500.00	\$1,983.33
			04/24/24	training/conference/Paul Phillips	04/26/24	\$300.00	\$300.00	200-200-5202010	Travel/Training	\$2,500.00	\$1,983.33
			04/24/24	cash back rewards	04/26/24	(\$7.48)	(\$7.48)	200-200-5202181	Supplies (Janitorial & Op	\$37,500.00	\$15,268.07
			04/24/24	office chair/admin	04/26/24	\$23.80	\$23.80	200-200-5202181	Supplies (Janitorial & Op	\$37,500.00	\$15,268.07
			04/24/24	clear bags for delinq notices	04/26/24	\$19.25	\$19.25	200-200-5202181	Supplies (Janitorial & Op	\$37,500.00	\$15,268.07
			04/24/24	water dept supplies	04/26/24	\$73.76	\$73.76	200-200-5202181	Supplies (Janitorial & Op	\$37,500.00	\$15,268.07
			04/24/24	treatment plant lab supplies	04/26/24	\$12.78	\$12.78	300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$8,920.95
			04/24/24	office chair/admin	04/26/24	\$23.80	\$23.80	300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$8,920.95
			04/24/24	clear bags for delinq notices	04/26/24	\$19.24	\$19.24	300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$8,920.95
			04/24/24	cash back rewards	04/26/24	(\$5.04)	(\$5.04)	300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$8,920.95
			04/24/24	treatment plant lab supplies	04/26/24	\$86.95	\$86.95	300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$8,920.95

City of Union
Council Approval Report
(Council Approval Report)

Vendor		Invoice Number	Date	Description	Due Date	Invoice Amt	Approved Amt	Account Number	Account Description	Budgeted \$	YTD Balance
		April '24	04/24/24	treatment plant lab supplies	04/26/24	\$20.81	\$20.81	300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$8,920.95
		April '24	04/24/24	treatment plant lab supplies	04/26/24	\$12.02	\$12.02	300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$8,920.95
		April '24	04/24/24	chemical pump	04/26/24	\$1,490.03	\$1,490.03	300-300-5202880	Equipment Repair/Maint	\$10,000.00	\$4,590.37
		April '24	04/24/24	office chair/admin	04/26/24	\$11.90	\$11.90	500-500-5202181	Supplies (Janitorial & Op	\$6,500.00	\$1,219.56
		April '24	04/24/24	library supplies	04/26/24	\$41.22	\$41.22	600-600-5202181	Supplies (Janitorial & Op	\$5,000.00	\$3,346.06
		April '24	04/24/24	office chair/admin	04/26/24	\$11.89	\$11.89	600-600-5202181	Supplies (Janitorial & Op	\$5,000.00	\$3,346.06
		April '24	04/24/24	cash back rewards	04/26/24	(\$6.95)	(\$6.95)	600-600-5202181	Supplies (Janitorial & Op	\$5,000.00	\$3,346.06
		April '24	04/24/24	books	04/26/24	\$8.40	\$8.40	600-600-5203410	Library Books/Magazines	\$9,000.00	\$3,580.51
		April '24	04/24/24	library programs	04/26/24	\$84.91	\$84.91	600-600-5203450	Library Programs	\$7,250.00	\$6,232.20
		April '24	04/24/24	library programs	04/26/24	\$36.99	\$36.99	600-600-5203450	Library Programs	\$7,250.00	\$6,232.20
		April '24	04/24/24	office chair/admin	04/26/24	\$11.90	\$11.90	700-710-5202181	Supplies (Janitorial & Op	\$4,500.00	\$2,912.58
		April '24	04/24/24	office chair/admin	04/26/24	\$11.90	\$11.90	700-720-5202181	Supplies (Janitorial & Op	\$14,000.00	\$5,750.24
		April '24	04/24/24	ambulance license fees/medic 8 and medic 9	04/26/24	\$230.00	\$230.00	700-720-5202600	Dues/License/Certs	\$750.00	\$635.00
		48		OTEC, PO Box 226, Baker City, OR, 97814			\$2,833.52				
		April '24	04/22/24	city hall	04/26/24	\$37.70	\$37.70	100-110-5202540	Electricity	\$1,000.00	\$497.63
		April '24	04/22/24	park path lights	04/26/24	\$94.75	\$94.75	100-130-5202540	Electricity	\$2,000.00	\$905.39
		April '24	04/22/24	transfer station	04/26/24	\$49.39	\$49.39	100-150-5202540	Electricity	\$800.00	\$303.62
		April '24	04/22/24	public works shop	04/26/24	\$128.90	\$128.90	200-200-5202540	Electricity	\$32,000.00	\$9,780.50
		April '24	04/22/24	well #3	04/26/24	\$987.58	\$987.58	200-200-5202540	Electricity	\$32,000.00	\$9,780.50
		April '24	04/22/24	well #2	04/26/24	\$1,091.90	\$1,091.90	200-200-5202540	Electricity	\$32,000.00	\$9,780.50
		April '24	04/22/24	city hall	04/26/24	\$37.71	\$37.71	200-200-5202540	Electricity	\$32,000.00	\$9,780.50
		April '24	04/22/24	public works shop	04/26/24	\$258.76	\$258.76	200-200-5202540	Electricity	\$32,000.00	\$9,780.50
		April '24	04/22/24	oregon street lift station	04/26/24	\$60.25	\$60.25	300-300-5202540	Electricity	\$38,000.00	\$12,514.01
		April '24	04/22/24	fulton street pump station	04/26/24	\$636.95	\$636.95	300-300-5202540	Electricity	\$38,000.00	\$12,514.01
		April '24	04/22/24	treatment plant	04/26/24	\$1,383.09	\$1,383.09	300-300-5202540	Electricity	\$38,000.00	\$12,514.01
		April '24	04/22/24	city hall	04/26/24	\$37.71	\$37.71	300-300-5202540	Electricity	\$38,000.00	\$12,514.01
		April '24	04/22/24	street lights	04/26/24	\$2,104.17	\$2,104.17	500-500-5202540	Electricity	\$27,500.00	\$7,744.76
		April '24	04/22/24	dearborn street	04/26/24	\$57.73	\$57.73	500-500-5202540	Electricity	\$27,500.00	\$7,744.76
		April '24	04/22/24	library	04/26/24	\$163.97	\$163.97	600-600-5202540	Electricity	\$3,250.00	\$1,590.16
		April '24	04/22/24	ranger station	04/26/24	\$50.22	\$50.22	800-800-5202540	Electricity	\$2,000.00	\$1,001.89
		April '24	04/22/24	ranger station	04/26/24	\$107.67	\$107.67	800-800-5202540	Electricity	\$2,000.00	\$1,001.89
		22		Quill Corporation, PO Box 37600, Philadelphia, PA, 19101-0600			\$7,288.45				
		38025739	04/22/24	office supplies	04/26/24	\$21.59	\$21.59	100-110-5202181	Supplies (Janitorial & Op	\$6,000.00	\$1,041.27
		38073998	04/22/24	name plate	04/26/24	\$11.49	\$11.49	100-160-5202181	Supplies (Janitorial & Op	\$350.00	\$222.90
		38025739	04/22/24	office supplies	04/26/24	\$21.59	\$21.59	200-200-5202181	Supplies (Janitorial & Op	\$37,500.00	\$15,268.07
		38025739	04/22/24	office supplies	04/26/24	\$21.59	\$21.59	300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$8,920.95
		38025739	04/22/24	office supplies	04/26/24	\$21.59	\$21.59	500-500-5202181	Supplies (Janitorial & Op	\$6,500.00	\$1,219.56

Council Approval Report (Council Approval Report)

Vendor		Invoice Number	Date	Description	Due Date	Invoice Amt	Approved Amt	Account Number	Account Description	Budgeted \$	YTD Balance
24	Sun Life Financial, PO Box 806644-1, Kansas City, MO, 64180-6644	May '24	04/22/24	volunteer fire/ems insurance	04/26/24	\$4.68	\$97.85	700-710-5102128	Benefits	\$7,055.00	\$3,404.49
		May '24	04/22/24	volunteer fire/ems insurance	04/26/24	\$4.70	\$9.38	700-720-5102128	Benefits	\$6,305.00	\$2,843.26
381	Tactical Business Group, PO Box 788, Medford, OR, 97501	ORCOU2024-003	04/22/24	ambulance billing services	04/26/24	\$120.00	\$120.00	700-720-5202152	Billing/ALS Fees	\$13,500.00	(\$18,938.51)
50	Tritech Software Systems, 12709 Collection Center Drive, Chicago, IL, 60693	408400	04/24/24	billing/postage	04/26/24	\$10.85	\$10.85	200-200-5202640	Postage/Shipping	\$3,500.00	\$278.56
88	Union Rural Fire Dept, PO Box 317, Union, OR, 97883	1077	04/22/24	rent/utilities	04/26/24	\$974.76	\$974.76	700-710-5202280	Rent/Fire & Ambulance	\$14,000.00	\$5,175.04
69	USA Blue Book, PO Box 9004, Gurnee, IL, 60031-9004	INV00329864	04/22/24	treatment plant supplies	04/26/24	\$694.94	\$1,949.52	300-300-5202181	Supplies (Janitorial & Op	\$45,000.00	\$8,920.95
3	Zayo Group LLC, PO Box 734521, Chicago, IL, 60673-4521	Apr '24	04/22/24	city well alarms/phone	04/26/24	\$206.52	\$694.94	200-200-5202570	Telephone/Cell	\$5,500.00	\$1,142.52
321	ZiplyFiber, PO Box 740416, Cincinnati, OH, 45274-0416	Apr '24	04/22/24	internet	04/26/24	\$43.30	\$411.47	100-110-5203800	IT/Computer/Software	\$8,000.00	\$1,147.44
321	ZiplyFiber, PO Box 740416, Cincinnati, OH, 45274-0416	Apr '24	04/22/24	internet	04/26/24	\$205.06	\$411.47	200-200-5202570	IT/Computer/Software	\$5,500.00	\$1,142.52
321	ZiplyFiber, PO Box 740416, Cincinnati, OH, 45274-0416	Apr '24	04/22/24	internet	04/26/24	\$77.60	\$411.47	200-200-5203800	IT/Computer/Software	\$7,500.00	(\$302.52)
321	ZiplyFiber, PO Box 740416, Cincinnati, OH, 45274-0416	Apr '24	04/22/24	internet	04/26/24	\$10.74	\$411.47	300-300-5203800	IT/Computer/Software	\$8,500.00	\$58.40
321	ZiplyFiber, PO Box 740416, Cincinnati, OH, 45274-0416	Apr '24	04/22/24	internet	04/26/24	\$5.38	\$411.47	500-500-5203800	IT/Computer/Software	\$1,500.00	\$486.07
321	ZiplyFiber, PO Box 740416, Cincinnati, OH, 45274-0416	Apr '24	04/22/24	internet	04/26/24	\$5.38	\$411.47	700-710-5203800	IT/Computer/Software	\$500.00	(\$38.74)
321	ZiplyFiber, PO Box 740416, Cincinnati, OH, 45274-0416	Apr '24	04/22/24	internet	04/26/24	\$5.38	\$411.47	700-720-5203800	IT/Computer/Software	\$1,000.00	(\$48.41)

City of Union
Council Approval Report
(Council Approval Report)

4/24/2024 1:11pm

Vendor		Invoice Number	Date	Description	Due Date	Invoice Amt	Approved Amt	Account Number	Account Description	Budgeted \$	YTD Balance
		Apr '24 public work	04/22/24	airbnb internet	04/26/24	\$60.00	\$60.00	800-800-5202181	Supplies (Janitorial & Op	\$3,000.00	\$552.31
							\$485.06				
							\$18,569.47				

Total Bills To Pay:

City of Union

Expenditures Register Approval

We, the Union City Council, do hereby certify and declare that we reviewed the demands enumerated and referred to in the foregoing expense pay list. We acknowledge the signature of the City Administrator indicates that he/she has reviewed and approved each of the foregoing expenditures. And, that the expenditures, as revise above, are to the best of our knowledge accurate and are just claims against the City, and that there are funds available for payment thereof in the City treasury.

Approved for distribution on this 24th day of April 2024.

Council Member	<u>Maddalena</u>	<u>4/24/24</u>
Council Member	<u>Amelia Bagnard</u>	<u>4-24-24</u>
City Administrator	<u>C. J. Tate</u>	

CASH SUMMARY COMPARED TO BUDGET (Expenses) April 2024

Department	2023-2024 Budget	Current Expenses	YTD Expenses	Variance	% Budget Expended
GENERAL FUND					
Administration	\$ 532,682.00	\$ 14,008.28	\$ 430,666.95	\$ 102,015.05	80.8%
Building Maintenance Rsv	\$ 467,210.00	\$ 567.65	\$ 169,655.17	\$ 297,554.83	36.3%
Vehicle/Equip Rsv	\$ 153,800.00	\$ 10,803.00	\$ 22,510.55	\$ 131,289.45	14.6%
Public Safety	\$ 94,920.00	\$ 14,286.96	\$ 68,282.04	\$ 26,637.96	71.9%
Emergency Event	\$ 547,650.00		\$ 230,710.00	\$ 316,940.00	42.1%
Parks Department	\$ 44,251.00	\$ 2,236.17	\$ 18,977.81	\$ 25,273.19	42.9%
Park Rsv	\$ 29,013.00	\$ -	\$ 7,945.31	\$ 21,067.69	27.4%
Special Tree Fund	\$ 12,930.00	\$ -	\$ -	\$ 12,930.00	0.0%
Court	\$ 2,975.00	\$ 10.00	\$ 1,082.28	\$ 1,892.72	36.4%
Recycling	\$ 900.00	\$ 49.39	\$ 545.77	\$ 354.23	60.6%
Planning	\$ 26,363.00	\$ 4,855.07	\$ 21,898.83	\$ 4,464.17	83.1%
Total General Fund	\$ 1,912,694.00	\$46,816.52	\$972,274.71	\$ 940,419.29	50.8%

WATER FUND					
Water Department	\$ 870,275.00	\$ 24,550.46	\$ 405,357.74	\$ 464,917.26	46.6%
Water Rsv	\$ 1,862,500.00	\$ -	\$ 293,682.11	\$ 1,568,817.89	15.8%
Total Water Fund	\$ 2,732,775.00	\$ 24,550.46	\$699,039.85	\$ 2,033,735.15	25.6%

SEWER FUND					
Sewer Department	\$ 823,300.00	\$ 27,179.08	\$ 383,378.56	\$ 439,921.44	46.6%
Sewer Rsv	\$ 554,750.00	\$ 142,742.40	\$ 468,746.39	\$ 86,003.61	84.5%
Sewer Debt	\$ 377,833.00	\$ 14,685.97	\$ 146,859.70	\$ 230,973.30	38.9%
Total Sewer Fund	\$ 1,755,883.00	\$ 184,607.45	\$998,984.65	\$ 756,898.35	56.9%

SYSTEM DEVELOPMENT FUND (SDC)					
System Development	\$ 98,826.00	\$ -	\$ -	\$ 98,826.00	0.0%
Total SDC	\$ 98,826.00	\$ -	\$0.00	\$ 98,826.00	0.0%

STREET FUND					
Street Department	\$ 337,000.00	\$ 11,048.85	\$ 190,836.64	\$ 146,163.36	56.6%
Street Rsv	\$ 606,867.00	\$ -	\$ 15,591.60	\$ 591,275.40	2.6%
Bike/Ped Path	\$ 77,962.00	\$ -	\$ -	\$ 77,962.00	0.0%
Total Street Fund	\$ 1,021,829.00	\$ 11,048.85	\$206,428.24	\$ 815,400.76	20.2%

LIBRARY FUND					
Library Department	\$ 237,250.00	\$ 8,682.61	\$ 85,265.48	\$ 151,984.52	35.9%
Total Library Fund	\$ 237,250.00	\$ 8,682.61	\$85,265.48	\$ 151,984.52	35.9%

EMERGENCY SERVICES FUND					
Unappropriated Funds	\$	36,446.00		\$	-
Fire Department	\$	140,552.00	\$	4,507.87	\$ 97,785.57 \$ 42,766.43 69.6%
Ambulance Department	\$	174,252.00	\$	9,470.53	\$ 145,482.44 \$ 28,769.56 83.5%
EMS Vehicle/Equip Rsv	\$	271,293.00	\$	-	\$ 22,282.12 \$ 249,010.88 8.2%
Total EMS Fund	\$	586,097.00	\$	13,978.40	\$265,550.13 \$ 320,546.87 45.3%

RANGER STATION FUND					
Ranger Station	\$	88,450.00	\$	2,854.54	\$ 31,590.04 \$ 56,859.96 35.7%
Total Ranger Station	\$	88,450.00	\$	2,854.54	\$31,590.04 \$ 56,859.96 35.7%

DOWNTOWN REVOLVING LOAN FUND (DRL)					
DRL Fees/Loans	\$	36,653.00	\$	-	\$ - \$ 36,653.00 0.0%
Total DRL	\$	36,653.00	\$	-	\$0.00 \$ 36,653.00 0.0%

GRAND TOTAL	\$	8,470,457.00	\$292,538.83	\$3,259,133.10	\$ 5,211,323.90 38.5%
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City of Union, Oregon



PO Box 529
342 S. Main Street
Union, OR 97883

Phone: 541-562-5197
Fax: 541-562-5196
www.cityofunion.com

Home to the Buffalo Peak Golf Course

MEMORANDUM

May 6, 2024

TO: Celeste Tate, City Administrator
FROM: Laura Dodds, Office Manager

SUBJECT: Office Manager Staff Report – April 2024

The following financial report shows revenues/expenditures:

- ❖ Total revenue for the month of April: **\$177,420.61**
- ❖ Total expenditures for the month of April: **\$292,538.83**
- ❖ A total of **\$106,472.34** was billed out in utility bills for the month
- ❖ We delivered **44** delinquent notices on April 30th. Delinquent fees total **\$880.00**. Delinquent accounts will be shut off if no attempt is made to pay or make payment arrangements by May 6th. Shut off date will be May 7th. If a delinquent account is unpaid by the due date services will be shut off, a \$35.00 fee assessed and the account will then be due in full to have services restored.
- ❖ Total amount billed for late fees assessed **\$1,267.50**
- ❖ Airbnb Revenue for April 2024, before deducting cleaning and management fees: **\$1,073.74**
- ❖ Attached with this report you will find a budget summary of revenues and expenditures up to date by department, print out of adjustments done to customer accounts, Accounts payable for the month of April.

CASH SUMMARY COMPARED TO BUDGET (Revenues)**April 2024**

Source	2023-2024 Budget	Current Receipts	YTD Receipts	Variance	% Budget Collected
GENERAL FUND					
Beginning Cash	\$ 1,237,493.00		\$1,295,392.59	\$ (57,899.59)	104.7%
Property Taxes	\$ 170,000.00	\$ 472.45	\$ 179,407.59	\$ (9,407.59)	105.5%
Delinquent Taxes	\$ 6,000.00	\$ 287.80	\$ 4,555.61	\$ 1,444.39	75.9%
Interest	\$ 1,500.00	\$ 174.81	\$ 1,787.10	\$ (287.10)	119.1%
Franchise Fees	\$ 100,000.00	\$ 35,205.83	\$ 114,291.87	\$ (14,291.87)	114.3%
Oregon Liquor Revenue	\$ 36,000.00	\$ 2,413.41	\$ 33,728.81	\$ 2,271.19	93.7%
Cigarette Tax	\$ 1,200.00	\$ 106.86	\$ 1,354.98	\$ (154.98)	112.9%
Oregon Shared Revenue	\$ 23,500.00		\$ 19,494.90	\$ 4,005.10	83.0%
Transient Lodging Tax	\$ 1,500.00	\$ 754.10	\$ 5,002.08	\$ (3,502.08)	333.5%
Liquor License Fees	\$ 175.00		\$ 90.00	\$ 85.00	51.4%
License/Permits	\$ 100.00		\$ -	\$ 100.00	0.0%
Land Use Fees	\$ 2,500.00	\$ 445.00	\$ 2,935.00	\$ (435.00)	117.4%
Burn Permits	\$ 1,200.00	\$ 185.00	\$ 1,430.00	\$ (230.00)	119.2%
Court Fines	\$ 750.00		\$ 250.00	\$ 500.00	33.3%
City Surplus Sales	\$ 1,000.00		\$ -	\$ 1,000.00	0.0%
Misc Revenue	\$ 10,000.00	\$ 932.86	\$ 17,167.86	\$ (7,167.86)	171.7%
COVID Funds	\$ -	\$ -	\$ -	\$ -	
Transfers From Other Funds	\$ 325,420.00		\$ 325,420.00	\$ -	100.0%
Total General Fund	\$ 1,918,338.00	\$ 40,978.12	\$2,002,308.39	\$ (83,970.39)	104.4%

WATER FUND					
Cash on Hand	\$ 812,075.00	\$ -	\$ 988,933.62	\$ (176,858.62)	121.8%
Interest	\$ 1,500.00	\$ 262.22	\$ 2,662.87	\$ (1,162.87)	177.5%
Water Bills	\$ 510,000.00	\$ 42,134.90	\$ 449,546.29	\$ 60,453.71	88.1%
Set-up Fees	\$ 1,200.00	\$ 125.00	\$ 950.00	\$ 250.00	79.2%
Installation Fees	\$ 5,000.00	\$ 300.00	\$ 4,710.00	\$ 290.00	94.2%
CDBG Grant	\$ 1,250,000.00		\$ 268,572.00	\$ 981,428.00	21.5%
Transfers In	\$ 150,000.00		\$ 150,000.00	\$ -	100.0%
Misc Revenue	\$ 3,000.00	\$ 343.23	\$ 1,324.78	\$ 1,675.22	44.2%
Total Water Fund	\$ 2,732,775.00	\$ 43,165.35	\$ 1,866,699.56	\$ 866,075.44	68.3%

SEWER FUND					
Cash on Hand	\$ 742,583.00	\$ -	\$777,067.02	\$ (34,484.02)	104.6%
Interest	\$ 1,500.00	\$ 262.22	\$ 2,662.87	\$ (1,162.87)	177.5%
Sewer Bills	\$ 620,000.00	\$ 55,175.93	\$ 535,823.64	\$ 84,176.36	86.4%
Set-up Fees	\$ 1,000.00	\$ 125.00	\$ 950.00	\$ 50.00	95.0%
Septic Fees	\$ 100.00	\$ 50.00	\$ 50.00	\$ 50.00	50.0%
Installation Fees	\$ 3,500.00	\$ 350.00	\$ 3,250.00	\$ 250.00	92.9%
Billed Labs	\$ 2,500.00	\$ 165.00	\$ 440.00	\$ 2,060.00	17.6%
Transfers In	\$ 383,500.00		\$ 206,500.00	\$ 177,000.00	53.8%

Misc Revenue	\$ 1,200.00	\$ 35.00	\$ 796.58	\$ 403.42	66.4%
Total Sewer Fund	\$ 1,755,883.00	\$ 56,163.15	\$ 1,527,540.11	\$ 228,342.89	87.0%

SYSTEM DEVELOPMENT FUND (SDC)					
Cash on Hand	\$ 98,826.00	\$ -	\$ 98,826.31	\$ (0.31)	100.0%
Misc Revenue	\$ -	\$ -	\$ -	\$ -	
Water Development Charge	\$ -	\$ -	\$ -	\$ -	0.0%
Sewer Development Charge	\$ -	\$ -	\$ -	\$ -	0.0%
Water New Growth	\$ -	\$ -	\$ -	\$ -	0.0%
Total SDC	\$ 98,826.00	\$ -	\$ 98,826.31	\$ (0.31)	100.0%

STREET FUND					
Cash on Hand	\$ 411,937.00	\$ -	\$ 419,563.85	\$ (7,626.85)	101.9%
State Gas Taxes	\$ 160,000.00	\$ 14,023.19	\$ 142,395.72	\$ 17,604.28	89.0%
Street Install Fees	\$ 500.00		\$ 3,978.00	\$ (3,478.00)	795.6%
Park Lights Grant	\$ -	\$ -	\$ -	\$ -	
Bridge STIP	\$ 316,392.00		\$ -	\$ 316,392.00	0.0%
Transfers from Other Funds	\$ 133,000.00		\$ 133,000.00	\$ -	100.0%
Total Street Fund	\$ 1,021,829.00	\$ 14,023.19	\$ 698,937.57	\$ 322,891.43	68.4%

LIBRARY FUND					
Cash on Hand	\$ 110,500.00	\$ -	\$ 121,751.53	\$ (11,251.53)	110.2%
Taxes Levied	\$ 120,000.00	\$ 535.99	\$ 123,141.10	\$ (3,141.10)	102.6%
Grant Funds	\$ 1,750.00		\$ 7,894.00	\$ (6,144.00)	451.1%
Misc Revenue	\$ 5,000.00	\$ 108.95	\$ 6,998.74	\$ (1,998.74)	140.0%
Total Library Fund	\$ 237,250.00	\$ 644.94	\$ 259,785.37	\$ (22,535.37)	109.5%

EMERGENCY SERVICES FUND					
Cash on Hand	\$ 358,543.00	\$ -	\$ 399,045.42	\$ (40,502.42)	111.3%
Interest	\$ 750.00	\$ 131.11	\$ 1,331.41	\$ (581.41)	177.5%
EMS Surcharge Fees	\$ 125,000.00	\$ 10,798.66	\$ 107,397.76	\$ 17,602.24	85.9%
Ambulance Svc Fees	\$ 65,000.00	\$ 5,746.24	\$ 92,897.15	\$ (27,897.15)	142.9%
Burn Permits	\$ 1,250.00	\$ 185.00	\$ 1,420.00	\$ (170.00)	113.6%
Transfers In	\$ 70,000.00		\$ 70,000.00	\$ -	100.0%
Misc Income	\$ 1,000.00		\$ 857.15	\$ 142.85	85.7%
Grant Funds	\$ 1,000.00		\$ 16,000.00	\$ (15,000.00)	1600.0%
Total EMS Fund	\$ 622,543.00	\$ 16,861.01	\$ 672,948.89	\$ (50,405.89)	108.1%

RANGER STATION FUND					
Cash on Hand	\$ 16,100.00	\$ -	\$ 23,973.94	\$ (7,873.94)	148.9%
Interest	\$ 250.00	\$ 43.68	\$ 443.65	\$ (193.65)	177.5%
Rent	\$ 35,000.00	\$ 5,491.17	\$ 31,700.83	\$ 3,299.17	90.6%
Transfers In	\$ 20,000.00		\$ 20,000.00	\$ -	100.0%
Grant Funds	\$ 17,000.00		\$ -	\$ 17,000.00	0.0%
Misc Revenue	\$ 100.00	\$ 50.00	\$ 100.00	\$ -	100.0%
Total Ranger Station	\$ 88,450.00	\$ 5,584.85	\$ 76,218.42	\$ 12,231.58	86.2%

DOWNTOWN REVOLVING LOAN FUND (DRL)

Cash on Hand	\$ 36,538.00	\$ -	\$ 36,537.51	\$ 0.49	100.0%
Interest	\$ 15.00	\$ -	\$ -	\$ 15.00	0.0%
Loan Fees		\$ -	\$ -	\$ -	0.0%
Transfers In	\$ -		\$ -	\$ -	0.0%
Loan Payments Rec'd	\$ 100.00		\$ -	\$ 100.00	0.0%
Total DRL	\$ 36,653.00	\$ -	\$ 36,537.51	\$ 115.49	99.7%
GRAND TOTAL	\$ 8,512,547.00	\$ 177,420.61	\$7,239,802.13	\$ 1,272,744.87	85.0%



Memorandum

Subject: Library Monthly Report
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Tiffany Derichsweiler, Library Lead

ATTACHED:
[Library Monthly Report April 2024](#)

April Monthly Report 2024

	Statistics	
	This Year	Last Year
Patron Count	1054	691
Circulation Count:	1195	1130
Adult	624	498
Children	571	632
Audios	61	58
Videos	230	234
Music CD's	2	0
Materials Added	230	127
Reference Questions	18	10
Programs for Patrons	17	5
Participants	163	56
Computer Usage	1507319	378660
New Patrons	13	7
ILL Requests	354	162
Notary	1	0

Events and Additions:

Started youth book club every Friday. Will run through September.

Library board created new volunteer policy.

2nd mason has assessed building for estimate, so we have options if get T-Mobile grant.

EOLS royalty has been invited to take promotional photos at library.

Making a catalogue of summer reading program prizes to reduce messes this summer.

All summer reading program events are posted online. Sign ups to begin May 20.

Ordered Christian Fiction novels, as this is a genre I have not curated previously.

Spring planters are ready.

One staff member resigned, and another has picked up the hours.



Memorandum

Subject: Sheriff's Monthly Report
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Celeste Tate, Administrator

ATTACHED:

[Sheriff's Monthly Report April 2024](#)

[Sheriff Deputy's Hours April 2024](#)

[Sheriff's Yearly Hours 2024](#)

Union Activities –April 2024

The Union County Deputies contributed hours to the total for the month. The statistics/report reflect the activities done by Sheriff's Deputies:

HOURS	128.5
Vacation/Sick Hours taken	0
Total Hours	0
CRIMINAL CITATIONS	2
TRAFFIC CITATIONS	2
WARNINGS	7
ARRESTS	1
CALLS FOR SERVICE	23
FI'S	91
WALK-INS	0
REPORTS	1
TOWS/IMPOUNDS	0
OTHER	0

Activities include:

Routine patrol including foot patrol, school patrol, and traffic patrol
 Extra patrol in areas requested done throughout the month
 Field interrogations and follow up done as needed throughout the month
 Traffic warnings given throughout the month
 Deputy assisted Animal Control with a citation
 Report taken for a runaway juvenile
 Deputy responded for abandoned property
 Assisted citizen
 Responded for suspicious circumstances
 Report of a theft, juvenile parents contacted no charges
 Options explained for juvenile problems
 Deputy responded for a call of harassment
 Responded for a juvenile theft, suspicious vehicle and suspicious circumstances
 Deputy assisted citizen
 Juvenile runaway recovered
 Responded for a Domestic
 Suspicious vehicle at the Baptist church
 Report of a restraining order violation
 Found dog
 Received a report of indecent exposure
 Stalking report
 Report of burglary in progress, determined to be unfounded
 Responded for a drug law violation
 Deputy assisted medical
 Deputy arrested one wanted person

DATE	Bowen	WW	Schaad	McKaig	Heath	Jensen	Sutten	Humphries	Butcher	Herna	Hamilton	Flowers	Capers	Witty	Johnson	BELL	Total
1														5			5.00
2														10			10.00
3														10S			0.00
4														10			10.00
5																	0.00
6																	0.00
7			2														2.00
8														10.5			10.50
9			1											8			9.00
10														8			8.00
11														8.5			8.50
12																	0.00
13																	0.00
14																	0.00
15														10			10.00
16														10			10.00
17														11			11.00
18																	0.00
19														9			9.00
20																	0.00
21																	0.00
22														9			9.00
23														4.5			4.50
24														1.5			1.50
25														1.5			1.50
26																	0.00
27																	0.00
28																	0.00
29														9			9.00
30														8T			0.00
31																	0.00
Sub Total	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	125.50	0.00	0.00	128.50
Total Hrs	128.50	APRIL															

2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	5.00								
2	8.00	8.00	0.00	10.00								
3	9.00	0.00	0.00	0.00								
4	8.00	0.00	6.00	10.00								
5	0.00	7.75	7.25	0.00								
6	0.00	0.00	9.00	0.00								
7	0.00	9.50	7.00	2.00								
8	9.25	9.50	0.00	10.50								
9	9.00	9.00	0.00	9.00								
10	8.25	0.00	0.00	8.00								
11	7.50	1.50	0.00	8.50								
12	0.00	9.50	7.50	0.00								
13	2.00	7.75	8.50	0.00								
14	0.00	3.00	11.50	0.00								
15	8.75	9.00	9.00	10.00								
16	9.50	0.00	0.00	10.00								
17	8.50	0.00	0.00	11.00								
18	9.00	0.00	0.00	0.00								
19	0.00	10.00	8.00	9.00								
20	0.00	9.50	8.50	0.00								
21	0.00	9.50	18.25	0.00								
22	8.75	4.00	2.50	9.00								
23	8.50	0.00	0.00	4.50								
24	5.75	0.00	0.00	1.50								
25	5.50	0.00	0.00	1.50								
26	0.00	5.50	10.00	0.00								
27	0.00	7.50	7.50	0.00								
28	0.50	8.00	10.00	0.00								
29	2.75	3.00	0.00	9.00								
30	8.00	0.00	2.00	0.00								
31	2.00	0.00	0.00	0.00								
Total	138.5	131.5	132.50	128.50								

	120	120	120	120	120	120	120	120	120	120	120	120
Per/Short	18.50	11.50	12.50	8.50	(120.00)	(120.00)	(120.00)	(120.00)	(120.00)	(120.00)	(120.00)	(120.00)



Memorandum

Subject: Water Sewer Committee
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Tim Cox,

BACKGROUND INFORMATION:

The Water Sewer Committee had a meeting on May 6th and looked at the alternatives in the Wastewater facilities plan, particularly alternative 4 which discusses the city no longer discharging into Catherine Creek. The committee is formulating a proposed 1st step to get out of the creek if needed which includes obtaining needed property for a lagoon. In addition, discussed needed updates on projects awaiting completion in order to formulate a 3-5 year plan. Also awaiting information on lining system under 4th street in order to complete that prior to chip sealing the road as planned.



Memorandum

Subject: Buffalo Flat Project Update
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Celeste Tate, Administrator

BACKGROUND INFORMATION:

There are no significant updates to the Buffalo Flats Little Creek Habitat Restoration Design. The draft 80% design threshold is still projected to be the end of June 2024. After that time a focus group meeting will be held. The Catherine Creek project is still in the feasibility study and cost estimate stage and will be into 2025. There are two fish passage projects that are being undertaken however with pre-construction meetings held with landowners and crew on May 1st at the Weaver Lane diversion, and the Israel Ames diversion. These projects aim to allow better irrigation access as well as fish passage. Landowners were present at both sites. Project drawings are attached for information.

ATTACHED:

[Buffalo Flat Design Project Update 2024 May \(002\)](#)
[Technical Specifications \(1\)](#)
[Little Creek Drawings Reduced 2 \(1\)](#)



10507 N. McAlister Road
La Grande Oregon 97850

Union City Council Buffalo Flats Design Update

We are currently on schedule with the project design deliverable timelines provided in March, with no additional updates to provide the Council at this time. The March update is provided below.

March 2024 Update

Little Creek:

Currently the Buffalo Flats Little Creek Habitat Restoration Designs are at a 30% completion level. After some delays in the design process at the end of the 2023 year, the design schedule has been revised. The revised schedule for the Buffalo Flats Little Creek Habitat Restoration portion of the design is as follows:

Draft 80% design completed by June 30, 2024

Final 80% design completed August 30, 2024

Project permitting will take place from June 30-October 1, 2024

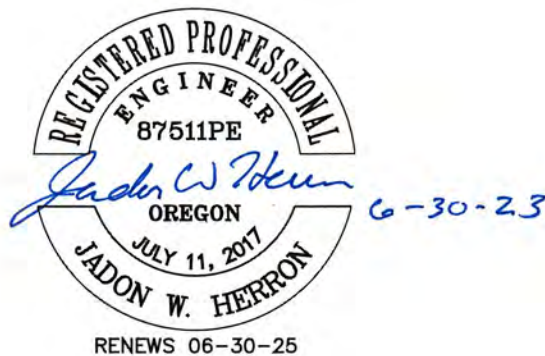
At this point the final design date is yet to be determined

Catherine Creek:

The Oregon Department of Transportation (ODOT) is conducting a feasibility study and cost estimate for relocating a portion of Highway 203 along Catherine Creek on the Buffalo Peak Land & Livestock property. ODOT began this work in May 2023 with site surveys to develop an elevation layer of the area. Alternatives for a new alignment and location of Highway 203 will be developed considering safety concerns, maintenance, weather impacts, construction feasibility, cost, and environmental impacts. This feasibility study and cost estimate are scheduled to take place through 2024 and into 2025.

**TECHNICAL SPECIFICATIONS AND DRAWINGS
FOR
UNION SOIL AND WATER CONSERVATION DISTRICT
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS**

2023



ANDERSON PERRY & ASSOCIATES, INC.

La Grande, Redmond, Hermiston, and Enterprise Oregon
Walla Walla, Washington

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TECHNICAL SPECIFICATIONS

SECTION 1

RIVER RESTORATION

PART 1 - GENERAL

1.1 Scope

These Specifications cover river restoration improvements, including earthwork, streambed simulation material, seeding, planting, riprap, etc. Work shall include furnishing all equipment, materials, labor, etc., as required to complete the required improvements as shown on the Drawings and specified herein. Items specified in this Technical Specification are intended to be broad in scope and may not always apply to all items of Work to be constructed. All applicable sections herein, as determined by the Engineer, shall control the Work outlined in the Contract Documents.

1.2 Earthwork

A. Earthwork Quantities

The approximate quantities, shown on the Drawings, of material required for the embankment construction and the quantity available from excavation have been made based on the ground elevations shown on the Drawings. Estimated quantities may vary because the actual ground surface elevations shown may vary and the shrinkage factor of the soil may vary. The Work shall be performed on a lump sum, all required basis. No field measurements of quantities will be made. The Contractor shall make their own determination of the actual quantity of earthwork required to complete the Work as shown on the Drawings.

B. Clearing and Grubbing

Clearing and grubbing shall include the removal and disposal of any unwanted items, such as concrete, culverts, fencing material, boards, miscellaneous metal, etc., and organic material such as trees, tree stumps, brush, hedges, vegetation, roots, rubbish, sod, and topsoil, and any other obstacles or materials in the construction area which would prevent completing the Project, and which are unsuitable for site work construction.

C. Excavation

Excavation shall consist of the excavation, haul, placement, and/or satisfactory disposal of all materials taken from within the work area for the construction of embankments, subgrade, ditches, main channels, side channels, and incidental work to the lines, grades, and cross sections shown on the Drawings.

TECHNICAL SPECIFICATIONS

SECTION 1

RIVER RESTORATION

D. Balancing Earthwork

It shall be the Contractor's responsibility to make their own determination of quantities required to complete the Work. Any imbalance in the actual earthwork which may occur shall be adjusted by either of the following methods. When sufficient material is not available from the excavation areas to construct the embankments, the Contractor shall arrange for and obtain borrow material to complete the Work, unless borrow areas are designated on the Drawings. When excess or unsuitable material exists beyond that required to complete the embankments, the Contractor shall dispose of the excess material at a location selected by the Contractor outside of the Project boundaries, unless a waste site has been designated on the Drawings. Balancing the earthwork shall be incidental to the Work performed.

1.3 Temporary Access Roads and Paths

The Contractor shall use existing access roads and paths whenever reasonable and shall minimize the number and length of temporary access roads and paths through riparian areas and floodplains in order to minimize soil disturbance and compaction and impacts to vegetation.

After consulting with the Engineer, the Contractor shall minimize the removal of riparian vegetation during construction of the temporary access roads or paths. When temporary removal of vegetation is necessary, the Contractor shall cut the vegetation at ground level as opposed to grubbing the Site.

All temporary access roads and paths shall be obliterated upon Project completion and the soil shall be stabilized and revegetated, at a minimum, to pre-Project conditions. Temporary roads and paths in wet areas or areas prone to flooding shall be obliterated by the Contractor by the end of the in-water work window.

1.4 Staging, Storage, and Stockpile Areas

Staging areas used for construction equipment storage; vehicle storage, fueling, and servicing; and hazardous materials storage shall be as far as practical away from any natural waterbody or wetland in staging areas identified on the Drawings for Little Creek 6 (LC6), and shall be a minimum of 150 feet from any natural waterbody or wetland in staging areas identified on the Drawings for Little Creek 5 (LC5). Equipment shall be washed prior to entering the regulated work area to minimize any adverse effects to waterways and aquatic species. During non-work hours, equipment and vehicles shall be stored in the designated staging areas.

TECHNICAL SPECIFICATIONS

SECTION 1

RIVER RESTORATION

Natural materials used for habitat restoration, such as large wood, gravel, and boulders, may be staged within the 100-year floodplain at identified locations shown on the Drawings. Any material not used for habitat restoration and not native to the floodplain shall be removed to a location outside of the 100-year floodplain for LC5.

1.5 Spill Prevention

The Contractor shall prepare a project-specific Spill Prevention, Control, and Countermeasures Plan (SPCC Plan) for LC6, and shall implement the SPCC Plan for the duration of the Project. No on-site construction activities may commence until the Engineer accepts the SPCC Plan. The SPCC Plan shall address all fuels and petroleum products. The Contractor shall update the SPCC Plan throughout project construction so that the written plan reflects actual site conditions and practices. The Contractor shall fully implement the SPCC Plan, as accepted and updated, at all times. The SPCC Plan shall set forth the following information in the order listed:

- A. Responsible Personnel - Identify the names, titles, and contact information for the personnel responsible for implementing and updating the SPCC Plan and for responding to spills.
- B. Project and Site Information - Describe the following items:
 - 1. The Project Work.
 - 2. The site location and boundaries.
 - 3. The drainage pathways from the site.
 - 4. Nearby waterways and sensitive areas and their distances from the site.
- C. Potential Spill Sources - Describe each of the following for all potentially hazardous materials brought on site including, but not limited to, materials used for equipment operation, refueling, maintenance, or cleaning:
 - 1. Name of material and its intended use.
 - 2. Estimated maximum amount on site at any one time.
 - 3. Location(s) where the material will be staged, used, and stored and the distance(s) from nearby waterways and sensitive areas.

TECHNICAL SPECIFICATIONS

SECTION 1

RIVER RESTORATION

D. Spill Prevention - Describe the following items:

1. The contents and locations of spill response kits that the Contractor shall supply and maintain that are appropriately stocked, located in close proximity to hazardous materials and equipment, and immediately accessible.
2. Security measures for potential spill sources to prevent accidental spills and vandalism.
3. Methods used to prevent stormwater from contacting hazardous materials.
4. Secondary containment for each potential spill source.
5. Best management practice methods and locations where they are used to prevent the discharge of hazardous materials and fuel to ground or water during mixing and transfer.
6. Routine equipment, storage area, and structure inspection and maintenance practices to prevent drips, leaks, or failures of hoses, valves, fittings, containers, pumps, or other systems that contain or transfer hazardous materials.
7. Site inspection procedures and frequency.

E. Spill Response - Outline the response procedures the Contractor shall follow for a hazardous material spill, indicating that if hazardous materials are spilled during construction, the Contractor shall do everything possible to control and contain the material until appropriate measures can be taken. Include a description of the actions the Contractor shall take and the specific on-site spill response equipment that shall be used to assess the spill, secure the area, contain and eliminate the spill source, clean up spilled material, decontaminate equipment, and dispose of spilled and contaminated material.

1.6 Work Area Isolation

The Contractor shall perform all Work for this Project located below ordinary high water within the designated in-stream work window for this Project. The Contractor shall isolate the work area from flow in the river by use of sand bags, ecology blocks, water bladder, or other Engineer-approved methodology. The Contractor is responsible for providing all equipment, materials, labor, etc., as required to provide bypass flow as shown on the Drawings and as required for construction. Any pump installed where fish may be present shall be equipped with a fish screen with openings not to exceed 3/32 inch. The Contractor shall account for this work as it will be required for the construction of the Project.

TECHNICAL SPECIFICATIONS

SECTION 1

RIVER RESTORATION

Contaminated or sediment-laden water, or water contained within an isolation barrier shall not be discharged directly into any Waters of the State until it has been satisfactorily treated (e.g., by bioswale, filter, settlement pond, pumping to a vegetated upland location, bio-bag, or dirtbag). The Contractor shall monitor turbidity and maintain water quality standards as outlined in the environmental permits. If a sediment plume is observed, work shall stop and best management practices shall be adjusted.

1.7 Permits

The Owner has obtained clearances from the Oregon Department of State Lands (DSL)/U.S. Army Corps of Engineers (USACE); the Contractor shall perform all Work in accordance with these permit requirements.

1.8 Erosion Control

Erosion control measures shall be incorporated as described in the environmental permits obtained for the Project Site and as shown on the Drawings. Sediment barriers shall be installed to prevent spoils or sediment-laden water from entering any waterbody. Erosion control measures, such as silt fencing or wattles, shall be used as needed to ensure minimal sediment is released from the work area, as required. The Contractor shall be responsible for obtaining a National Pollutant Discharge Elimination System (NPDES) 1200-C Permit for erosion and sedimentation control, if an NPDES Permit is required. A copy of the NPDES Permit shall be provided to the Engineer and Owner Prior to the start of construction.

1.9 Mobilization/Demobilization

- A. Mobilization shall consist of preparatory work and operations including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the Project Site for establishment facilities necessary for Work on the Project, for premiums on bond and insurance for the Project, special fees, and for other work and operations which the Contractor must perform or costs the Contractor must incur before beginning Work on the Project.
- B. Demobilization shall consist of work and operations including, but not limited to, those necessary for the movement of personnel, equipment, and incidentals from the Project Site, as well Project closeout, etc.

TECHNICAL SPECIFICATIONS

SECTION 1

RIVER RESTORATION

1.10 Construction Staking

A. General

1. The Contractor shall carefully preserve benchmarks, reference points, and stakes set by others. In the case of willful or careless destruction by the Contractor, the Contractor shall be charged with the resulting expense of replacement and shall be responsible for any mistakes or liability that may be caused by the loss or disturbance.
2. Any additional staking requested by the Contractor, replacement of stakes or hubs lost or disturbed by the Contractor or due to vandalism or other reasons, or re-staking required because of improper construction will be done by the Engineer at the Contractor's expense or by a licensed professional land surveyor hired by the Contractor. The Engineer requires two business days' notice (excluding weekends and holidays) prior to the time the staking is required. The Contractor shall secure the work area and protect all construction staking.
3. The Engineer will provide the following construction staking. All other staking required to construct the Project shall be provided by the Contractor.
 - a. Grading of Fish Bypass Channel

Grade cut-fill stakes with reference point (RP) hubs, at a predetermined offset to centerline, on the channel will be provided at 25-foot stations for centerline.
 - b. Concrete Diversion and Fish Screen

The Engineer shall provide RP hubs for the top of footing of the concrete diversion and fish screen at predetermined offsets. All other grade and survey control will be provided by the Contractor.
 - c. Irrigation Piping

The Engineer shall provide stakes for line and grade, where required, at 50-foot stations along a predetermined offset to top of pipe. Offset stakes will be provided for the flowmeter manholes.

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1.11 Existing Survey Monumentation

- A. The Contractor shall be responsible for the protection and perpetuation of existing land survey, property, or construction monuments shown on the Drawings, which are marked or are clearly visible on the ground.
- B. The Contractor shall give the Engineer a minimum of 48 hours' notice prior to working in the vicinity of any such monument that the Contractor may disturb so the Owner can arrange for such monuments to be referenced. When proper notice is provided, the Owner shall have any disturbed monuments restored following construction. Should the Contractor fail to provide adequate notice to the Engineer, the Contractor shall be responsible for the expense of having the disturbed monument restored by a qualified surveyor.

1.12 Progress of the Work - Cleanup

The Contractor shall arrange their work schedule such that all phases of Work, once started, shall be diligently pursued until complete. The intent is that the work area shall not be disturbed for undue periods of time. Work shall not be left uncompleted. If the Engineer determines that Work is not being diligently completed, the Engineer shall request the Contractor to complete said Work.

Cleaning up shall be a continuing process from the start of the Work to final acceptance of the Project. The Contractor shall, at all times, at their own expense, and without further order, keep property on which Work is in progress free from accumulations of waste material or rubbish caused by employees or by the Work. At all times during the construction period, the Contractor shall maintain structure sites, rights-of-way, easements, adjacent property, and the surfaces of streets and roads on which Work is being done in a safe condition for the Contractor's workers and the public.

Accumulations of waste materials that might constitute a fire hazard will not be permitted. Spillage from the Contractor's hauling vehicles on traveled public or private roads shall be promptly cleaned up. The Contractor shall take appropriate action to control dust caused by their operations. This shall include, but not be limited to, watering of exposed areas, cleaning of roadways, etc. This is considered a normal part of the construction Project.

Upon completion of the Work, the Contractor shall, at their own expense, remove all temporary structures, rubbish, waste material, equipment, and supplies resulting from their operations. The Contractor shall leave such lands in a neat and orderly condition that is at minimum as good as the condition in which they found them prior to their operations. Should the Contractor fail to provide said cleanup upon 24-hour written notice, the Owner shall have

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the right to perform such work at the expense of the Contractor and withhold the cost from the Contractor's payments.

The Contractor shall replace or restore, equivalent to their original condition, all surfaces or existing facilities disturbed by their work, whether within or outside of the work areas. Restoration work will include, but is not limited to, roadways, utilities, structures, landscaping, etc.

1.13 Work within Wetland

When excavation occurs in the wetland, the wetland topsoil shall be segregated to be reused in the disturbed soil once construction is complete. Segregated wetland topsoil shall be spread over the top of the temporary bypass channel area following construction to restore the wetland area. Woody vegetation clearing in temporary impact areas should be completed by cutting rather than grubbing to allow for resprouting. If the wetland area is excessively wet during construction, mats should be used to avoid compaction.

Following completion of construction, any temporary site modifications, such as straw wattles, shall be removed. The disturbed wetland areas shall be regraded to match original site elevations. In addition to seeding, wetland areas shall be restored using reserved wetland material and vegetation. No permanent wetland impacts outside the fish bypass channel shall occur.

PART 2 - MATERIALS

2.1 Streambed Simulation Material

Material for streambed simulation material shall be a mixture of soil, gravel, cobbles, and boulders to simulate the natural streambed at the Project Site. The gravel, cobbles, and boulders shall be hard, durable, round river rock (preferred) or unweathered, hard, durable, basalt rock (allowed). Minimum specific gravity of the rock material is 2.5. Streambed simulation material to be used shall be approved by the Engineer prior to installation.

Gradation Requirements for Streambed Simulation Material, Inches or Sieve Size

Bed Class	100 Percent Passing	85 Percent Passing	50 Percent Passing	16 Percent Passing	10 Percent Passing
6	14	6	2-1/2	3/4	No. 10
10	24	10	4	1	No. 10
18	46	18	8	3	No. 10
24	60	24	10	3	No. 10

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The streambed simulation material shall be a mixture of the disturbed on-site natural streambed material and imported rock to develop an overall mixture meeting the required gradation requirements.

2.2 Rock

Rock material for the construction of rock matrix and large-scale roughness boulders shall be unweathered, hard, durable, basalt rock with an apparent specific gravity of 2.5 minimum. The rock shall be approved by the Engineer prior to installation. Each rock shall be angular in shape with neither the width nor thickness less than 1/3 the length. Rounded rock will not be accepted. Rock material shall be free of overburden, spoil, shale, and organic material. Non-durable rock, shale, or rock with shale seams or fractures is not acceptable.

2.3 Riprap

A. Rock

Riprap material shall be hard, durable, and resistant to weathering. Riprap shall be angular in shape with an apparent specific gravity of 2.5 minimum. Neither the width nor the thickness of a single stone shall be less than 1/3 its length. Gradation of riprap blanket material must be approved by the Engineer, and shall conform to the following:

Gradation Requirements for Riprap Material, Pounds

Class	100 Percent Passing	80 Percent Passing	50 Percent Passing	10 Percent Passing
100	100	60	25	2

Gradation Requirements for Riprap Material, Inches

Class	100 Percent Passing	80 Percent Passing	50 Percent Passing	10 Percent Passing
100	13	11	8	3

2.4 Plant Cuttings

Cuttings shall be of the type called for on the Drawings, and shall be provided from a nursery whose specific business is the development of woody plantings or taken from native, live trees. The cuttings shall be 3/4-inch to 2 inches in diameter and of sufficient length as to extend a minimum of 18 inches below the water table and protrude 1 foot above the ground elevation.

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2.5 Seeding of Disturbed Areas

The following table outlines the seed mixture required for seeding all disturbed riparian and wetland areas. The Contractor shall submit a pasture seed mixture to the Owner for approval for seeding disturbed agricultural areas.

Botanical Name (Common Name)	Seeding Rate (Pounds of Pure Live Seed per Acre)
<i>Poa ampla</i> (Big bluegrass)	3
<i>Pseudoroegneria spicata</i> (Bluebunch wheatgrass)	6
<i>Leymus cinereus</i> (Basin wildrye)	2
<i>Festuca idahoensis</i> (Idaho Fescue)	3
<i>Deschampsia cespitosa</i> (Tufted hairgrass)	2

PART 3 - EXECUTION

3.1 Construction Sequencing

The Contractor shall sequence construction activities in such a manner as to provide continuous flow down the channel. All construction shall conform to DSL/USACE permit requirements, appropriate laws and regulations, and the Drawings. Care shall be taken to control sediment and protect fish and vegetation. The Contractor shall prepare a work plan showing methods of sequencing construction for review and approval by the Engineer.

3.2 Demolition

Debris throughout the Site shall be removed as it is encountered during construction activities as shown on the Drawings and as required for construction. The Contractor shall remove the existing concrete diversion structure completely. The Contractor shall dispose of all demolition material in accordance with prevailing laws and at the Contractor's expense.

3.3 Earthwork

A. Clearing

1. All fencing, vegetation, rubbish, and other debris in areas shown on the Drawings shall be removed and disposed of by the Contractor in conformance with the

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requirements of local authorities controlling air pollution and solid waste disposal. Cleared trees, brush, and roots shall be salvaged and used as racking or slash material or scattered on the floodplain as directed by the Engineer.

2. When topsoil at the Site is to be saved and reused, it shall be stripped and stored clear of the construction area. Take reasonable care to prevent the topsoil from becoming mixed with subsoil and other debris, etc.
3. The Contractor shall exercise care to minimize disturbing the natural ground or vegetation outside the limits of the construction area.

B. Excavation

Prior to any excavation, the area to be excavated shall be cleared and grubbed.

3.4 Streambed Simulation Material

Streambed simulation material shall be placed on a prepared surface to form a well-graded, low permeability mass, similar in appearance and texture to the natural streambed. The Contractor shall place streambed simulation material as described on the Drawings.

3.5 Riprap

Riprap shall be placed to its full course thickness in one operation by methods that do not cause segregation of riprap or displace the underlying material. All sizes of material shall be placed in their proper proportion with some hand placing, or rearranging of individual stones by mechanical equipment, or other approved means to provide a smooth finished surface.

3.6 Planting of Woody Species

The cuttings shall be cut at an angle on the bottom and be planted deep enough to be in permanently saturated soil. This is established as the low water elevation as a minimum depth. The cutting tops shall be cut square and extend 1 foot above the ground. Every care should be made so that more than five but less than eight budding points are on the cuttings above ground level. Planting spacing shall be as shown on the Drawings. Willow clumps and container plants shall be planted as shown on the Drawings.

3.7 Seeding of Disturbed Areas

- A. All areas disturbed by the Contractor's operation shall be seeded once construction is complete and approved by the Engineer.

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- B. After the seed has been broadcast over the area, the Contractor shall drag the area with a heavy chain suitable for the Work. The Contractor shall coordinate the seeding with the planting to ensure all seeded areas can be properly dragged.
- C. Seeding shall occur at proper times of the year as approved by the Engineer.

3.8 Dust and Mud Control

The Contractor shall take appropriate action to control dust and mud caused by their operations. This shall include, but not be limited to, watering exposed areas, etc.

3.9 Restoration, Finishing, and Cleanup

The Contractor shall restore or replace all graveled surfaces and other existing facilities equal to their original condition. All surplus material and temporary structures as well as debris shall be removed and the entire Site of Contractor operations shall be left in a neat and clean condition.

PART 4 - MEASUREMENT AND PAYMENT

4.1 Basis

See Technical Specifications - "Measurement and Payment" for a description of the basis of measurement and payment for Work performed under this Contract.

4.2 Earthwork Quantities

The intent is for the earthwork to be performed on a lump sum, all required basis. No field measurement of earthwork quantities shall be made. The Contractor shall make their own determination of the actual quantity of earthwork required to complete the Work as specified and as shown on the Drawings.

END OF SECTION

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SECTION 2
REINFORCED CONCRETE AND WALKWAY

PART 1 - GENERAL

1.1 Scope

This section covers the mixing, placing, finishing, curing, and repairing of reinforced concrete and the construction of miscellaneous metalwork shown on the Drawings such as walkways, stanchions, etc. Portland cement concrete shall be composed of cement, aggregates, water, admixtures, etc., as specified or approved. The required proportions shall be assembled, well mixed, transported, placed, consolidated, finished, and cured as hereinafter specified. Concrete shall be uniformly dense and sound, free from faults, cracks, voids, honeycomb, and other imperfections.

- A. Concrete shall conform to the requirements of these Specifications and to the latest issue of the "Building Code Requirements for Reinforced Concrete" (ACI 318), "Specifications for Structural Concrete for Buildings" (ACI 301), and "Standard Specification for Ready Mixed Concrete" (ASTM C94) except as modified below.
- B. The Specifications in this section are general in nature and, therefore, some of the items outlined may not apply to the Work required. All applicable sections, as determined by the Engineer, shall control the Work outlined in the Contract Documents.
- C. All structures constructed under these Technical Specifications shall conform to the most recent edition of the International Building Code as amended by the Oregon Structural Specialty Code (OSSC). Anything not specifically outlined in these Technical Specifications shall be as required in the International Building Code.
- D. All manufactured articles, materials, and equipment specified in this Technical Specification shall be applied, installed, connected, erected, used, cleaned, and conditioned as recommended by the manufacturer.

1.2 Delivery, Handling, and Storage

- A. All cement shall be stored in a suitable, weather-tight building in such a manner as to protect the cement from dampness and to permit easy access for proper inspection. Storage bins for bulk cement shall be weather-tight and constructed so that there will be no dead storage. If there is reason to believe that dead storage exists, the bins shall be emptied completely at least every four months.
- B. Fine and coarse aggregates shall be stored and measured separately. Aggregates shall be protected from contamination with dust, dirt or other foreign materials.

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- C. Steel reinforcement not placed in the Work shall be stored under cover to prevent rusting, and shall be placed on blocking such that no steel touches any ground surface.

1.3 Submittals

A. Reinforcing Steel

1. Before ordering reinforcing steel, the Contractor shall submit all order lists and bending diagrams for review by the Engineer.
2. Review of order lists and bending diagrams by the Engineer shall in no way relieve the Contractor of the responsibility for correctness of such lists and diagrams.
3. Any expense incidental to the revision of materials furnished according to such lists and diagrams to make the material comply with the Drawings shall be borne by the Contractor.

B. Walkway and Miscellaneous Metal

The Contractor shall submit Shop Drawings for the walkway and all miscellaneous metalwork. The Shop Drawings shall be submitted at a time sufficiently early to allow review of same by the Engineer and to accommodate the rate of construction progress required under this Contract.

1.4 Walkway

The Contractor shall furnish and construct a walkway system as shown on the Drawings and specified herein including I-beams, grating, railing, etc., and all hardware to provide a complete walkway as shown on the Drawings and specified herein.

PART 2 - MATERIALS

2.1 Backfill/Fill Material

Backfill/fill material may be obtained from on-site excavations if it is suitable for the intended purposes and approved by the Engineer. When additional material or material of a different nature is required, it shall be obtained by the Contractor from borrow areas. Backfill/fill material shall be free of organic matter or any other objectionable material and shall contain no rocks larger than 6 inches in diameter and shall be at a suitable moisture content for compaction. Highly plastic or expansive clays will not be approved.

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2.2 Portland Cement

Portland cement shall conform to the requirements of ASTM C150, for Type I - II cement. The Engineer may direct the use of Portland cement of a type other than that specified in the Contract Documents, in which case the Owner will pay the additional cost, if any, for the cement required over the cost of that specified, or shall receive appropriate credit for any cement required of a lesser cost than that specified.

2.3 Aggregates

A. General

1. All aggregates for concrete shall conform to the Specification for "Concrete Aggregates" (ASTM C33). No aggregate shall be incorporated into the Work until and unless the aggregates are approved by the Engineer.
2. The decision to perform any or all tests on aggregates shall be left to the Engineer. Should testing of the aggregates be deemed necessary, Samples shall be selected at random from the stockpile and tested for conformance with the Specifications.
3. When the aggregates have been approved by the Engineer, the source shall not be changed without the written approval of the Engineer.

B. Fine Aggregate

Fine aggregate shall consist of natural sand, having hard, strong, and durable particles and which does not contain more than 2 percent by weight of such deleterious substances as clay lumps, shale, schist, alkali, mica coated grains, or soft and flaky particles. The grading of fine aggregate shall range uniformly from coarse to fine within the limits specified in ASTM C33.

C. Coarse Aggregate

1. Coarse aggregate shall consist of clean, hard, fine grained, sound crushed rock, or washed gravel which does not contain in excess of 5 percent by weight of flat, chip-like, thin, elongated, friable or laminated pieces, or more than 2 percent by weight of shale or cherty material.
2. Any piece having a major dimension in excess of 2-1/2 times the average thickness shall be considered to be flat and/or elongated.

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3. The maximum size of coarse aggregate shall not exceed 1-1/2 inches, nor 1/5 of the narrowest dimension between the forms, nor 3/4 of the clear spacing between reinforcing bars.
4. The minimum size of coarse aggregate shall be 3/4-inch unless approved otherwise.
5. Coarse aggregate shall be uniformly graded from coarse to fine within the limits specified in ASTM C33.

2.4 Water

Water for mixing shall be clean, fresh, and free from injurious amounts of oil, acid, chlorides, sulfates, alkali, organic matter, or other deleterious substances.

2.5 Concrete Admixtures

A. General

1. The use of admixtures will be allowed only when included in the mix design or as specified.
2. Admixtures used will be considered as a means of improving workability and/or placement of the concrete.
3. Admixtures shall conform to the following:

Parameter	Reference
Air-entraining	ASTM C260
Water Reducer	ASTM C494, Type A
Set Retarding	ASTM C494, Type B
Water Reducing/Set Retarding	ASTM C494, Type D
High Range Water Reducing (Super Plasticizer)	ASTM C494, Type F and G
Pozzolanic	ASTM C618, Type F

4. Admixtures shall be non-toxic after 30 days and shall contain no chlorides. Calcium chloride will not be permitted to be used in concrete.

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B. Air-Entraining Admixtures

Provide air-entraining admixture in all concrete. Furnish manufacturer's compliance statement for these requirements.

C. Water Reducing Admixture

1. When water-reducing and/or super plasticizer admixtures are used, with the agreement of the Engineer, it shall be compatible with the air-entraining admixtures.
2. The amount of admixture added to the concrete shall be in accordance with the manufacturer's recommendations.
3. Furnish a compliance statement that the admixture used satisfies all requirements of this Specification.

2.6 Proportioning of Concrete Mix

A. General

The exact proportions of all materials entering into the concrete shall be as established by an approved laboratory mix design and shall be changed only as directed by the Engineer or Laboratory when necessary to obtain specified strength or desired density, uniformity, and workability. This requirement may be waived when adequate test data is available on mixes currently being used to verify the suitability of a given mix for the job, or as approved by the Engineer.

B. Mix Design

1. The mix shall meet the following requirements unless otherwise specified or approved:

Parameter	Class A
Minimum compressive strength (at 28-day test)	4,000 psi
Maximum water-cement ratio (by weight)	0.45
Minimum cement content (per cubic yard of concrete)	630 lbs
Air Content Range	4-7%

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2. All classes of concrete shall have a maximum water soluble chloride ion content of 0.06 percent of mix design cement weight.
3. A super plasticizer shall be used in all concrete which is pumped or introduced into forms over six feet in height.
4. Water Content and Slump Test
 - a. In calculating the total water content in any mix, the amount of free moisture (excess of saturated surface dry) carried on the surface of the aggregate particles shall be included. The amount of water to be used shall be the minimum amount necessary to produce a plastic mixture of the strength specified and of the desired density, uniformity, and workability.
 - b. For the type of construction indicated, the slump shall be within the range indicated below unless approved otherwise:

Allowable Slump		
Location/Type of Construction	Slump in Inches ⁽¹⁾	
	Maximum	Minimum
Reinforced foundation walls and footings	4	2
Unreinforced footings and substructure walls	3	1
Reinforced slabs, beams and walls	4	2

⁽¹⁾ Slump listed in the table is the maximum slump allowed prior to the addition of water reducing or high range water reducing admixtures. Maximum allowable slump after the addition of admixtures is 8 inches.

2.7 Steel Reinforcing Bars

Steel reinforcing bars shall be grade 60 billet steel, unless otherwise specified and shall conform to ASTM A615. Bars shall be deformed in accordance with ASTM A305. When called for on the Drawings, epoxy coated reinforcing bars shall conform to ASTM A775.

2.8 Nonshrink Grout

- A. Grout shall be fluid grout capable of satisfactorily meeting the baseplate test and shall be non-metallic, unless specified for special use hereinafter. The grout shall be a non-gas-liberating type, cement base product, premixed, requiring only the addition of water for the required consistency. All components shall be inorganic.

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- B. The grout product shall satisfy all of the above requirements even though the Project use calls for a dry pack consistency and use.
- C. The following listed grouts meet these requirements and are acceptable for use: UPCON High Flow, the UPCO Company, Cleveland, Ohio; Master Flow 713, The Master Builders Co., Cleveland, Ohio; or approved equal. Grout type and procedure shall be as recommended by the manufacturer for the specific application.
- D. The grout used shall be cured with a curing compound sprayed on, or as recommended by the grout manufacturer.

2.9 Concrete Bonding Agent/Admixture

For bonding new concrete to old and as an admixture for concrete finish work, use Burke Acrylic Bond-Crete or equal.

2.10 Curing Compounds

- A. Curing compounds shall conform to the requirements of ACI 308 and ASTM C309 and shall be compatible with required finishes and/or coatings.
- B. The compound shall be approved Type 2, Class B white or gray pigmented or Type 1-D clear compound with fugitive dye.
- C. Manufacturer's literature shall state quantity or coverage required to meet or exceed tests and method of application.

2.11 Bond Breaker

Bond breaker shall be Burke Super Bond Breaker or equal.

2.12 Construction, Contraction, and Expansion Joints

Construction, contraction, and expansion joints are as follows or as approved by the Engineer:

- A. Pre-molded Joint Filler for Expansion Joints

Bituminous type conforming to ASTM D994 or D1751, unless otherwise shown or specified.

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B. Pourable Joint Fillers

1. Rubber Asphalt Filler: The specific gravity of the in-place filler after curing shall be greater than 1.0. Filler shall be No. 164.
2. Polymeric sealing compound, hot pour, or Hi-Spec Polymeric joint sealing, hot pour compound, as manufactured by W. R. Meadows, Inc., Elgin, IL; or No-Track two-component materials (Code 2323), cold applied, self-leveling filler as manufactured by A. C. Horn, Inc., North Bergen, NJ; or Gardox, two-component, cold applied compound filler, as manufactured by W. R. Meadows, Elgin, IL.
3. On sloping joints, use Gun Grade material of the above products or similar non-sag material; submit product information for approval.

C. Roofing Felt for Expansion Joints

Thirty-pound asphalt-saturated roofing felt conforming to ASTM D226, Type II; or a tar-saturated roofing felt of equal quality at the option of the Contractor.

2.13 Structural Steel and Miscellaneous Metalwork

A. General

Unless otherwise noted on the Drawings, all rolled shapes, plates, and bars shall be carbon steel conforming to ASTM A36.

B. Handrail

1. Handrail shall consist of a top rail, intermediate rail, and posts. Rail height, post spacing, and pipe diameter shall be as shown on the Drawings, or as required by applicable safety or building codes. Railing assembly shall be able to withstand a load of 200 pounds applied in any direction at any point on the top rail.
2. Pipe for galvanized steel handrail shall be ASTM A53/A53M, Type E or Type S, Grade B; or ASTM A501, 1-1/2-inch NPS with 1.900-inch outside diameter and a minimum 0.145-inch wall thickness for rails and a minimum of 0.200-inch wall thickness for posts. Hot-dip galvanized walkway frame assembly and handrail sections.

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C. Grating

1. Provide plank style grating fabricated from 14 gauge pre-galvanized steel sheet bent into a C shape with serrated surfaces as shown on the Drawings.
2. Provide anchor plank style grating per manufacturer's recommendations.

D. Welding Electrodes

1. Welding electrodes shall conform to the requirements of the "Code for Welding in Building Construction" of the American Welding Society.
2. Filler metal for aluminum welding shall be the filler material recommended in the Welding Handbook, latest edition, published by the American Welding Society. For welded areas that are to be anodized after fabrication, the filler metal selected shall be the one that yields the best color match after anodizing, otherwise the more ductile filler metal shall be selected.

E. Bolts and Fasteners

All bolts and fasteners shall be stainless steel bolts formed from Type 303 or 304 stainless steel. Bolts shall be furnished with nuts and washers meeting compatible specifications.

F. Anchor Bolts

Anchor bolts for fastening sills, plates, ledgers, and columns to concrete or masonry shall be formed from Type 303 or 304 stainless steel.

G. Expansion Anchor Bolts

Expansion anchor bolts shall be wedge-expanding type anchors being wholly made of the type of material specified (zinc-plated steel, if no other material specified), such as Wej-It, manufactured by Wej-It Expansion Projects, Inc., Red Head Wedge Anchors, manufactured by Phillips Drill Company, or an approved equal.

2.14 Epoxy

Epoxy for anchor bolts shall be Hilti HVA-HAS doweling system, or approved equal.

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PART 3 - EXECUTION

3.1 General

All manufactured articles, materials, and equipment specified in this section shall be applied, installed, connected, erected, used, cleaned, and conditioned as recommended by the manufacturer and approved by the Engineer.

3.2 Forming

A. General

1. The Contractor shall be responsible for the design, engineering and construction of formwork. Formwork shall conform to applicable requirements of "Recommended Practices for Concrete Formwork" (ACI 347).
2. Forms shall be used, whenever necessary, to confine the concrete to the required lines and grades, and to obtain a thoroughly compacted dense concrete through proper vibrating. Forms may be of wood, metal or other material, and shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping and vibration, without deflection from the prescribed lines.
3. The surface of all forms in contact with the concrete shall be smoothly finished and free from defects that might adversely affect the appearance of concrete formed against it.
4. All forms, whether prefabricated or custom made, shall be assembled and connected in such a manner that only minor mortar seepage through the joints will occur during vibration of the concrete.

B. Form Surface Preparation

1. All dirt, chips, sawdust, mud, water, and other foreign matter shall be removed from within the forms or within the excavated areas, before any concrete is deposited therein. Forms previously used shall be thoroughly cleaned of all dirt, mortar and foreign matter before being reused.
2. All wood surfaces in contact with the concrete shall be coated with an effective release agent prior to form installation. The release agent shall be non-staining and non-toxic after 30 days.

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3. Mill scale, rust, and other ferrous deposits shall be sandblasted or otherwise removed from the contact surface of steel forms. All steel forms shall have the contact surfaces coated with a release agent. The release agent shall be effective in preventing discoloration of the concrete from rust, and shall be non-toxic after 30 days.
 4. Proprietary panels shall be free of surface cracks, spalls, gouging, splitting or other surface damage. Patching of forms is not acceptable. Any repairs must include complete surface recondition.
- C. Beveled Edges and Corners (Chamfers and Fillets)
1. Exposed sharp edges shall be eliminated from finished concrete work by means of 3/4-inch triangular fillets or chamfer strips placed in the forms.
 2. Where called for on the Drawings, horizontal corners shall be tooled with a 1/2-inch radius tool.
- D. Form Removal
1. All forms shall be removed before backfilling is begun.
 2. Forms shall be so constructed that they can be removed without hammering on or prying against the concrete and shall be removed in such a manner as to prevent damage to the concrete and to ensure the complete safety of all parts of the structure.
 3. The Contractor shall determine the time of removal of forms and shall be responsible for any damages due to early or improper form removal. In general the following periods, exclusive of days when the temperature is below 40°F, for removal of forms may be used as a guide.

Time Period for Removal of Forms	
Location	Time Period
Walls	24 hours
Side of Slabs and Other Parts	24 hours

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3.3 Placement of Reinforcement Steel

A. General

1. Mild steel reinforcing bars shall be furnished, cut, cold bent, tagged, marked, shipped, and placed as indicated on Drawings and in accordance with the current edition of the "Manual of Standard Practice" by the Concrete Reinforcing Steel Institute. Field bending or straightening shall be accomplished so that the steel will not be damaged. Kinked bars shall not be used.
2. Reinforcing bars shall be in position before concrete placement is begun. All reinforcing bars shall be tied together and supported in such a manner that displacement during placing of concrete will not occur. Conform to the requirements of "Placing Reinforcing Bars" published by the Concrete Reinforcing Steel Institute.

B. Minimum Bar Spacing

The clear distance between parallel bars shall not be less than 1.5 times the nominal diameter for round bars, but in no case shall the clear distance be less than 1-1/2 inches nor less than 1.33 times the maximum size aggregate.

C. Concrete Cover

1. At the time of placing concrete, all reinforcement shall be free from dirt, loose mill scale, detrimental rust, grease, oil, paint, or other foreign substances which might destroy or reduce its bond with concrete.
2. Unless stated otherwise on the Drawings, the following minimum concrete cover over reinforcement steel shall apply.
 - a. All formed surfaces exposed to water, ground, or weather shall have a minimum cover over the reinforcement steel of 2 inches.
 - b. All formed surfaces not exposed to water, ground, or weather shall have a minimum cover over the reinforcement steel of 1-1/2 inches.
 - c. All surfaces cast against and permanently exposed to earth shall have a minimum cover over the steel of 3 inches.

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D. Splicing

1. Splices at the points of maximum stress shall be avoided.
2. Bars in horizontal members shall have a minimum lap at splices sufficient to develop the strength of the bars. Whenever possible, splices of adjacent bars shall be staggered.
3. Deformed bars shall be lapped the minimum splice length as listed in the table below, or as shown on the Drawings, whichever is greater.
4. Furnish full length reinforcing bars the specified length or the calculated length, and for those designated "full length."
5. Splice bars with designated splice locations at those locations or fabricate bars full length.
6. In absence of other directions, including bars designated "continuous," furnish reinforcing bars to provide the minimum practical number of bars and splices. In lapped splices, place bars in contact and fastened together with at least three ties.

Reinforcing Bar Splice Length Table for 4,000 psi Concrete and Grade 60 Non-Coated¹ Reinforcing Bars										
Bar Size (No.)		3	4	5	6	7	8	9	10	11
Bar Orientation	Vertical and Horizontal	1'-7"	2'-1"	2'-7"	3'-1"	4'-6"	5'-2"	5'-10"	6'-7"	7'-3"
	Horizontal Top Bars	2'-1"	2'-9"	3'-5"	4'-1"	5'-11"	6'-9"	7'-7"	8'-6"	9'-6"

¹For epoxy coated bars, increase the listed splice lengths by 50 percent.

E. Supports and Ties

1. All reinforcement shall be retained in place, true to indicated lines and grades, by the use of approved galvanized metal or concrete supports, spacers, or ties. They must be completely concealed in the concrete and shall not discolor or otherwise mar the surface of the concrete.
2. Concrete blocks used to support reinforcement shall have a compressive strength of not less than the specified 28-day compressive strength of the

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concrete being placed. Rocks, clay bricks, masonry blocks, etc., or parts thereof, shall not be used to support reinforcement.

3. Tie bars in the top mats of footings and slabs at all intersections. Tie all other bars at all intersections except where spacing of the bars is less than 12 inches in each direction, then alternate intersections shall be tied.
4. Tie coated reinforcement with nonmetallic coated ties. Precast concrete blocks that support coated reinforcement shall have nonmetallic ties.

F. Reinforcement Around Opening

Where reinforcing steel has to be cut to permit passage of pipe or openings and should no detail be shown for extra reinforcing in such areas, at least an equivalent area of steel cut must be placed around all four sides of pipe or opening. This steel shall be extended at least 2'-0" beyond opening.

G. Inspection

The Engineer shall be notified when the reinforcing is ready for review with sufficient time for this review to occur prior to placement of the concrete. No concrete shall be placed prior to review by the Engineer.

3.4 Mixing

A. Batch Plant

1. Adequate equipment and facilities shall be provided for accurate control and measurement of all materials within specified proportions and tolerances, and for readily changing the proportions of materials as may be necessary to meet varying conditions of the Work in order to produce concrete of the required strength, durability and workability.
2. Batch plant equipment shall be in complete working order and equipment shall conform to the requirements of Section 00540.20 of Oregon Standard Specifications for Construction, current edition.

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B. Mixers

1. General

- a. Concrete shall be mixed in batch plant mixers or in a revolving drum type truck mixer.
- b. Concrete mixed in a batch plant mixer shall be hauled to the Project Site in a truck mixer.
- c. Mixers shall be equipped with a metal plate on which the manufacturer has marked the mixing and agitation speeds of the drum and the maximum mixing capacity.

2. Batch Plant Mixing

Refer to Specifications for truck mixing.

3. Truck Mixing

- a. Truck mixers shall be the revolving drum type, watertight, and constructed and maintained within tolerances of the manufacturer's specifications. Truck mixers shall be equipped and operated with a tank for carrying mixing water, a device to measure mixing water added to the mix and a device to indicate the number of drum revolutions.
- b. Before placing materials for the concrete into the mixer, empty the drum of water and reset the drum revolution counter to zero or record the counter number on the batch ticket. The total revolution on any load shall not exceed 300. The concrete in the truck mixer shall not exceed the manufacturer's maximum rated capacity. All materials of a batch shall be simultaneously and continuously fed into the mixer.
- c. Mixing shall commence as soon as the cement is added to the aggregate. Continue mixing before leaving the plant for not less than 70 nor more than 100 revolutions of the drum at the manufacturer's rated mixing speed. If water or additives are added to the batch at the Project Site, the concrete shall be mixed an additional 40 revolutions or more at the manufacturer's mixing speed, but the total revolution shall not exceed 300.

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- d. All mixers, when fully loaded, shall mix the ingredients into a uniform mass within the required time. Only truck mixers that properly mix the concrete and are capable of discharging the concrete at a steady rate shall be used on the Project Site.
- e. During transport of the concrete, the truck mixer shall turn continuously at the rated agitation speed.

3.5 Placing Concrete

A. Conveyance

- 1. Concrete shall be conveyed from mixer to forms as rapidly as practicable by methods which will prevent segregation or loss of ingredients. It shall be deposited as nearly as practicable in its final position.
- 2. There shall be no free vertical drop greater than 6 feet, except when starting a vertical pour in which case the free vertical drop of concrete shall not be more than 2 feet.
- 3. In dropping concrete through reinforcement, care shall be taken that no segregation of the coarse aggregate occurs.

B. Placement

- 1. Concrete shall be placed before initial set has occurred and unless otherwise authorized by the Engineer, before it has contained its water content for more than 1-1/2 hours at 85°F. This time period may be extended provided Contractor can satisfy the Engineer that admixtures in sufficient quantity can extend the setting time of the concrete without adverse effects to the strength and quality of the concrete.
- 2. Unless otherwise specified, all concrete shall be placed upon clean, damp surfaces free from running water, and never upon soft mud, dry porous earth, or upon fills that have not been subjected to approved tamping or other compaction so that ultimate settlement has occurred.
- 3. Concrete shall not be placed in water nor shall water be allowed to rise over freshly placed concrete until the concrete has set sufficiently to prevent damage unless otherwise approved by the Engineer.

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4. Concrete shall not be placed until all reinforcement is securely and properly fastened in its correct position, and until the form ties at construction joints have been retightened, all sleeves, hangers, pipe, bolts, waterstop, and any other items required to be embedded in the concrete have been placed and anchored.
5. Concrete shall be placed generally in horizontal layers not more than 12 inches thick except as otherwise specified. When a monolithic layer cannot be completed in one operation, it shall be terminated with a vertical bulkhead. Feathering out to less than 6 inches will not be permitted.
6. All top surfaces not covered by forms, and which are to be covered by additional concrete or backfill, shall be carried slightly above grade, struck off and given specified finish.

C. Vibration

1. Concrete shall be placed with the aid of approved mechanical vibrating equipment. Vibration shall be transmitted directly to the concrete; in no case shall it be transmitted through the forms. Vibrators shall be applied at uniformly spaced points not farther apart than the visible effectiveness of the machine.
2. The vibrator shall at all times be inserted through the newly placed layer into the next lower course, to ensure a proper integration of one course to another, and shall then be pulled up slowly, the speed of which is dependent upon mix design and type of vibrator. The vibrator operator shall vibrate the concrete systematically from one point to another without skipping any areas or without having to move backwards and forwards in any one single pass. Particular care to vibrating concrete shall be given at horizontal and vertical construction joints to eliminate any possibility of honeycomb. Extreme care shall be exercised in using vibrators around waterstops to avoid damage to the waterstop. Every effort shall be made to avoid any contact of vibrator to reinforcing steel. At all times, the intensity and duration of vibration shall be sufficient to accomplish thorough and uniform compaction.
3. Vibrators shall not be used to flow or transport concrete inside of forms. Where necessary, vibration shall be supplemented by forking or spading by hand adjacent to the forms on exposed faces in order to secure smooth, dense, even surfaces. The concrete shall be compacted and worked in an approved manner into all corners and angles of the forms and around reinforcement and embedded fixtures.

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4. Only high frequency internal vibrators with operating speeds of preferably 21,000 vpm but not less than 14,000 vpm shall be used unless otherwise approved in writing by the Engineer. The number of vibrators employed shall be ample to consolidate the incoming concrete to the proper degree within 5 minutes after it is deposited. The number of vibrators will be predicated by the nature of the job and the ability to sufficiently consolidate the concrete within the specified time.

3.6 Restrictions Due to Weather

A. Cold Weather

1. Concrete placement in cold weather, i.e., 40°F or less, will be permitted only under conditions which shall meet the approval of the Engineer.
2. In general, cold weather placing shall conform to "Recommended Practice for Cold Weather Concreting" (ACI 306).
3. Salts, chemicals, or other foreign materials shall not be mixed with the concrete to prevent freezing, unless such use is authorized by the Engineer in writing.
4. All concrete shall be effectively protected from frost action for a period of 5 days after placing, during which the temperature of the concrete does not fall below 40°F. Upon written notice from the Engineer, all concrete which may have become damaged by frost action shall be replaced by the Contractor at their own expense.

B. Hot Weather

1. For concrete placed during extremely hot weather (air temperature exceeding 95°F), the aggregate shall be cooled by frequent spraying in such a manner as to utilize the cooling effect of evaporation. During such periods, the placement schedule shall be arranged, as approved, in such a manner as to provide time for the temperature of the previously placed concrete to begin to recede.
2. The mixing water shall be the coolest available at the Site insofar as is practicable. At no time shall the temperature of the concrete mix exceed 90°F prior to placement.

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C. Low Humidity

1. Placing of concrete during periods of low humidity (below 50 percent) should be avoided when feasible and economically possible, particularly when large surface areas need to be finished.
2. In any event, finished surfaces exposed to the drying wind shall be covered up immediately with polyethylene sheets and be water cured continuously as soon as the concrete has set up.
3. Curing compounds, in lieu of water, may not be used.

3.7 Bonding to New Concrete

- A. Roughen the surface of the hardened concrete. Thoroughly clean and saturate with water and apply a concrete bonding agent.
- B. Cover the horizontal surfaces with at least a 12-inch lift of superplasticized concrete (6-inch to 8-inch slump) and thoroughly vibrate the mix.
- C. New concrete is defined as less than 60 days old.

3.8 Finishing

A. Slabs

1. Screeding

- a. Concrete shall be deposited in the slab from a wheelbarrow, buggy, bucket, chute, conveyor, or pump hose without segregation of coarse and fine aggregates.
- b. Spreading of the concrete shall be performed with a square end shovel.
- c. The concrete shall then be screeded or struck off before any excess moisture or bleed water is present on the surface.
- d. If a vibrating screed is used, it shall be moved forward as rapidly as possible to avoid excess mortar being brought to the surface.

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2. Bull Floating

- a. The purpose of bull floating is to smooth the surface and to eliminate high and low spots.
- b. Bull floating shall occur immediately after screeding or strike off and before bleed water accumulates on the surface, and shall be done in such a manner that the surface is not sealed.
- c. Bull floating shall be done with a wood or magnesium float.
- d. Do not overwork the surface.

3. Waiting Period

Upon completion of the bull floating, the concrete shall be allowed to sit until the bleeding has stopped and the water sheen disappears, and after the concrete is firm enough to permit a person to walk on the surface leaving a foot print no greater than 1/4 inch in depth.

4. Edging and Jointing

After the bleeding has stopped, slabs shall be edged and jointed as directed.

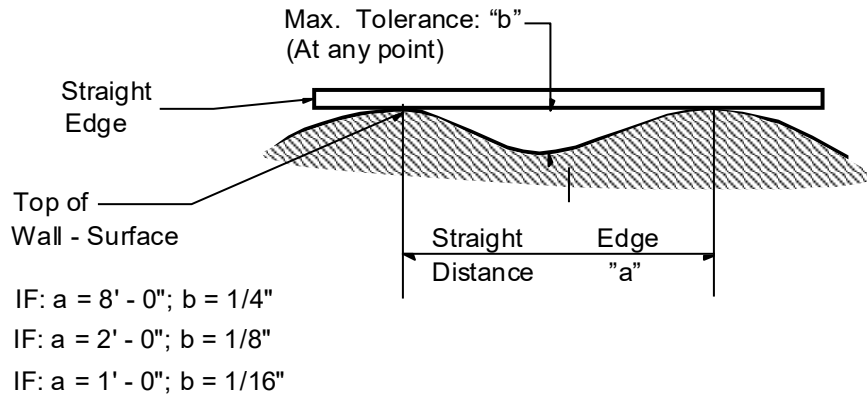
5. Floating

- a. The purpose of floating is to embed the large aggregate just beneath the surface of the mortar; to remove slight imperfections, bumps and voids; and to compact the concrete and consolidate mortar at the surface in preparation for final finishing.
- b. After the waiting period defined above, the Contractor shall float the concrete surface using wood or magnesium hand floats or a troweling machine equipped with float shoes.

6. Surface Tolerance

The surface of all slabs shall conform to the following surface tolerance:

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7. Broom Finish

- a. After completion of floating and after the concrete has hardened sufficiently, all slabs shall receive a broom finish unless otherwise specified.
- b. The broom shall be a stiff fiber or steel tined broom that will mark the finished concrete to a depth not to exceed 1/8th of an inch. Markings or corrugations shall be transverse to the direction of travel.

B. Unformed Surfaces

Unformed surfaces that will not be exposed in the complete Work shall be brought to required finished elevations and left smooth and regular. Sufficient screeds shall be installed to ensure an even concrete surface, true to grade and elevation, without unacceptable local depressions.

C. Formed Surfaces

1. Class C Finish

- a. Forms shall be removed as soon as permissible and immediately thereafter, snap tie holes, rock pockets, air pockets over 1/2-inch depth, and other defects shall be chipped, sandblasted, or wire brushed to expose sound aggregate and mortar and then shall be pointed and thoroughly tamped with dry pack grout.
- b. Surfaces that have been pointed shall be kept moist for a period of not less than 24 hours. If after the pointing sets and is rubbed, dusting occurs, the surface shall be refinished.

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- c. Finished surfaces shall be free from sand streaks or other voids.
 - d. All formed concrete surfaces that will not be exposed to view shall receive a Class C surface finish unless otherwise indicated.
2. Class B Finish
- a. Class B finish shall consist of a smooth finish such as can be achieved by means of plywood forms, steel forms, or form liners.
 - b. After the forms are removed, the concrete surface shall first receive a Class C finish. The surface shall then be additionally finished as necessary to produce a smooth and even surface with uniform texture, lines, and appearance, free of bulges, fins, lips, undulations, depressions, or other imperfections. Chipping, grinding, or other methods may be necessary to achieve a smooth surface.
 - c. All exposed formed concrete surfaces shall receive a Class B Finish unless otherwise indicated. Surfaces below water shall be considered exposed.

3.9 Protection

Every reasonable precaution shall be taken to protect finished surfaces from abrasions or other damage. Concrete surfaces or edges likely to be injured during the construction period shall be protected by leaving the forms in place or by erecting satisfactory covers. No fire shall be permitted in direct contact with concrete at any time. Concrete shall be adequately protected from drying action by sun and wind.

3.10 Curing

A. General

- 1. All Portland cement concrete shall be cured by maintenance of proper moisture content and temperature for the development of desired concrete strength and durability. Curing shall be commenced immediately after placement of the concrete and initial finishing has been completed.
- 2. There are two systems of maintaining satisfactory moisture content:
 - a. Water curing by the continuous or frequent application of water through ponding or immersion, fog spraying or sprinkling or a saturated cover of heavy quilted cotton mats or rugs, or multiple layers of burlap.

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- b. Surface sealing for the prevention of excessive loss of water from concrete slabs by use of 4-mil polyethylene sheet or reinforced bituminous kraft paper (ASTM C171); and for exterior slabs only by the application of a liquid membrane-forming curing compound to the freshly placed concrete, and for walls by leaving water proof forms in place with periodic soaking.

B. Cure Time

All concrete shall be cured for a period of not less than 7 days after placement. If during the cure time the surrounding temperature falls below 45°F, the cure time shall be extended for the number of hours the temperature is below 45°F.

C. Walls

The acceptable methods of curing concrete walls are:

1. Concrete forms for walls shall be left in place and kept damp at all times during the required cure time; the wall forms may be loosened after 24 hours following the concrete placement, but water shall be flowed periodically into the space between the concrete and the form to add moisture. During the cure time, the tops of walls shall be covered with a continuously water saturated covering such as burlap or cotton mats.
2. The Contractor may remove the wall forms not less than 24 hours following the concrete placement. Curing shall then be accomplished by draping continuously water saturated heavy quilted cotton mats or rugs over the concrete walls. The water saturated coverings shall be secured to the wall to prevent air from circulating between the covering and the concrete surface.
3. After 24 hours of water cure, except as specified below, concrete curing of formed surfaces may be completed using a curing compound. However, a curing compound shall not be used on concrete surfaces that will be Class B finished, unless the curing compound is compatible with the final finish or the curing compound is removed by sandblasting.

D. Slabs

The entire surface of a newly placed concrete slab shall receive one of the water curing or sealing methods described above, or a combination thereof, beginning after finishing operations have been completed and as soon as marring of the concrete will not occur.

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E. Curing and Protection in Cold Weather

Curing and protection in cold weather shall conform to ACI 306. Repair or replace concrete changed by cold weather.

3.11 Construction, Contraction, and Expansion Joints

A. General

Joints in concrete shall be horizontal level or vertical and shall be of the type and location as shown on the Drawings, or as approved by the Engineer. Joints shall be accurately located and constructed to produce straight joints. The concrete pour shall not commence until after the joint preparation has been reviewed by the Engineer.

B. Construction Joints

1. Construction joints, including keyways when required, shall be made as shown on the Drawings or as approved by the Engineer.
2. For construction joints without keyways, prior to placing the abutting concrete for all construction joints, the contact surface shall be cleaned by sandblasting or other approved means to remove all laitance, expose the aggregate, and roughen surface to a minimum of 1/4-inch amplitude.
3. For all joints, the exposed portion of the reinforcing steel shall be cleaned and surface roughening of all concrete.
4. The surface of the hardened concrete may be roughened by one of the following methods:
 - a. Sandblasting the foundation and reinforcing dowels after the concrete has fully cured to remove all laitance and spillage, and to expose sound aggregate.
 - b. Water blasting the foundation and reinforcing dowels after the concrete has partially cured to remove all laitance and spillage, and to expose sound aggregate.
5. For all horizontal construction joints without waterstops and all vertical construction joints, thoroughly clean and saturate the hardened concrete surface with water prior to placement of the new abutting concrete.

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C. Sawed Contraction Joints

When called for on the Drawings, the Contractor shall make saw cut contraction joints at the location, spacing, and layout shown on the Drawings. Joints shall be sawed as soon as the concrete is hard enough not to be torn or damaged by the blade. Joints shall be sawed approximately 1/8-inch in width to a depth of one-quarter of the slab thickness. When called for on the Drawings, saw cut joints shall be filled with pourable or gun grade joint filler.

D. Formed Contraction Joint

When called for on the Drawings, the Contractor shall make contraction joints as detailed including keyways, waterstop, dowels, reinforcement, sealants, etc. Prior to placement of the new concrete, a bond breaker shall be applied to the existing hardened concrete. Bond breakers shall not be applied to waterstop material.

3.12 Pumped Concrete

A. General

Pumping of concrete will be permitted only with the Engineer's agreement. If, in the Engineer's opinion, the pumped concrete does not produce satisfactory end results, the Contractor shall discontinue the pumping operation and proceed with the placing of concrete using conventional methods.

B. Pumping Equipment

1. The Contractor shall have a standby pump, conveyor system, crane and concrete bucket, or other system acceptable to the Engineer, on the Site during pumping, in order to provide adequate redundancy to assure completion of the concrete placement without cold joints in the event of breakdown of the primary placing equipment.
2. The minimum diameter of the hose (conduit) shall be 4 inches. Pumping equipment and hoses (conduits) that, in the opinion of the Engineer, are not functioning properly, shall be replaced.
3. Aluminum conduits for conveying the concrete shall not be used.
4. A cement-water slurry shall be pumped through the lines and hoses before starting the concrete mix through the pump. The pump shall be operated in a

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manner that produces a continuous stream of concrete without air pockets or segregation.

C. Concrete Samples

Concrete samples for slump and test cylinders will be taken at the placement (discharge) end of the line.

3.13 Tolerances

A. General

Tolerance is the specified permissible variation from lines, grades, or dimensions shown. Where tolerances are not stated in these Specifications, permissible deviations will be in accordance with ACI 347. Notations on the Drawings of specific maximum and minimum tolerances shall govern if in conflict with these Specifications.

B. Permissible Tolerance

Unless otherwise indicated, all columns, beams, slabs, openings, reinforcing bars, waterstops, etc., shall be accurately located to within 1/4 inch. The permissible tolerance of the inside and outside wall surface shall be 3/16-inch plus or minus for linear walls and 3/8-inch plus or minus for circular walls. The tolerance of alignment as to the actual position of inside and outside surface is 3/8-inch plus or minus. All transitions from plus to minus shall be gradual, even and smooth, and without abrupt changes in the surfaces.

C. Failed Tolerances

Should the completed Work fail to meet the tolerances specified herein, the Contractor shall bear the expense of any remedial work required to repair or replace the defected, as directed by the Engineer. Surface defects and irregularities are defined as finished and are to be distinguished from tolerances.

3.14 Testing and Quality Control

A. General

The Contractor shall provide and maintain a quality control program that will ensure the quality of the Work and materials incorporated into the Project. See the Quality Control section of the General Requirements. Materials that fail to meet Contract requirements shall not be incorporated into the Work.

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B. Structural Concrete

1. Cement Content

The cement content shall be tested in accordance with ASTM C85 and shall meet the requirements specified above in "Proportioning of Concrete Mix."

2. Fine and Coarse Aggregate

Aggregate size shall meet the requirements of ASTM C33.

3. Slump

Concrete shall be tested for slump in accordance with ASTM C143.

4. Air Content

Air content shall be tested in accordance with ASTM C231 and shall meet the requirements specified above in "Proportioning of Concrete Mix."

5. Compressive Strength

- a. Sample concrete cylinders may be taken from the Work by the Engineer or their representative. At least three identical cylinders may be taken not less than once a day, nor less than once for each 25 cubic yards of concrete placed. When the frequency of testing will provide less than five tests for a given class of concrete, tests may be made from at least five randomly selected batches or from each batch if fewer than five are used, or as required by the Engineer.
- b. All cylinders shall be prepared and cured in accordance with ASTM C31 and tested in accordance with ASTM C39. One cylinder shall be tested at the age of 7 days and two at the age of 28 days. Each strength test result shall be the average of the two cylinders from the same Sample tested at 28 days.
- c. The strength level of the concrete will be considered satisfactory if the averages of all sets of three consecutive strength test results equal or exceed the required minimum compressive strength and no individual strength test result falls below the required minimum compressive strength by more than 500 psi.

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6. Concrete Core Samples

- a. Samples shall be taken according to ASTM C42. Three cores shall be taken for each unsatisfactory strength test. If the concrete in the structure will be dry under service conditions, the cores shall be air dried (temperature 60° to 85°, relative humidity less than 60 percent) for 7 days before test and shall be tested dry. If the concrete in the structure will be more than superficially wet under service conditions, the cores shall be immersed in water for at least 48 hours and tested wet.
- b. Concrete in the area represented by the core tests may be considered structurally adequate if the average of the three cores is equal to at least 85 percent of the minimum compressive strength and if no single core is less than 75 percent of the minimum compressive strength. The decision as to whether the concrete is structurally adequate shall be at the sole discretion of the Engineer. A cost adjustment may be required as a condition of acceptance.

7. Admixtures

Admixtures shall meet the requirements listed under Part 2 - Materials, "Concrete Admixtures."

8. Visual Inspection

The concrete shall be free of rock pockets, cracks, and other structural and water holding defects. Any defective concrete shall be repaired as approved by the Engineer. Any defective concrete with exposed reinforcing steel shall either be repaired or demolished and replaced at the sole discretion of the Engineer.

C. Defective Concrete

1. For each unsatisfactory strength test, concrete core samples shall be taken according to ASTM C42. A minimum of three cores shall be taken for each unsatisfactory strength test. If the concrete in the structure will be dry under service conditions, the cores shall be air dried (temperature 60° to 85°, relative humidity less than 60 percent) for 7 days before test and shall be tested dry. If the concrete in the structure will be more than superficially wet under service conditions, the cores shall be immersed in water for at least 48 hours and tested wet.

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2. Concrete in the area represented by the core tests may be considered structurally adequate if the average of the three cores is equal to at least 85 percent of the minimum compressive strength and if no single core is less than 75 percent of the minimum compressive strength. The Engineer may require additional core tests to determine the limits of the defective concrete. The cost of core tests shall be borne by the Contractor. The decision as to whether the concrete is structurally adequate shall be at the sole discretion of the Engineer. A cost adjustment may be required as a condition of acceptance.

D. Visual Inspection

All concrete shall be free of rock pockets, cracks, and other structural and water holding defects. Any defective concrete shall be repaired as approved by the Engineer. Any defective concrete with exposed reinforcing steel shall either be repaired or demolished and replaced at the sole discretion of the Engineer.

3.15 Bolts

Holes for bolts shall be 1/16 inch larger than bolt diameter. All bolts must be retightened just prior to being covered with other work.

3.16 Structural Steel and Miscellaneous Metal Work

A. Fabrication and Erection

Fabrication and erection of structural steel and miscellaneous steel items shall be in accordance with the "Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings" of the American Institute of Steel Construction, where applicable.

B. Handrail

Rail height, post spacing, and pipe diameter shall be as shown on the Drawings, or as required by applicable Safety or Building codes. Clearance between handrail and any object shall be a minimum of 3 inches.

C. Minimum Embedment for Anchor Bolts

Minimum embedment for anchor bolts in concrete and masonry.

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Bolt Size	Embedment Length
1/2"	4"
5/8"	5"
3/4"	5"
7/8"	6"
1"	7"

3.17 Epoxy System

Epoxy shall be applied in strict accordance with manufacturer's directions. Holes where epoxy will be used shall be cleaned free of all dust, oil, dirt, form releasing or concrete curing agents, and water.

PART 4 - MEASUREMENT AND PAYMENT

4.1 Basis

See Technical Specifications - "Measurement and Payment" for a description of the basis of measurement and payment for Work performed under this Contract.

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TECHNICAL SPECIFICATIONS
SECTION 3
EXCAVATION AND BACKFILL OF TRENCHES

PART 1 - GENERAL

1.1 Summary

- A. These Specifications cover the excavation and backfill of trenches for the installation of irrigation lines.
- B. Items specified in this Technical Specification are intended to be broad in scope and may not always apply to all items of Work to be constructed. All applicable sections, as determined by the Engineer, shall control the Work outlined in the Contract Documents.

1.2 Definitions

- A. Backfill is the filling of the trench to the existing ground level or the finish grade line shown on the Drawings.
- B. General trench excavation shall include whatever materials that are encountered (except solid rock) to the depths shown on the Drawings or as required to properly install the pipe.
- C. Solid Rock
 - 1. Solid rock is defined as being rock formations other than cemented gravels that require hard ripping, jackhammering, blasting, or other extra work beyond the capability of heavy-duty trench excavating equipment such as a Caterpillar 235 or 345B Excavator.
 - 2. Cemented gravel excavation may be included as "Rock Excavation" when said excavation requires hard ripping, jackhammering, or blasting and ONLY when, in the opinion of the Engineer, such conditions were unforeseen and are beyond the capability of heavy duty trench excavating equipment such as a Caterpillar 235 or 345B Excavator.

1.3 Safety

The determination of the safe trench width is the sole responsibility of the Contractor.

1.4 Dust and Mud Control

- A. The Contractor shall take appropriate action to control dust and mud caused by their operations. This shall include, but not be limited to, watering of exposed areas, cleaning of roadways, etc. This is considered a normal part of the construction Project.

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- B. No measurement or payment shall be made for this Work.

1.5 Soil and Groundwater Conditions

- A. Soils data and groundwater conditions, when shown on the Drawings, are provided for the Contractor's information, may not be relied upon, and are a general description only. This information may or may not be shown. The Engineer assumes no responsibility for actual soil conditions.
- B. Soils data and groundwater conditions, when shown, shall not relieve the Contractor from the responsibility of making additional investigations. The Contractor shall perform investigations as they deem necessary to acquaint themselves with actual conditions to be encountered in performing the Work. Groundwater conditions in particular should be carefully considered and are subject to change.

PART 2 - MATERIALS

2.1 Bedding and Select Backfill

Bedding and select backfill shall be well-graded 3/4"-0 or 1"-0 crushed rock or approved equal. All bedding and select backfill materials shall be subject to the approval of the Engineer.

2.2 General Backfill

- A. General backfill will consist of material excavated from the trench, or material imported by the Contractor. General backfill material shall be free of vegetative matter, boulders (10-inch plus), frozen material and any other unsuitable material, and shall have a moisture content that will allow for the required compaction of the general backfill material unless approved otherwise by the Engineer. Use of backfill material containing consolidated masses 10-inch in diameter or greater is prohibited.
- B. When necessary, the Contractor shall selectively separate suitable general backfill material from unsuitable general backfill material.
- C. When the Engineer determines that the native material excavated from the trench is unsuitable or unacceptable for use as general backfill, the Engineer may require the Contractor to remove the unsuitable material from the Project Site and import suitable general backfill material. Suitable material shall be similar in nature to native soils as approved by the Engineer. When imported general backfill must be placed in or below the groundwater, the imported general backfill shall be free draining granular material with less than 20 percent passing a No. 4 sieve and less than 3 percent passing a No. 200 sieve.

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PART 3 - EXECUTION

3.1 Clearing and Grubbing

- A. Contractor shall do all clearing and grubbing and removal of structures, etc. necessary to permit proper installation of the pipeline and to eliminate the possibility of stumps, logs, brush, or rubbish being mixed with the backfill material. A sufficient amount of all stumps and stump roots shall be removed so that any future removal of any remaining parts of the stumps and/or roots will not damage the pipeline. All stumps, roots, logs, brush and rubbish shall be removed and disposed of in conformance with the requirements of local authorities controlling air pollution, and solid waste disposal.
- B. Should the area in which construction takes place be served by rural mail carrier service, the Contractor shall cooperate with the mail service and re-install, in a convenient location, any rural mail boxes which will have to be removed or be blocked by construction operations. As soon as the Work is completed, all mail boxes removed shall be replaced undamaged in their original location.
- C. As soon as the Work is completed, all signs, guardrails, utility poles, fences, etc., that were moved for the construction operation shall be replaced undamaged in their original location. Damaged items shall be replaced by the Contractor with new items of equal quality.

3.2 Cutting of Asphalt Pavement

- A. Where the excavation is made in a paved street, the asphalt surface shall be cut on each side of the trench prior to excavation, to provide a vertical joint in the surface. Cutting of the asphalt will be made with a saw designed for the cutting of asphalt.
- B. The use of a jackhammer, wheel cutter, or other similar tool may be allowed by the Engineer only where the Contractor can demonstrate that the alternate method provides a neat straight edge.
- C. Following proper backfill and compaction of their excavation, as specified herein, the Contractor shall repair streets in accordance with the Oregon Department of Transportation (ODOT) crossing permit.

3.3 Trench Excavation

- A. General

When solid rock is encountered in trench excavation, the Engineer shall be notified.

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B. Trench Width

1. The maximum trench width in the pipe zone shall be 2 feet plus the O.D. of the pipe and the minimum trench width in the pipe zone shall be 1 foot plus the O.D. of the pipe. This width shall be maintained to the top of the pipe.
2. The maximum clear width above the top of the pipe will not be limited except in cases where excess width of excavation would cause damage to adjacent structures or utilities.

C. Unsuitable Material

When natural soil conditions exist in the bottom of the trench that are unsuitable for proper pipe installation, the Contractor shall immediately notify the Engineer. The Contractor shall then over-excavate the trench below the design grade to a depth specified by the Engineer. Such over-excavation shall be to provide for foundation material as specified herein. No additional payment will be made to the Contractor for additional excavation without prior approval of the Owner.

D. Exploratory Work

Contractor shall perform appropriate exploratory work to locate utilities when they are known to exist but the specific location is unknown or not marked accurately. Appropriate exploratory work shall be performed in these situations.

3.4 Shoring, Sheet piling, and Bracing of Trenches

- A. The Contractor shall adequately sheet and brace the trench during excavation whenever necessary to satisfy trench safety standards, prevent cave-ins, or to protect adjacent structures or property. Where sheet piling and bracing are used, the Contractor shall increase trench widths for the bracing material accordingly.
- B. The sheet piling must be kept in place until the pipe has been placed, backfilled at the pipe zone, tested for defects, and repaired if necessary. All sheet piling, shoring, and bracing of trenches shall conform to the requirements of the public agency having jurisdiction.

3.5 Dewatering Excavated Areas

- A. All groundwater, seepage, or stormwater that may occur or accumulate in the excavation during the progress of the Work shall be removed. In areas where the nature of soil and hydrostatic pressures are of such a character as to develop a quick condition in the earth mass of the trench, the dewatering operation shall be conducted so that the

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hydrostatic pressure will be reduced to or near zero in the immediate vicinity of the trench.

- B. All excavations shall be kept free of water during the construction or until otherwise requested by the Engineer.
- C. Contractor shall dispose of all waste and water removed from the trench. Disposal shall be in accordance with all state and local regulations.

3.6 Location of Excavated Materials

- A. During trench excavation, the excavated material shall be located within the construction easement or right-of-way so that the excavated material will not obstruct any private or public traveled roadways or streets, or cause undue damage to the streets.
- B. Contractor shall provide means of containing overly saturated soils, i.e., muck, or remove the muck from the Work area as it is excavated, if such soils are encountered in the excavation. The intent is to prevent excessive damage or disruption to street rights-of-way or easement beyond what would normally occur during such Work. Pile and maintain material from trenches so that the toe of the slope of the material excavated is at least two feet from the edge of the trench. It shall be the Contractor's responsibility, however, to determine the safe loading of all trenches.

3.7 Disposal of Excavated Materials

Contractor shall dispose of all excavated material, which is not required for, or is unsuitable for, backfill. The Contractor's method of disposal shall comply with regulations of the governing body having jurisdiction.

3.8 Trench Backfill

- A. All backfill material shall be placed into the trench so that free fall of the materials into the trench is prevented until at least two feet of cover is provided over the pipe. Under no circumstances shall sharp or heavy pieces of material be allowed to drop directly onto the pipe. Methods of backfilling, other than as specified herein, shall be used only upon the approval of the Engineer.
- B. Bedding and Select Backfill
 - 1. A minimum 4-inch depth of bedding shall be placed on the trench bottom, compacted to 85 percent of the maximum density as determined by ASTM D698

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and smoothed to provide uniform bedding so the pipe is supported along its full length and not by the bells. Bell holes at each joint shall be provided to ensure support along the entire pipe length.

2. It shall be understood that the 4-inch depth is a minimum depth only, not an average depth, and does not preclude the Contractor at their option from placing additional depth of bedding to facilitate their Work. Once the pipe is properly installed, the bedding material shall be brought up to the spring line of the pipe in 4-inch lifts and compacted to 85 percent density. Care shall be used to ensure that the bedding material is properly worked under the haunch of the pipe for its full length. No additional payment will be made to the Contractor should they elect to use additional bedding material for their convenience. Payment for any additional bedding material used as foundation material must be approved by the Owner prior to any Work being performed.
 3. Select backfill shall then be brought up from the spring line to the minimum distance above the top of the pipe shown on the Drawings, leveled and compacted to 85 percent of ASTM D698 density. Compaction of the bedding and select backfill by hand tamping will be allowed if the 85 percent density is achieved; otherwise, mechanical tamping will be required.
 4. When an open-graded material is used for bedding or foundation material to facilitate trench dewatering, the open graded material shall be placed to the spring line of the pipe. The Contractor shall make provisions to ensure that fines from the select backfill do not migrate into the open graded bedding or foundation material. To prevent soil migration the Contractor may use any of the following:
 - a. Provide a properly graded select backfill approved by the Engineer;
 - b. Provide an approved fiber/fabric between the open graded bedding material and select backfill;
 - c. Hydraulically jet select backfill fines into open graded bedding material after dewatering is complete and before general backfill is placed; or
 - d. Provide an alternative approved by the Engineer.
- C. All general backfill material shall be pushed first onto the slope of the backfill previously placed and allowed to roll down into the trench. The Contractor shall not push the

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backfill material directly into the trench until at least two feet of cover is provided over the pipe.

D. Compaction

1. In driveways, as shown on the Drawings, or as required by the Engineer, general backfill shall be placed in horizontal lifts not to exceed 12 inches in depth and compacted to 90 percent of the laboratory density as determined by ASTM D1557. In state highway rights-of-way, trench backfill shall be placed and compacted as specified by ODOT. The method of compaction shall be selected by the Contractor.
2. The Contractor shall exercise extreme care to avoid damage to the pipe during compaction of the trench. Where materials consist of cobbles and coarse gravels, compaction of each lift shall be accomplished by at least five passes of an appropriate vibrating type compactor. When materials are such that meaningful in place density test cannot be run, then the Contractor and Engineer will agree on a method of compaction which will provide adequate compaction.
3. In sections where specific compaction requirements are not specified or required by the Engineer, general backfill shall be compacted, as a minimum, to a density equal to that of the natural ground adjacent to the trench. All trenches shall be maintained for a period of one year after final acceptance of the Project. Any settlement of the trenches during the one-year guarantee period shall be remedied promptly at the request of the Engineer and at no additional cost to the Owner.

3.9 Execution of Dust and Mud Control

If the Contractor fails to properly control the dust and mud, the Engineer may request them to do so in writing. If, after 24 hours from this request, the Contractor has not corrected the dust or mud problem, the Owner may elect to have the corrective work performed and withhold the cost from the Contractor's payments.

3.10 Restoration, Finishing, and Cleanup

- A. The Contractor shall restore or replace all paved surfaces, graveled surfaces, trees and shrubbery, lawns, pastures and fences, or other existing facilities disturbed by their Work unless otherwise specified. Restoration and cleanup shall be a continuing operation and shall be diligently pursued until completed.

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- B. All surplus material and temporary structures as well as excess excavation shall be removed by the Contractor and the entire Site of Contractor operations shall be left in a neat and clean condition.
- C. Surface restoration shall be performed in accordance with Technical Specifications - "Surface Restoration." All other existing facilities shall be replaced or restored equal to their original condition.

PART 4 - MEASUREMENT AND PAYMENT

4.1 Basis of Measurement and Payment

- A. Unless specifically listed in the Bid Schedule, there will be no measurement or payment made for general trench excavation, shoring, and backfill of trenches, including bedding and select backfill. All costs shall be included in other appropriate bid items listed in the Bid Schedule. See Technical Specifications - "Measurement and Payment" for a description of the bid items for this Project.
- B. The Contractor shall make allowance in their Bid for importing up to 10 percent of the general backfill material required on the Project and shall perform this Work when, in the opinion of the Engineer, native soil conditions require removal and replacement of unsuitable material. The Engineer and the Contractor shall document all general backfill quantities removed using neat line average trench section areas and lengths to compute quantities. Should the quantity which is removed and replaced exceed 10 percent of the total general backfill required on the Project, the amount of general backfill imported over 10 percent shall be paid for under a negotiated Change Order. Material called for removal and replacement with defined material, specifically on the Drawings, shall not be considered as a part of the import allowance.

4.2 Surface Restoration

The Contractor should note the pay limits of gravel and asphalt restoration listed under Technical Specifications - "Surface Restoration."

4.3 Additional Excavation

All such additional excavating work shall be performed by Change Order, unless previously shown on the Drawings and/or called for in the Bid Schedule or identified in other portions of the Specifications. This provision applies also to manhole and vault foundations.

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4.4 Shoring, Sheeting, and Bracing

Unless provided for in the Bid Schedule, no additional payment will be made for shoring, sheeting, or bracing of trenches.

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- A. These Specifications cover the furnishing and installation of irrigation lines, fittings, canal gates, flowmeters, manholes, and related appurtenances. This work includes, unless otherwise specified, furnishing all labor, materials, tools, equipment, and incidentals required to construct a complete irrigation line ready for service as outlined on the Drawings and in the Specifications.
- B. Requirements for excavation and backfill of trenches, surface restoration, traffic control, and special appurtenance, etc., are specified under other Technical Specifications, when applicable.
- C. Items specified in this Technical Specification are intended to be broad in scope and may not always apply to all items of Work to be constructed. All applicable sections, as determined by the Engineer, shall control the Work outlined in the Contract Documents.

1.2 Specifications References

Specification references made herein for manufactured materials such as pipe, valves, and fittings refer to designations for the American Water Works Association (AWWA), American National Standards Institute, Inc. (ANSI) or ASTM International (ASTM) as they are effective on the date of call for Bids.

1.3 Catalog Information

Catalog information on all equipment and materials to be installed shall be submitted to the Engineer for review prior to purchase and installation of the items.

1.4 Delivery, Storage, and Handling

- A. Adequate precautions shall be taken to prevent damage to piping and protective coatings. During transporting, pipe and other materials shall be secured individually by use of wood spacer blocks, wood crates, or otherwise protected to prevent collision of individual pieces and accompanying damage.
- B. Where possible, all materials furnished by the Contractor shall be delivered and distributed at the Site by the Contractor so that each piece is unloaded opposite or near the place where it is to be placed in the trench.

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- C. All pipe, fittings, valves, and accessories shall be loaded and unloaded by lifting with hoists or skidding so as to avoid shock or damage. During freezing weather, valves shall be stored to prevent accumulation of water in housing which could freeze and damage valves. Under no circumstances shall materials dropped during handling be installed or be used in the Work.
- D. All pipes, valves, fittings, and all other materials used in the construction of the irrigation lines shall be carefully inspected by the Contractor prior to installation. All defective materials shall be rejected.
- E. Proper materials, tools, and equipment shall be used by the Contractor to provide safe and convenient prosecution of the Work.

1.5 Manufacturer's Certification

If requested to do so, the Contractor shall furnish to the Engineer a sworn statement from the product manufacturer, stating that inspection and all specified tests have been made on the supplied material and that the results thereof comply with all appropriate Specifications. The statement shall also state that all materials furnished are in accordance with these Contract Documents and that all materials are new.

PART 2 - MATERIALS

2.1 General

The Contractor shall furnish and install irrigation lines and valves of the size, type, class, and material called for on the Drawings, in the Bid Schedule and as specified. Where no specific type of pipe is called for, the Contractor may select any type listed herein. Once a particular type and manufacturer is selected, the Contractor shall use that type for the entire Project unless other types are specifically called for on the Drawings.

2.2 Pipe

A. Polyvinyl Chloride (PVC) Pipe

PVC pipe for irrigation lines shall conform to AWWA C900-16, DR 18 (235 psi). The pipe shall have flexible rubber gasketed joints conforming to ASTM D3139 and ASTM F477. Pipe shall be JM Eagle, North American Pipe Corporation, or approved equal. Pipe color shall be white.

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B. Ductile Iron (DI) Pipe

1. DI pipe and fittings shall conform to AWWA C150, AWWA C115, AWWA C151, AWWA C153, and AWWA C110 and shall be minimum pressure Class 350 unless specified otherwise.
2. All DI pipe shall have a bituminous sealed cement mortar lining conforming to AWWA C104 on the interior.
3. All joints unless otherwise specified shall be push-on rubber gasket joints conforming to AWWA C111 and shall be furnished complete with all necessary accessories.
 - a. Flanges for couplings and fittings shall conform to ANSI B16.1, 125-pound bolt hole template.
 - b. Mechanical joints shall conform to AWWA C111.
4. When flanged pipe is required, the Contractor shall provide the DI pipe class required by the flange manufacturer to ensure the pipe and flange units are compatible. These data shall be provided to the Engineer for review prior to ordering these materials.

2.3 Fittings for Iron and PVC Pipe

A. General

1. Unless specified otherwise, all fittings such as elbows, etc., shall have mechanical joints conforming to AWWA C111 and shall be short-bodied compact DI fittings conforming to AWWA C153, Class 350.
2. When called for, flanged cast iron fittings shall conform to AWWA C110 with ANSI B16.1, 125-pound bolt hole template.
3. All fittings shall be cement mortar lined in accordance with AWWA C104.
4. Gaskets shall be either ring or full faced, 1/8-inch thick conforming to AWWA C111, Appendix B.

B. Couplings

1. Couplings shall be fabricated steel "Dresser" style couplings, or approved equal, conforming to AWWA C219.

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2. The Contractor shall provide the appropriate coupling and gaskets as required to match the irrigation line types and sizes being utilized.
3. Couplings shall be rated for the working pressure of the pipe main for which they will be utilized.

2.4 Locating Wire

- A. Locating wire shall be a minimum of 12 awg UF solid copper with blue colored insulation. The use of THHN wire will not be acceptable. At all splices, the connecting ends of the wires shall be stripped and connected to ensure an electrical connection and made waterproof with an approved splice kit such as 3M splice kit DBR/Y-6 or approved equal.
- B. Where location wire is to be secured to the exterior of posts, etc., stainless steel pipe straps shall be used.

2.5 Impeller Flowmeters

Flowmeters shall be propeller flowmeters designed for agricultural irrigation measurement housed in a fusion-bonded, epoxy-coated, flanged carbon steel pipe. Flowmeters shall meet the provisions of AWWA C704-02. The bearing housing shall be 316 stainless steel. Flowmeters shall have an accuracy within 2 percent guaranteed throughout the full range of design flows. Flowmeters shall be pressure rated for 150 psi. The instantaneous dial shall read in cubic feet per second and have a seven-wheel totalizer. Flowmeters shall be installed with a register extension, and the register shall be installed near the top of the flowmeter vault to allow easy reading of the register without entering the vault. The register shall be attached to the vault with a fabricated steel bracket. The flowmeters shall be McCrometer MW5 or approved equal.

2.6 Canal Gates

Gates shall be of the flat back style, Fresno Series 6600 Model 101C steel slide gates, or approved equal, and of the size called for on the Drawings. All steel shall be coated per the manufacturer's recommendations. Gates shall have stainless steel stem and fasteners and be face mounted and handwheel operated.

2.7 Manholes

- A. Precast Concrete Base Sections

Precast concrete base sections shall be approved by the Engineer and shall conform to ASTM C478. Concrete shall be consolidated by mechanical vibration. Reinforcing shall be

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provided in the base and walls. Minimum concrete thickness shall be 5 inches unless otherwise required for deep manholes.

B. Precast Concrete Manhole Sections

1. Precast concrete manhole sections shall conform to ASTM C478 and consist of circular sections in the standard 48-inch diameter, unless otherwise noted. No more than two lift holes shall be cast into each section. Holes shall be located as to not damage reinforcing or expose it to corrosion. All lift holes shall be patched to prevent water seepage into the manhole, utilizing an approved, non-shrink grout.
2. Flat slab covers for manholes shall conform to ASTM C478. Slabs, cones, and ring sections shall be free from fractures, cracks, rock pockets, or exposed reinforcement. Joint seal material shall be "Kent Seal" mastic acrylic polymeric sealant, O-ring rubber gasket, or approved equal.

PART 3 - EXECUTION

3.1 Trench Excavation and Backfill

Trench excavation and backfill shall be performed as specified in the Technical Specifications for "Excavation and Backfill of Trenches."

3.2 Installation of Pipe

- A. Irrigation pipe shall be installed in accordance with best current practices as required by the manufacturer and as specified herein. PVC pipe installation shall conform to the Uni-Bell Plastic Pipe Association, "Guide for Installation of PVC Pressure Pipe for Municipal Water Main Distribution Systems" and also AWWA M23 "PVC Pipe - Design and Installation."
- B. Irrigation pipe shall be installed with bell ends laid facing in the direction of laying unless directed otherwise by the Engineer. Each pipe shall be properly bedded so as to be supported for the full length of the pipe. A suitable foundation shall be achieved by a slight excavation under the bell at each joint. All rubber ring joints shall be lubricated and installed in accordance with the installation instructions of the pipe manufacturer, taking particular care to avoid pinching or otherwise causing damage to the rubber ring. All joints shall be free of dirt and other foreign matter prior to the joining of the next pipe. All joints shall be restrained to prevent creep and misalignment of joints.
- C. Irrigation lines shall be installed to the minimum depths called for on the Drawings and to the lines and grades when shown.

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1. It shall be recognized that irrigation line depths may vary from the minimum depths shown when adjustment of grade is required to avoid conflict with existing utilities.
 2. Additional fittings may also be required when a grade adjustment is required.
- D. No pipe shall be installed in water or when conditions exist that, in the opinion of the Engineer, are unsuitable for the laying of the pipe.
1. At times when pipe laying is not in progress, the open ends of pipe shall be closed by a watertight plug or other approved means. This provision applies during the noon hour as well as overnight.
 2. If there is water in the trench, the seal should remain in place until the trench is dewatered sufficiently to prevent groundwater from entering the pipe. Adequate provisions shall be made by the Contractor for final disposal of the groundwater pumped from trenches.
- E. All pipe shall be installed true to line. The Contractor may install a pipeline on a curve when called for on the Drawings or when approved by the Engineer. For PVC pipe installed on a curve, deflection of the pipe shall be achieved by bending the pipe within the limitations specified by the pipe manufacturer. Joint deflection of PVC pipe is not allowed.

3.3 Locating Wire

- A. A continuous solid copper locating wire shall be placed along the top of all irrigation pipe as required on the Drawings. This wire shall be secured to the top of the pipe at maximum 10-foot intervals using 6-inch strips of 2-inch wide duct tape. All splices shall be electrically continuous. At all splices the connecting ends of the wires shall be overlapped and tied. The ends shall be stripped and connected with a wire nut to ensure an electrical connection and made waterproof with an approved silicone splice kit. Access to terminal ends of the locating wire shall be made at all structures. The result of this installation shall be a continuous wire circuit electrically isolated from ground.
- B. The Contractor shall be responsible for testing continuity and for testing isolation from ground in the wire after all Work has been completed on the test section. The Contractor is advised to do intermediate testing on their own after backfilling operations and prior to surface restoration work to be sure continuity is maintained. If there is a break or defect in the wire, it shall be the Contractor's responsibility to locate and repair the defect.

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- C. The continuity of the location wire shall be tested from one test load point to the next by use of a temporary wire laid between test points in-line with an ohmmeter. Resistance shall be measured with an approved ohmmeter that has been properly calibrated. The continuity of a test section will be accepted if the resistance of the test section does not exceed 5 ohms per 500 feet of location wire being tested. Isolation from ground shall be measured with a megohmmeter and shall be a minimum of 20 megohms for any section of location wire tested. The Engineer shall witness the acceptance test. The wire and installation shall be included in the "(size) Polyvinyl Chloride (PVC) Line" bid item price. No separate payment shall be made.

3.4 Testing

Perform hydrostatic or air testing per Section 00445.70 of the Oregon Standard Specifications on the irrigation line from the fish screen to the existing irrigation ditch.

3.5 Restoration, Finishing, and Cleanup

- A. The Contractor shall restore or replace all paved surfaces, graveled surfaces, trees, shrubbery, lawns, pastures, fences, and other existing facilities equal to their original condition.
- B. All surplus material and temporary structures as well as excess excavation shall be removed and the entire Site of Contractor operations shall be left in a neat and clean condition as outlined in the General Conditions.
- C. Also see Technical Specifications - "Excavation and Backfill of Trenches" and Technical Specifications - "Surface Restoration" for specific requirements.

PART 4 - MEASUREMENT AND PAYMENT

4.1 Basis

See Technical Specifications - "Measurement and Payment" for a description of the basis of measurement and payment for Work performed under this Contract.

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TECHNICAL SPECIFICATIONS

SECTION 5

SURFACE RESTORATION

PART 1 - GENERAL

1.1 Scope

- A. The Contractor shall perform all Work and furnish all materials to restore the work area including any gravel, asphalt, lawn, fences, or any other surfaces or items damaged or disturbed by their construction operation. Surface restoration shall follow as closely as possible the backfill and compaction of excavations.
- B. Items specified in this Technical Specification are intended to be broad in scope and may not always apply to all items of Work to be constructed. All applicable sections, as determined by the Engineer, shall control the Work outlined in the Contract Documents.

1.2 Oregon Highway 237 Crossing

The Owner has obtained a permit for the irrigation line crossing Oregon Highway 237. The Contractor shall follow all provisions outlined in the permit, including but not limited to, all insurance and bonding, traffic control, excavation and backfill, and surface restoration requirements.

PART 2 - MATERIALS

2.1 Base Rock

Base rock shall substantially conform to current Oregon Standard Specifications for Construction for base aggregate materials, or as otherwise approved by the Engineer. The intent is to specify a base rock which is suitable for use in the restoration of areas disturbed by the Contractor's Work. Base rock required shall generally be 1"-0, or 3/4"-0 unless otherwise specified or approved. The Contractor shall submit to the Engineer Samples of the base rock proposed for use on the Project.

2.2 Seed

- A. Lawn Seed

Lawn seed shall be a blend typically used in the area and of the type to match existing lawn areas, and must be approved by the Owner prior to use.

- B. Pasture Seed

Pasture seed shall be a mixture of orchard grass, rye grass, and fescue, native to the area and must be approved by the Owner prior to use.

TECHNICAL SPECIFICATIONS

SECTION 5

SURFACE RESTORATION

2.3 Fertilizer

Inorganic fertilizer shall be commercially available 22-16-8 with 22 percent nitrogen, 16 percent available phosphoric acid, 8 percent soluble potash, and a minimum of 2 percent sulfur.

2.4 Topsoil

Topsoil shall be native to the area and shall be approved by the Engineer prior to use.

Furnish topsoil that is from the fertile part of a soil profile, commonly referred to as the "A" horizon, typically ranging in depth from 3 inches to 12 inches below original ground surface. Do not take material for topsoil from a depth greater than 12 inches below original ground surface.

2.5 Mulch

All mulch shall be straw that has been air dried and seasoned before baling or loading. It shall be free of noxious weeds and other materials detrimental to grass growth.

PART 3 - EXECUTION

3.1 Gravel Surface Restoration

- A. During trench and general excavation, the Contractor shall minimize the disturbance of adjacent gravel surfaces.
- B. Backfill of trenches and other work areas shall be in accordance with Technical Specifications - "Excavation and Backfill of Trenches," or other applicable requirements.
- C. In gravel streets, parking areas or driveways disturbed by the Work, the Contractor shall resurface the areas with base rock, as required on the Drawings.
- D. In gravel streets, shoulders, parking strips and driveways, a 4-inch minimum compacted depth shall be required or a compacted depth equal to the existing depth of gravel plus the depth of granular subbase, if any, whichever is greater, unless otherwise specified on the Drawings or in these Specifications.
- E. The resurfacing aggregate shall be compacted to 95 percent of laboratory density as determined by ASTM D1557.

TECHNICAL SPECIFICATIONS

SECTION 5

SURFACE RESTORATION

3.2 General Surface Restoration

A. General

1. The Contractor shall replace or restore, equivalent to their original condition, all surfaces, trees and shrubbery, lawns, agricultural areas, pastures and fences, or other existing facilities disturbed by their Work unless otherwise specified. Restoration and cleanup shall be a continuing operation and shall be diligently pursued until completed. Surface restoration shall be completed as soon as possible after the underground work is complete.
2. All surplus material, rock and debris, and temporary structures, as well as excess excavation, shall be removed by the Contractor and the entire Site of Contractor's operations shall be left in a neat and clean condition.
3. Lawns and pastures in private easement shall be restored to a smooth condition and reseeded with a like mixture of grass unless specified otherwise on the Drawings, in the Specifications, or in the easement documents. When backfilling trenches in private easements, unless otherwise specified, Contractor shall replace topsoil to minimum 1-foot depth or to a depth equal to the original depth, whichever is less. Lawn sod shall be utilized where called for on the Drawings or where required by the Engineer.

B. Seeding

1. All areas to be seeded shall have a minimum of 6 inches of topsoil.
2. After the backfilling and compaction have been completed, the top 2 inches of the topsoil shall be scarified to provide a good seed bed and the area seeded, fertilized, compacted with a weighted roller, a straw mulch applied, and the initial watering completed.
3. All additional watering of the grass seed shall be the responsibility of the property owners.
4. Unless required otherwise, the seed shall be applied at a minimum rate of 4 pounds per 1,000 square feet, the fertilizer at 1 pound per 100 square feet, and the mulch at a rate needed to provide a minimum mulch thickness of 1 inch.

TECHNICAL SPECIFICATIONS

SECTION 5

SURFACE RESTORATION

3.3 Mulch

- A. Place mulch approximately 1-1/2 inches deep in a loose condition at a rate of 2 to 2.5 tons/acre. Place grass straw mulch so that it is loose enough for sunlight to penetrate and air to circulate; but dense enough to shade the ground, reduce water evaporation, and materially reduce soil erosion.
- B. Anchor using a crimping disc, an approved tackifier, or approved modified sheepsfoot roller, or another method approved by the Engineer.

3.4 Cleanup

- A. Cleaning up shall be a continuing process from the start of the work to final acceptance of the Project. The Contractor shall, at all times, keep the area on which work is in progress free from accumulations of waste material or rubbish.
- B. Spillage from the Contractor's hauling vehicles on traveled public or private roads shall be promptly cleaned up. Upon completion of the work the Contractor shall remove all temporary structures, rubbish, and waste material, equipment and supplies, resulting from the Contractor's operations. The Contractor shall leave such lands in a neat and orderly condition which is at least as good as the condition in which the Contractor found them prior to the Contractor's operations. See specific conditions in the General Requirements.
- C. In roadways and traffic areas, the Contractor shall be responsible for maintaining a road surface suitable for travel by the public from the time of excavation until the road surface has been restored. Such work includes dust control, temporary patching, signing, grading, and filling of potholes on temporary street surfaces, etc. The Contractor shall be responsible for all Claims and damages resulting from their failure to maintain a suitable surface.

PART 4 - MEASUREMENT AND PAYMENT

4.1 Basis

See Technical Specifications - "Measurement and Payment" for the description of the basis of measurement and payment for the Work performed under this Contract.

END OF SECTION

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TECHNICAL SPECIFICATIONS
SECTION 6
MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 Scope

The basis for measurement and payment for all Work performed under this Contract shall be as listed in the "Bid Schedule." Unless the Work to be performed is specifically called out to be measured and paid for in the Bid Schedule, payment for such Work shall be included in other applicable items of the Bid Schedule. There shall be no separate measurement and payment for any such Work not specifically listed in the Bid Schedule.

1.2 Method of Payment

Items listed in the Bid Schedule as lump sum shall be on a lump sum all required basis. No direct measurement will be made for lump sum bid items. Bid items calling for unit prices show estimated quantities of Work to be performed. These quantities, although shown with as much accuracy as possible, are approximate only and are for bidding purposes only. The Owner reserves the right to increase or decrease the amount of these quantities as may be deemed necessary. Payment to the Contractor shall be made on the quantity of Work actually performed by the Contractor.

The summation of all bid items under the Bid Schedule shall equal all Work required by the Drawings and Specifications regardless of whether individual items of Work are described under bid item descriptions or not. Payment shall be made at the contract unit bid or lump sum prices listed in the Bid Schedule. The prices listed therein shall be payment in full for all labor, tools, equipment, materials, etc., which are required to construct respective bid items according to the Contract Documents, including all Work and materials incidental thereto.

Payment for unit bid items and lump sum bid items only partially completed at the end of the monthly pay period shall be based on a percentage of work completed as determined by the Engineer.

1.3 Payment Items

A. Numbering

The numbering of the payment items listed below may not be the same as the numbering for bid items in the Bid Schedule.

TECHNICAL SPECIFICATIONS
SECTION 6
MEASUREMENT AND PAYMENT

B. Method of Payment

1. Mobilization/Demobilization

Measurement for payment for mobilization/demobilization shall be on a lump sum all required basis. Payment shall be made at the lump sum price stated in the Bid Schedule for "Mobilization/Demobilization." Partial payments will be made as follows:

- a. When 5 percent of the original Contract Price is earned from other Contract items, excluding amounts paid for materials on hand, 50 percent of the price stated in the Bid Schedule for "Mobilization/Demobilization," or 5 percent of the original Contract Price, whichever is less, will be paid.
- b. When 10 percent of the original Contract Price is earned from other Contract items, excluding amounts paid for materials on hand, 100 percent of the price stated in the Bid Schedule for "Mobilization/Demobilization," or 10 percent of the original Contract Price, whichever is less, will be paid.
- c. When the Substantial Completion Date has been established for the Project, payment of any amount of the price stated in the Bid Schedule for "Mobilization/Demobilization" in excess of 10 percent of the total original Contract Price will be paid.

2. Clearing and Grubbing

Measurement for payment for clearing and grubbing shall be on a lump sum all required basis. There shall be no measurement of the Work for payment purposes. This item shall include removal and disposal of all unwanted items, such as concrete, iron, boards, pipe, fence material, etc., and organic matter, such as trees, roots, brush, etc. Payment shall be made at the lump sum price stated in the Bid Schedule for "Clearing and Grubbing."

3. Environmental Controls

Measurement for payment for environmental controls shall be on a lump sum all required basis. There shall be no measurement for payment purposes. This item shall include furnishing all labor and materials necessary to develop and implement a Spill Prevention, Control, and Countermeasures Plan, implement erosion and sediment control and stormwater discharge measures, and other

TECHNICAL SPECIFICATIONS
SECTION 6
MEASUREMENT AND PAYMENT

environmental controls related to construction activities. This includes complying with other project-related permits obtained by the Owner. Payment shall be made at the lump sum price stated in the Bid Schedule for "Environmental Controls."

4. Demolition

Measurement for payment for demolition shall be on a lump sum all required basis. There shall be no measurement of the Work for payment purposes. This item shall include all excavation, saw cutting, backfill, disposal, etc., along with all labor, equipment, etc., required to remove the diversion as shown on the Drawings and called for in the Technical Specifications. Payment shall be made at the lump sum price stated in the Bid Schedule for "Demolition."

5. Concrete Diversion Structure

Measurement for payment for the concrete diversion structure shall be on a lump sum all required basis and shall include all labor, materials, equipment, etc., needed for construction of a complete concrete diversion structure. This bid item shall include placement of base rock, reinforced concrete floor slab, all reinforced concrete walls, stop log guides, stop logs, slide gates, concrete abutments, wing walls, fish bypass control structure, retaining walls, compacted base rock parking area, etc. This bid item shall not include any walkway, railing, or grating, as these items will be covered under separate bid items. All work not covered in any of the other bid items shall be included in this bid item. Payment shall be made at the lump sum price stated in the Bid Schedule for "Concrete Diversion Structure."

6. Walkway and Railing

Measurement for payment for walkway and railing shall be on a lump sum all required basis and shall include all railing, grating, I-beams, mounting hardware, etc., needed to complete the walkway and railing as shown on the Drawings and described in the Technical Specifications. Payment shall be made at the lump sum price stated in the Bid Schedule for "Walkway and Railing."

7. Fish Bypass Channel Earthwork

This is a lump sum all required bid item. There shall be no measurement of the Work for payment purposes. The Work shall include all excavation, embankment, borrow material, waste disposal, watering, scarifying, soft spot

TECHNICAL SPECIFICATIONS
SECTION 6
MEASUREMENT AND PAYMENT

removal, compacting, all grade control other than that performed by the Engineer, etc., as required to completely construct the fish bypass channel as shown on the Drawings and called for in the Technical Specifications. Earthwork does not include excavation, placement, or material for the installation of streambed simulation material. Payment shall be made at the lump sum price stated in the Bid Schedule for "Fish Bypass Channel Earthwork."

8. Streambed Simulation Material and Large-Scale Roughness Boulders

Measurement for payment for installation of streambed simulation material and large-scale roughness boulders shall be on a lump sum all required basis. There shall be no measurement of the Work for payment purposes. These items shall include materials, labor, equipment, etc., necessary to install streambed simulation material and large-scale roughness boulders as shown on the Drawings and called for in the Technical Specifications. The streambed simulation material includes the installation of the boulder matrix as shown on the Drawings and called for in the Technical Specifications. Payment shall be made at the lump sum price stated in the Bid Schedule for "_____ Channel Streambed Simulation Material (SSM)," and "_____ Channel Large-Scale Roughness Boulders."

9. Polyvinyl Chloride (PVC) Line

Measurement for payment for irrigation lines and fish return lines shall be on a linear foot basis, for the various sizes and types listed in the Bid Schedule. Lengths of pipe shall be determined by measuring along the centerline of the pipe as installed from one end to the other. This item shall include all fittings, location wire, couplings, and other items installed in the line as detailed on the Drawings. There is no specified pay depth for irrigation lines. The depth shall be as shown on the Drawings and as required in the field for proper installation. No field measurements will be made for depth. Payment shall be made at the unit price stated in the Bid Schedule for "____-inch Polyvinyl Chloride (PVC) Line" for the various sizes and types as listed in the Bid.

10. Flowmeter and Manhole

Measurement for payment for flowmeter and manhole shall be made on a per each basis. Work shall include all piping, fittings, pipe supports, meter, excavation, bedding, backfill, manholes, etc., as required by the Drawings. Payment shall be made at the unit price stated in the Bid Schedule for "Flowmeter and Manhole."

TECHNICAL SPECIFICATIONS
SECTION 6
MEASUREMENT AND PAYMENT

11. Concrete for Fish Screen

Measurement for payment for the concrete for the fish screen shall be on a lump sum all required basis and shall include all labor, materials, equipment, etc., needed for placement of the concrete for the fish screen structure. This bid item shall include placement of base rock, reinforced concrete, etc. The metal embeds will be provided by Oregon Department of Fish and Wildlife (ODFW) and installed by the Contractor. The metal fish screen components will be fabricated and installed by ODFW. Payment shall be made at the lump sum price stated in the Bid Schedule for "Concrete for Fish Screen."

12. State Highway Crossing

Measurement for payment for state highway crossing shall be on a lump sum all required basis. Work shall include all provisions outlined in the Oregon Department of Transportation (ODOT) crossing permit including, but not limited to, all insurance and bonding, traffic control, saw cutting, grinding, additional excavation and backfill, asphalt, gravel shoulder restoration, and surface restoration. This bid item includes all additional work to install the irrigation line across the state highway; it does not include the installation of the irrigation line. Payment shall be made at the lump sum price stated in the Bid Schedule for "State Highway Crossing."

13. Junction Box and Irrigation Outfall

Measurement for payment for junction box and irrigation outfall shall be on a lump sum all required basis. Work shall include all fittings, excavation, compacted rock, backfill, concrete, riprap, demolition, pipe connections, etc., as required by the Drawings. There shall be no measurement for payment purposes. Payment shall be made at the lump sum price stated in the Bid Schedule for "Junction Box" and "Irrigation Outfall."

14. Site Restoration

This is a lump sum all required bid item. There shall be no measurement of the Work for payment purposes. The work shall include all labor, material, plantings, seed mixtures, equipment, etc., required to seed areas, plant, and restore surfaces as shown on the Drawings and called for in the Technical Specifications. Payment shall be made at the lump sum price stated in the Bid Schedule for "Site Restoration."

TECHNICAL SPECIFICATIONS
SECTION 6
MEASUREMENT AND PAYMENT

15. Water Control

This is a lump sum all required bid item. There shall be no measurement of the Work for payment purposes. The Work shall include all ecology blocks, sandbags, dams, excavation, fill, fabric, plastic sheeting, high density polyethylene liner, bypass pipes, pumps, etc., necessary to isolate the work area, divert flow, dewater the work area, and control turbidity. The Work shall also include all pumps, pipe, culverts, screens, etc., required to provide irrigation delivery during the Project. Any costs for pumping water shall be included in this bid item. Payment shall be made at the lump sum price stated in the Bid Schedule for "Water Control."

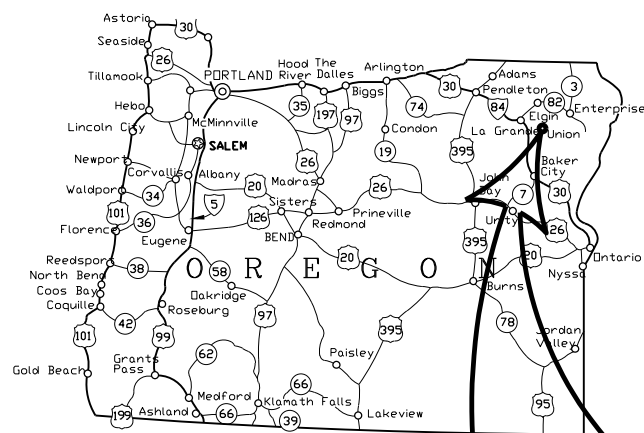
END OF SECTION

UNION SOIL AND WATER CONSERVATION DISTRICT

LITTLE CREEK (LC5 AND LC6)

FISH PASSAGE IMPROVEMENTS

2023

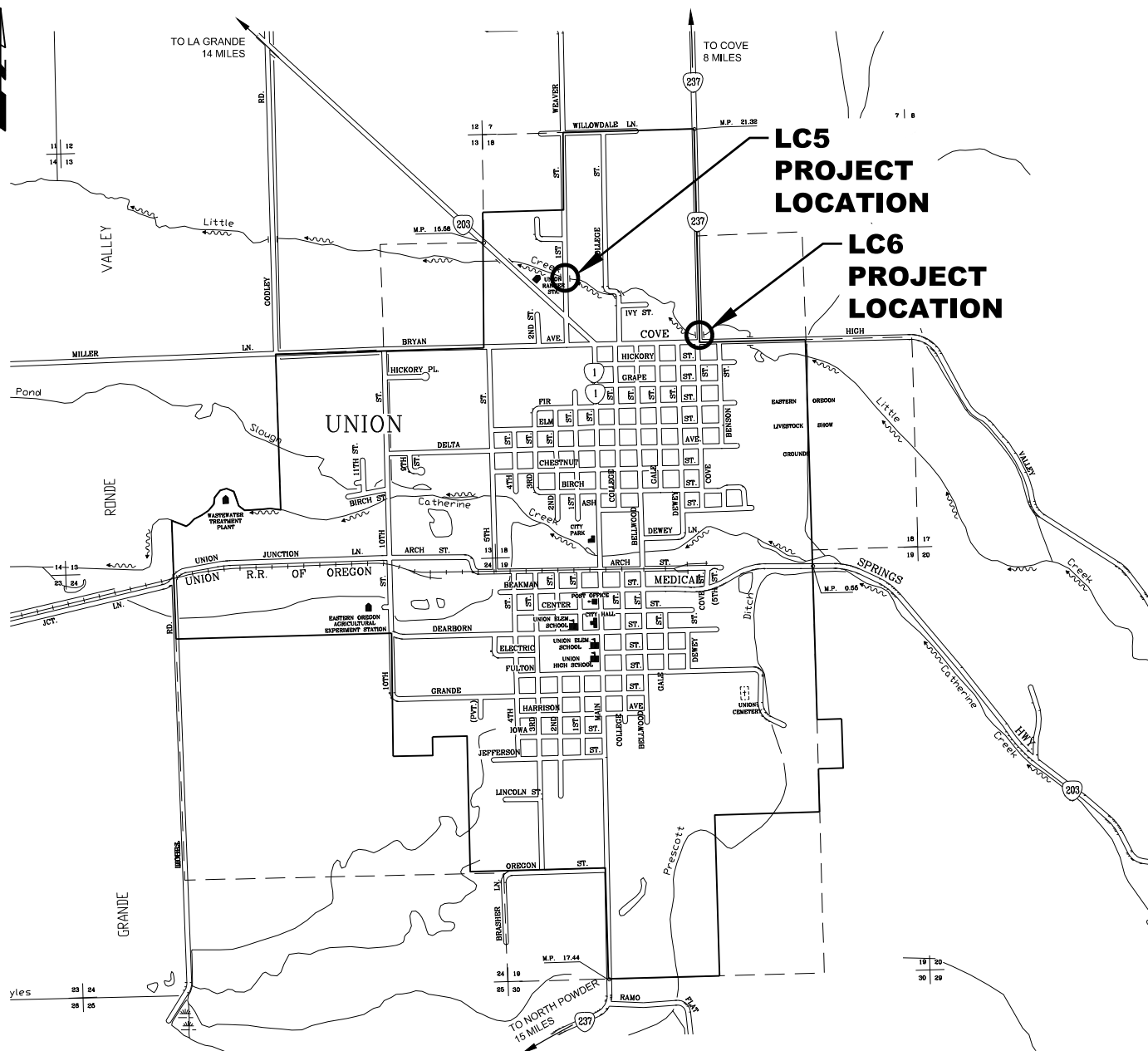


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VICINITY MAP
N.T.S.

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This project was designed in accordance with the BPA Habitat Improvement Program, Programmatic Biological Opinion (HIP IV).



Engineering Surveying Natural Resources Cultural Resources GIS
1901 N. Fir Street - La Grande, OR 97850 Ph: (541) 963-8309 Fax: (541) 963-5456
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06/30/2023

FINAL ELECTRONIC DOCUMENTS AVAILABLE UPON REQUEST

PROJECT OBJECTIVE

THE PURPOSE OF THE PROJECT IS TO PROVIDE RELIABLE AND CONSISTENT IRRIGATION FLOWS WHILE IMPROVING FISH PASSAGE AND PROVIDING RELIABLE FISH SCREENING FOR THESE IRRIGATION DIVERSIONS ON LITTLE CREEK.

GENERAL NOTES

1. ALL DIMENSIONS, STATIONS, AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE NOTED.
2. ALL IN-STREAM WORK SHALL BE PERFORMED WITHIN THE IN-STREAM WORK WINDOW AS DESIGNATED IN THE OREGON DEPARTMENT OF STATE LANDS (DSL) AND CORPS OF ENGINEERS (COE) PERMITS.
3. ALL WORK, INCLUDING EROSION CONTROL MEASURES, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DSL AND COE PERMITS.
4. VERTICAL DATUM NAVD 88
5. HORIZONTAL DATUM NAD83, OREGON STATE PLANE NORTH
6. SURVEY DATA WAS GATHERED IN APRIL 2021. CONTRACTOR TO VERIFY ACTUAL TOPOGRAPHY AT THE TIME OF CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
7. FIELD VERIFY LOCATION OF UTILITIES AND CULVERTS.
8. LOCATE AND PROTECT EXISTING UTILITIES. 48-HOUR NOTIFICATIONS SHOULD BE GIVEN PER ORS 757.542-546. "CALL BEFORE YOU DIG" NUMBER FOR OREGON IS 1-800-332-2344 (OR 811).

STREAM DESIGN CRITERIA

95% EXCEEDANCE FLOW	7	CFS
5% EXCEEDANCE FLOW	120	CFS
2 YEAR FLOW	218	CFS
5 YEAR FLOW	299	CFS
10 YEAR FLOW	351	CFS
25 YEAR FLOW	417	CFS
50 YEAR FLOW	466	CFS
100 YEAR FLOW*	882	CFS

* PUBLISHED FEMA FLOW

ESTIMATED EARTHWORK QUANTITIES

THE QUANTITIES SHOWN ARE NEAT LINE ESTIMATES AND ARE SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL NOT USE THESE ESTIMATES FOR BIDDING PURPOSES AND IS RESPONSIBLE FOR CALCULATING THEIR OWN QUANTITIES.

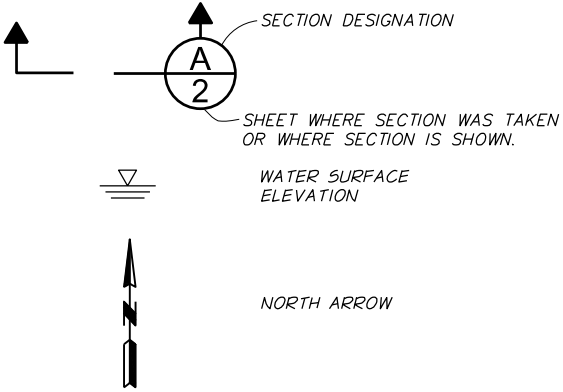
THE QUANTITIES SHOWN ARE BASED ON EXCAVATION AND FILL REQUIRED FOR MAIN CHANNEL AND PERMANENT FISH BYPASS CHANNEL ONLY. THESE QUANTITIES WERE CALCULATED TO FINISH GRADE AND DO NOT INCLUDE ANY ALLOWANCE FOR OVER EXCAVATION AND PLACEMENT OF STREAMBED SIMULATION MATERIAL.

	LC5	LC6
EXCAVATION	95 CY	120 CY
FILL	10 CY	40 CY

LEGEND

	EXISTING	PROPOSED
INDEX CONTOUR		
INTERMEDIATE CONTOUR		
EDGE OF WATER		
CREEK THALWEG		
ORDINARY HIGH WATER		
PROPERTY LINE		
EDGE OF ASPHALT		
EDGE OF GRAVEL		
FENCE LINE/GATE FLOW		
FILL AREA		
REMOVE		
WETLAND		
BOULDER		
STREAMBED SIMULATION MATERIAL		
STREAMBED SIMULATION MATERIAL		
PLANTINGS		

DRAFTING



LC5 WATER RIGHTS SUMMARY

Priority Date	Water Rights (cfs)
1863	0.15
1863	0.15
1863	0.05
1863	1.03
1869	3.63
1874	0.08
Total	5.09

LC6 WATER RIGHTS SUMMARY

Priority Date	Water Rights (cfs)
1863	0.10
1863	0.25
1863	0.21
1863	0.05
1863	0.20
1863	0.08
1863	0.10
1863	0.38
1863	0.08
1863	0.13
1863	0.16
1863	0.08
1863	0.15
1863	0.13
1863	0.10
1864	0.06
1883	0.08
1928	0.13
1972	0.13
Total	2.60

NOTE:
IRRIGATION DESIGN CRITERIA IS BASED ON THE WATER RIGHT DATA DEVELOPED BY THE BUREAU OF RECLAMATION IN 2011.



DESIGNED BY: J. HERRON	DATE: 2023
DRAWN BY: P. RICHARDSON	ACAD FILE: 596-07-G-001.dwg
REVIEWED BY: C. HUTCHINS	COPYRIGHT 2023 BY ANDERSON PERRY & ASSOC., INC.



UNION SOIL AND WATER CONSERVATION DISTRICT
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS
LEGEND AND NOTES

SHEET
G-001
1 OF 23

HIP GENERAL CONSERVATION MEASURES APPLICABLE TO ALL ACTIONS

THE ACTIVITIES COVERED UNDER THE HIP ARE INTENDED TO PROTECT AND RESTORE FISH AND WILDLIFE HABITAT WITH LONG-TERM BENEFITS TO ESA-LISTED SPECIES. THE FOLLOWING GENERAL CONSERVATION MEASURES (DEVELOPED IN COORDINATION WITH USFWS AND NMFS) WILL BE APPLIED TO ALL ACTIONS OF THIS PROJECT.

PROJECT DESIGN AND SITE PREPARATION.

1. STATE AND FEDERAL PERMITS.

- A. ALL APPLICABLE REGULATORY PERMITS AND OFFICIAL PROJECT AUTHORIZATIONS WILL BE OBTAINED BEFORE PROJECT IMPLEMENTATION.
- B. THESE PERMITS AND AUTHORIZATIONS INCLUDE, BUT ARE NOT LIMITED TO, NATIONAL ENVIRONMENTAL POLICY ACT, NATIONAL HISTORIC PRESERVATION ACT, THE APPROPRIATE STATE AGENCY REMOVAL AND FILL PERMIT, USACE CLEAN WATER ACT (CWA) 404 PERMITS, CWA SECTION 401 WATER QUALITY CERTIFICATIONS, AND FEMA NO-RISE ANALYSES.

2. TIMING OF IN-WATER WORK.

- A. APPROPRIATE STATE (OREGON DEPARTMENT OF FISH AND WILDLIFE (ODFW), WASHINGTON DEPARTMENT OF FISH AND WILDLIFE (WDFW), IDAHO DEPARTMENT OF FISH AND GAME (IDFG), AND MONTANA FISH WILDLIFE AND PARKS (MFWP)) GUIDELINES FOR TIMING OF IN-WATER WORK WINDOWS (IWW) WILL BE FOLLOWED.
- B. CHANGES TO ESTABLISHED WORK WINDOWS WILL BE APPROVED BY REGIONAL STATE BIOLOGISTS AND BPA’S EC LEAD.
- C. BULL TROUT. FOR AREAS WITH DESIGNATED IN-WATER WORK WINDOWS FOR BULL TROUT OR AREAS KNOWN TO HAVE BULL TROUT, PROJECT PROPONENTS WILL CONTACT THE APPROPRIATE USFWS FIELD OFFICE TO INSURE THAT ALL REASONABLE IMPLEMENTATION MEASURES ARE CONSIDERED AND AN APPROPRIATE IN-WATER WORK WINDOW IS BEING USED TO MINIMIZE PROJECT EFFECTS.
- D. LAMPREY. WORKING IN STREAM OR RIVER CHANNELS THAT CONTAIN PACIFIC LAMPREY WILL BE AVOIDED FROM MARCH 1 TO JULY 1 FOR REACHES <5,000 FEET IN ELEVATION AND FROM MARCH 1 TO AUGUST 1 FOR REACHES >5,000 FEET. IF EITHER TIMEFRAME IS INCOMPATIBLE WITH OTHER OBJECTIVES, THE AREA WILL BE SURVEYED FOR NESTS AND LAMPREY PRESENCE, AND AVOIDED IF POSSIBLE. IF LAMPREYS ARE KNOWN TO EXIST, THE PROJECT SPONSOR WILL UTILIZE DEWATERING AND SALVAGE PROCEDURES (SEE FISH SALVAGE AND ELECTROFISHING SECTIONS) TO MINIMIZE ADVERSE EFFECTS.
- E. THE IN-WATER WORK WINDOW WILL BE PROVIDED IN THE CONSTRUCTION PLANS.

3. CONTAMINANTS.

- A. EXCAVATION OF MORE THAN 20 CUBIC YARDS WILL REQUIRE A SITE VISIT AND DOCUMENTED ASSESSMENT FOR POTENTIAL CONTAMINANT SOURCES. THE SITE ASSESSMENT WILL BE STORED WITH PROJECT FILES OR AS AN APPENDIX TO THE BASIS OF DESIGN REPORT.
- B. THE SITE ASSESSMENT WILL SUMMARIZE:
 - 1. THE SITE VISIT, CONDITION OF THE PROPERTY, AND IDENTIFICATION OF ANY AREAS USED FOR VARIOUS INDUSTRIAL PROCESSES;
 - 2. AVAILABLE RECORDS, SUCH AS FORMER SITE USE, BUILDING PLANS, AND RECORDS OF ANY PRIOR CONTAMINATION EVENTS;
 - 3. INTERVIEWS WITH KNOWLEDGEABLE PEOPLE, SUCH AS SITE OWNERS, OPERATORS, OCCUPANTS, NEIGHBORS, OR LOCAL GOVERNMENT OFFICIALS; AND
 - 4. THE TYPE, QUANTITY, AND EXTENT OF ANY POTENTIAL CONTAMINATION SOURCES.

4. SITE LAYOUT AND FLAGGING.

- A. CONSTRUCTION AREAS TO BE CLEARLY FLAGGED PRIOR TO CONSTRUCTION.
- B. AREAS TO BE FLAGGED WILL INCLUDE:
 - 1. SENSITIVE RESOURCE AREAS, SUCH AS AREAS BELOW ORDINARY HIGH WATER, SPAWNING AREAS, SPRINGS, AND WETLANDS;
 - 2. EQUIPMENT ENTRY AND EXIT POINTS;
 - 3. ROAD AND STREAM CROSSING ALIGNMENTS;
 - 4. STAGING, STORAGE, AND STOCKPILE AREAS; AND
 - 5. NO-SPRAY AREAS AND BUFFERS.

5. TEMPORARY ACCESS ROADS AND PATHS.

- A. EXISTING ACCESS ROADS AND PATHS WILL BE PREFERENTIALLY USED WHENEVER REASONABLE, AND THE NUMBER AND LENGTH OF TEMPORARY ACCESS ROADS AND PATHS THROUGH RIPARIAN AREAS AND FLOODPLAINS WILL BE MINIMIZED.
- B. VEHICLE USE AND HUMAN ACTIVITIES, INCLUDING WALKING, IN AREAS OCCUPIED BY TERRESTRIAL ESA-LISTED SPECIES WILL BE MINIMIZED.
- C. TEMPORARY ACCESS ROADS AND PATHS WILL NOT BE BUILT ON SLOPES WHERE GRADE, SOIL, OR OTHER FEATURES SUGGEST A LIKELIHOOD OF EXCESSIVE EROSION OR FAILURE. IF SLOPES ARE STEEPER THAN 30%, THEN THE ROAD WILL BE DESIGNED BY A CIVIL ENGINEER WITH EXPERIENCE IN STEEP ROAD DESIGN.
- D. THE REMOVAL OF RIPARIAN VEGETATION DURING CONSTRUCTION OF TEMPORARY ACCESS ROADS WILL BE MINIMIZED. WHEN TEMPORARY VEGETATION REMOVAL IS REQUIRED, VEGETATION WILL BE CUT AT GROUND LEVEL (NOT GRUBBED).
- E. AT PROJECT COMPLETION, ALL TEMPORARY ACCESS ROADS AND PATHS WILL BE OBLITERATED, AND THE SOIL WILL BE STABILIZED AND REVEGETATED. ROAD AND PATH OBLITERATION REFERS TO THE MOST COMPREHENSIVE DEGREE OF DECOMMISSIONING AND INVOLVES DECOMPACTING THE SURFACE AND DITCH, PULLING THE FILL MATERIAL ONTO THE RUNNING SURFACE, AND RESHAPING TO MATCH THE ORIGINAL CONTOUR.
- F. HELICOPTER FLIGHT PATTERNS WILL BE ESTABLISHED IN ADVANCE AND LOCATED TO AVOID TERRESTRIAL ESA-LISTED SPECIES AND THEIR OCCUPIED HABITAT DURING SENSITIVE LIFE STAGES.

6. TEMPORARY STREAM CROSSINGS.

- A. EXISTING STREAM CROSSINGS OR BEDROCK WILL BE PREFERENTIALLY USED WHENEVER REASONABLE, AND THE NUMBER OF TEMPORARY STREAM CROSSINGS WILL BE MINIMIZED.
- B. TEMPORARY BRIDGES AND CULVERTS WILL BE INSTALLED TO ALLOW FOR EQUIPMENT AND VEHICLE CROSSING OVER PERENNIAL STREAMS DURING CONSTRUCTION. TREATED WOOD SHALL NOT BE USED ON TEMPORARY BRIDGE CROSSINGS OR IN LOCATIONS IN CONTACT WITH OR DIRECTLY OVER WATER.
- C. FOR PROJECTS THAT REQUIRE EQUIPMENT AND VEHICLES TO CROSS IN THE WET:
 - 1. THE LOCATION AND NUMBER OF ALL WET CROSSINGS SHALL BE APPROVED BY THE BPA EC LEAD AND DOCUMENTED IN THE CONSTRUCTION PLANS;
 - 2. VEHICLES AND MACHINERY SHALL CROSS STREAMS AT RIGHT ANGLES TO THE MAIN CHANNEL WHENEVER POSSIBLE;
 - 3. NO STREAM CROSSINGS WILL OCCUR 300 FEET UPSTREAM OR 100 FEET DOWNSTREAM OF AN EXISTING REDD OR SPAWNING FISH; AND
 - 4. AFTER PROJECT COMPLETION, TEMPORARY STREAM CROSSINGS WILL BE OBLITERATED AND BANKS RESTORED.

7. STAGING, STORAGE, AND STOCKPILE AREAS.

- A. STAGING AREAS (USED FOR CONSTRUCTION EQUIPMENT STORAGE, VEHICLE STORAGE, FUELING, SERVICING, AND HAZARDOUS MATERIAL STORAGE) WILL BE 150 FEET OR MORE FROM ANY NATURAL WATER BODY OR WETLAND. STAGING AREAS CLOSER THAN 150 FEET WILL BE APPROVED BY THE EC LEAD.
- B. NATURAL MATERIALS USED FOR IMPLEMENTATION OF AQUATIC RESTORATION, SUCH AS LARGE WOOD, GRAVEL, AND BOULDERS, MAY BE STAGED WITHIN 150 FEET IF CLEARLY INDICATED IN THE PLANS THAT AREA IS FOR NATURAL MATERIALS ONLY.
- C. ANY LARGE WOOD, TOPSOIL, AND NATIVE CHANNEL MATERIAL DISPLACED BY CONSTRUCTION WILL BE STOCKPILED FOR USE DURING SITE RESTORATION AT A SPECIFICALLY IDENTIFIED AND FLAGGED AREA.
- D. ANY MATERIAL NOT USED IN RESTORATION, AND NOT NATIVE TO THE FLOODPLAIN, WILL BE DISPOSED OF OUTSIDE THE 100-YEAR FLOODPLAIN.

8. EQUIPMENT.

- A. MECHANIZED EQUIPMENT AND VEHICLES WILL BE SELECTED, OPERATED, AND MAINTAINED IN A MANNER THAT MINIMIZES ADVERSE EFFECTS ON THE ENVIRONMENT (E.G., MINIMALLY-SIZED, LOW PRESSURE TIRES; MINIMAL HARD-TURN PATHS FOR TRACKED VEHICLES; TEMPORARY MATS OR PLATES WITHIN WET AREAS OR ON SENSITIVE SOILS).
- B. EQUIPMENT WILL BE STORED, FUELED, AND MAINTAINED IN AN CLEARLY IDENTIFIED STAGING AREA THAT MEETS STAGING AREA CONSERVATION MEASURES.

- C. EQUIPMENT WILL BE REFUELED IN A VEHICLE STAGING AREA OR IN AN ISOLATED HARD ZONE, SUCH AS A PAVED PARKING LOT OR ADJACENT, ESTABLISHED ROAD (THIS MEASURE APPLIES ONLY TO GAS-POWERED EQUIPMENT WITH TANKS LARGER THAN 5 GALLONS).
- D. BIODEGRADABLE LUBRICANTS AND FLUIDS WILL BE USED ON EQUIPMENT OPERATING IN AND ADJACENT TO THE STREAM CHANNEL AND LIVE WATER.
- E. EQUIPMENT WILL BE INSPECTED DAILY FOR FLUID LEAKS BEFORE LEAVING THE VEHICLE STAGING AREA FOR OPERATION WITHIN 150 FEET OF ANY NATURAL WATER BODY OR WETLAND.
- F. EQUIPMENT WILL BE THOROUGHLY CLEANED BEFORE OPERATION BELOW ORDINARY HIGH WATER, AND AS OFTEN AS NECESSARY DURING OPERATION, TO REMAIN GREASE FREE.

9. EROSION CONTROL.

- A. TEMPORARY EROSION CONTROL MEASURES INCLUDE:
 - 1. TEMPORARY EROSION CONTROLS WILL BE IN PLACE BEFORE ANY SIGNIFICANT ALTERATION OF THE ACTION SITE AND APPROPRIATELY INSTALLED DOWNSLOPE OF PROJECT ACTIVITY WITHIN THE RIPARIAN BUFFER AREA UNTIL SITE REHABILITATION IS COMPLETE;
 - 2. IF THERE IS A POTENTIAL FOR ERODED SEDIMENT TO ENTER THE STREAM, SEDIMENT BARRIERS WILL BE INSTALLED AND MAINTAINED FOR THE DURATION OF PROJECT IMPLEMENTATION;
 - 3. TEMPORARY EROSION CONTROL MEASURES MAY INCLUDE SEDGE MATS, FIBER WATTLES, SILT FENCES, JUTE MATTING, WOOD FIBER MULCH AND SOIL BINDER, OR GEOTEXTILES AND GEOSYNTHETIC FABRIC;
 - 4. SOIL STABILIZATION UTILIZING WOOD FIBER MULCH AND TACKIFIER (HYDRO-APPLIED) MAY BE USED TO REDUCE EROSION OF BARE SOIL IF THE MATERIALS ARE NOXIOUS WEED FREE AND NONTOXIC TO AQUATIC AND TERRESTRIAL ANIMALS, SOIL MICROORGANISMS, AND VEGETATION;
 - 5. SEDIMENT WILL BE REMOVED FROM EROSION CONTROLS ONCE IT HAS REACHED 1/3 OF THE EXPOSED HEIGHT OF THE CONTROL; AND
 - 6. ONCE THE SITE IS STABILIZED AFTER CONSTRUCTION, TEMPORARY EROSION CONTROL MEASURES WILL BE REMOVED.
- B. EMERGENCY EROSION CONTROLS. THE FOLLOWING MATERIALS FOR EMERGENCY EROSION CONTROL WILL BE AVAILABLE AT THE WORK SITE:
 - 1. A SUPPLY OF SEDIMENT CONTROL MATERIALS; AND
 - 2. AN OIL-ABSORBING FLOATING BOOM WHENEVER SURFACE WATER IS PRESENT.

10. DUST ABATEMENT.

- A. THE PROJECT SPONSOR WILL DETERMINE THE APPROPRIATE DUST CONTROL MEASURES BY CONSIDERING SOIL TYPE, EQUIPMENT USAGE, PREVAILING WIND DIRECTION, AND THE EFFECTS CAUSED BY OTHER EROSION AND SEDIMENT CONTROL MEASURES.
- B. WORK WILL BE SEQUENCED AND SCHEDULED TO REDUCE EXPOSED BARE SOIL SUBJECT TO WIND EROSION.
- C. DUST-ABATEMENT ADDITIVES AND STABILIZATION CHEMICALS (TYPICALLY MAGNESIUM CHLORIDE, CALCIUM CHLORIDE SALTS, OR LIGNINSULFONATE) WILL NOT BE APPLIED WITHIN 25 FEET OF WATER OR A STREAM CHANNEL AND WILL BE APPLIED SO AS TO MINIMIZE THE LIKELIHOOD THAT THEY WILL ENTER STREAMS. APPLICATIONS OF LIGNINSULFONATE WILL BE LIMITED TO A MAXIMUM RATE OF 0.5 GALLONS PER SQUARE YARD OF ROAD SURFACE, ASSUMING MIXED 50:50 WITH WATER.
- D. APPLICATION OF DUST ABATEMENT CHEMICALS WILL BE AVOIDED DURING OR JUST BEFORE WET WEATHER, AND AT STREAM CROSSINGS OR OTHER AREAS THAT COULD RESULT IN UNFILTERED DELIVERY OF THE DUST ABATEMENT MATERIALS TO A WATERBODY (TYPICALLY THESE WOULD BE AREAS WITHIN 25 FEET OF A WATERBODY OR STREAM CHANNEL; DISTANCES MAY BE GREATER WHERE VEGETATION IS SPARSE OR SLOPES ARE STEEP).
- E. SPILL CONTAINMENT EQUIPMENT WILL BE AVAILABLE DURING APPLICATION OF DUST ABATEMENT CHEMICALS.
- F. PETROLEUM-BASED PRODUCTS WILL NOT BE USED FOR DUST ABATEMENT.

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PROJECT DESIGN AND SITE PREPARATION (CONTINUED).

11. SPILL PREVENTION, CONTROL, AND COUNTER MEASURES.

- A. A DESCRIPTION OF HAZARDOUS MATERIALS THAT WILL BE USED, INCLUDING INVENTORY, STORAGE, AND HANDLING PROCEDURES WILL BE AVAILABLE ON-SITE.
- B. WRITTEN PROCEDURES FOR NOTIFYING ENVIRONMENTAL RESPONSE AGENCIES WILL BE POSTED AT THE WORK SITE.
- C. SPILL CONTAINMENT KITS (INCLUDING INSTRUCTIONS FOR CLEANUP AND DISPOSAL) ADEQUATE FOR THE TYPES AND QUANTITY OF HAZARDOUS MATERIALS USED AT THE SITE WILL BE AVAILABLE AT THE WORK SITE.
- D. WORKERS WILL BE TRAINED IN SPILL CONTAINMENT PROCEDURES AND WILL BE INFORMED OF THE LOCATION OF SPILL CONTAINMENT KITS.
- E. ANY WASTE LIQUIDS GENERATED AT THE STAGING AREAS WILL BE TEMPORARILY STORED UNDER AN IMPERVIOUS COVER, SUCH AS A TARPULIN, UNTIL THEY CAN BE PROPERLY TRANSPORTED TO AND DISPOSED OF AT A FACILITY THAT IS APPROVED FOR RECEIPT OF HAZARDOUS MATERIALS.
- F. PUMPS USED ADJACENT TO WATER SHALL USE SPILL CONTAINMENT SYSTEMS.

12. INVASIVE SPECIES CONTROL.

- A. PRIOR TO ENTERING THE SITE, ALL VEHICLES AND EQUIPMENT WILL BE POWER WASHED, ALLOWED TO FULLY DRY, AND INSPECTED TO MAKE SURE NO PLANTS, SOIL, OR OTHER ORGANIC MATERIAL ADHERES TO THE SURFACE.
- B. WATERCRAFT, WADERS, BOOTS, AND ANY OTHER GEAR TO BE USED IN OR NEAR WATER WILL BE INSPECTED FOR AQUATIC INVASIVE SPECIES.
- C. WADING BOOTS WITH FELT SOLES ARE NOT TO BE USED DUE TO THEIR PROPENSITY FOR AIDING IN THE TRANSFER OF INVASIVE SPECIES UNLESS DECONTAMINATION PROCEDURES HAVE BEEN APPROVED BY THE EC LEAD.

WORK AREA ISOLATION AND FISH SALVAGE.

1. WORK AREA ISOLATION.

- A. ANY WORK AREA WITHIN THE WETTED CHANNEL WILL BE ISOLATED FROM THE ACTIVE STREAM WHENEVER ESA-LISTED FISH ARE REASONABLY CERTAIN TO BE PRESENT, OR IF THE WORK AREA IS LESS THAN 300- FEET UPSTREAM FROM KNOWN SPAWNING HABITATS.
- B. WORK AREA ISOLATION AND FISH SALVAGE ACTIVITIES WILL COMPLY WITH THE IN-WATER WORK WINDOW.
- C. DESIGN PLANS WILL INCLUDE ALL ISOLATION ELEMENTS AND AREAS (COFFER DAMS, PUMPS, DISCHARGE AREAS, FISH SCREENS, FISH RELEASE AREAS, ETC.).
- D. WORK AREA ISOLATION AND FISH CAPTURE ACTIVITIES WILL OCCUR DURING PERIODS OF THE COOLEST AIR AND WATER TEMPERATURES POSSIBLE, NORMALLY EARLY IN THE MORNING VERSUS LATE IN THE DAY, AND DURING CONDITIONS APPROPRIATE TO MINIMIZE STRESS AND DEATH OF SPECIES PRESENT.

2. FISH SALVAGE.

- A. MONITORING AND RECORDING WILL TAKE PLACE FOR DURATION OF SALVAGE. THE SALVAGE REPORT WILL BE COMMUNICATED TO AGENCIES VIA THE PROJECT COMPLETION FORM (PCF).
- B. SALVAGE ACTIVITIES SHOULD TAKE PLACE DURING CONDITIONS TO MINIMIZE STRESS TO FISH SPECIES, TYPICALLY PERIODS OF THE COOLEST AIR AND WATER TEMPERATURES WHICH OCCUR IN THE MORNING VERSUS LATE IN THE DAY.
- C. SALVAGE OPERATIONS WILL FOLLOW THE ORDERING, METHODS, AND CONSERVATION MEASURES SPECIFIED BELOW:
 - 1. SLOWLY REDUCE WATER FROM THE WORK AREA TO ALLOW SOME FISH TO LEAVE VOLITIONALLY.
 - 2. BLOCK NETS WILL BE INSTALLED AT UPSTREAM AND DOWNSTREAM LOCATIONS AND MAINTAINED IN A SECURED POSITION TO EXCLUDE FISH FROM ENTERING THE PROJECT AREA.
 - 3. BLOCK NETS WILL BE SECURED TO THE STREAM CHANNEL BED AND BANKS UNTIL FISH CAPTURE AND TRANSPORT ACTIVITIES ARE COMPLETE. BLOCK NETS MAY BE LEFT IN PLACE FOR THE DURATION OF THE PROJECT TO EXCLUDE FISH AS LONG AS PASSAGE REQUIREMENTS ARE MET.
 - 4. NETS WILL BE MONITORED HOURLY DURING IN-STREAM DISTURBANCE.

- 5. IF BLOCK NETS REMAIN IN PLACE MORE THAN ONE DAY, THE NETS WILL BE MONITORED AT LEAST DAILY TO ENSURE THEY ARE SECURED AND FREE OF ORGANIC ACCUMULATION. IF BULL TROUT ARE PRESENT, NETS ARE TO BE CHECKED EVERY 4 HOURS FOR FISH IMPINGEMENT.
- 6. CAPTURE FISH THROUGH SEINING AND RELOCATE TO STREAMS.
- 7. WHILE DEWATERING, ANY REMAINING FISH WILL BE COLLECTED BY HAND OR DIP NETS.
- 8. SEINES WITH A MESH SIZE TO ENSURE CAPTURE OF THE RESIDING ESA-LISTED FISH WILL BE USED.
- 9. MINNOW TRAPS WILL BE LEFT IN PLACE OVERNIGHT AND USED IN CONJUNCTION WITH SEINING.
- 10. ELECTROFISH TO CAPTURE AND RELOCATED FISH NOT CAUGHT DURING SEINING PER ELECTROFISH CONSERVATION MEASURES.
- 11. CONTINUE TO SLOWLY DEWATER STREAM REACH.
- 12. COLLECT ANY REMAINING FISH IN COLD-WATER BUCKETS AND RELOCATED TO THE STREAM.
- 13. LIMIT THE TIME FISH ARE IN A TRANSPORT BUCKET.
- 14. MINIMIZE PREDATION BY TRANSPORTING COMPARABLE SIZES IN BUCKETS.
- 15. BUCKET WATER TO BE CHANGED EVERY 15 MINUTES OR AERATED.
- 16. BUCKETS WILL BE KEPT IN SHADED AREAS OR COVERED.
- 17. DEAD FISH WILL NOT BE STORED IN TRANSPORT BUCKETS, BUT WILL BE LEFT ON THE STREAM BANK TO AVOID MORTALITY COUNTING ERRORS.

D. SALVAGE GUIDELINES FOR BULL TROUT, LAMPREY, MUSSELS, AND NATIVE FISH.

- 1. CONDUCT SITE SURVEY TO ESTIMATE SALVAGE NUMBERS.
- 2. PRE-SELECT SITE(S) FOR RELEASE AND/OR MUSSEL BED RELOCATION.
- 3. SALVAGE OF BULL TROUT WILL NOT TAKE PLACE WHEN WATER TEMPERATURES EXCEED 15 DEGREES CELSIUS.
- 4. IF DRAWDOWN LESS THAN 48 HOURS, SALVAGE OF LAMPREY AND MUSSELS MAY NOT BE NECESSARY IF TEMPERATURES SUPPORT SURVIVAL IN SEDIMENTS.
- 5. SALVAGE MUSSELS BY HAND, LOCATING BY SNORKELING OR WADING.
- 6. SALVAGE LAMPREY BY ELECTROFISHING (SEE ELECTROFISHING FOR LARVAL LAMPREY SETTINGS AND LARVAL LAMPREY DRY SHOCKING SETTINGS).
- 7. SALVAGE BONY FISH AFTER LAMPREY WITH NETS OR ELECTROFISHING (SEE ELECTROFISHING FOR APPROPRIATE SETTINGS).
- 8. REGULARLY INSPECT DEWATERED SITE SINCE LAMPREY LIKELY TO EMERGE AFTER DEWATERING AND MUSSELS MAY BECOME VISIBLE.
- 9. MUSSELS MAY BE TRANSFERRED IN COOLERS.
- 10. MUSSELS WILL BE PLACED INDIVIDUALLY TO ENSURE ABILITY TO BURROW INTO NEW HABITAT.

3. ELECTROFISHING.

- A. INITIAL SITE SURVEY AND INITIAL SETTINGS.
 - 1. IDENTIFY SPAWNING ADULTS AND ACTIVE REDDS TO AVOID.
 - 2. RECORD WATER TEMPERATURE. ELECTROFISHING WILL NOT OCCUR WHEN WATER TEMPERATURES ARE ABOVE 18 DEGREES CELSIUS.
 - 3. IF POSSIBLE, A BLOCK NET WILL BE PLACED DOWNSTREAM AND CHECKED REGULARLY TO CAPTURE STUNNED FISH THAT DRIFT DOWNSTREAM.
 - 4. INITIAL SETTINGS WILL BE 100 VOLTS, PULSE WIDTH OF 500 MICRO SECONDS, AND PULSE RATE OF 30 HERTZ.
 - 5. RECORDS FOR CONDUCTIVITY, WATER TEMPERATURE, AIR TEMPERATURE, ELECTROFISHING SETTINGS, ELECTROFISHER MODEL, ELECTROFISHER CALIBRATION, FISH CONDITIONS, FISH MORTALITIES, AND TOTAL CAPTURE RATES WILL BE INCLUDED IN THE SALVAGE LOG BOOK.

B. ELECTROFISHING TECHNIQUE.

- 1. SAMPLING WILL BEGIN USING STRAIGHT DC. POWER WILL REMAIN ON UNTIL THE FISH IS NETTED WHEN USING STRAIGHT DC. GRADUALLY INCREASE VOLTAGE WHILE REMAINING BELOW MAXIMUM LEVELS.
- 2. MAXIMUM VOLTAGE WILL BE 1100 VOLTS WHEN CONDUCTIVITY IS <100 MILLISECONDS, 800 VOLTS WHEN CONDUCTIVITY IS BETWEEN 100 AND 300 MILLISECONDS, AND 400 VOLTS WHEN CONDUCTIVITY IS >300 MILLISECONDS.
- 3. IF FISH CAPTURE IS NOT SUCCESSFUL USING STRAIGHT DC, THE ELECTROFISHER WILL BE SET TO INITIAL VOLTAGE FOR PDC. VOLTAGE, PULSE WIDTH, AND PULSE FREQUENCY WILL BE GRADUALLY INCREASED WITHIN MAXIMUM VALUES UNTIL CAPTURE IS SUCCESSFUL.
- 4. MAXIMUM PULSE WIDTH IS 5 MILLISECONDS. MAXIMUM PULSE RATE IS 70 HERTZ
- 5. ELECTROFISHING WILL NOT OCCUR IN ONE AREA FOR AN EXTENDED PERIOD.
- 6. THE ANODE WILL NOT INTENTIONALLY COME INTO CONTACT WITH FISH. THE ZONE FOR POTENTIAL INJURY OF 0.5 M FROM THE ANODE WILL BE AVOIDED.
- 7. SETTINGS WILL BE LOWERED IN SHALLOWER WATER SINCE VOLTAGE GRADIENTS LIKELY TO INCREASE.
- 8. ELECTROFISHING WILL NOT OCCUR IN TURBID WATER WHERE VISIBILITY IS POOR (I.E. UNABLE TO SEE THE BED OF THE STREAM).
- 9. OPERATIONS WILL IMMEDIATELY STOP IF MORTALITY OR OBVIOUS FISH INJURY IS OBSERVED. ELECTROFISHING SETTINGS WILL BE REEVALUATED.

C. SAMPLE PROCESSING.

- 1. FISH SHALL BE SORTED BY SIZE TO AVOID PREDATION DURING CONTAINMENT.
- 2. SAMPLERS WILL REGULARLY CHECK CONDITIONS OF FISH HOLDING CONTAINERS, AIR PUMPS, WATER TRANSFERS, ETC.
- 3. FISH WILL BE OBSERVED FOR GENERAL CONDITIONS AND INJURIES
- 4. EACH FISH WILL BE COMPLETELY REVIVED BEFORE RELEASE. ESA-LISTED SPECIES WILL BE PRIORITIZED FOR SUCCESSFUL RELEASE.

D. BULL TROUT ELECTROFISHING.

- 1. ELECTROFISHING FOR BULL TROUT WILL ONLY OCCUR FROM MAY 1 TO JULY 31. NO ELECTROFISHING WILL OCCUR IN ANY BULL TROUT OCCUPIED HABITAT AFTER AUGUST 15. IN FMO HABITATS ELECTROFISHING MAY OCCUR ANY TIME.
- 2. ELECTROFISHING OF BULL TROUT WILL NOT OCCUR WHEN WATER TEMPERATURES EXCEED 15 DEGREES CELSIUS.

E. LARVAL LAMPREY ELECTROFISHING.

- 1. PERMISSION FROM EC LEAD WILL BE OBTAINED IF LARVAL LAMPREY ELECTROFISHER IS NOT ONE OF FOLLOWING PRE-APPROVED MODELS: ABP-2 "WISCONSIN", SMITH-ROOT LR-24, OR SMITH-ROOT APEX BACKPACK.
- 2. LARVAL LAMPREY SAMPLING WILL INCORPORATE 2-STAGE METHOD: "TICKLE" AND "STUN".
- 3. FIRST STAGE: USE 125 VOLT DC WITH A 25 PERCENT DUTY CYCLE APPLIED AT A SLOW RATE OF 3 PULSES PER SECOND. IF TEMPERATURES ARE BELOW 10 DEGREES CELSIUS, VOLTAGE MAY BE INCREASED GRADUALLY (NOT TO EXCEED 200 VOLTS). BURSTED PULSES (THREE SLOW AND ONE SKIPPED) RECOMMENDED TO INCREASE EMERGENCE.
- 4. SECOND STAGE (OPTIONAL FOR EXPERIENCED NETTERS): IMMEDIATELY AFTER LAMPREY EMERGE, USE A FAST PULSE SETTING OF 30 PULSES PER SECOND.
- 5. USE DIP NETS FOR VISIBLE LAMPREY. SIENES AND FINE MESH NET SWEEPS MAY BE USED IN POOR VISIBILITY.
- 6. SAMPLING WILL OCCUR SLOWLY (>60 SECONDS PER METER) STARTING AT UPSTREAM AND WORKING DOWNSTREAM.
- 7. MULTIPLE SWEEPS TO OCCUR WITH 15 MINUTES BETWEEN SWEEPS.
- 8. POST-DRAWDOWN "DRY-SHOCKING" WILL BE APPLIED IF LARVAL LAMPREY CONTINUE TO EMERGE. ANODES TO BE PLACED ONE METER APART TO SAMPLE ONE SQUARE METER AT A TIME FOR AT LEAST 60 SECONDS. FOR TEMPERATURES LESS THAN 10 DEGREES CELSIUS, MAXIMUM VOLTAGE MAY BE GRADUALLY INCREASED TO 400 VOLTS (DRY-SHOCKING ONLY).

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WORK AREA ISOLATION AND FISH SALVAGE (CONTINUED).

4. DEWATERING.

- A. DEWATERING WILL OCCUR AT A RATE SLOW ENOUGH TO ALLOW SPECIES TO NATURALLY MIGRATE OUT OF THE WORK AREA.
- B. WHERE A GRAVITY FEED DIVERSION IS NOT POSSIBLE, A PUMP MAY BE USED. PUMPS WILL BE INSTALLED TO AVOID REPETIVE DEWATERING AND REWATERING.
- C. WHEN FISH ARE PRESENT, PUMPS WILL BE SCREENED IN ACCORDANCE WITH NMFS FISH SCREEN CRITERIA. NMFS ENGINEERING REVIEW AND APPROVAL WILL BE OBTAINED FOR PUMPS EXCEEDING 3 CUBIC FEET PER SECOND.
- D. DISSIPATION OF FLOW ENERGY AT THE BYPASS OUTFLOW WILL BE PROVIDED TO PREVENT DAMAGE TO THE STREAM CHANNEL AND RIPARIAN VEGETATION.
- E. SEEPAGE WATER WILL BE PUMPED TO A TEMPORARY STORAGE AND TREATMENT SITE OF INTO UPLAND AREAS TO ALLOW WATER TO PERCOLATE THROUGH SOIL AND VEGETATION PRIOR TO REENTERING THE STREAM CHANNEL.

CONSTRUCTION AND POST CONSTRUCTION CONSERVATION MEASURES.

1. FISH PASSAGE.

- A. FISH PASSAGE WILL BE PROVIDED FOR ADULT AND JUVENILE FISH LIKELY TO BE PRESENT DURING CONSTRUCTION UNLESS PASSAGE DID NOT EXIST BEFORE CONSTRUCTION, THE STREAM IS NATURALLY IMPASSABLE, OR PASSAGE WILL NEGATIVELY IMPACT ESA-LISTED SPECIES OR THEIR HABITAT.
- B. FISH PASSAGE ALTERNATIVES WILL BE APPROVED BY THE BPA EC LEAD UNDER ADVISEMENT BY THE NMFS HABITAT BIOLOGIST.

2. CONSTRUCTION AND DISCHARGE WATER.

- A. SURFACE WATER MAY BE DIVERTED TO MEET CONSTRUCTION NEEDS ONLY IF DEVELOPED SOURCES ARE UNAVAILABLE OR INADEQUATE.
- B. DIVERSIONS WILL NOT EXCEED 10% OF THE AVAILABLE FLOW.
- C. CONSTRUCTION DISCHARGE WATER WILL BE COLLECTED AND TREATED TO REMOVE DEBRIS, NUTRIENTS, SEDIMENT, PETROLEUM HYDROCARBONS, METALS, AND OTHER POLLUTANTS.

3. TIME AND EXTENT OF DISTURBANCE.

- A. EARTHWORK REQUIRING IN-STREAM MECHANIZED EQUIPMENT (INCLUDING DRILLING, EXCAVATION, DREDGING, FILLING, AND COMPACTING) WILL BE COMPLETED AS QUICKLY AS POSSIBLE.
- B. MECHANIZED EQUIPMENT WILL WORK FROM TOP OF BANK UNLESS WORK FROM ANOTHER LOCATION WILL RESULT IN LESS HABITAT DISTURBANCE (TURBIDITY, VEGETATION DISTURBANCE, ETC.).

4. CESSATION OF WORK.

- A. PROJECT OPERATIONS WILL CEASE WHEN HIGH FLOW CONDITIONS MAY RESULT IN INUNDATION OF THE PROJECT AREA (FLOOD EFFORTS TO DECREASE DAMAGES TO NATURAL RESOURCES PERMITTED).
- B. WATER QUALITY LEVELS EXCEEDED. SEE CWA SECTION 401 WATER QUALITY CERTIFICATION AND TURBIDITY MEASURES.

5. SITE RESTORATION.

- A. DISTURBED AREAS, STREAM BANKS, SOILS, AND VEGETATION WILL BE CLEANED UP AND RESTORED TO IMPROVED OR PRE-PROJECT CONDITIONS.
- B. PROJECT-RELATED WASTE WILL BE REMOVED.
- C. TEMPORARY ACCESS ROADS AND STAGING WILL BE DECOMPACTED AND RESTORED. SOILS WILL BE LOOSENEED IF NEEDED FOR REVEGETATION OR WATER INFILTRATION.
- D. THE PROJECT SPONSOR WILL RETAIN THE RIGHT OF REASONABLE ACCESS TO THE SITE TO MONITOR AND MAINTAIN THE SITE OVER THE LIFE OF THE PROJECT.

6. REVEGETATION.

- A. PLANTING AND SEEDING WILL OCCUR PRIOR TO OR AT THE BEGINNING OF THE FIRST GROWING SEASON AFTER CONSTRUCTION.

- B. A MIX OF NATIVE SPECIES (INVASIVE SPECIES NOT ALLOWED) APPROPRIATE TO THE SITE WILL BE USED TO REESTABLISH VEGETATION, PROVIDE SHADE, AND REDUCE EROSION. REESTABLISHED VEGETATION SHOULD BE AT LEAST 70% OF PRE-PROJECT CONDITIONS WITHIN THREE YEARS.
- C. VEGETATION SUCH AS WILLOWS, SEDGES, OR RUSH MATS WILL BE SALVAGED FROM DISTURBED OR ABANDONED AREAS TO BE REPLANTED.
- D. SHORT-TERM STABILIZATION MEASURE MAY INCLUDE THE USE OF NON-NATIVE STERILE SEED MIX (WHEN NATIVE NOT AVAILABLE), WEED-FREE CERTIFIED STRAW, OR OTHER SIMILAR TECHNIQUES.
- E. SURFACE FERTILIZER WILL NOT BE APPLIED WITHIN 50 FEET OF ANY STREAM, WATE BODY, OR WETLAND.
- F. FENCING WILL BE INSTALLED AS NECESSARY TO PREVENT ACCESS TO REVEGETATED SITES BY LIVESTOCK OR UNAUTHORIZED PERSONS.
- G. INVASIVE PLANTS WILL BE REMOVED OR CONTROLLED UNTIL NATIVE PLANT SPECIES ARE WELL ESTABLISHED (TYPICALLY THREE YEARS POST-CONSTRUCTION).

7. SITE ACCESS AND IMPLEMENTATION MONITORING.

- A. THE PROJECT SPONSOR WILL PROVIDE CONSTRUCTION MONITORING DURING IMPLEMENTATION TO ENSURE ALL CONSERVATION MEASURES ARE ADEQUATELY FOLLOWED, EFFECTS TO LISTED SPECIES ARE NOT GREATER THAN PREDICTED, AND INCIDENTAL TAKE LIMITATIONS ARE NOT EXCEEDED.
- B. THE PROJECT SPONSOR OR DESIGNATED REPRESENTATIVE WILL SUBMIT THE PROJECT COMPLETION FORM (PCF) WITHIN 30 DAYS OF PROJECT COMPLETION.

8. CWA SECTION 401 WATER QUALITY CERTIFICATION.

- A. THE PROJECT SPONSOR OR DESIGNATED REPRESENTATIVE WILL COMPLETE AND RECORD WATER QUALITY OBSERVATIONS (SEE TURBIDITY MONITORING) TO ENSURE IN-WATER WORK IS NOT DEGRADING WATER QUALITY.
- B. DURING CONSTRUCTION, WATER QUALITY PROVISIONS PROVIDED BY THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY, WASHINGTON DEPARTMENT OF ECOLOGY, IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY WILL BE FOLLOWED.

STAGED REWATERING PLAN.

- A. WHEN REINTRODUCING WATER TO DEWATERED AREAS AND NEWLY CONSTRUCTED CHANNELS, A STAGED REWATERING PLAN WILL BE APPLIED.
- B. THE FOLLOWING WILL BE APPLIED TO ALL REWATERING EFFORTS. COMPLEX REWATERING EFFORTS MAY REQUIRE ADDITIONAL NOTES OR A DEDICATED SHEET IN THE CONSTRUCTION DETAILS.
 - 1. TURBIDITY MONITORING PROTOCOL WILL BE APPLIED TO REWATERING EFFORTS.
 - 2. PRE-WASH THE AREA BEFORE REWATERING. TURBID WASH WATER WILL BE DETAINED AND PUMPED TO THE FLOODPLAIN OR SEDIMENT CAPTURE AREAS RATHER THAN DISCHARGING TO FISH-BEARING STREAMS.
 - 3. INSTALL SEINE NETS AT UPSTREAM END TO PREVENT FISH FROM MOVING DOWNSTREAM UNTIL 2/3 OF TOTAL FLOW IS RESTORED TO THE CHANNEL.
 - 4. STARTING IN EARLY MORNING INTRODUCE 1/3 OF NEW CHANNEL FLOW OVER PERIOD OF 1-2 HOURS.
 - 5. INTRODUCE SECOND THIRD OF FLOW OVER NEXT 1 TO 2 HOURS AND BEGIN FISH SALVAGE OF BYPASS CHANNEL IF FISH ARE PRESENT.
 - 6. REMOVE UPSTREAM SEINE NETS ONCE 2/3 FLOW IN REWATERED CHANNEL AND DOWNSTREAM TURBIDITY IS WITHIN ACCEPTABLE RANGE (LESS THAN 40 NTU OR LESS THAN 10% BACKGROUND).
 - 7. INTRODUCE FINAL THIRD OF FLOW ONCE FISH SALVAGE EFFORTS ARE COMPLETE AND DOWNSTREAM TURBIDITY VERIFIED TO BE WITHIN ACCEPTABLE RANGE.
 - 8. INSTALL PLUG TO BLOCK FLOW INTO OLD CHANNEL OR BYPASS. REMOVE ANY REMAINING SEINE NETS.
 - 9. IN LAMPREY SYSTEMS, LAMPREY SALVAGE AND DRY SHOCKING MAY BE NECESSARY.

TURBIDITY MONITORING.

- A. RECORD THE READING, LOCATION, AND TIME FOR THE BACKGROUND READING APPROXIMATELY 100 FEET UPSTREAM OF THE PROJECT AREA USING A RECENTLY CALIBRATED TURBIDIMETER OR VIA VISUAL OBSERVATION (SEE THE HIP HANDBOOK TURBIDITY MONITORING SECTION FOR A VISUAL OBSERVATION KEY).
- B. RECORD THE TURBIDITY READING, LOCATION, AND TIME AT THE MEASUREMENT COMPLIANCE LOCATION POINT.
 - 1. 50 FEET DOWNSTREAM FOR STREAMS LESS THAN 30 FEET WIDE.
 - 2. 100 FEET DOWNSTREAM FOR STREAMS BETWEEN 30 AND 100 FEET WIDE.
 - 3. 200 FEET DOWNSTREAM FOR STREAMS GREATER THAN 100 FEET WIDE.
 - 4. 300 FEET FROM THE DISCHARGE POINT OR NONPOINT SOURCE FOR LOCATIONS SUBJECT TO TIDAL OR COASTAL SCOUR.
- C. TURBIDITY SHALL BE MEASURED (BACKGROUND LOCATION AND COMPLIANCE POINTS) EVERY 4 HOURS WHILE WORK IS BEING IMPLEMENTED.
- D. IF THERE IS A VISIBLE DIFFERENCE BETWEEN A COMPLIANCE POINT AND THE BACKGROUND, THE EXCEEDANCE WILL BE NOTED IN THE PROJECT COMPLETION FORM (PCF). ADJUSTMENTS OR CORRECTIVE MEASURES WILL BE TAKEN IN ORDER TO REDUCE TURBIDITY.
- E. IF EXCEEDANCES OCCUR FOR MORE THAN TWO CONSECUTIVE MONITORING INTERVALS (AFTER 8 HOURS), THE ACTIVITY WILL STOP UNTIL THE TURBIDITY LEVEL RETURNS TO BACKGROUND. THE BPA EC LEAD WILL BE NOTIFIED OF ALL EXCEEDANCES AND CORRECTIVE ACTIONS AT PROJECT COMPLETION.
- F. IF TURBIDITY CONTROLS (COFFER DAMS, WADDLES, FENCING, ETC.) ARE DETERMINED INEFFECTIVE, CREWS WILL BE MOBILIZED TO MODIFY AS NECESSARY. OCCURRENCES WILL BE DOCUMENTED IN THE PROJECT COMPLETION FORM (PCF).
- G. FINAL TURBIDITY READINGS, EXCEEDANCES, AND CONTROL FAILURES WILL BE SUBMITTED TO THE BPA EC LEAD USING THE PROJECT COMPLETION FORM (PCF).

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06/30/2023

REVISION		BY	DATE		
DESIGNED BY J. HERRON				JOB NUMBER 596-07	DATE 2023
DRAWN BY P. RICHARDSON				ACAD FILE: 596-07-G-004.dwg	
REVIEWED BY C. HUTCHINS				COPYRIGHT 2023 BY ANDERSON PERRY & ASSOC., INC.	

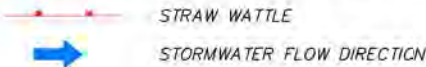


UNION SOIL AND WATER CONSERVATION DISTRICT		SHEET
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS		G-004
HIP GENERAL CONSERVATION MEASURES III		4 OF 23

NOTES

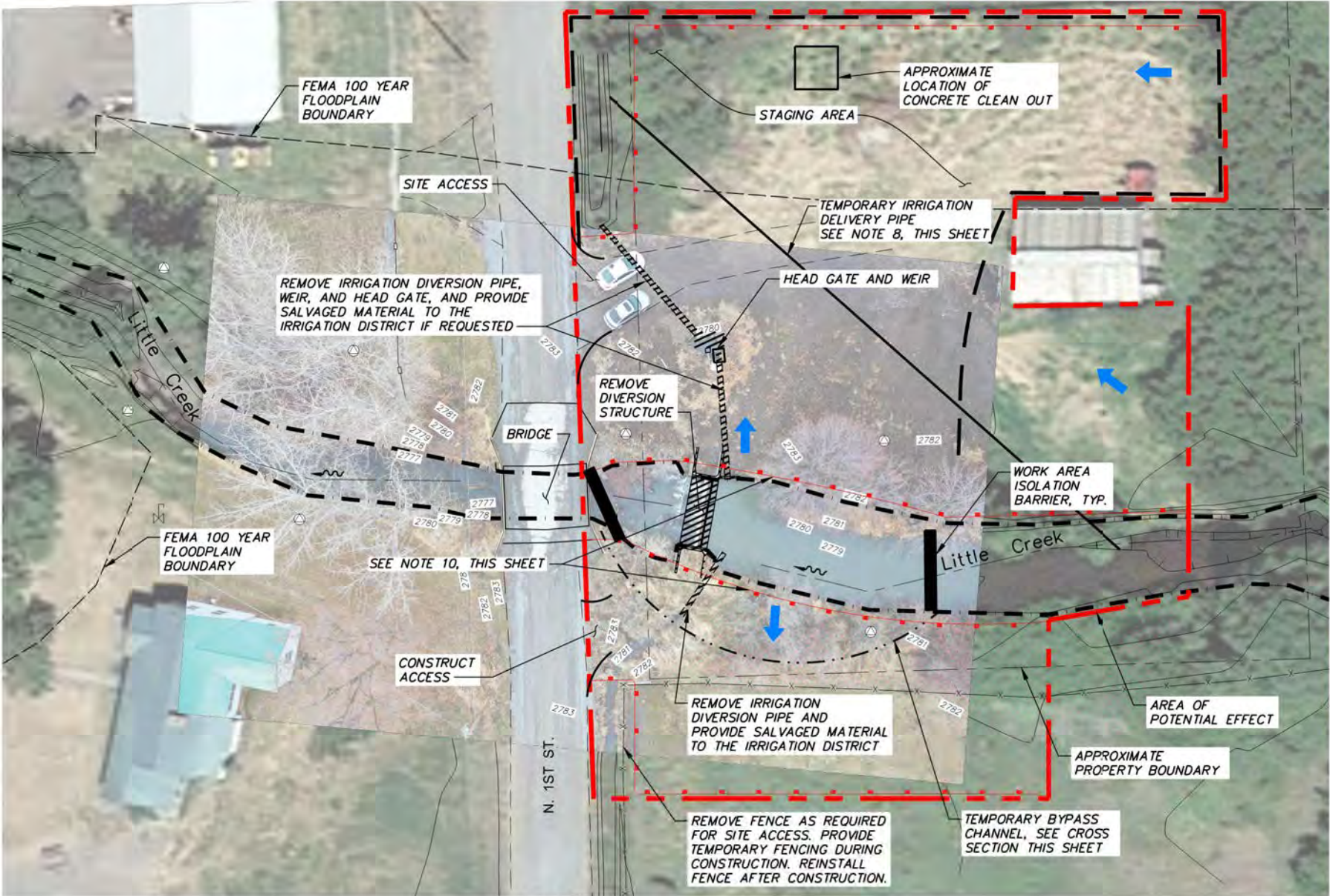
- 1. COORDINATE WITH OWNER FOR ACCESS AND STAGING AREAS PRIOR TO MOBILIZING TO THE SITE.
- 2. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO PRE-PROJECT CONDITIONS OR BETTER PRIOR TO DEMOBILIZING FROM THE SITE. SEED MIXTURE SHOWN IN SPECIFICATIONS SHALL BE APPLIED AT ALL DISTURBED AREAS.
- 3. LOCATION OF BYPASS DITCH AND TEMPORARY IRRIGATION DELIVERY PIPE SHOWN IS APPROXIMATE. THE ACTUAL LOCATION SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE ENGINEER.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK AREA ISOLATION AND WATER CONTROL, SEE TECHNICAL SPECIFICATIONS.
- 5. FISH SALVAGE TO BE PERFORMED BY OTHERS. THE CONTRACTOR SHALL COORDINATE BYPASS EFFORTS AND FISH SALVAGE WITH THE OWNER. ESTIMATED TIME FOR SALVAGE IS TWO DAYS. CONTRACTOR SHALL PROVIDE FISH SCREEN AND PUMP TO DEWATER ENTIRE ISOLATION AREA.
- 6. ANTICIPATED FLOWS IN LITTLE CREEK AT THE TIME OF CONSTRUCTION RANGE FROM APPROXIMATELY 5 TO 30 CFS.
- 7. BOULDERS SHALL BE INSTALLED IN THE BYPASS DITCH TO REDUCE VELOCITY TO 2 FT/S OR LESS.
- 8. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING IRRIGATION FLOWS THROUGHOUT THE ENTIRE PROJECT AND SHALL COORDINATE ANY UNAVOIDABLE IRRIGATION SHUTDOWNS WITH THE OWNER 48 HOURS IN ADVANCE. CONTRACTOR SHALL SUBMIT A TEMPORARY IRRIGATION DELIVERY PLAN TO THE ENGINEER. THE PLAN SHALL INCLUDE HOW THE CONTRACTOR WILL MAINTAIN IRRIGATION FLOWS THROUGHOUT CONSTRUCTION. THIS WORK MAY INCLUDE TEMPORARY DITCHES, CULVERTS, PIPING, PUMPS, AND ALL OTHER WORK THAT MAY BE REQUIRED TO MAINTAIN IRRIGATION DELIVERY THROUGHOUT CONSTRUCTION.
- 9. ONCE THE IN-STREAM WORK IS COMPLETED ON THE DIVERSION STRUCTURE, CONTRACTOR SHALL REMOVE THE TEMPORARY BYPASS CHANNEL, ADJUST THE WORK AREA ISOLATION BARRIERS, AND CONSTRUCT THE PERMANENT FISH BYPASS CHANNEL.
- 10. EROSION AND SEDIMENT CONTROLS ALONG THE BANK MAY BE REMOVED TO FACILITATE CONSTRUCTION AND ACCESS WHEN WITHIN AN ISOLATED WORK AREA.
- 11. ALL WORK WITHIN THE WETLAND BOUNDARY SHALL BE PERFORMED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND THE DSL PERMIT.

EROSION AND SEDIMENT CONTROL LEGEND

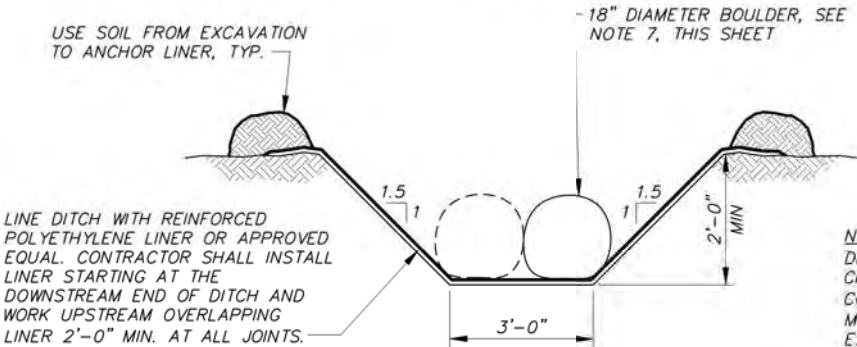


SPILL PREVENTION

STAGING AREAS ARE WITHIN THE 100-YEAR FLOODPLAIN AND WITHIN 150 FEET OF THE STREAM. SEE THE TECHNICAL SPECIFICATIONS FOR SPILL PREVENTION REQUIREMENTS.



PLAN



TEMPORARY BYPASS CHANNEL SECTION

N.T.S.

NOTES:
DIMENSIONS SHOWN ARE FOR FLOWS LESS THAN 30 CFS. IF FLOWS EXCEED 30 CFS, CHANNEL SHALL BE CONSTRUCTED WITH A BOTTOM WIDTH OF 7'-0" AND MINIMUM DEPTH OF 2'-6". CONTRACTOR SHALL ESTIMATE FLOWS AND NOTIFY ENGINEER PRIOR TO CONSTRUCTION. SEE NOTE 6, THIS SHEET.



REVISION	BY	DATE
DESIGNED BY: A. HAMILTON		
DRAWN BY: P. RICHARDSON		
REVIEWED BY: J. HERRON		

20	0	20	40	60
SCALE IN FEET				

JOB NUMBER: 596-07	DATE: 2023
ACAD FILE: 596-07-D-101.dwg	
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UNION SOIL AND WATER CONSERVATION DISTRICT	
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS	
LC5	
EXISTING SITE PLAN, STAGING, DEMOLITION, AND WATER CONTROL PLAN	

SHEET

D-101

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STREAM RESTORATION NOTES:

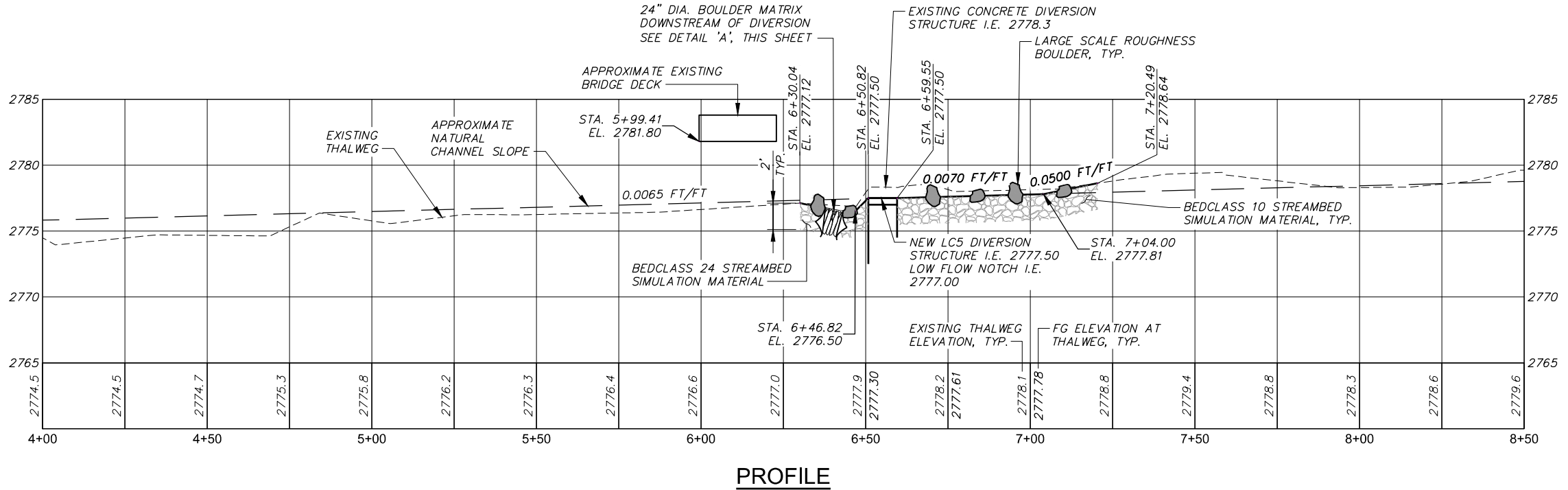
1. STREAMBED SIMULATION MATERIAL SHALL BE PLACED 6" ABOVE DESIGN FINISHED GRADE SHOWN ON THE DRAWINGS PER ENGINEER'S DIRECTION TO ACCOUNT FOR ANTICIPATED SETTLING. MATERIAL SHALL BE PLACED BY FIRST INSTALLING THE LARGEST MATERIAL. THE SMALLER MATERIAL SHALL THEN BE USED TO FILL THE VOIDS BETWEEN THE LARGE MATERIAL. THIS MATERIAL SHALL BE TAMPED IN PLACE IN 12" LIFTS FOLLOWED BY JETTING OR FLOODING THE SURFACE WITH WATER TO WASH THE FINER MATERIAL INTO REMAINING VOIDS. FINES SHALL CONTINUE TO BE ADDED AND WASHED INTO THE STREAM SIMULATION MATERIAL UNTIL WATER POOLS ON THE STREAMBED SURFACE.
2. LARGE BOULDERS RANGING IN SIZE FROM 18" TO 24" SHALL BE PLACED NEAR THE SURFACE OF THE STREAMBED AND SHALL BE BURIED APPROXIMATELY 60% TO ACHIEVE LARGE SCALE HYDRAULIC ROUGHNESS AND RESTING LOCATIONS FOR FISH. SPACING SHALL BE ON AVERAGE APPROXIMATELY 10' O.C. THROUGHOUT THE NEWLY CONSTRUCTED REACH. ACTUAL LOCATIONS OF BOULDERS TO BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE ENGINEER.
3. CONTRACTOR SHALL PLACE 24" DIAMETER BOULDER MATRIX PRIOR TO PLACING STREAMBED SIMULATION MATERIAL. CONTRACTOR SHALL INCORPORATE BED CLASS 6 STREAMBED SIMULATION MATERIAL INTO BED CLASS 24 STREAMBED SIMULATION MATERIAL AS REQUIRED TO FILL THE VOIDS BETWEEN 24" DIAMETER BOULDERS UNDER THE ENGINEER'S DIRECTION. THE BOULDERS SHALL BE PLACED ON A PREPARED BED TO ENSURE STREAMBED MATERIAL IS PLACED UP TO THE SPRING LINE OF THE ROCK. THE LARGE BOULDER MATRIX ARE NOT SHOWN ON THE PLAN VIEW FOR CLARITY.
4. CONTRACTOR SHALL INSTALL LOW FLOW THALWEG THROUGH NEWLY CONSTRUCTED CHANNEL PER ENGINEERS DIRECTION.
5. CONTRACTOR SHALL CONSTRUCT THE CONCRETE PORTION OF THE FISH SCREEN PER THE ODFW DRAWINGS. ODFW WILL FABRICATE AND INSTALL METAL SCREEN COMPONENTS AFTER CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER SO ODFW CAN REVIEW ALL FORMING PRIOR TO POURING CONCRETE. THE FISH RETURN PIPE SHALL BE INSTALLED BY THE CONTRACTOR PER ODFW DIRECTION.

24" DIA. BOULDER MATRIX

STREAMBED SIMULATION MATERIAL, TYP.

NOTE
24" DIA BOULDER MATRIX SHALL BE INSTALLED IN ONE CONTINUOUS LAYER WITH STREAMBED SIMULATION MATERIAL INSTALLED TO FILL IN THE VOIDS. SEE STREAM RESTORATION NOTE 3, THIS SHEET.

DETAIL 'A'
N.T.S.



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06/30/2023

REVISION	BY	DATE
DESIGNED BY: A. HAMILTON		
DRAWN BY: P. RICHARDSON		
REVIEWED BY: J. HERRON		

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HORIZ. SCALE IN FEET				
5	0	5	10	15
VERT. SCALE IN FEET				
JOB NUMBER	596-07	DATE	2023	
ACAD FILE:	596-07-C-102.dwg			
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UNION SOIL AND WATER CONSERVATION DISTRICT	
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS	
LC5 SITE PLAN AND PROFILE	

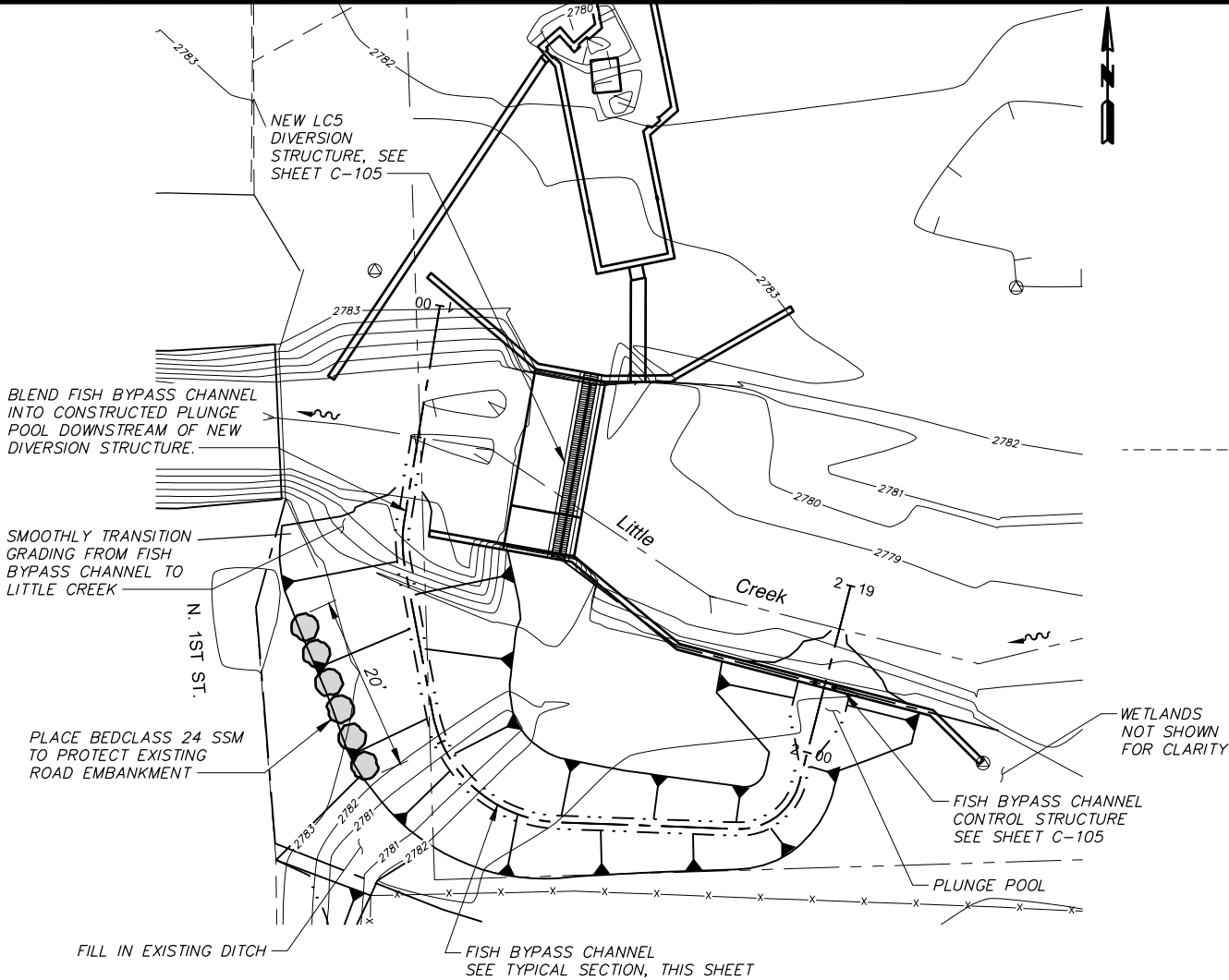
SHEET
C-102
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STREAM RESTORATION NOTES

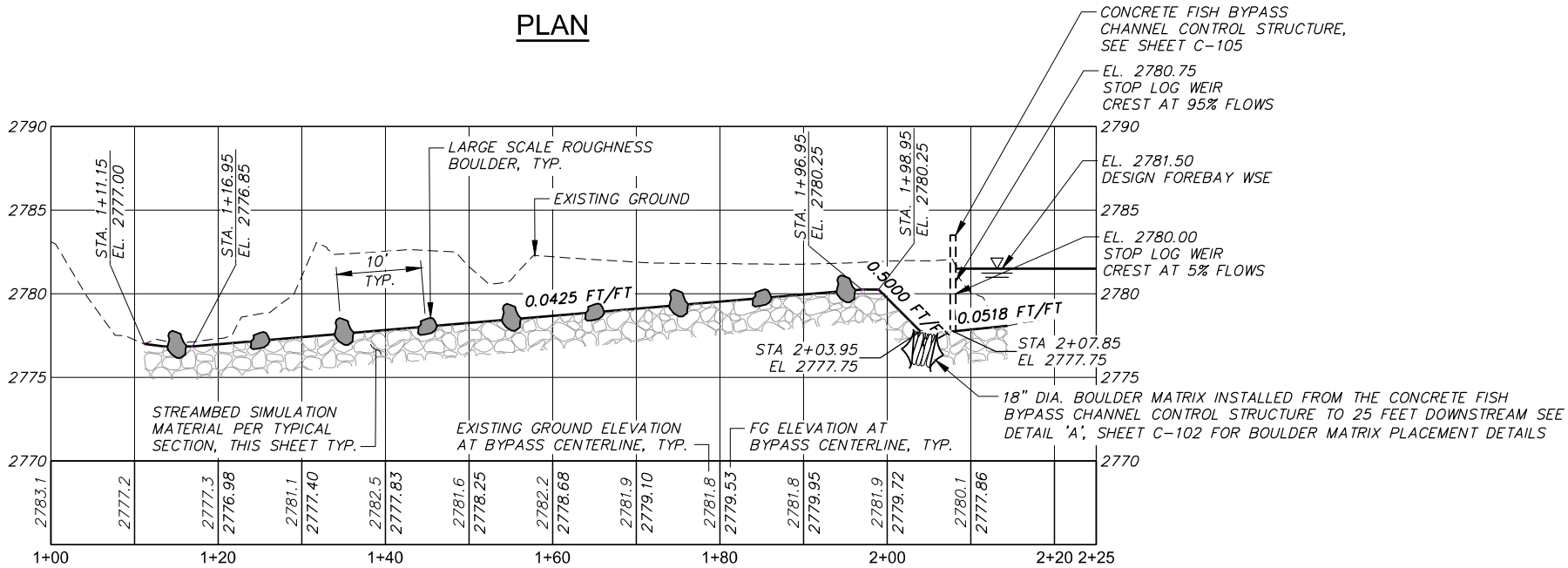
1. STREAMBED SIMULATION MATERIAL SHALL BE PLACED 6" ABOVE DESIGN FINISHED GRADE SHOWN ON THE DRAWINGS PER ENGINEER'S DIRECTION TO ACCOUNT FOR ANTICIPATED SETTLING. MATERIAL SHALL BE PLACED BY FIRST INSTALLING THE LARGEST MATERIAL. THE SMALLER MATERIAL SHALL THEN BE USED TO FILL THE VOIDS BETWEEN THE LARGE MATERIAL. THIS MATERIAL SHALL BE TAMPED IN PLACE IN 12" LIFTS FOLLOWED BY JETTING OR FLOODING THE SURFACE WITH WATER TO WASH THE FINER MATERIAL INTO REMAINING VOIDS. FINES SHALL CONTINUE TO BE ADDED AND WASHED INTO THE STREAM SIMULATION MATERIAL UNTIL WATER POOLS ON THE STREAMBED SURFACE.
2. LARGE BOULDERS RANGING IN SIZE FROM 18" TO 24" SHALL BE PLACED NEAR THE SURFACE OF THE STREAMBED AND SHALL BE BURIED APPROXIMATELY 60% TO ACHIEVE LARGE SCALE HYDRAULIC ROUGHNESS AND RESTING LOCATIONS FOR FISH. SPACING SHALL BE ON AVERAGE APPROXIMATELY 10' O.C. THROUGHOUT THE NEWLY CONSTRUCTED REACH. ACTUAL LOCATIONS OF BOULDERS TO BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE ENGINEER.
3. 18" BOULDERS SHALL BE PLACED IN ALTERNATING CLUSTERS TO CREATE A SINUOUS FLOW PATH IN THE BYPASS CHANNEL.
4. SSM IS NOT SHOWN IN PLAN FOR CLARITY.

DIVERSION STRUCTURE OPERATING NOTES

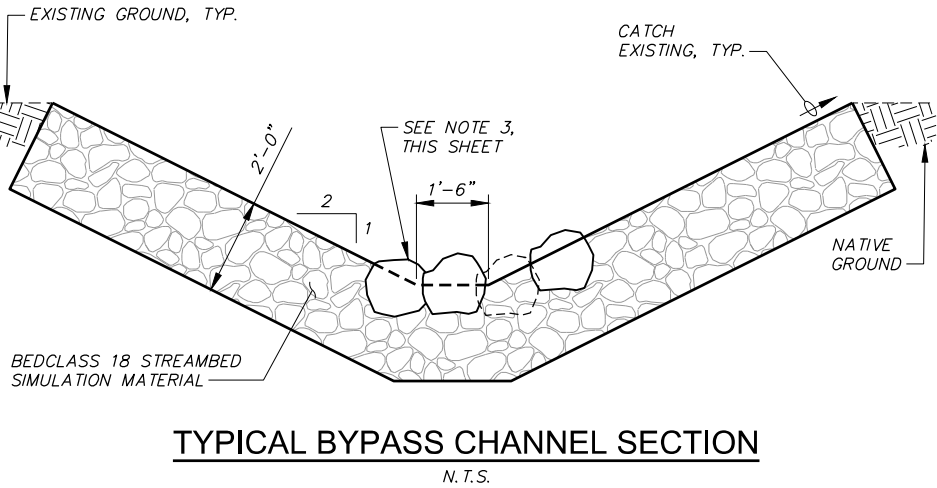
1. ONCE FLOWS BEGIN TO DROP, INSTALL CHECK BOARDS IN THE MAIN CHANNEL AS REQUIRED TO MAINTAIN AN UPSTREAM WATER SURFACE ELEVATION OF 2781.50 (APPROXIMATELY 24" BELOW TOP OF CONCRETE WALL). KEEP THE CHECK BOARDS ON THE RIVER LEFT STANCHION (LOOKING DOWNSTREAM) LOWER TO BIAS FLOW TOWARDS THE FISH BYPASS CHANNEL. KEEP ALL BOARDS OUT OF THE FISH BYPASS CHANNEL.
2. ONCE ALL BOARDS ARE INSTALLED IN THE MAIN CHANNEL, ALL OF THE CHANNEL FLOW IS THROUGH THE FISH BYPASS CHANNEL, AND THE UPSTREAM WATER SURFACE ELEVATION CANNOT BE MAINTAINED AT 2781.50, INSTALL BOARDS IN THE FISH BYPASS CHANNEL. DO NOT PLACE BOARDS IN THE BYPASS CHANNEL THAT WOULD CREATE MORE THAN A 6" DROP IN WATER SURFACE ELEVATION ACROSS THE BOARDS.
3. IF FLOWS DROP TO NEAR ZERO AND WATER IS NO LONGER FLOWING THROUGH THE BYPASS CHANNEL, OPEN THE BOTTOM ORIFICE TO PREVENT FISH STRANDING IN THE FISH BYPASS CHANNEL PLUNGE POOL.
4. WHEN THE DIVERSION IS NOT UN USE, OR IF THERE IS A FLOODING CONCERN, REMOVE ALL BOARDS FROM THE MAIN CHANNEL AND DROP THE STANCHIONS. PLACE BOARDS ACROSS THE FISH BYPASS CHANNEL TO PREVENT EXCESSIVE FLOW THROUGH THE FISH BYPASS CHANNEL DURING FLOODING TO HELP REDUCE MAINTENANCE FROM POSSIBLE FLOOD DAMAGE.



PLAN



PROFILE

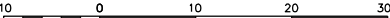
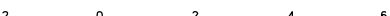


TYPICAL BYPASS CHANNEL SECTION



06/30/2023

REVISION	BY	DATE
DESIGNED BY: A. HAMILTON		
DRAWN BY: P. RICHARDSON		
REVIEWED BY: J. HERRON		

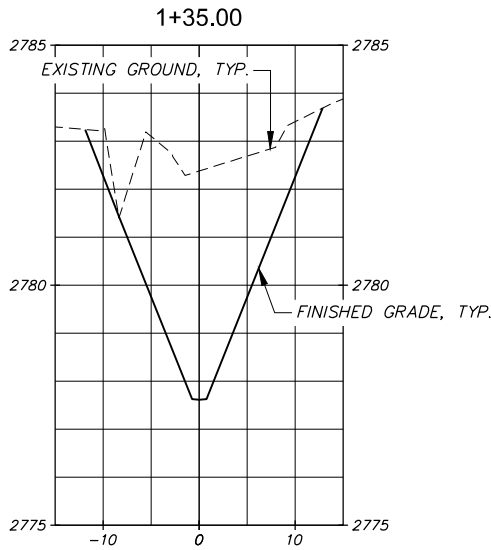
	
HORZ. SCALE IN FEET	
	
VERT. SCALE IN FEET	
JOB NUMBER	596-07
DATE	2023
ACAD FILE:	596-07-C-103.dwg
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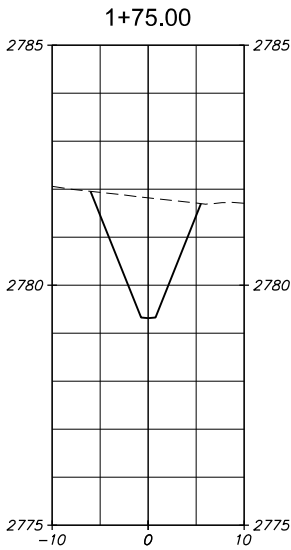
UNION SOIL AND WATER CONSERVATION DISTRICT		SHEET
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS		C-103
FISH BYPASS CHANNEL PLAN AND PROFILE		7 OF 23

NOTE

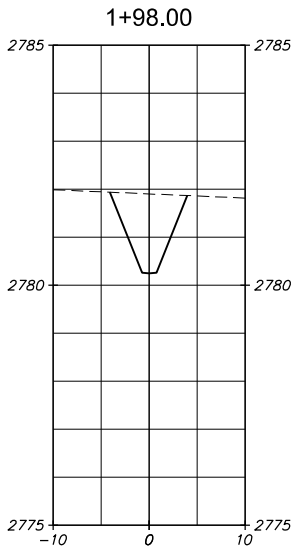
CROSS SECTIONS ARE
LOOKING UPSTREAM.



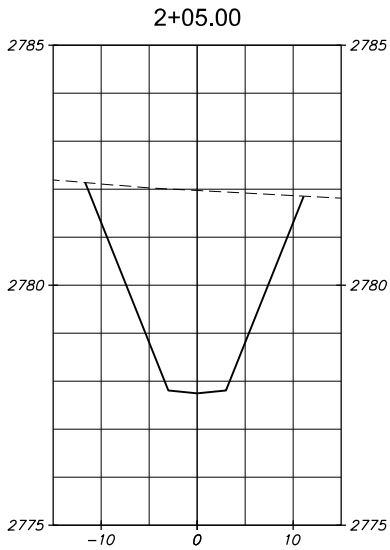
STATION 1+35.00
NEAT LINE CUT AREA = 58.0 SQ. FT.



STATION 1+75.00
NEAT LINE CUT AREA = 16.2 SQ. FT.



STATION 1+98.00
NEAT LINE CUT AREA = 7.8 SQ. FT.



STATION 2+05.00
NEAT LINE CUT AREA = 59.9 SQ. FT.



06/30/2023

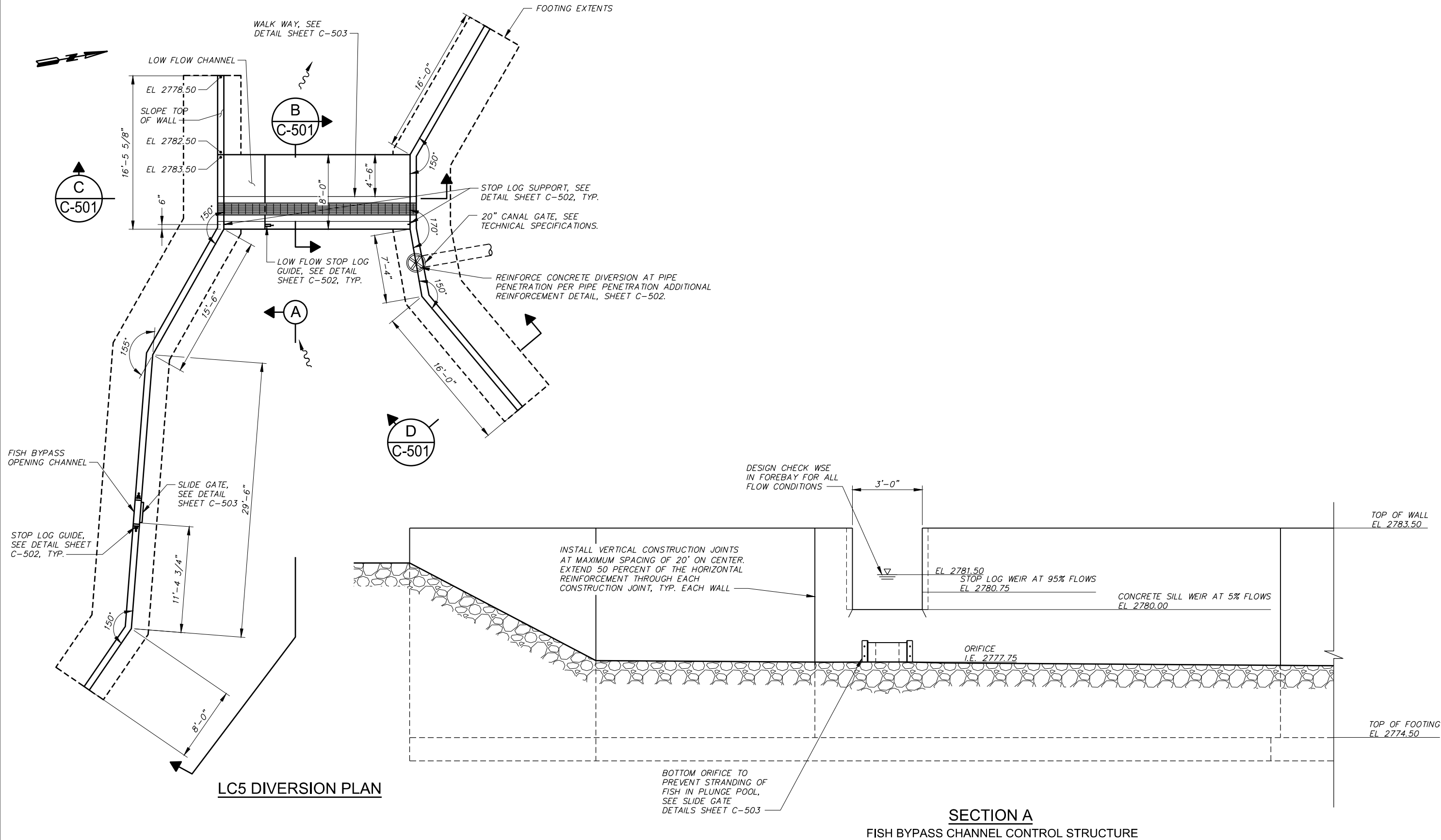
REVISION		BY	DATE
DESIGNED BY: A. HAMILTON			
DRAWN BY: P. RICHARDSON			
REVIEWED BY: J. HERRON			

20 0 20 40 60 HORZ. SCALE IN FEET	
5 0 5 10 15 VERT. SCALE IN FEET	
JOB NUMBER 596-07	DATE 2023
ACAD FILE: 596-07-C-104.dwg	
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UNION SOIL AND WATER CONSERVATION DISTRICT	
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS	
LC5 BYPASS CHANNEL NEAT LINE CUT AREA CROSS-SECTIONS	

SHEET
C-104
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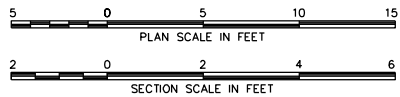


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06/30/2023

				5051015 PLAN SCALE IN FEET 20246 SECTION SCALE IN FEET	
REVISION		BY	DATE		
DESIGNED BY J. HERRON				JOB NUMBER	596-07
DRAWN BY P. RICHARDSON				DATE	2023
REVIEWED BY C. HUTCHINS				ACAD FILE:	596-07-C-105.dwg
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UNION SOIL AND WATER CONSERVATION DISTRICT	
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS	
LC5 DIVERSION PLAN AND SECTION	

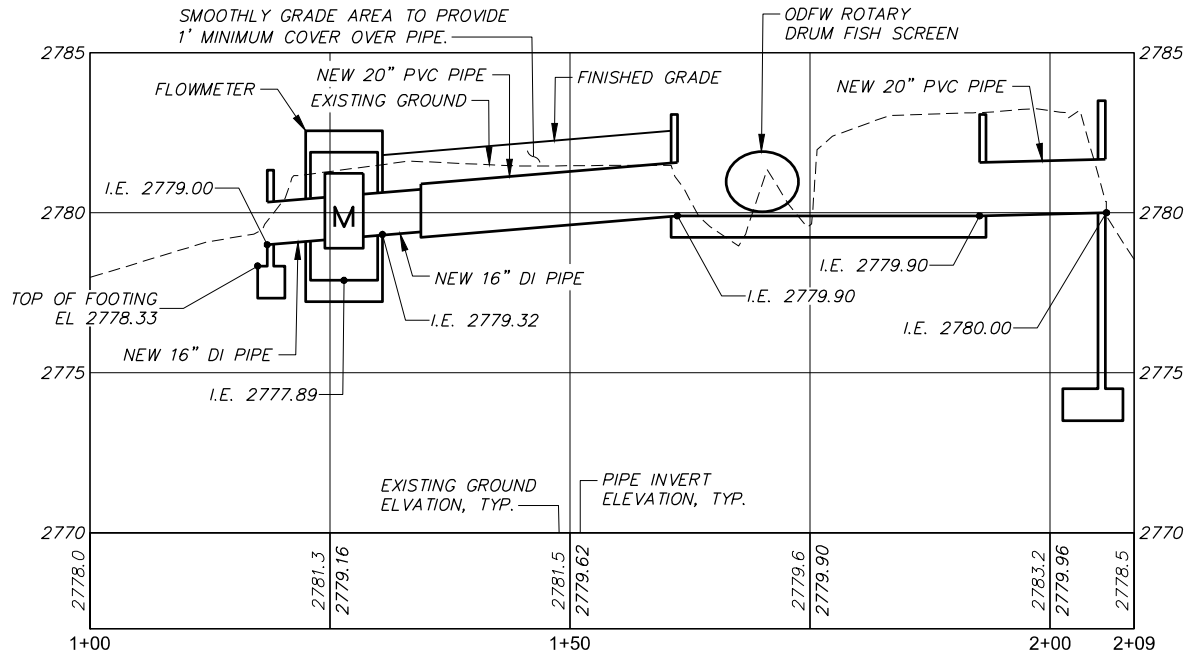
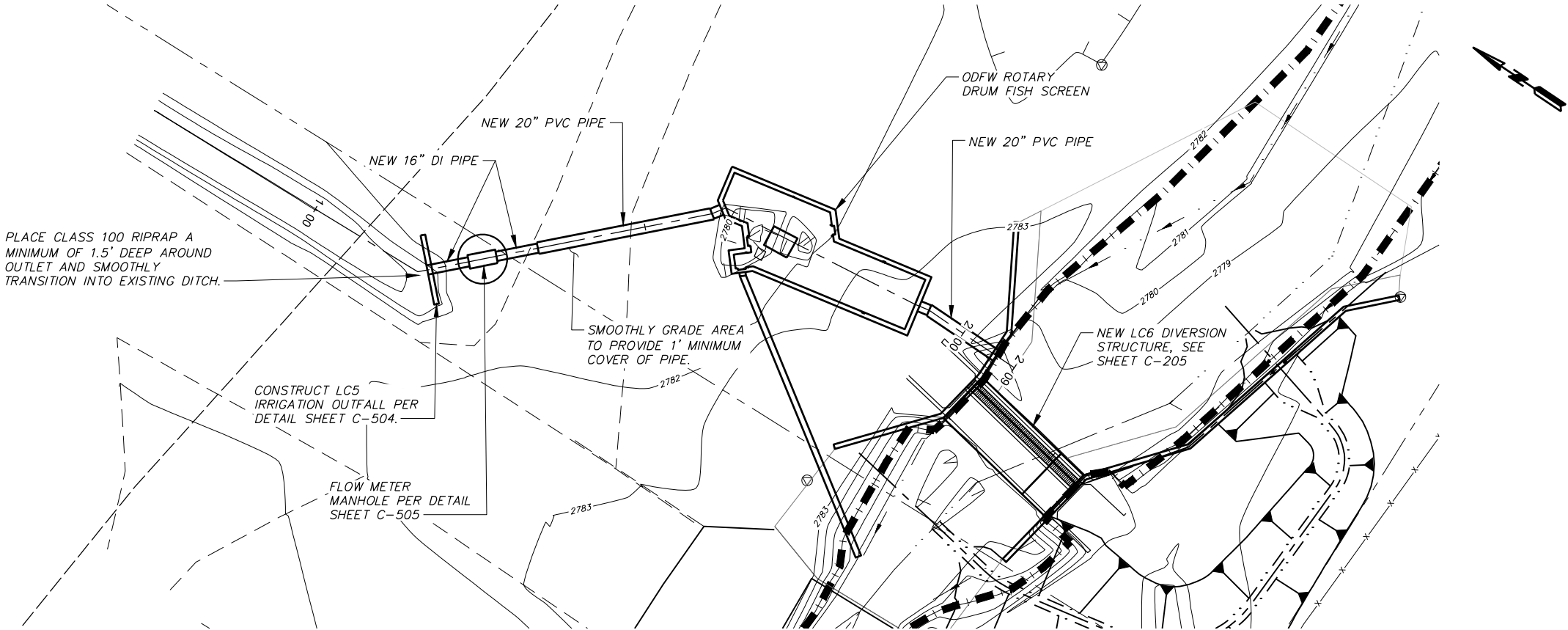
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FISH SCREEN NOTES

1. SEE LITTLE CREEK #5 FISH SCREEN DESIGN DRAWINGS PREPARED ODFW. CONTRACTOR SHALL CONSTRUCT ALL CONCRETE AND PIPE CONNECTIONS TO THE FISH SCREEN.
2. ODFW WILL FABRICATE AND INSTALL SCREEN COMPONENTS AFTER CONSTRUCTION.
3. CONTRACTOR SHALL INSTALL FISH RETURN PIPE. RETURN PIPE. RETURN PIPE INSTALLATION SHALL BE COORDINATED CLOSELY WITH ODFW AND FIELD FIT AS DIRECTED BY ODFW.



LC5 DIVERSION PLAN AND PROFILE



06/30/2023

REVISION	BY	DATE
DESIGNED BY: J. HERRON		
DRAWN BY: P. RICHARDSON		
REVIEWED BY: C. HUTCHINS		

20	0	20	40	60
HORZ. SCALE IN FEET				
3	0	3	6	9
VERT. SCALE IN FEET				
JOB NUMBER	596-07	DATE	2023	
ACAD FILE:	596-07-C-106.dwg			
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UNION SOIL AND WATER CONSERVATION DISTRICT
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS
LC5 IRRIGATION PLAN AND PROFILE

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10 OF 23

NOTES

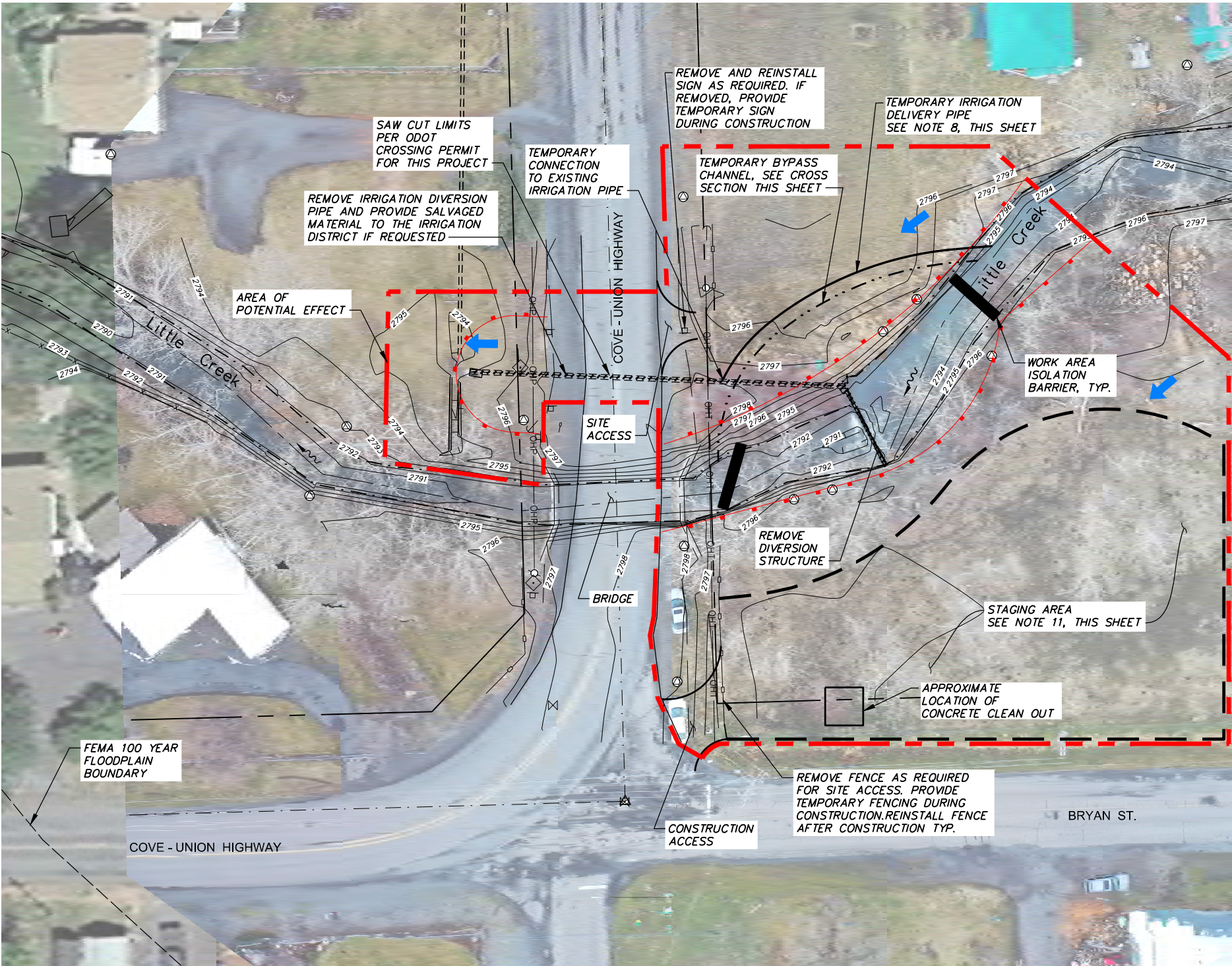
- 1. COORDINATE WITH OWNER FOR ACCESS AND STAGING AREAS PRIOR TO MOBILIZING TO THE SITE.
- 2. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO PRE-PROJECT CONDITIONS OR BETTER PRIOR TO DEMOBILIZING FROM THE SITE. SEED MIXTURE SHOWN IN SPECIFICATIONS SHALL BE APPLIED AT ALL DISTURBED AREAS.
- 3. LOCATION OF BYPASS DITCH AND TEMPORARY IRRIGATION DELIVERY PIPE SHOWN IS APPROXIMATE. THE ACTUAL LOCATION SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE ENGINEER.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK AREA ISOLATION AND WATER CONTROL, SEE TECHNICAL SPECIFICATIONS.
- 5. FISH SALVAGE TO BE PERFORMED BY OTHERS. THE CONTRACTOR SHALL COORDINATE BYPASS EFFORTS AND FISH SALVAGE WITH THE OWNER. ESTIMATED TIME FOR SALVAGE IS TWO DAYS. CONTRACTOR SHALL PROVIDE FISH SCREEN AND PUMP TO DEWATER ENTIRE ISOLATION AREA.
- 6. ANTICIPATED FLOWS IN LITTLE CREEK AT THE TIME OF CONSTRUCTION RANGE FROM APPROXIMATELY 5 TO 30 CFS.
- 7. BOULDERS SHALL BE INSTALLED IN THE BYPASS DITCH TO REDUCE VELOCITY TO 2 FT/S OR LESS.
- 8. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING IRRIGATION FLOWS THROUGHOUT THE ENTIRE PROJECT AND SHALL COORDINATE ANY UNAVOIDABLE IRRIGATION SHUTDOWNS WITH THE OWNER 48 HOURS IN ADVANCE. CONTRACTOR SHALL SUBMIT A TEMPORARY IRRIGATION DELIVERY PLAN TO THE ENGINEER. THE PLAN SHALL INCLUDE HOW THE CONTRACTOR WILL MAINTAIN IRRIGATION FLOWS THROUGHOUT CONSTRUCTION, INCLUDING HOW SEQUENCING WILL BE PERFORMED WITH THE EXISTING AND NEW HIGHWAY CROSSING PIPES. THIS WORK MAY INCLUDE TEMPORARY DITCHES, CULVERTS, PIPING, PUMPS, AND ALL OTHER WORK THAT MAY BE REQUIRED TO MAINTAIN IRRIGATION DELIVERY THROUGHOUT CONSTRUCTION.
- 9. ONCE THE IN-STREAM WORK IS COMPLETED ON THE DIVERSION STRUCTURE, CONTRACTOR SHALL REMOVE THE TEMPORARY BYPASS CHANNEL, ADJUST THE WORK AREA ISOLATION BARRIERS, AND CONSTRUCT THE PERMANENT FISH BYPASS CHANNEL.
- 10. EROSION AND SEDIMENT CONTROLS ALONG THE BANK MAY BE REMOVED TO FACILITATE CONSTRUCTION AND ACCESS WHEN WITHIN AN ISOLATED WORK AREA.
- 11. REMOVE AND DISPOSE OF TREES WITHIN STAGING AREA.

EROSION AND SEDIMENT CONTROL LEGEND

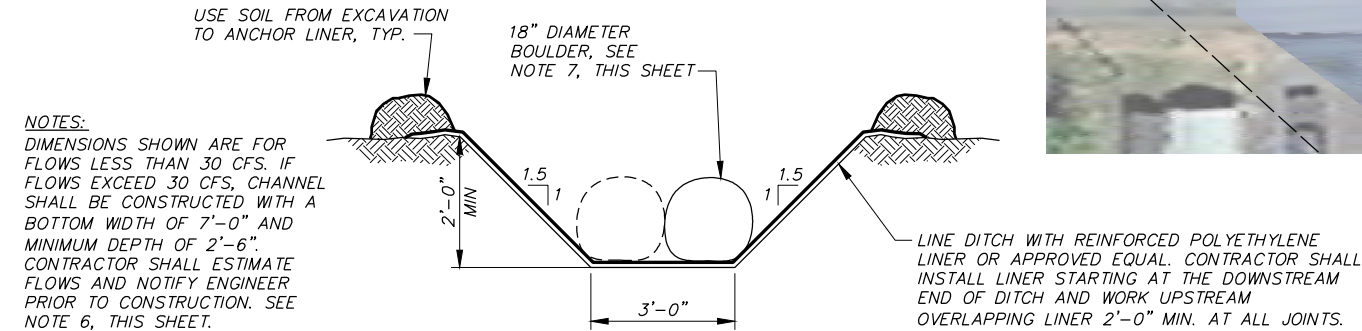
- STRAW WATTLE
- STORMWATER FLOW DIRECTION

SPILL PREVENTION

STAGING AREAS ARE WITHIN THE 100-YEAR FLOODPLAIN AND WITHIN 150 FEET OF THE STREAM. SEE THE TECHNICAL SPECIFICATIONS FOR SPILL PREVENTION REQUIREMENTS.



PLAN



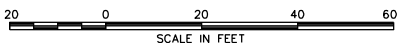
TEMPORARY BYPASS CHANNEL SECTION

N. T.S.



06/30/2023

DESIGNED BY	A. HAMILTON	BY		DATE	
DRAWN BY	P. RICHARDSON				
REVIEWED BY	J. HERRON				



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UNION SOIL AND WATER CONSERVATION DISTRICT	
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS	
LC6	
EXISTING SITE PLAN, STAGING, DEMOLITION, AND WATER CONTROL PLAN	

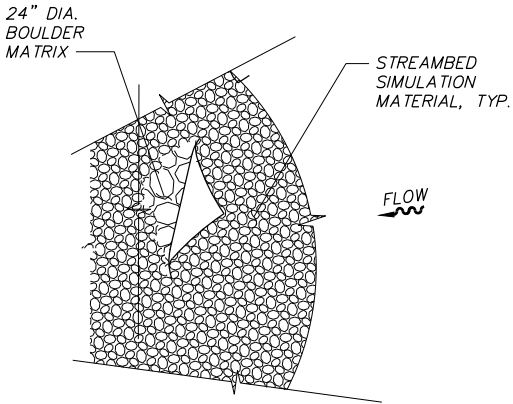
SHEET

D-201

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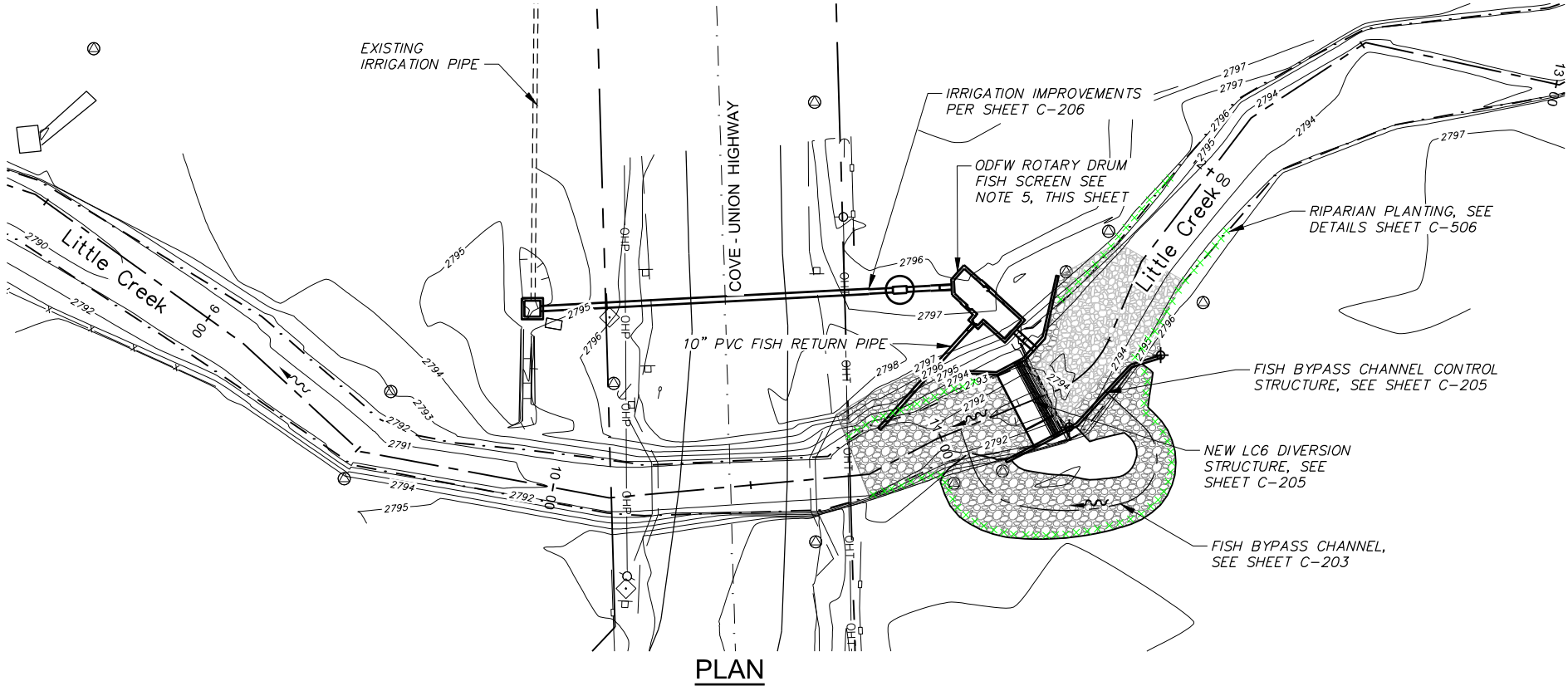
STREAM RESTORATION NOTES:

1. STREAMBED SIMULATION MATERIAL SHALL BE PLACED 6" ABOVE DESIGN FINISHED GRADE SHOWN ON THE DRAWINGS PER ENGINEER'S DIRECTION TO ACCOUNT FOR ANTICIPATED SETTLING. MATERIAL SHALL BE PLACED BY FIRST INSTALLING THE LARGEST MATERIAL. THE SMALLER MATERIAL SHALL THEN BE USED TO FILL THE VOIDS BETWEEN THE LARGE MATERIAL. THIS MATERIAL SHALL BE TAMPED IN PLACE IN 12" LIFTS FOLLOWED BY JETTING OR FLOODING THE SURFACE WITH WATER TO WASH THE FINER MATERIAL INTO REMAINING VOIDS. FINES SHALL CONTINUE TO BE ADDED AND WASHED INTO THE STREAM SIMULATION MATERIAL UNTIL WATER POOLS ON THE STREAMBED SURFACE.
2. LARGE BOULDERS RANGING IN SIZE FROM 18" TO 24" SHALL BE PLACED NEAR THE SURFACE OF THE STREAMBED AND SHALL BE BURIED APPROXIMATELY 60% TO ACHIEVE LARGE SCALE HYDRAULIC ROUGHNESS AND RESTING LOCATIONS FOR FISH. SPACING SHALL BE ON AVERAGE APPROXIMATELY 10' O.C. THROUGHOUT THE NEWLY CONSTRUCTED REACH. ACTUAL LOCATIONS OF BOULDERS TO BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE ENGINEER.
3. CONTRACTOR SHALL PLACE 24" DIAMETER BOULDER MATRIX PRIOR TO PLACING STREAMBED SIMULATION MATERIAL. CONTRACTOR SHALL INCORPORATE BED CLASS 6 STREAMBED SIMULATION MATERIAL INTO BED CLASS 24 STREAMBED SIMULATION MATERIAL AS REQUIRED TO FILL THE VOIDS BETWEEN 24" DIAMETER BOULDERS UNDER THE ENGINEER'S DIRECTION. THE BOULDERS SHALL BE PLACED ON A PREPARED BED TO ENSURE STREAMBED MATERIAL IS PLACED UP TO THE SPRING LINE OF THE ROCK. THE LARGE BOULDER MATRIX ARE NOT SHOWN ON THE PLAN VIEW FOR CLARITY.
4. CONTRACTOR SHALL INSTALL LOW FLOW THALWEG THROUGH NEWLY CONSTRUCTED CHANNEL PER ENGINEERS DIRECTION.
5. CONTRACTOR SHALL CONSTRUCT THE CONCRETE PORTION OF THE FISH SCREEN PER THE ODFW DRAWINGS. ODFW WILL FABRICATE AND INSTALL METAL SCREEN COMPONENTS AFTER CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER SO ODFW CAN REVIEW ALL FORMING PRIOR TO POURING CONCRETE. THE FISH RETURN PIPE SHALL BE INSTALLED BY THE CONTRACTOR PER ODFW DIRECTION.

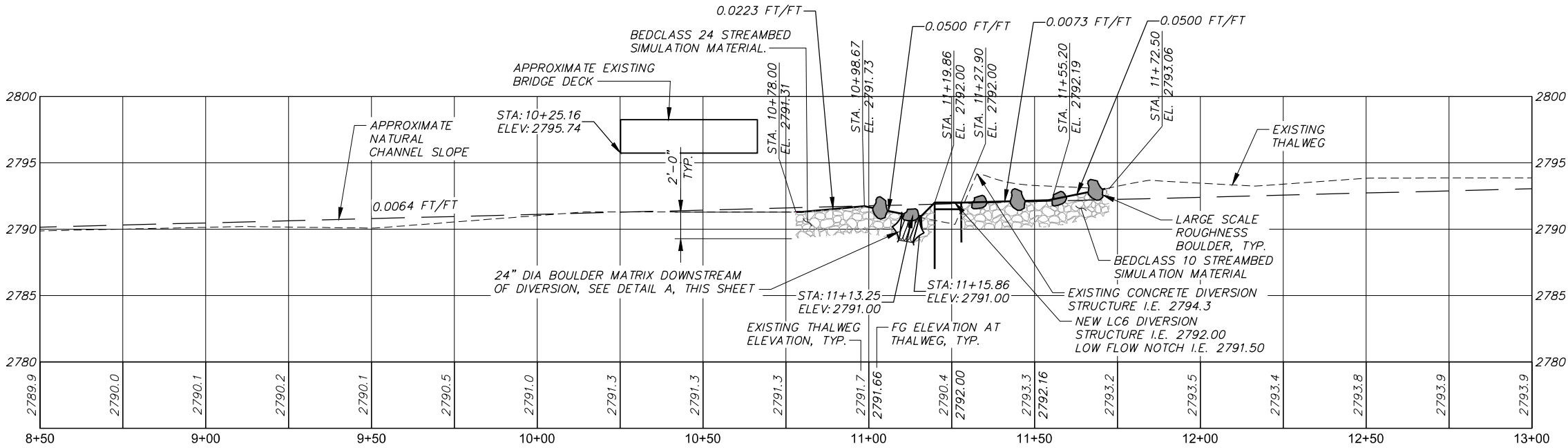


NOTE
24" DIA BOULDER MATRIX SHALL BE INSTALLED IN ONE CONTINUOUS LAYER WITH STREAMBED SIMULATION MATERIAL INSTALLED TO FILL IN THE VOIDS. SEE STREAM RESTORATION NOTE 3, THIS SHEET.

DETAIL 'A'
N.T.S.



PLAN

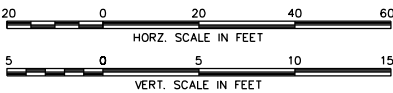


PROFILE



06/30/2023

REVISION	BY	DATE
DESIGNED BY: A. HAMILTON		
DRAWN BY: P. RICHARDSON		
REVIEWED BY: J. HERRON		



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UNION SOIL AND WATER CONSERVATION DISTRICT LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS
LC6 SITE PLAN AND PROFILE

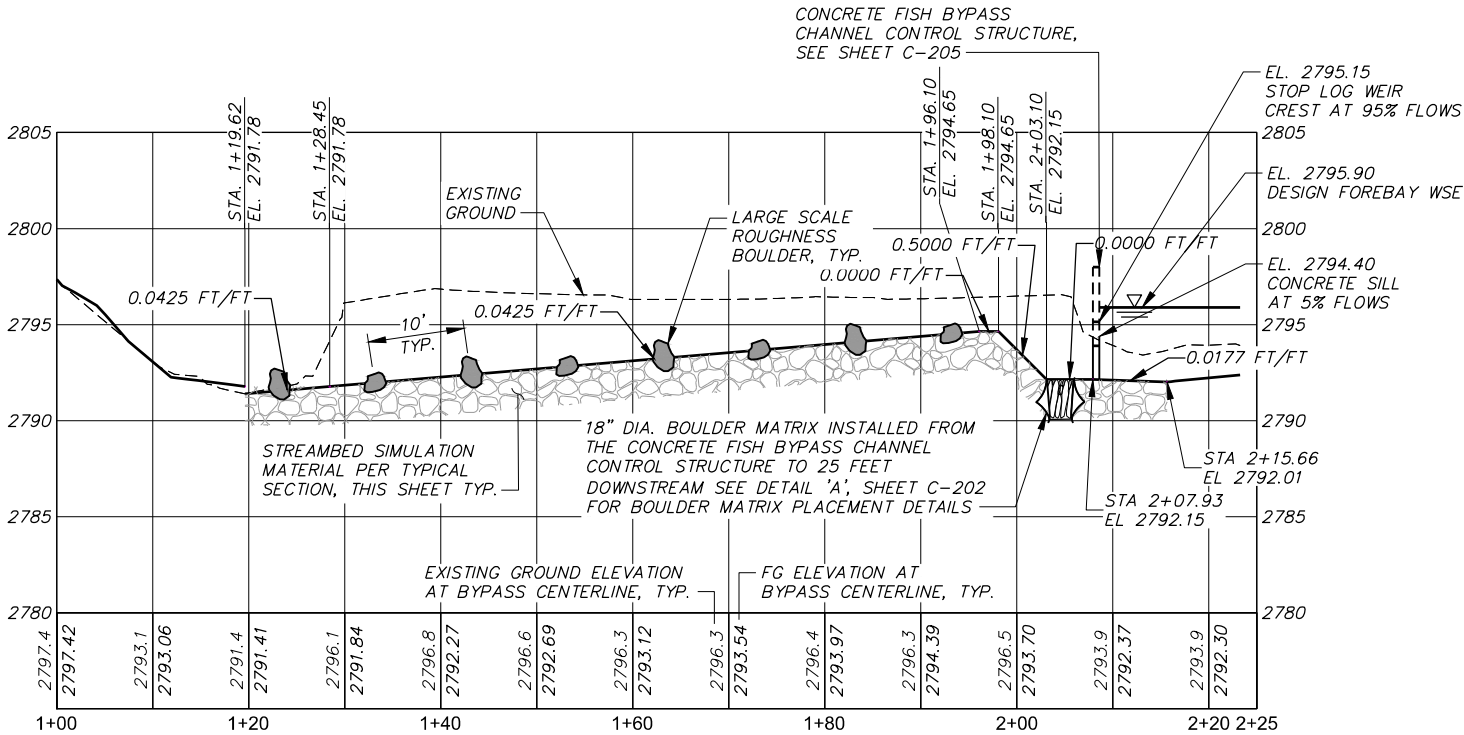
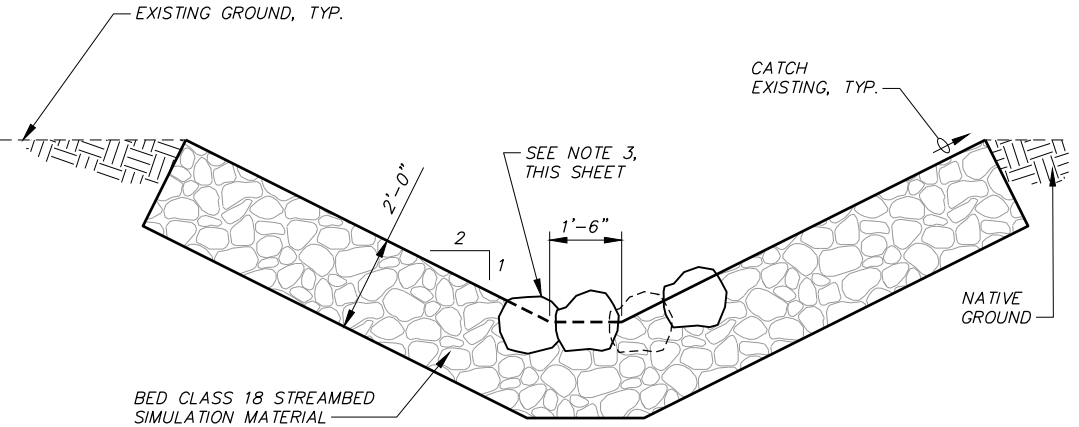
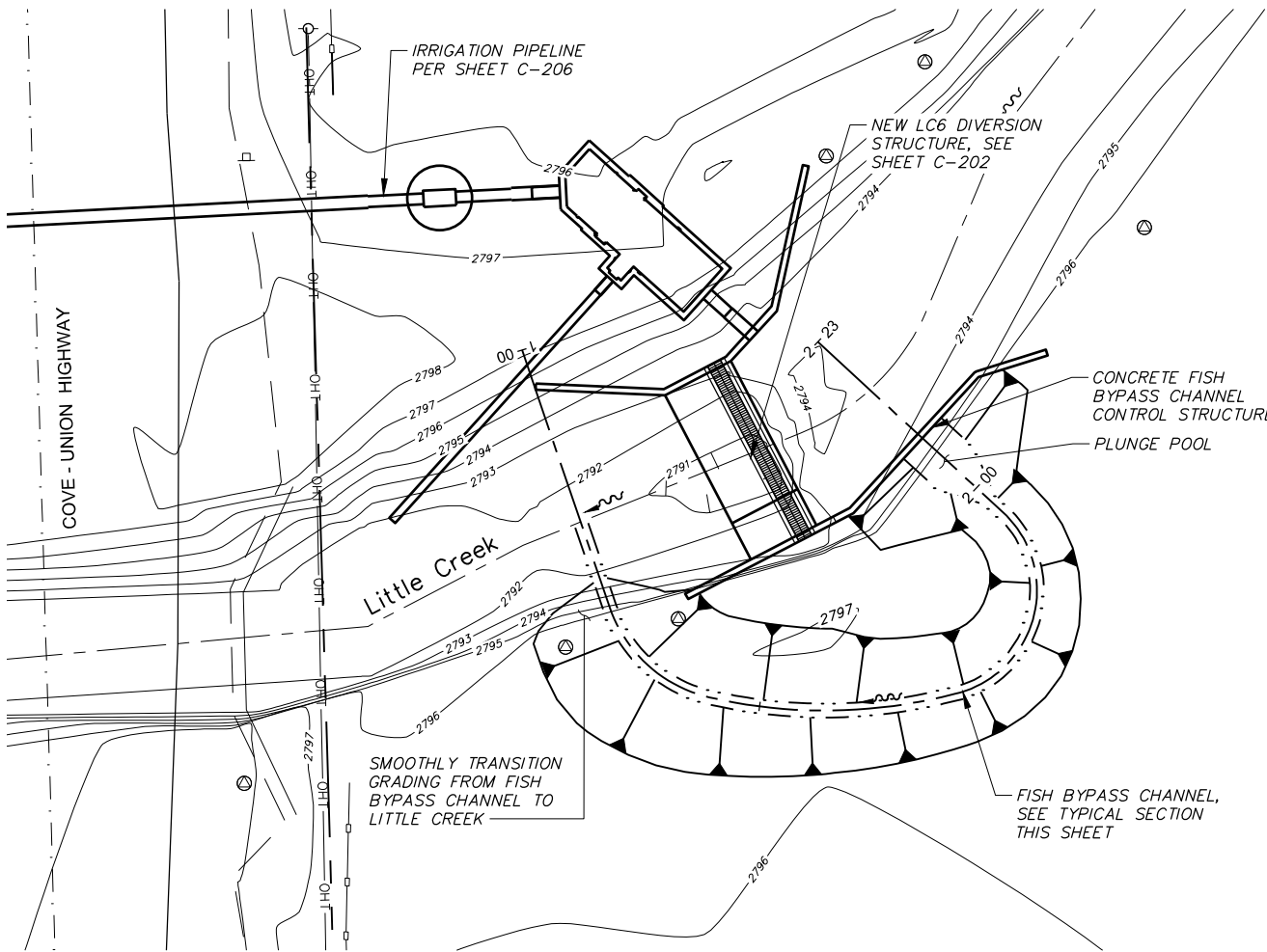
SHEET
C-202
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STREAM RESTORATION NOTES

1. STREAMBED SIMULATION MATERIAL SHALL BE PLACED 6" ABOVE DESIGN FINISHED GRADE SHOWN ON THE DRAWINGS PER ENGINEER'S DIRECTION TO ACCOUNT FOR ANTICIPATED SETTLING. MATERIAL SHALL BE PLACED BY FIRST INSTALLING THE LARGEST MATERIAL. THE SMALLER MATERIAL SHALL THEN BE USED TO FILL THE VOIDS BETWEEN THE LARGE MATERIAL. THIS MATERIAL SHALL BE TAMPED IN PLACE IN 12" LIFTS FOLLOWED BY JETTING OR FLOODING THE SURFACE WITH WATER TO WASH THE FINER MATERIAL INTO REMAINING VOIDS. FINES SHALL CONTINUE TO BE ADDED AND WASHED INTO THE STREAM SIMULATION MATERIAL UNTIL WATER POOLS ON THE STREAMBED SURFACE.
2. LARGE BOULDERS RANGING IN SIZE FROM 18" TO 24" SHALL BE PLACED NEAR THE SURFACE OF THE STREAMBED AND SHALL BE BURIED APPROXIMATELY 60% TO ACHIEVE LARGE SCALE HYDRAULIC ROUGHNESS AND RESTING LOCATIONS FOR FISH. SPACING SHALL BE ON AVERAGE APPROXIMATELY 10' O.C. THROUGHOUT THE NEWLY CONSTRUCTED REACH. ACTUAL LOCATIONS OF BOULDERS TO BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE ENGINEER.
3. 18" BOULDERS SHALL BE PLACED IN ALTERNATING CLUSTERS TO CREATE A SINUOUS FLOW PATH IN THE BYPASS CHANNEL.
4. SSM IS NOT SHOWN IN PLAN FOR CLARITY.

DIVERSION STRUCTURE OPERATING NOTES

1. ONCE FLOWS BEGIN TO DROP, INSTALL CHECK BOARDS IN THE MAIN CHANNEL AS REQUIRED TO MAINTAIN AN UPSTREAM WATER SURFACE ELEVATION OF 2795.90 (APPROXIMATELY 25" BELOW TOP OF CONCRETE WALL). KEEP THE CHECK BOARDS ON THE RIVER LEFT STANCHION (LOOKING DOWNSTREAM) LOWER TO BIAS FLOW TOWARDS THE FISH BYPASS CHANNEL. KEEP ALL BOARDS OUT OF THE FISH BYPASS CHANNEL.
2. ONCE ALL BOARDS ARE INSTALLED IN THE MAIN CHANNEL, ALL OF THE CHANNEL FLOW IS THROUGH THE FISH BYPASS CHANNEL, AND THE UPSTREAM WATER SURFACE ELEVATION CANNOT BE MAINTAINED AT 2795.90, INSTALL BOARDS IN THE FISH BYPASS CHANNEL. DO NOT PLACE BOARDS IN THE BYPASS CHANNEL THAT WOULD CREATE MORE THAN A 6" DROP IN WATER SURFACE ELEVATION ACROSS THE BOARDS.
3. IF FLOWS DROP TO NEAR ZERO AND WATER IS NO LONGER FLOWING THROUGH THE BYPASS CHANNEL, OPEN THE BOTTOM ORIFICE TO PREVENT FISH STRANDING IN THE FISH BYPASS CHANNEL PLUNGE POOL.
4. WHEN THE DIVERSION IS NOT UN USE, OR IF THERE IS A FLOODING CONCERN, REMOVE ALL BOARDS FROM THE MAIN CHANNEL AND DROP THE STANCHIONS. PLACE BOARDS ACROSS THE FISH BYPASS CHANNEL TO PREVENT EXCESSIVE FLOW THROUGH THE FISH BYPASS CHANNEL DURING FLOODING TO HELP REDUCE MAINTENANCE FROM POSSIBLE FLOOD DAMAGE.



06/30/2023

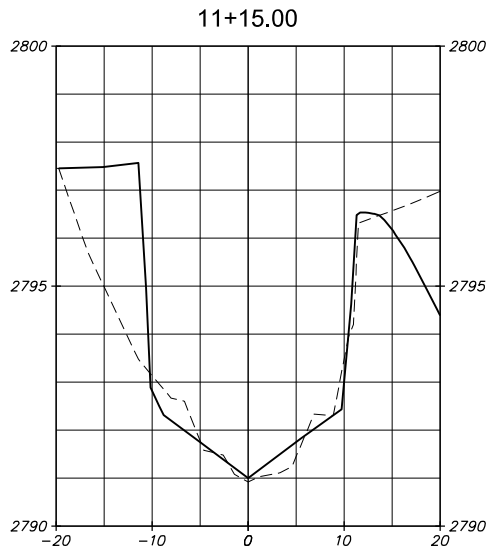
DESIGNED BY	A. HAMILTON	BY		DATE	
DRAWN BY	P. RICHARDSON				
REVIEWED BY	J. HERRON				

JOB NUMBER	596-07	DATE	2023
ACAD FILE:	596-07-C-203.dwg		
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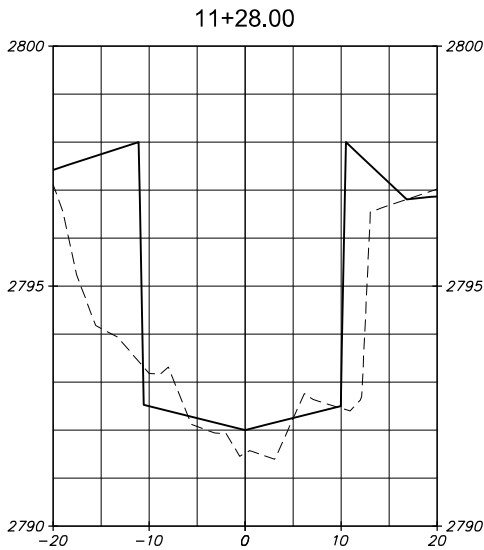


UNION SOIL AND WATER CONSERVATION DISTRICT		SHEET
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS		C-203
FISH BYPASS CHANNEL PLAN AND PROFILE		13 OF 23

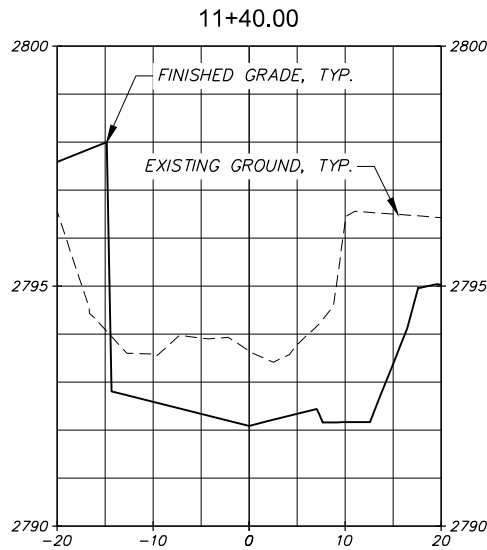
NOTE
CROSS SECTIONS ARE
LOOKING UPSTREAM.



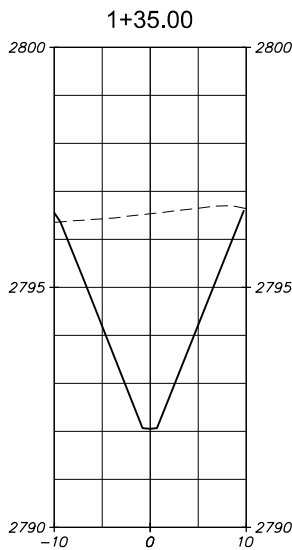
STATION 11+15.00



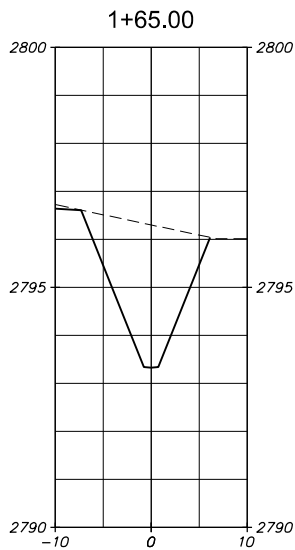
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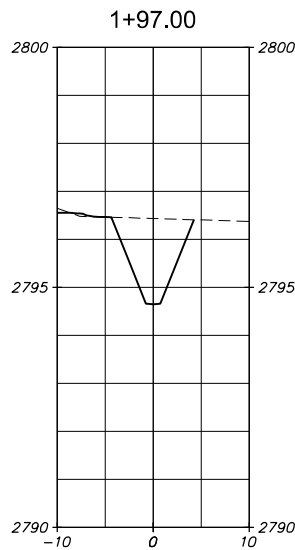
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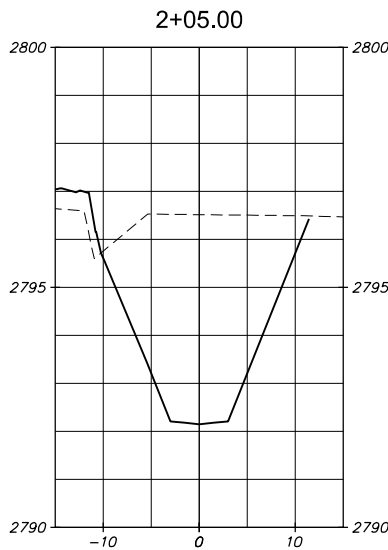
STATION 1+35.00
NEAT LINE CUT AREA = 46.6 SQ. FT.



STATION 1+65.00
NEAT LINE CUT AREA = 22.1 SQ. FT.



STATION 1+97.00
NEAT LINE CUT AREA = 8.9 SQ. FT.



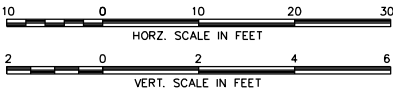
STATION 2+05.00
NEAT LINE CUT AREA = 60.8 SQ. FT.



06/30/2023

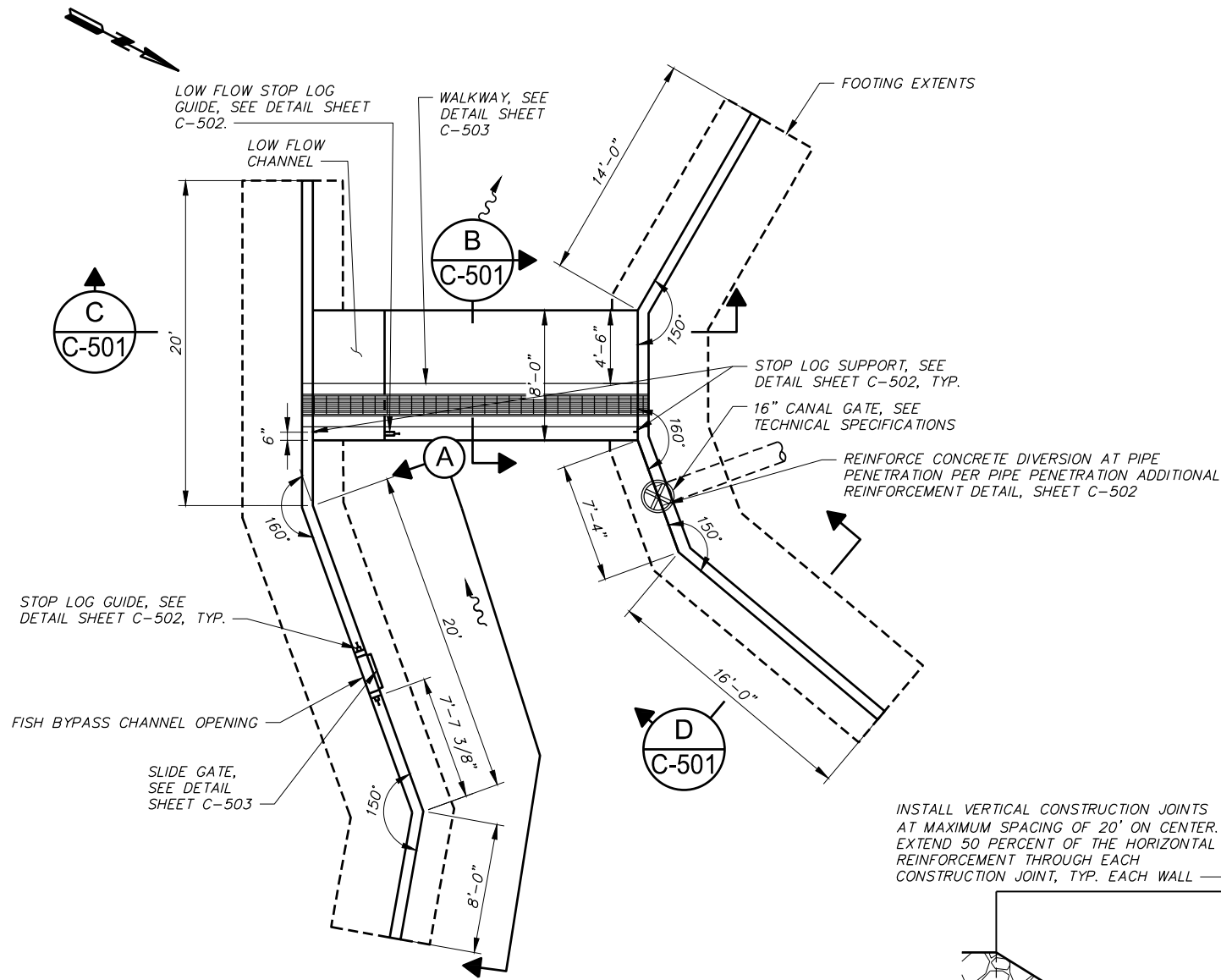
REVISION	BY	DATE
DESIGNED BY: A. HAMILTON		
DRAWN BY: P. RICHARDSON		
REVIEWED BY: J. HERRON		

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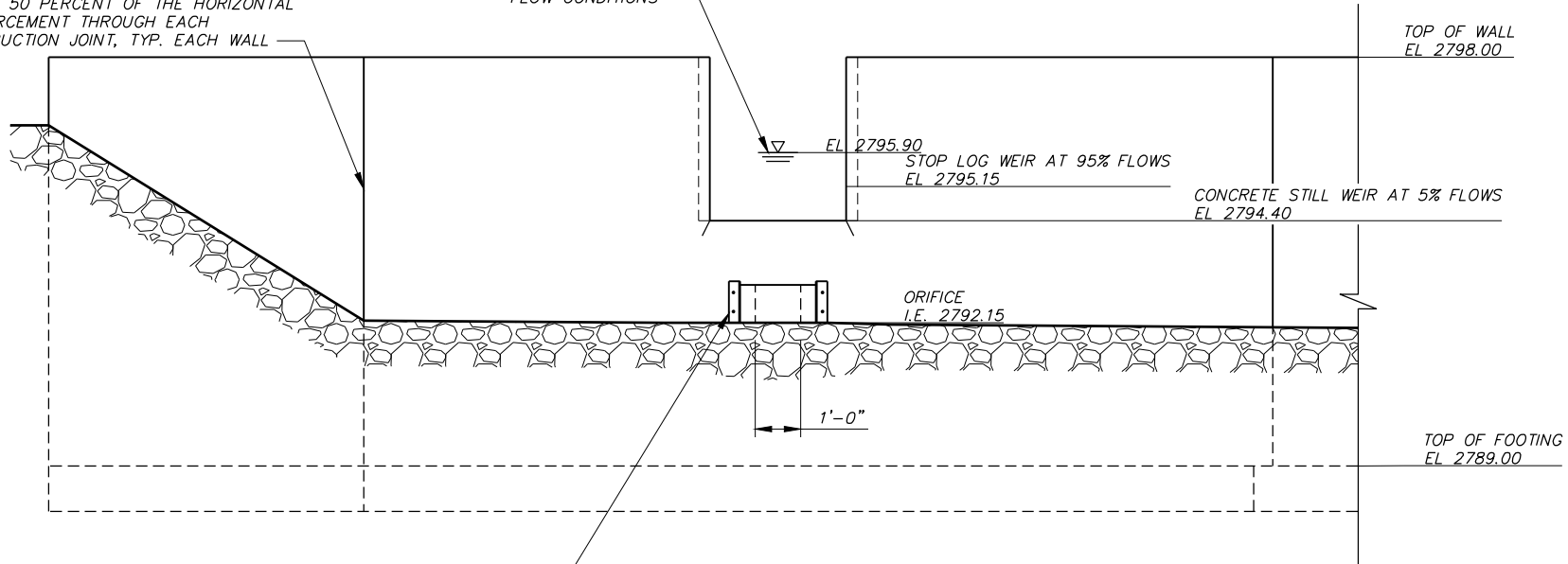
UNION SOIL AND WATER CONSERVATION DISTRICT LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS	
LC6 BYPASS CHANNEL NEAT LINECUT AREA CROSS-SECTIONS	

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C-204
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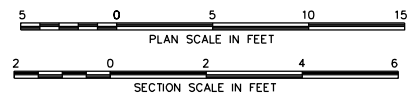
INSTALL VERTICAL CONSTRUCTION JOINTS AT MAXIMUM SPACING OF 20' ON CENTER. EXTEND 50 PERCENT OF THE HORIZONTAL REINFORCEMENT THROUGH EACH CONSTRUCTION JOINT, TYP. EACH WALL

DESIGN CHECK WSE IN FOREBAY FOR ALL FLOW CONDITIONS



06/30/2023

REVISION	BY	DATE
DESIGNED BY: J. HERRON		
DRAWN BY: P. RICHARDSON		
REVIEWED BY: C. HUTCHINS		



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UNION SOIL AND WATER
CONSERVATION DISTRICT
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS
LC6
DIVERSION PLAN AND SECTION

SHEET

C-205

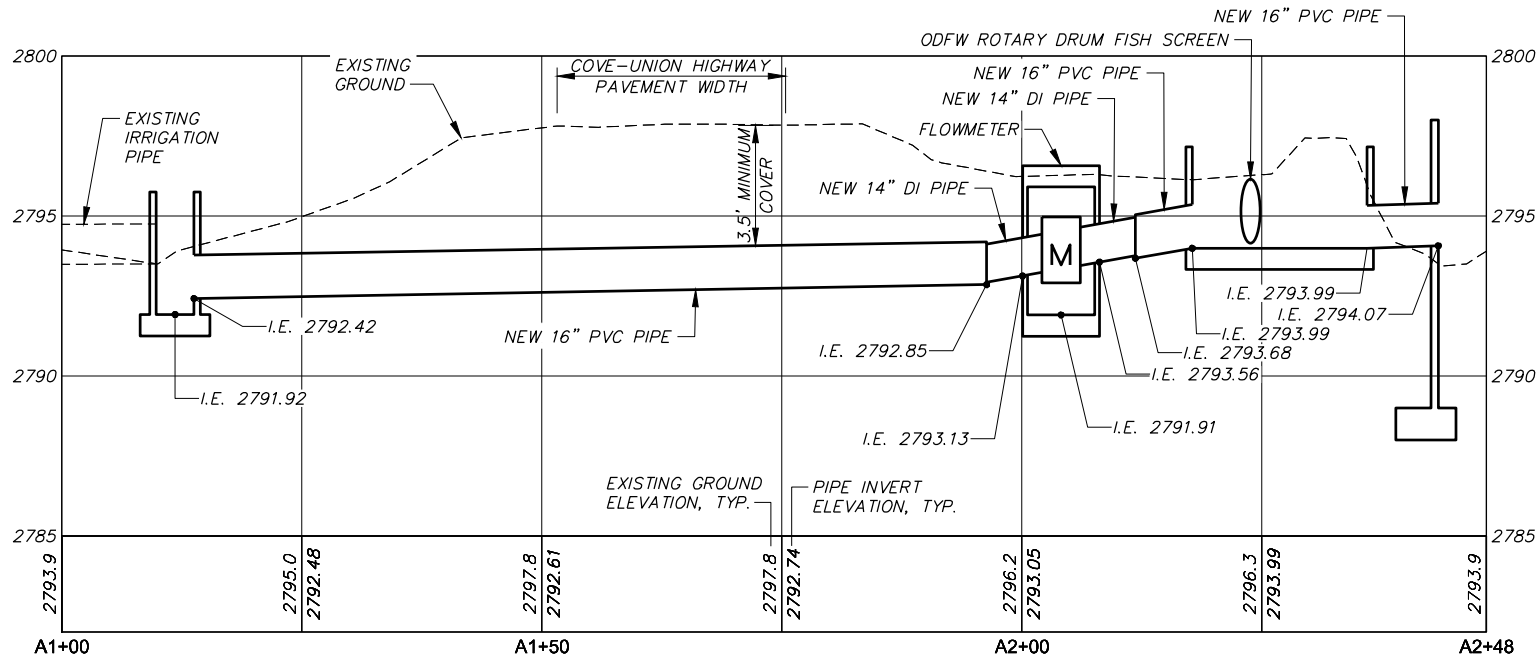
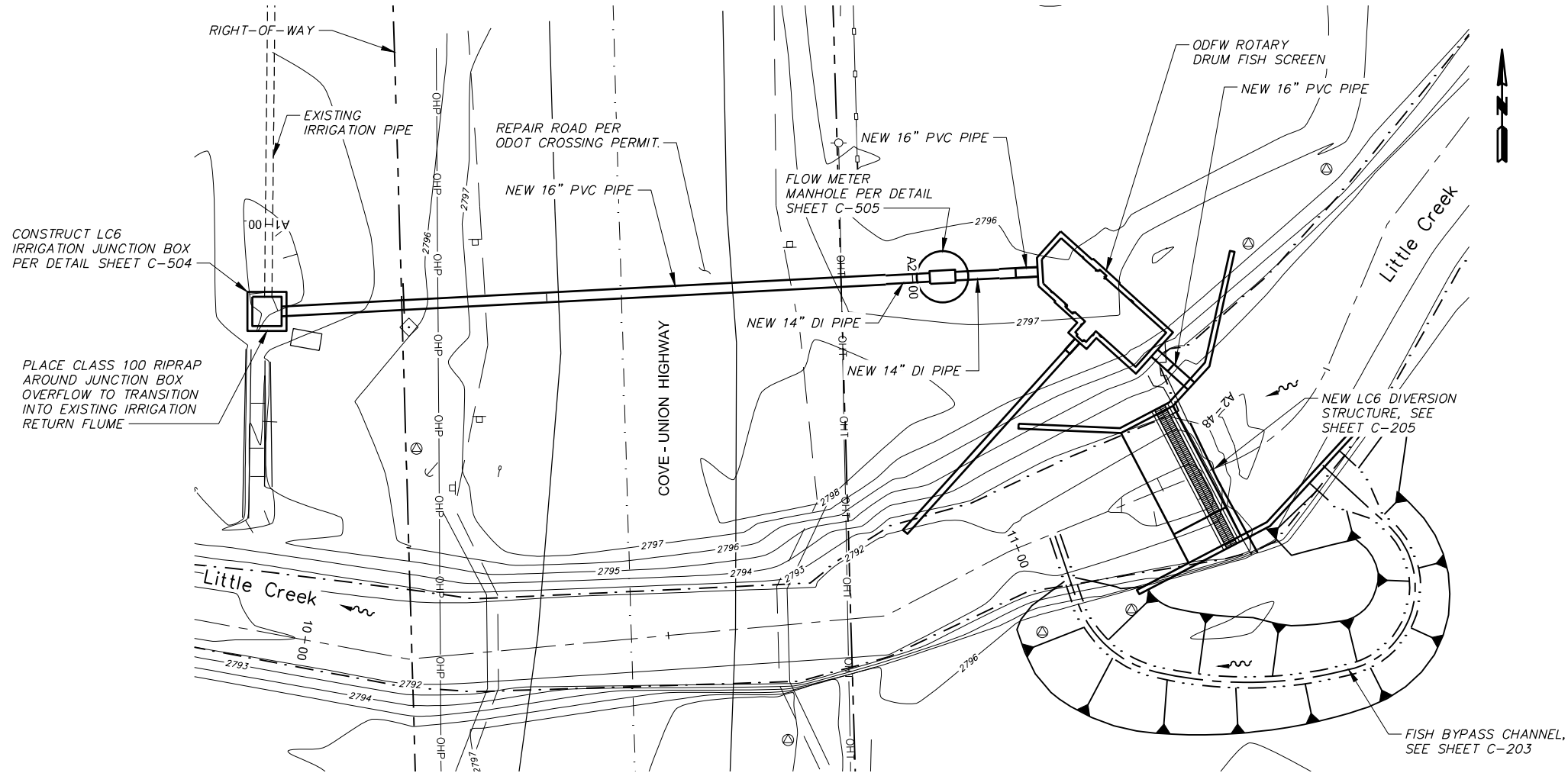
15 OF 23

HIGHWAY CROSSING NOTES

1. CONTRACTOR SHALL FOLLOW ALL PROVISIONS OUTLINED IN THE ODOT CROSSING PERMIT.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL REQUIREMENTS IN ACCORDANCE WITH THE ODOT CROSSING PERMIT.

FISH SCREEN NOTES

1. SEE LITTLE CREEK #6 FISH SCREEN DESIGN DRAWINGS PREPARED BY ODFW. CONTRACTOR SHALL CONSTRUCT ALL CONCRETE AND PIPE CONNECTIONS TO THE FISH SCREEN.
2. ODFW WILL FABRICATE AND INSTALL SCREEN COMPONENTS AFTER CONSTRUCTION.
3. CONTRACTOR SHALL INSTALL FISH RETURN PIPE. RETURN PIPE INSTALLATION SHALL BE COORDINATED CLOSELY WITH ODFW AND FIELD FIT AS DIRECTED BY ODFW.



06/30/2023

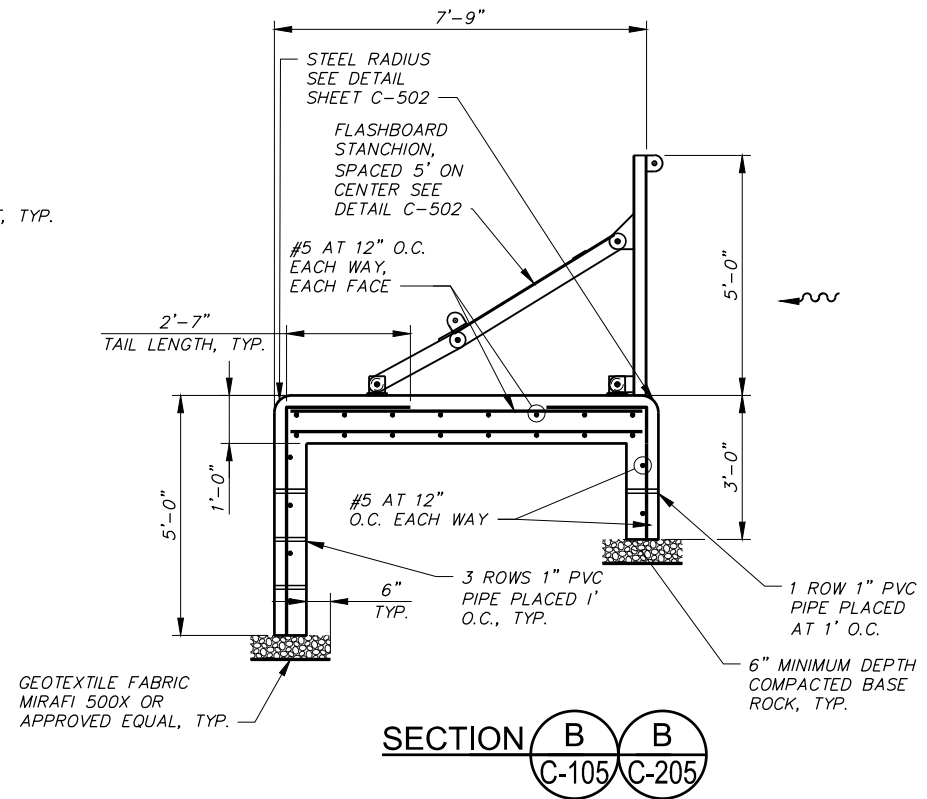
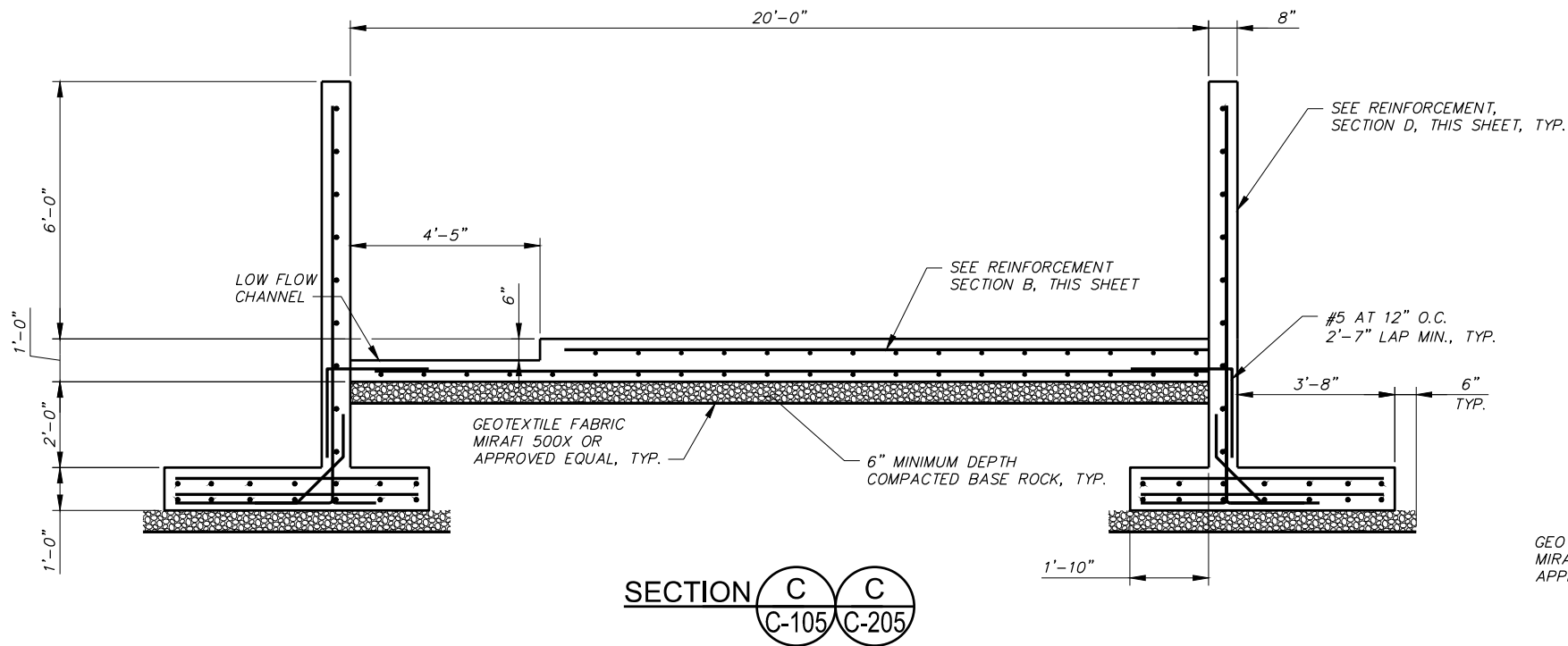
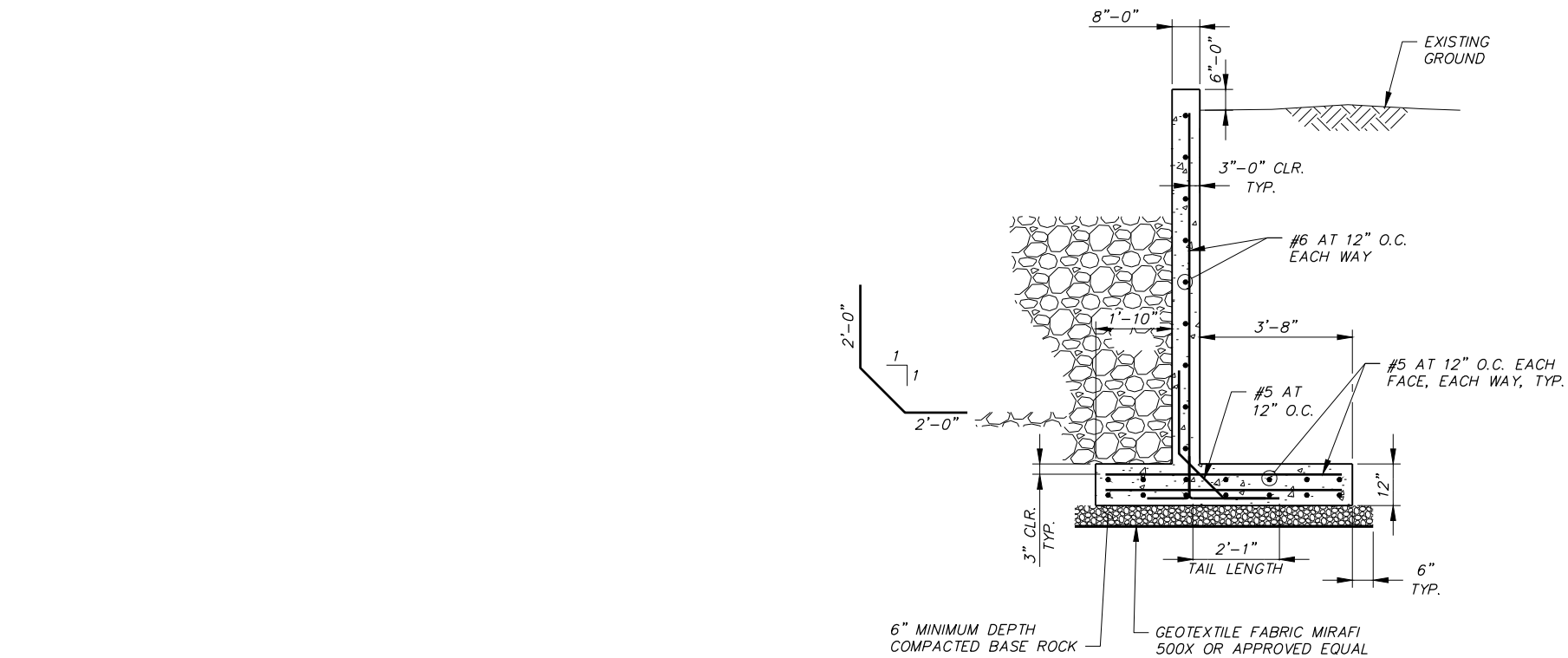
REVISION	BY	DATE
DESIGNED BY: J. HERRON		
DRAWN BY: P. RICHARDSON		
REVIEWED BY: C. HUTCHINS		

10	0	10	20	30
HORZ. SCALE IN FEET				
3	0	3	6	9
VERT. SCALE IN FEET				
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ACAD FILE:	596-07-C-206.dwg			
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UNION SOIL AND WATER CONSERVATION DISTRICT
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS
LC6 IRRIGATION PLAN AND PROFILE

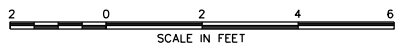
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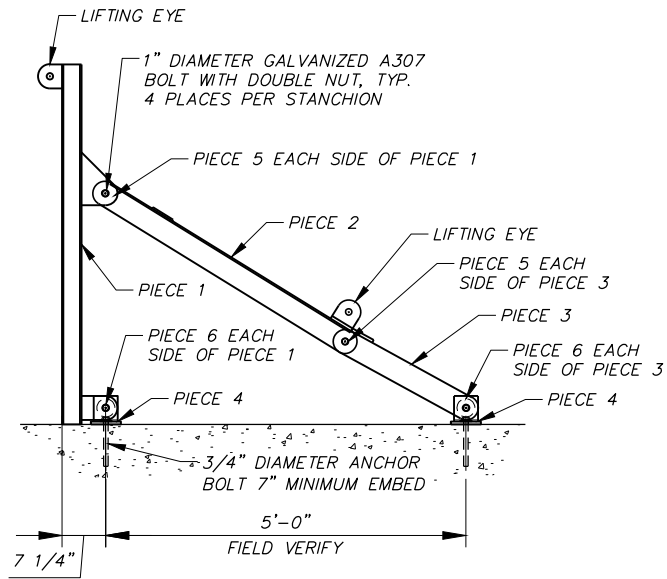
06/30/2023

REVISION	BY	DATE
DESIGNED BY: J. HERRON		
DRAWN BY: P. RICHARDSON		
REVIEWED BY: C. HUTCHINS		

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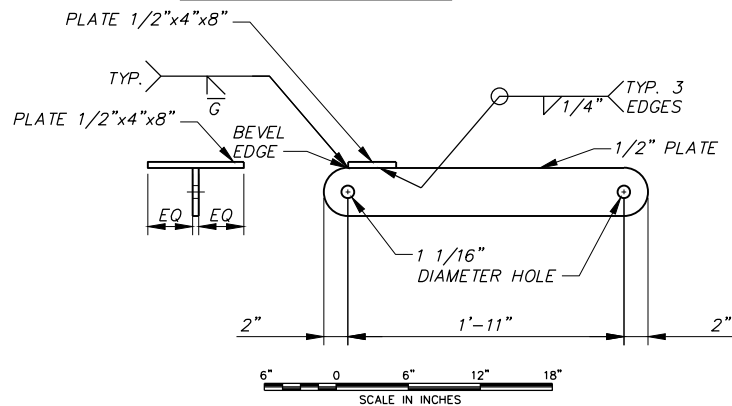


UNION SOIL AND WATER CONSERVATION DISTRICT		SHEET
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS		C-501
LC5 AND LC6 DIVERSION SECTIONS		17 OF 23

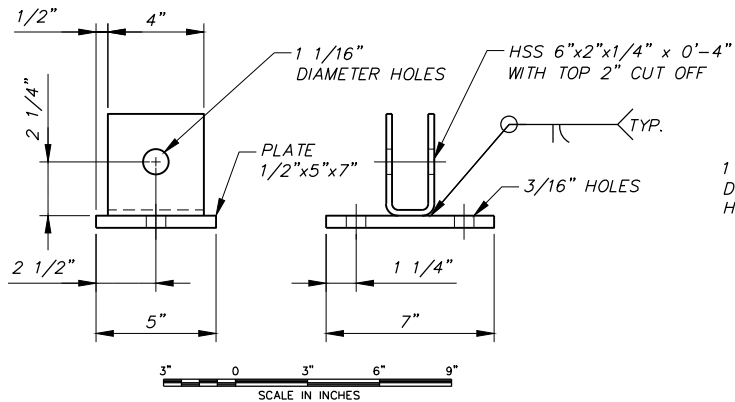


- NOTES**
- PIECES 1,2,3,4 SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
 - PIECES 5 AND 6 SHALL BE ULTRA HIGH MOLECULAR WEIGHT PLASTIC.
 - PROVIDE ONE 6' LONG AND ONE 8' LONG FABRICATED LIFTING HANDLES WITH HOOKS FOR EACH SIDE.

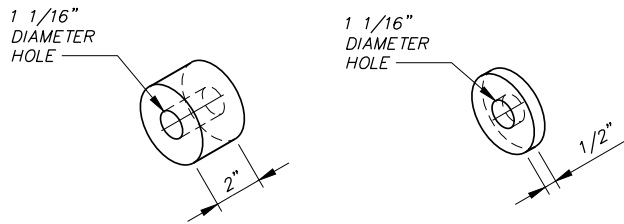
ASSEMBLY ELEVATION



PIECE 1



PIECE 3

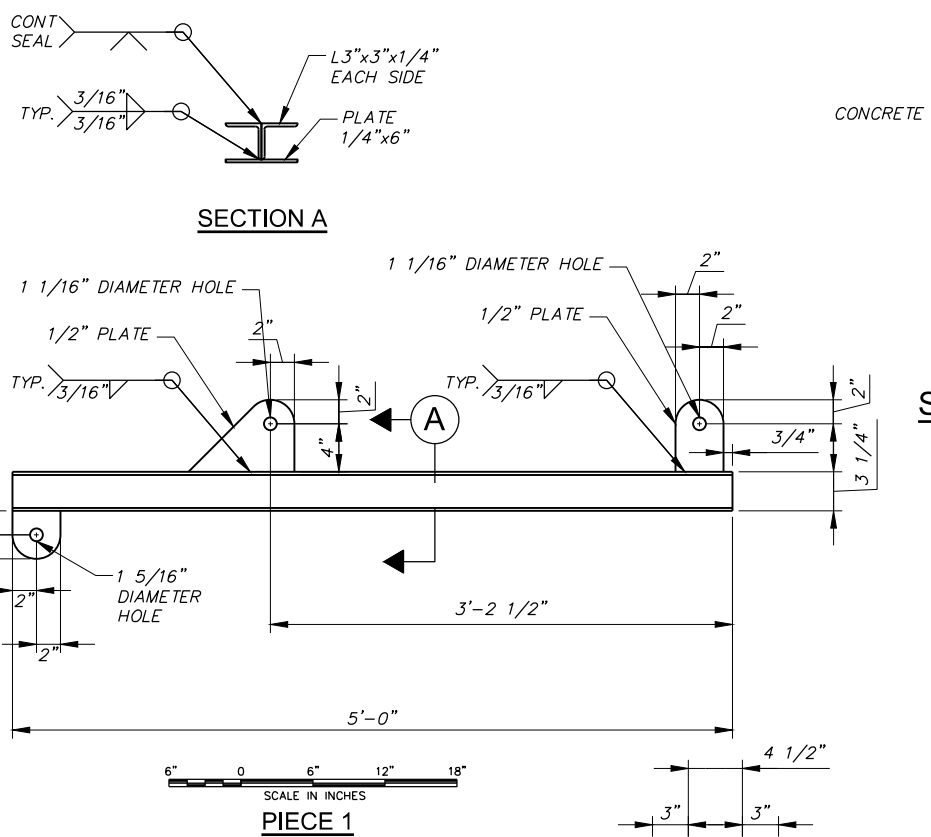


PIECE 4

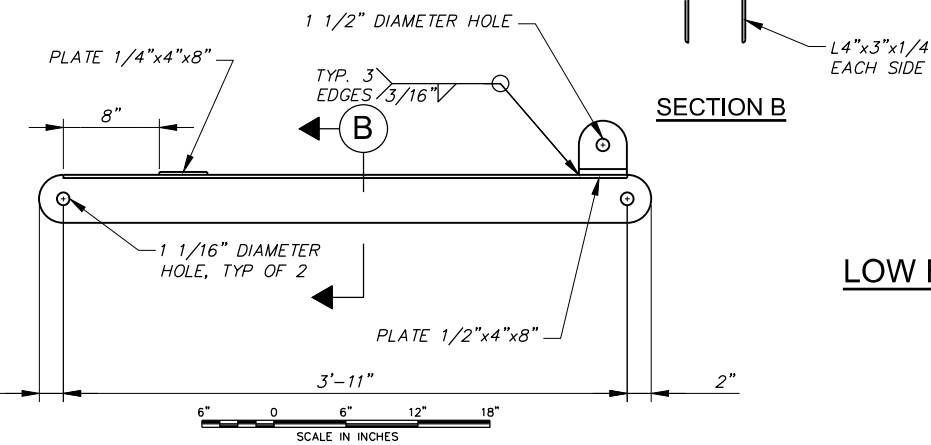
PIECE 5

PIECE 6

FLASHBOARD STANCHION DETAIL

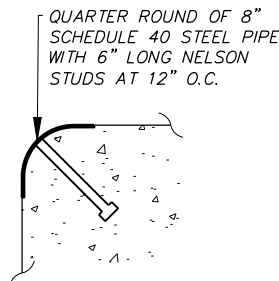


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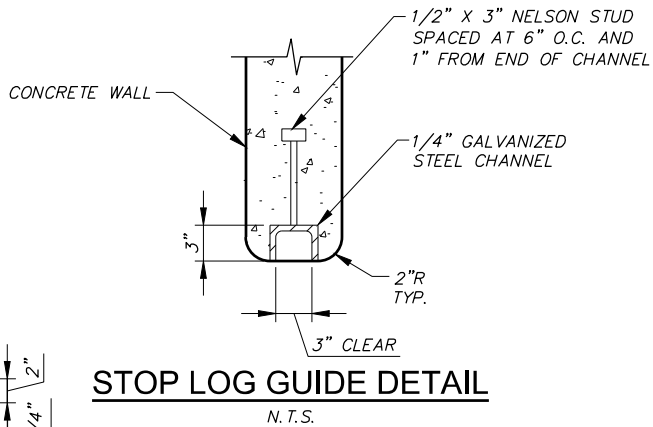


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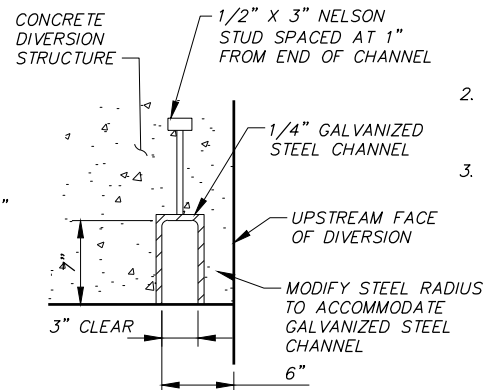
SECTION B



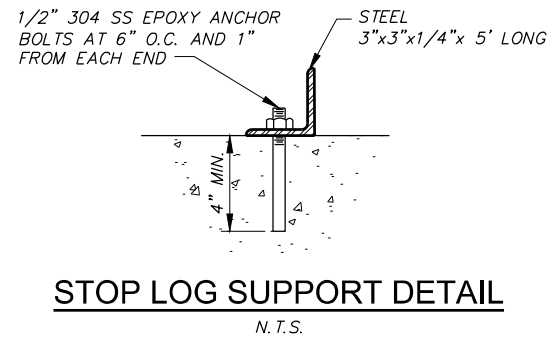
STEEL RADIUS DETAIL



STOP LOG GUIDE DETAIL

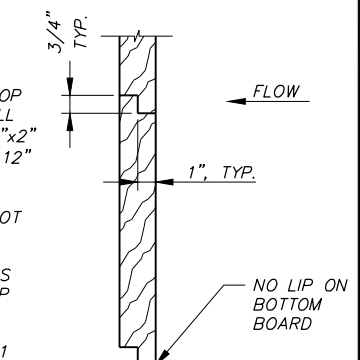


LOW FLOW STOP LOG GUIDE DETAIL

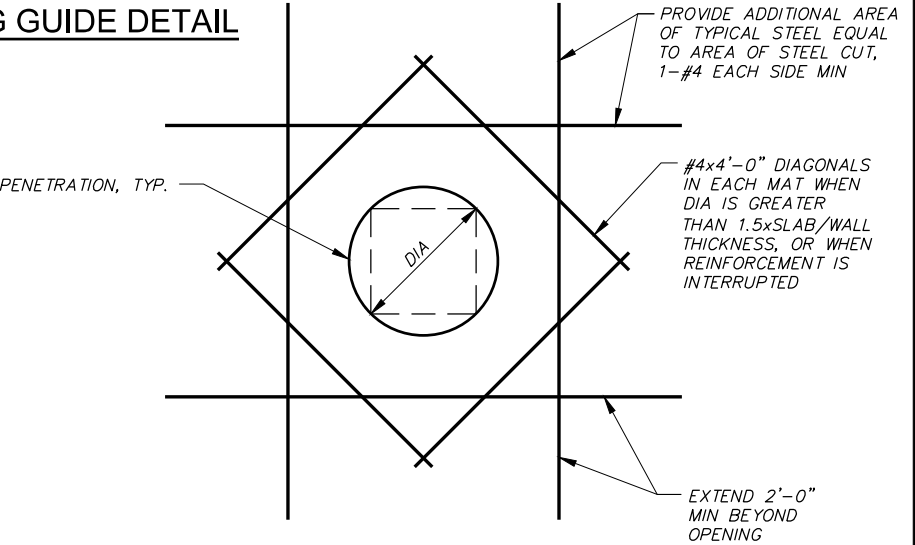


STOP LOG SUPPORT DETAIL

- NOTES**
- 41 - ROUGH CUT 2"x6"x4'-10" STOP LOGS TO BE PROVIDED; FOUR SHALL NOT HAVE BOTTOM LIP. PROVIDE 2"x2" NOTCHES SPACED APPROXIMATELY 12" ON CENTER ALONG THE BOTTOM 4 BOARDS. 9 - 2"x5"x3'-4" STOP LOGS TO BE PROVIDED. 1 SHALL NOT HAVE BOTTOM LIP.
 - CONTRACTOR TO VERIFY DIMENSIONS PRIOR TO MANUFACTURING OF STOP LOGS.
 - THE NUMBER OF BOARDS IN NOTE 1 SHALL BE PROVIDED FOR EACH SITE.



STOP LOG DETAIL



**PIPE PENETRATION
ADDITIONAL REINFORCEMENT**



06/30/2023

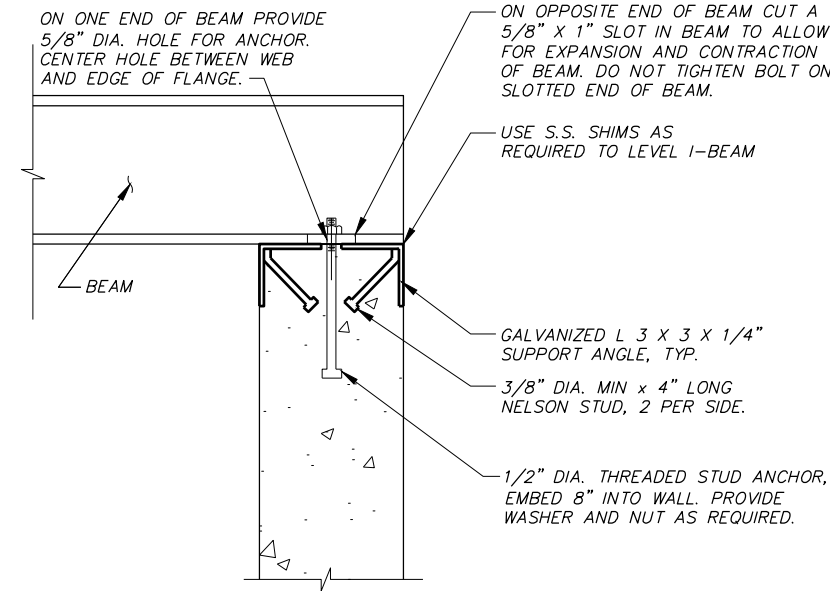
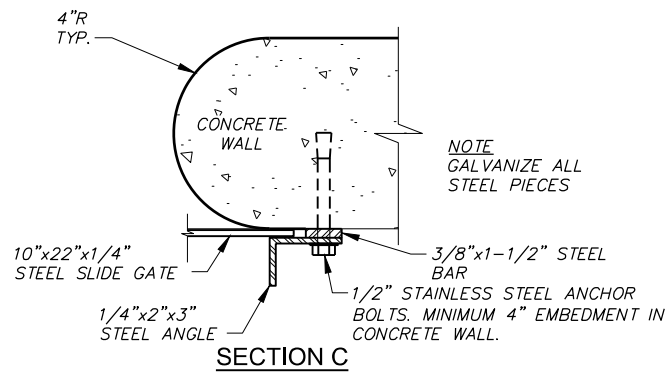
REVISION	BY	DATE
DESIGNED BY: J. HERRON		
DRAWN BY: S. MAGNER		
REVIEWED BY: C. HUTCHINS		

JOB NUMBER: 596-07	DATE: 2023
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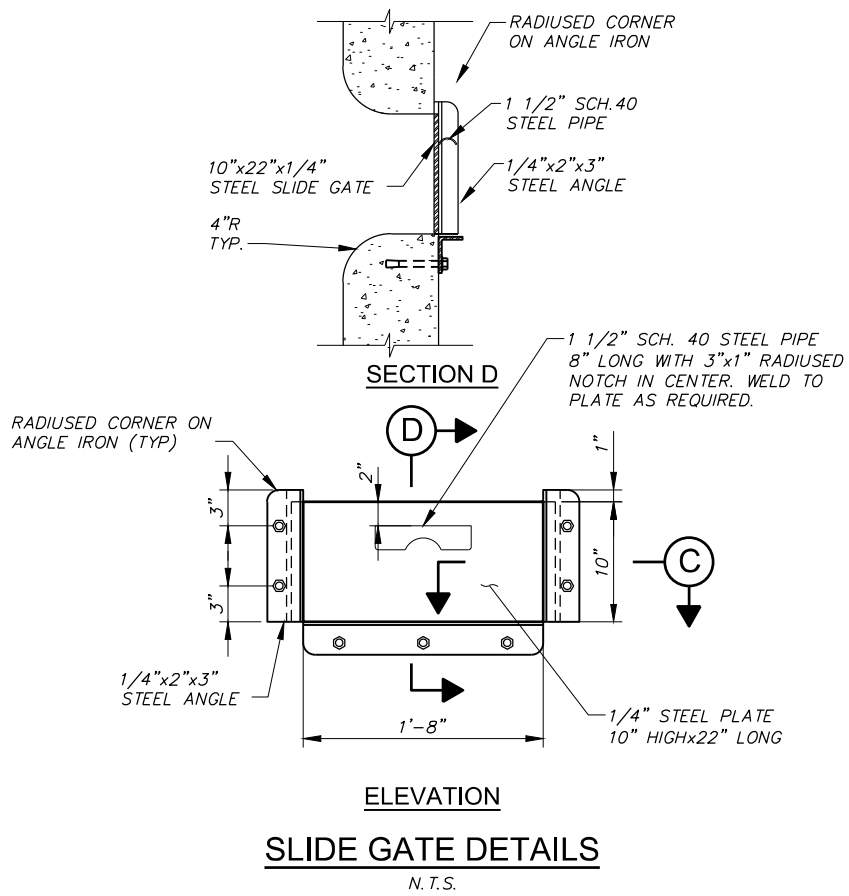


UNION SOIL AND WATER CONSERVATION DISTRICT
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS
LC5 AND LC6 DIVERSION DETAILS I

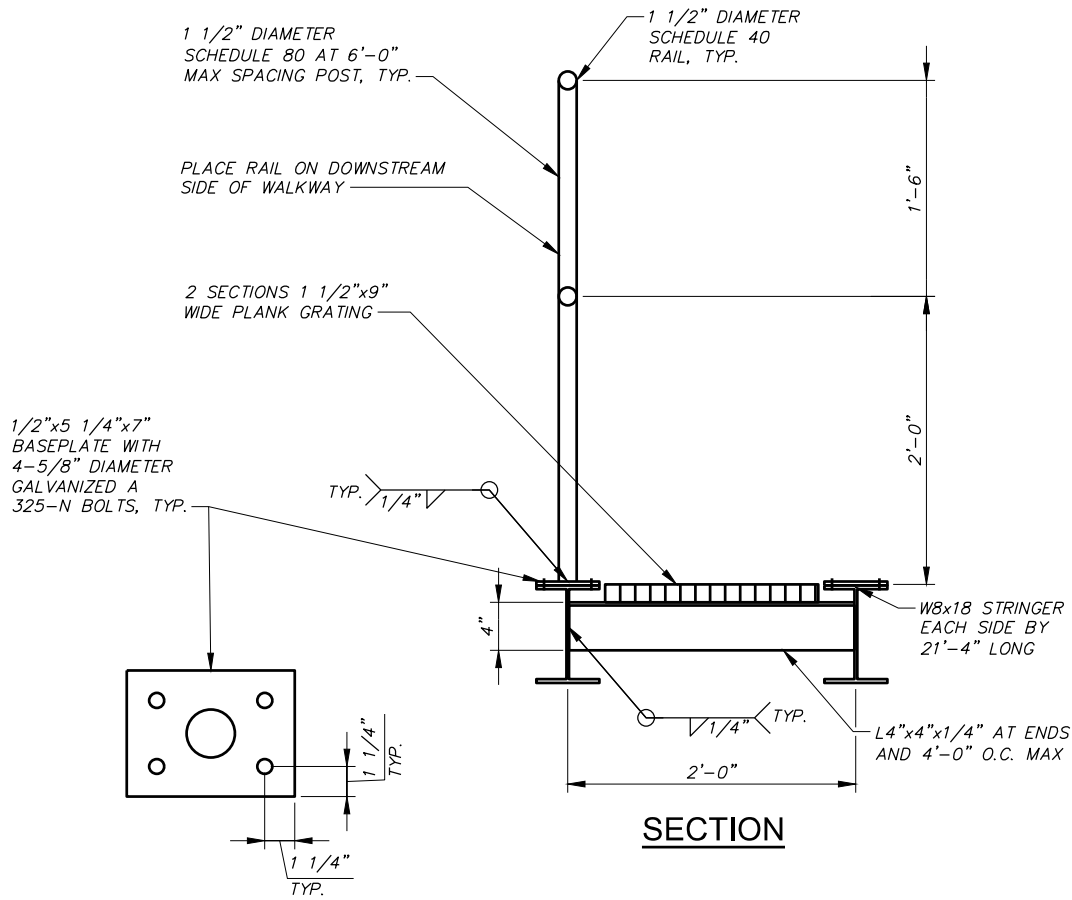
SHEET
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BEAM TO CONCRETE CONNECTION DETAIL
N.T.S.



SLIDE GATE DETAILS
N.T.S.



WALKWAY DETAIL
N.T.S.

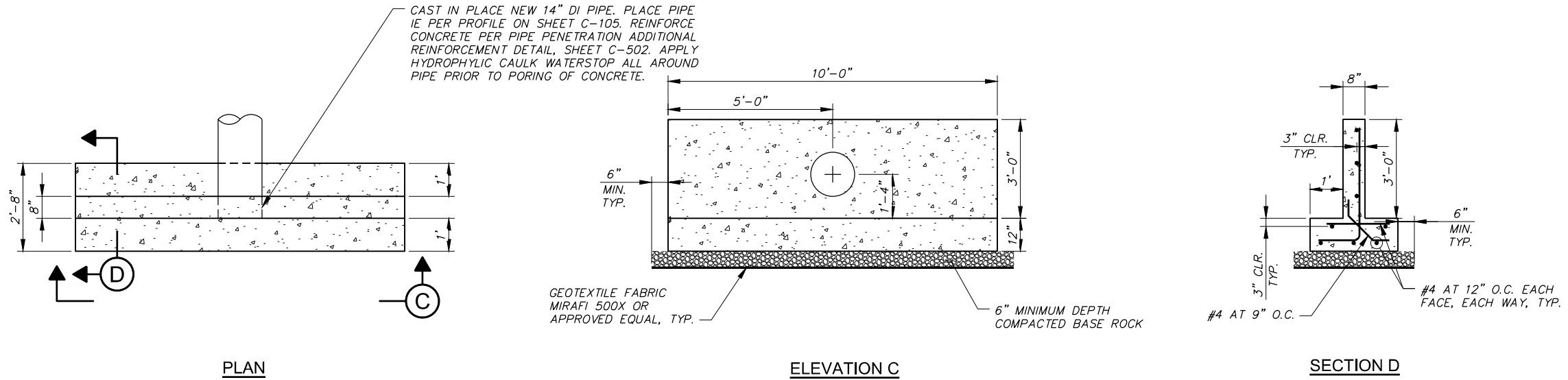


DESIGNED BY: J. HERRON	BY:	DATE:	JOB NUMBER: 596-07	DATE: 2023
DRAWN BY: S. MAGNER			ACAD FILE: 596-07-C-503.dwg	
REVIEWED BY: C. HUTCHINS			COPYRIGHT 2023 BY ANDERSON PERRY & ASSOC., INC.	

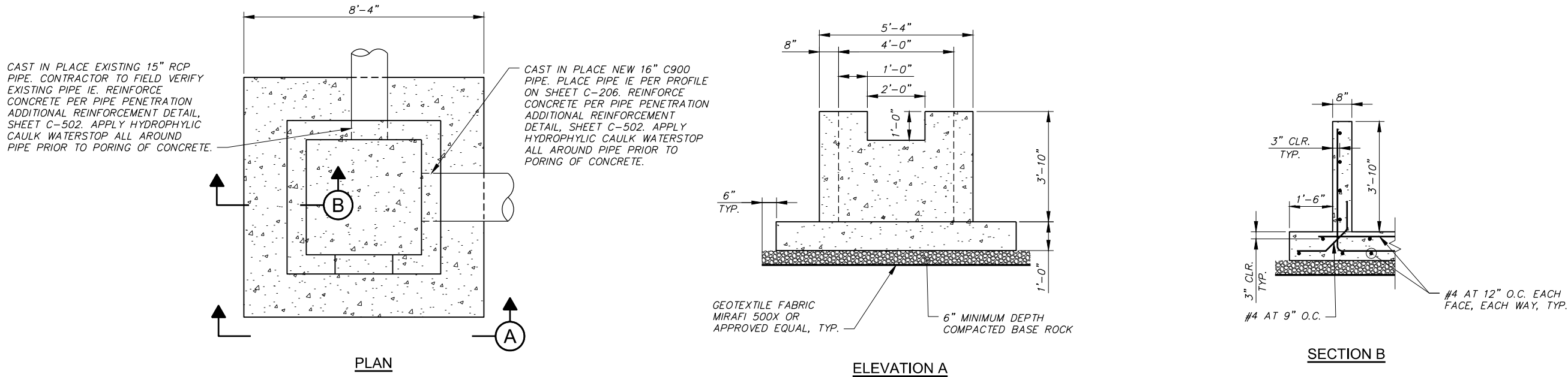


UNION SOIL AND WATER CONSERVATION DISTRICT	
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS	
LC5 AND LC6 DIVERSION DETAILS II	

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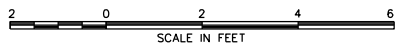
LC5 IRRIGATION OUTFALL DETAIL



LC6 JUNCTION BOX DETAIL



REVISION		BY	DATE
DESIGNED BY: J. HERRON			
DRAWN BY: P. RICHARDSON			
REVIEWED BY: C. HUTCHINS			
JOB NUMBER: 596-07		DATE: 2023	
ACAD FILE: 596-07-C-504.dwg		COPYRIGHT 2023 BY ANDERSON PERRY & ASSOC., INC.	

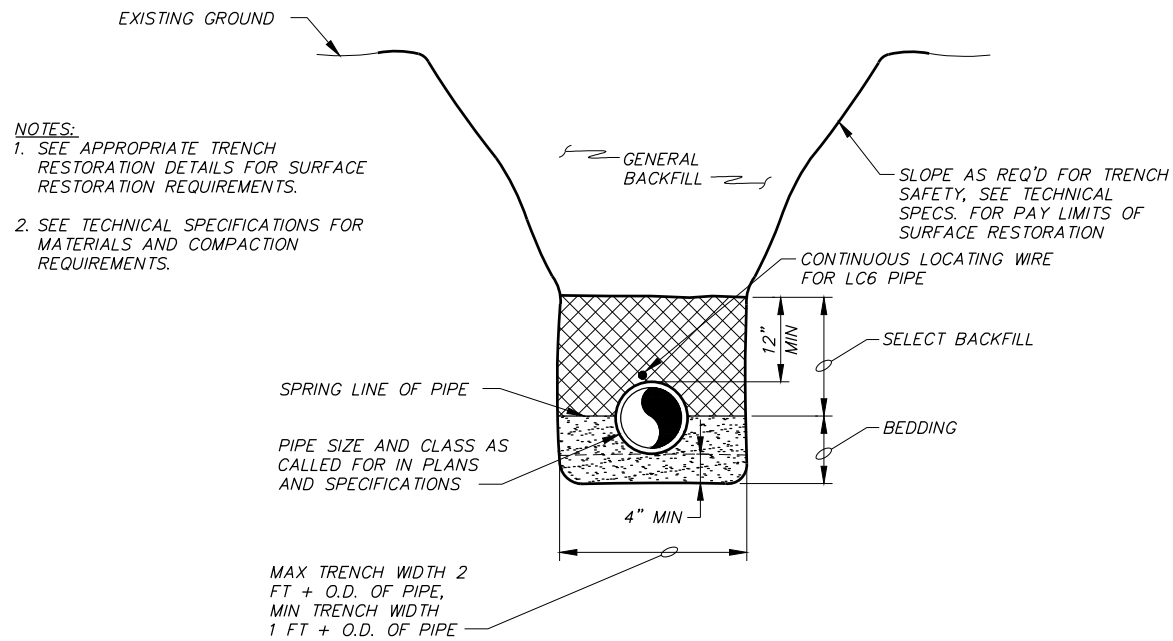


UNION SOIL AND WATER CONSERVATION DISTRICT	
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS	
LC5 AND LC6 JUNCTION BOX AND IRRIGATION OUTFALL DETAILS	

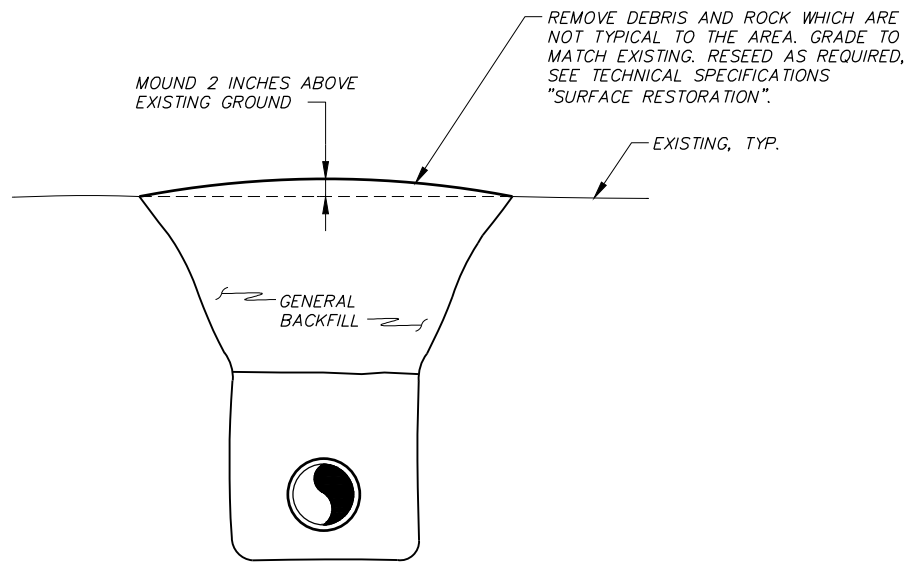
SHEET
C-504
20 OF 23



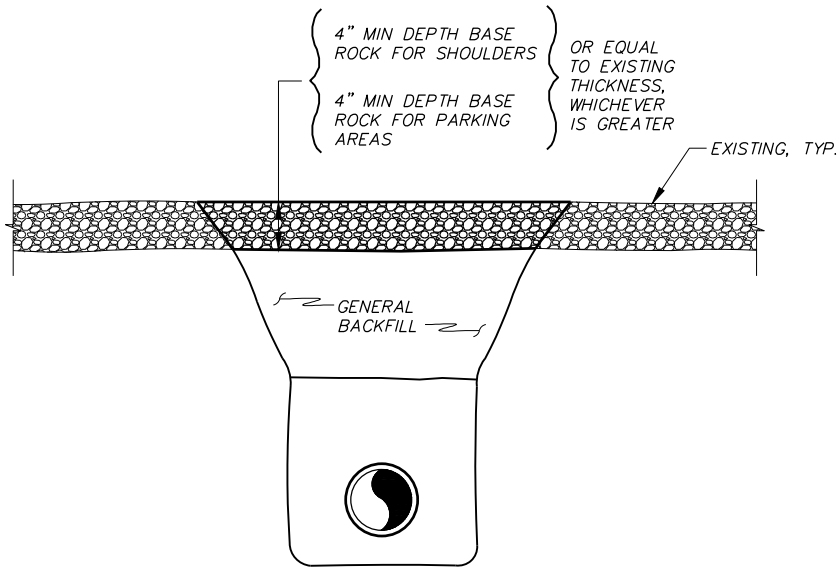
**ap anderson
perry**



TRENCH EXCAVATION AND BACKFILL
(WITH LOCATING WIRE)
N.T.S.



TRENCH RESTORATION
NATURAL AREAS
N.T.S.



TRENCH RESTORATION
SHOULDERS AND PARKING AREAS
N.T.S.
("GRAVEL SURFACE RESTORATION" PAY ITEM)

NOTE
SEE THE ODOT CROSSING PERMIT FOR STATE HIGHWAY TRENCH RESTORATION REQUIREMENTS.

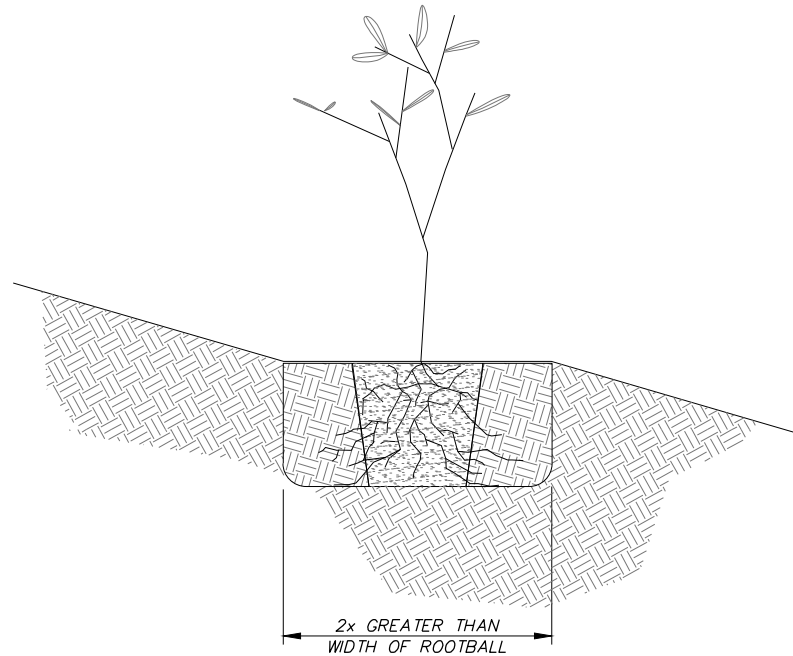


06/30/2023

REVISION	BY	DATE	JOB NUMBER	596-07	DATE	2023
DESIGNED BY	J. HERRON		ACAD FILE:	596-07-C-506.dwg		
DRAWN BY	S. MAGNER					
REVIEWED BY	C. HUTCHINS					



UNION SOIL AND WATER CONSERVATION DISTRICT	SHEET
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS	C-506
LC5 AND LC6 TRENCH DETAILS	22 OF 23

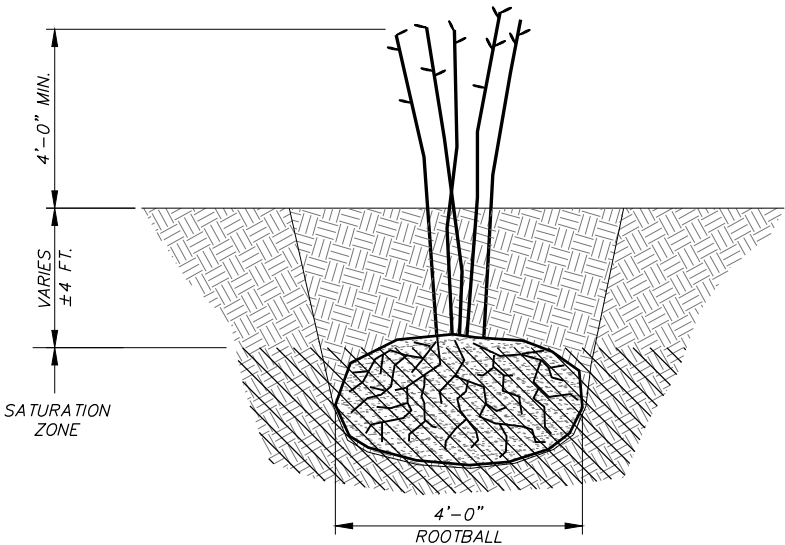


CONTAINER PLANT INSTALLATION NOTES

1. PRIOR TO INSTALLATION OF CONTAINER PLANT, CLEANLY PRUNE ANY BROKEN BRANCHES AND SCARIFY OUTER 1" OF ROOTBALL. CLEANLY PRUNE BROKEN, DEAD, OR DISEASED ROOTS. ROOTBOUND PLANTS SHALL BE REJECTED.
2. EXCAVATE CIRCULAR PLANTING HOLE WITH VERTICAL SIDES. SCARIFY SIDES AND BOTTOM OF PLANTING HOLE.
3. PLACE ROOTBALL ON UNDISTURBED NATIVE SOIL AT BASE OF PLANTING HOLE AND SPREAD ROOTS OUT TO SIDES OF HOLE. CLEANLY TRIM ANY ROOTS THAT ARE TOO LONG TO LAY STRAIGHT IN PLANTING HOLE. PLANTS SHALL BE UPRIGHT, PLUMB, AND TOP OF ROOTBALL SHALL BE EVEN WITH FINISH GRADE. WHEN PLANTING ON SLOPES, CREATE LEVEL PLANTING SURFACE TO ENSURE COVER OF ROOTS ON DOWNHILL SIDE OF PLANT.
4. BACKFILL PLANTING HOLE WITH SOIL EXCAVATED FROM PLANTING HOLE AND TAMP SOIL AROUND ROOTS. ANY TRASH OR DEBRIS FOUND IN EXCAVATED SOIL SHALL NOT BE USED TO BACKFILL THE PLANTING HOLE. BACKFILL SOIL SHALL MAKE GOOD CONTACT WITH THE ROOTBALL, LEAVING NO VOIDS.
5. PLANTS SHALL BE PLANTED IN CLUSTERS USING TYPICAL SPACING SHOWN ON THE SCHEDULE WHILE OTHER AREAS ARE LEFT UNPLANTED TO ALLOW FOR DISTRIBUTION OF THE PLANTS THROUGHOUT THE PLANTING AREA.
6. WITHIN 4 HOURS OF PLANT INSTALLATION, THOROUGHLY WATER IN EACH INSTALLED PLANT.

CONTAINER PLANT DETAIL

N.T.S.



WILLOW CLUMP INSTALLATION NOTES:

1. HARVEST THE ENTIRE LIVE WILLOW CLUMP INCLUDING THE ABOVEGROUND STEMS AND THE BELOWGROUND ROOTS.
2. USE WILLOWS THAT ARE YOUNG AND VIGOROUS, RANGE IN HEIGHT FROM 8 TO 15 FEET, AND ARE APPROXIMATELY THE DIAMETER OF A 4-FOOT BACKHOE BUCKET.
3. START THE HOLE FOR THE WILLOW CLUMP BY DIGGING APPROXIMATELY 10 INCHES AWAY FROM THE STEMS AND DIG DOWN APPROXIMATELY 2 FEET IN ORDER TO GET AS MUCH OF THE ROOT MASS AS POSSIBLE.
4. TRANSPORT THE WILLOW CLUMP TO THE PLANTING LOCATION IMMEDIATELY UPON DIGGING THE WILLOW CLUMP AND PLANT IT SO THE WILLOW CLUMP DOES NOT DRY OUT. TARPING OF THE WILLOW CLUMP MAY BE NECESSARY IF TRANSPORTING THE CLUMP A LONG DISTANCE AND IF THE WEATHER IS SUNNY AND HOT.
5. PRE-DIG THE PLANTING LOCATION FOR THE WILLOW CLUMP AND EXCAVATE DOWN TO THE SOIL SATURATION ZONE BUT NOT INTO THE GROUNDWATER TABLE.
6. PLACE THE WILLOW CLUMP INTO THE PLANTING HOLE AND BACKFILL IN AND AROUND THE WILLOW CLUMP WITH SOIL AND WATER TO REMOVE AIR POCKETS AROUND THE CLUMP.
7. A MINIMUM 4 TO 5 FEET OF THE WILLOW STEMS SHALL PROTRUDE ABOVE THE FINISHED GROUND SURFACE.
8. CUT OFF ABOUT ONE-THIRD TO ONE-HALF OF THE WILLOW TOPS STRAIGHT ACROSS AT THE FINISHED GROUND SURFACE ONCE PLACED AND BACKFILLED.

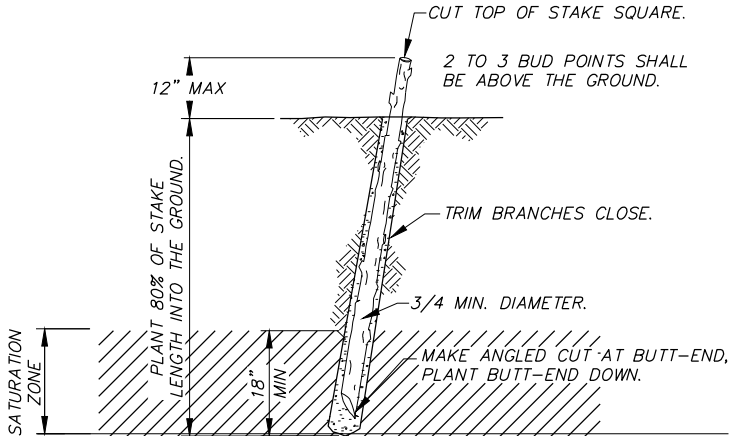
WILLOW CLUMP DETAIL

N.T.S.

PLANT MATERIAL SCHEDULE AND DENSITY PRESCRIPTION

PLANTING AREA	LENGTH	REDOSIER DOGWOOD (CP)	COYOTE WILLOW (PP)	WOODS ROSE (CP)	WILLOW CLUMP (LOCAL)
LC5	270	90	270	90.00	14.00
LC6	240	80	240	80.00	12.00

CP = CONTAINER PLANTS
PP = POLE PLANTING
LOCAL = LOCAL WILLOW SPECIES



POLE PLANTING INSTALLATION NOTES

1. USE HEALTHY, STRAIGHT AND LIVE WOOD AT LEAST 1 YEAR OLD.
2. MAKE CLEAN CUTS AND DO NOT DAMAGE STAKES OR SPLIT ENDS DURING INSTALLATION, USE A PILOT BAR OR OTHER APPROVED METHOD IN FIRM SOILS.
3. CUTTINGS HARVESTED FRESH AT THE TIME OF INSTALLATION SHALL BE SOAKED FOR A MINIMUM OF 24 HOURS PRIOR TO INSTALLATION PLANTING. CUTTINGS HARVESTED AND STORED SHALL BE SOAKED FOR A MINIMUM OF 10 DAYS PRIOR TO PLANTING.
4. TAMP THE SOIL AROUND THE STAKE.
5. EXTEND STAKES INTO WATER SATURATION ZONE.

TYPICAL POLE PLANTING DETAIL

N.T.S.



06/30/2023

DESIGNED BY	J. HERRON	JOB NUMBER	596-07	DATE	2023
DRAWN BY	P. RICHARDSON	ACAD FILE:	596-07-C-507.dwg		
REVIEWED BY	C. HUTCHINS				



UNION SOIL AND WATER CONSERVATION DISTRICT	SHEET
LITTLE CREEK (LC5 AND LC6) FISH PASSAGE IMPROVEMENTS	C-507
LC5 AND LC6 PLANTING DETAILS	23 OF 23



Memorandum

Subject: Public Works Report
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Paul Phillips, Public Works Lead

ATTACHED:
[Public Works Report April 2024](#)

Council Report for April 2024 Public Works Department

Water: Installed a new water service line at 1650 North college. Did two waterline taps for the chlorine analyzer, which will be located at well #2. Currently we are waiting for the building permit, so the project is about two weeks behind schedule. Both water samples came back good, and we have finished our C.C.R. (consumer confidence report), which will be in the newsletter and added to the city website. I attended a three-day short school in Ontario to keep my C.E.U.s (continuing educational units) up as the state requires us to have 20 hours in water, 20 hours in sewer and 6 hours in cross connections in every two years.

Sewer: Installed a sewer tap at 660 East Beckman and a tap at 1650 North College. Drained the effluent force main line and reinstalled the check valve in the vault at the golf course. Added some chlorine tablets to the effluent pond at the golf course. Helped troubleshoot Influent pump issues at the treatment plant. Had electricians fix blower #3 as a fuse was blown and had to be replaced along with a fan. Helped install a new float on the influent channel and installed a window on the breezeway between the shop and the screw screen building. Will work on the breezeway as time allows.

Streets: There is a bucket truck in Elgin that the owner is holding for us as our bucket truck died almost two years ago and we have been looking for a replacement ever since. Celeste has the information on the truck, and it appears to check out good. The county has delivered the chip rock for the upcoming chipseal work.

Park: We replaced one of the valves to the sprinkler system and with the warm weather will probably be working on firing it up soon. Robin had the park sprayed for dandelions and ground sterilant in the playground area. She has been mowing, weed eating, and edging the park and has it looking good. We located the three property pins between the park and the hotel.

State Shop: We have been cleaning the back area and are hosting spring cleanup day. With any luck things will go smoothly and we will be having the cleanup day at the shop for future years to come.

Paul Phillips Public Works Lead May 8th 2024



Memorandum

Subject: April 2024 Wastewater Report
Meeting: City Council - May 13 2024
Prepared For: Mayor and Members of Council
Staff Contact: Heather Daggett, Wastewater

ATTACHED:
[Wastewater Report April 2024](#)

Wastewater Report APRIL 2024

Drying Beds & Sludge removal – Currently 3 of 4 drying beds are occupied. Drying Bed 1 has product from Catherine Creek Hides and 3 & 4 have Digester sludge from the secondary digester. Sludge maintenance and monitoring, decanting water off the digesters as well as transfer from the Primary Digester to the Secondary Digester. Mix drying beds when weather conditions allow.

Regular Maintenance

- Laboratory equipment
- Chemical pump maintenance, Chlorine, and Calcium Pumps
- Blower Services and Maintenance
- RBC Maintenance
- SBC: Grease
- Oregon Street Lift Station

Effluent - Effluent discharge is going to Catherine Creek with an average of 125,000 gall a day.

Laboratory – Daily, Weekly, Monthly, and Quarterly laboratory testing to meet DEQ requirements, and facility process checks.

Influent - With wet weather comes increased flows. Filter cleaning, screen & channel cleaning.

- Pull influent screen and manually clean and remove rags that bound up around the drum shaft and support bar.
- Replace low level float in the influent wet well.

Collections System -

- New sewer installation on N College

Other

- Run Vac Truck and help with the water line from E Center to new well building.
- Replace chemical pump.
- Replace tubing for both chemical pumping systems and verify flow to the injection location.
- T.A.G on site and corrected the issue with influent pumping.
- Working with Anderson Perry & Lakeside to improve the operation of the drum screen.



CITY ADMINISTRATOR REPORT - April 2024

Ranger Station:

The second unit was opened for reservations starting Monday March 4th and we make improvement and adjustments as complements and suggestions are received. At this time, we are looking at some preliminary drawings for the layout of the final unit. These drawings will then be used to formulate a budget for completion of the third and final unit.

Water/Sewer:

Work continues on the Water project. As a reminder, Well 2 has been taken out of service while upgrades are completed. Though there has been some movement in the schedule, we are still hoping to have the upgrades Well #2 completed mid to late Jul, and Well #3 upgraded by mid-August. These projects are both out of the CDBG grant. I met with Business Oregon, Anderson & Perry and city staff on April 24th to continue coordination of efforts and keep the project running as smoothly as possible. These meetings will continue on a regular basis throughout the duration of the project. Public Works is also gearing up for their summer cleaning at the wastewater plant per DEQ mandate and during this process, work also continues on updating a short term and long-term wastewater facilities plan in order to budget for future needed upgrades.

Library:

The outside of the library has been spruced up with planter pots and there has been much activity as springtime weather rolls in. There has been a 52% increase in patrons for the month of April compared to the same time this year and double the number of new patrons this April compared to April of last year. Tiffany has posted all summer reading program events online and I fully expect those programs to be fully utilized. Sign-ups begin May 20. Tiffany has received a second quote for the repointing project and we are still awaiting news the end of May on whether we received the grant that we applied for to assist with that project.

Buffalo Peak:

I met with Dana Londin of Buffalo Peak at the golf course and had a good conversation on the positive contribution that Buffalo Peak makes to the community by bringing folks in both local and from out of town and out of state. There were over 100 tee times the last weekend of April as folks took advantage of a sunny springtime day.

Budget:

The 2023-2024 Proposed budget was reviewed on April 23rd, 24th and 25th by the budget committee. After good discussion amongst the budget committee over two evenings, the budget committee voted to approve the proposed budget to be sent to council for a budget hearing on June 10th at 7:15pm. At that time the budget will be reviewed, public comment received, and the council will vote on whether to approve the proposed budget for the upcoming fiscal year.

Law Enforcement Contract and Ordinance position:

We had a very productive meeting with sheriff Cody Bowen and there is a proposed contract in the council packet. Once the contract is approved by council, I will move forward with advertising for a part time position to assist with the administration side of Ordinance enforcement.