REQUEST FOR QUOTE (RFQ)

BLM/UNF BOUNDARY FENCE

Fence Construction

JUNE 2021

Bidder Timeline
Mandatory Bid Tour: July 14, 2021
Deadline for Clarifying Questions: July 28, 2021
Final Addenda Released: August 2, 2021
Bids Due/Opened: August 9, 2021, 4pm
Award Notification: August 11, 2021

Contract Timeline
Contract Negotiation: August 11-17, 2021
Contract Signing: August 11-17, 2021
Work Begins: August 2021
Work Completed: May 2022

NORTH FORK JOHN DAY WATERSHED COUNCIL

Valeen Madden, Executive Director
Alex Rice, Project Coordinator

691 HWY 395 N.
LONG CREEK, OR 97856
PH: (541) 421-3018

INVITATION TO BID

The North Fork John Day Watershed Council (hereinafter called COUNCIL) is seeking construction and repair services for the following tasks:
1) Inspection and repair of 2.76 miles of fence ranked as being in 'Fair' condition.
2) Repair/reconstruction of 4.6 miles of fence ranked as being 'Non-Functional' condition.

- CONTRACTOR will, where necessary on segments designated 'Fair', repair all 4-wire barbed wire fencing designated as to a condition that is fully functional and meets "wildlife-friendly" standards.
- CONTRACTOR will construct 4-wire barbed wire fence with galvanized pipe bracing (where accessibility for equipment is feasible) or rock cribs (where necessary) and 48" tamarack or fir split stays to replace 'Non-Functional' fencing. CONTRACTOR will construct stream crossings where necessary.
- CONTRACTOR will remove and dispose of deconstructed fencing materials to be replaced in both 'Fair' and 'Non-Functional' fencing segments.
- When constructing rock jacks, CONTRACTOR shall only gather rocks from natural location and never from human-made features like cairns, mounds, or foundations, etc.
- CONTRACTOR shall adhere to all road closures except where explicit written permission is given by the Bureau of Land Management and/or the US Forest Service
- When necessary, the CONTRACTOR shall make use of only those campsites designated for use during this project.
- CONTRACTOR will furnish all materials for repair and construction of all fencing.
-
- CONTRACTOR will be responsible for contacting Oregon Utility Notification Center at 811 prior to implementation.
- CONTRACTOR will implement best management practices and work with minimal impact on stream, riparian, and associated uplands.
- A fire prevention/control plan will be required from the CONTRACTOR when/if Industrial Fire Precaution Level is a 3 or 4.
- A Hazardous Material Spill Plan will be required from CONTRACTOR prior to mobilization.

Project is located on and around Boneyard Canyon, a tributary to the North Fork John Day River in Grant County. Instream or work dependent on instream work and associated work must be performed during the designated instream work period between **July 15 and August 15, 2021** with written notice to proceed from the COUNCIL.

A *mandatory* pre-bid site tour will take place on **July 14th at 10am**. Bidders must RSVP via email to alex@nfjdwc.org or phone (541) 421-3018 by **July 12th .** The project locations is extremely remote and on rugged terrain. Bid tour attendees must bring an ATV or other small OHV suitable for use off-road as well as personal provisions for a field day in hot, dry conditions. Given the size of the project area (approximately 7 miles) bid tour attendees should expect to be at the project site for a full day. Exact tour locations are to be determined and will be sent out prior to July 14th.

This bid packet consists of this packet, the scope of work (Appendix A, consists of scope of work, project maps and design specifications), and a sample contract.

Individual bids will be received from qualified contractors by the COUNCIL at 691 Hwy 395 N (PO Box 444), Long Creek, OR 97856 until **4:00 PM August 9th, 2021.**

As stipulated in the instructions to bidders, individual sealed envelopes and emails containing bids and supporting materials shall be marked **BLM/UNF Boundary Fence.**

Bids received after the established deadline may not be considered.

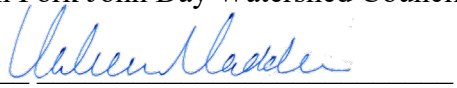
When a Contract is awarded at an amount lower than the funding available to support the Scope of Work, bidders acknowledge that the COUNCIL may increase CONTRACTOR services and contract compensation for additional services supporting the original Scope of Work.

The COUNCIL may reject any bid not in compliance with all prescribed bidding procedures and requirements, and reserves the right to reject for good cause any or all bids in whole or in part upon the finding of the COUNCIL that it is in the interest of the COUNCIL to do so, to waive irregularities not affecting substantial rights, and to postpone the award of the work as necessary for a period of time not to extend beyond thirty (30) days from the bid opening date. Bid prices quoted shall remain firm for a period of forty-five (45) days from the date of bid opening.

CONTRACTOR shall comply with the requirements of the Oregon prevailing wage rates under ORS 279C.800 to 279C.870 or federal Davis-Bacon prevailing wages, whichever is higher.

On behalf of the bidder and proposed subcontractor(s), successful bidder must furnish at contract signing: valid W-9 Tax Form; Workers Compensation as required by the State of Oregon; and, proof of general liability insurance with extended coverage through an insurance company licensed to do business in the State of Oregon, indicating at minimum $1,000,000 coverage per incident and $2,000,000 aggregate. All general liability certificates will name North Fork John Day Watershed Council as Additional Insured, as defined in the Contract.

North Fork John Day Watershed Council

By:  Date: June 15, 2021

Valeen Madden
Executive Director, Executive Director

PART I

GENERAL INFORMATION

1. BID PREPARATION

A. Compliance: Bidder certifies that bidder and anticipated subcontractor(s) hold all required certifications and insurances.

- Bids must be presented to the COUNCIL prior to the bid deadline.
- All bids shall be typed or prepared in ink or other media and signed in ink by an authorized representative of the bidder.
- Bids will be considered irregular if the proposal is on a form other than furnished by the COUNCIL, or otherwise specified, or if the form is altered or any thereof is detached.
- If there are unauthorized additions, conditional or alternated bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite, or ambiguous as to its meaning.

B. All labor costs shall be calculated at Prevailing Wage rates. CONTRACTOR will certify that wage standards are met during project implementation.

C. Unit and Total Price: Unless otherwise indicated, the price of each item must be clearly shown in the space provided. The price of each item shall be extended to show the total when required. In cases of errors in extensions, the unit price shall prevail. The written unit price shall prevail over the numerical unit price.

D. References: Three (3) professional bidder references for similar work performed within the last five (5) years, including a brief description of the work, contract amount, and contact information for a contract representative who can speak to the quality of the bidder's performance. Submission of a bid shall be deemed consent for the COUNCIL to contact listed representatives to obtain professional reference information.

E. Completion: Bidder certifies that the work will be completed according to the completion time stated in the specifications and as directed by COUNCIL representatives.

2. BID EVALUATION

A. Minimum Requirements: Evaluation of bids will be based on minimum requirements established by the bid proposal. COUNCIL reserves the right to reject any and all bids or to accept the bid deemed to be in the best interest of the COUNCIL.

B. Certification of Alteration or Erasure: A bid may be rejected if it contains any material alteration or erasures unless, before the bid is submitted, each such alteration and erasure is initialed in ink.

C. Resident Bidder: Bidders shall indicate whether they are resident bidders. A resident bidder is one who has a business address in Oregon and paid income and unemployment taxes in Oregon during the twelve (12) calendar months immediately preceding the bid.

D. CONTRACTOR and Subcontractor(s): Bidder and subcontractor qualifications, prior experience, professionalism and prior work history with the COUNCIL shall be considered in award of the contract.

E. Exceptions: Any bid or proposal that takes exception to specifications or to contract terms set forth in the bid documents may be rejected.

PART II

INSTRUCTIONS TO BIDDERS

1. SCOPE OF WORK

The North Fork John Day Watershed Council (herein called "COUNCIL") is inviting bids from qualified vendors to furnish all equipment, labor, tools, transportation and services necessary, and reasonably incidental to the completion of BLM/UNF Boundary Fence as defined in Appendix A and as directed by a COUNCIL REPRESENTATIVE on site.

2. EXAMINATION OF WORK SITE

It is understood that the bidder, before submitting the bid, has made a careful examination of the contract; that the bidder has been fully informed as to the character of the work required; and that the bidder has made a careful examination of the location and conditions of the work location. COUNCIL will in no case be responsible for any loss or for any unanticipated costs that may be suffered by CONTRACTOR as a result of CONTRACTOR's failure to acquire full information in advance and in regard to all conditions pertaining to the work.

3. NOTICE FOR SUBCONTRACTING

The CONTRACTOR may hire or engage one or more subcontractors to perform any of its obligations under the Contract; however, if a CONTRACTOR chooses to engage subcontractors, the CONTRACTOR shall take sole responsibility and professional liability for the activities and duties performed by all of its subcontractors. The CONTRACTOR shall use the same degree of care in selecting any such subcontractor as it would if such subcontractor was being retained to provide similar services to the CONTRACTOR. The CONTRACTOR must include with its bid response packet, a list of its potential subcontractor(s) and the CONTRACTOR account(s) of subcontractor qualifications and experience in the last 5 years, as related to the performance of the

Scope of Work. The CONTRACTOR will remain responsible for all of its obligations under the Contract; including standard of services, regardless of the performance of its subcontractor(s). All subcontractors are held to the same standards of insurance as the CONTRACTOR. Documentation of all subcontractor insurances shall be provided at Contract signing and must demonstrate an active status and reflect the North Fork John Day Watershed Council as an Additional Insured.

4. INTERPRETATION OF PROPOSED CONTRACT DOCUMENTS

A. If a bidder finds discrepancies in, or omissions from, the documents, or if the bidder is in doubt as to their meaning, the bidder shall immediately notify the COUNCIL.

B. All addenda will be covered in the Bid Proposal. In closing the Contract, all addenda will become a part of that contract.

5. PREPARATION OF BID PROPOSAL

A. The bidder shall submit their proposal on the Bid Proposal form. The bidder shall specify the bid item unit price; both written out in words and in figures, in addition to providing the total item amount (unit price multiplied by the approximate quantity) and total extended amount (sum of all total item amounts) in figures. All words and figures shall be in ink or typed.

B. Bidder shall provide 3 professional references for similar work completed under contract within the last 5 years. Bidder shall also provide bidder account of subcontractor qualifications and experience as it pertains to the RFQ.

C. If an amount entered by the bidder on the proposal form is to be altered it should be crossed out with ink, the new bid amount entered above or below it, and initialed by the bidder, also with ink. In a case of discrepancy between the prices written out in words and those written in figures, the prices written in words shall govern.

D. Bidders may make requests for information or ask clarifying questions while preparing the Bid Proposal. Requests shall be presented to the COUNCIL **no later than July 28th, 2021**. Bidder requests shall be received by email at alex@nfjdwc.org or by calling (541) 421-3018.

E. The bidder's proposal must be signed with ink by the individual, by one or more members of the partnership, by one or more members or officers of each firm representing a joint venture, by one or more officers of a corporation, or by an agent of the CONTRACTOR legally qualified and acceptable to the owner.

6. SUBSTITUTES

Bidders may request COUNCIL approval to substitute equipment or products, when certain manufacturer's equipment, product brand or its approved equal is called for. Requests shall be presented to the COUNCIL by email at alex@nfjdwc.org no later than **July 28, 2021**. Bidder requests must include comprehensive equipment manufacturer specifications and context demonstrating requisite equivalency and Scope of Work suitability.

7. PRE-BID INQUIRIES

Technical questions regarding implementation and requests for clarification shall be directed to Alex Rice at alex@nfjdwc.org or (541) 421-3018, and must be received no later than **July 28, 2021**.

8. RESIDENT BIDDER

Bidder shall indicate their Resident Bidder status on the Bid Proposal form. "Resident Bidder" is one who has a business address in Oregon and has paid both income and unemployment taxes in Oregon for twelve (12) consecutive months preceding the bid close date.

11. BID SUBMITTAL AND MODIFICATION

A. Bid response materials must be marked: ***BLM/UNF Boundary Fence, Attn: Alex Rice.*** Bids shall be submitted through one of the following: 1) post mail to P.O. Box 444, Long Creek, OR 97845, 2) email to alex@nfjdwc.org, or 3) **scheduled hand delivery** at 691 HWY 395 North, Long Creek, OR 97845. **Due to the ongoing Covid-19 pandemic, hand delivered bids that are not scheduled in advance WILL NOT BE ACCEPTED.**

B. A bidder may not modify any bid after it has been deposited with the COUNCIL. A bidder may rescind a bid and deposit a new bid with the COUNCIL at any time prior to the bid deadline.

12. BID OPENING

All bids will be opened by the COUNCIL on **August 9, 2021** at 4pm at 691 HWY 395 North, Long Creek, OR 97845.

13. ACCEPTANCE OF BID

COUNCIL reserves the right to reject any bid that does not comply with all prescribed bidding procedures and requirements, and may reject for good cause any bid or all bids upon a finding it is in COUNCIL's interest to do so. Bid proposals may be considered irregular and therefore may be rejected if the bidder adds/alters any provisions reserving

the right to accept or reject an award, or to enter into a contract pursuant to an award.

14. BID EVALUATION CRITERIA

A. EVALUATION POINT SUMMARY

The following is a summary of evaluation criteria with point values assigned to each. These weighted factors will be used in the evaluation of individual bidder proposals by sub-category. COUNCIL may contact Bidder prior to bid evaluation if clarification or questions arise.

Clear Creek Fencing Scoring Table				
Cost (60 points):				Score
[Lowest Responsive Bid/Bidder's Bid Amount] x 60 (0-60)				
Contractor Qualifications and Experience (20 points):	Reviewer 1	Reviewer 2	Reviewer 3	Average
Thoroughness and clarity of the response (0-5)				
Relevant Project management experience and/or past experience working with NFJDWC and/or partners (0-5)				
Company resources available (0-10)				
Contractor References (15 points):				Score
Reference 1 (0-5)				
Reference 2 (0-5)				
Reference 3 (0-5)				
Local Contractor (5 points):				Score
Local Contractor= 5 pts, Not Local= 0 pts				
Total				

Table 1: Evaluation Point Summary

B. EVALUATION FACTORS

1. Cost
   The evaluation of each Bidder's cost proposal will be conducted using the following formula:

   Lowest Responsive Offer Bid
   ---------- *X Available Award Points= XX points*
   Bidder's Bid Amount

2. Bidder & Subcontractor Qualifications & Experience
   Points will be awarded based on the thoroughness and clarity of the response, the breadth and depth of the engagements cited and the perceived validity of the response.

3. Bidder & Subcontractor References
   Points will be awarded based upon an evaluation of the responses to a series of questions that will be asked of the Bidder references concerning the quality of the Bidder's services, the timeliness of services, responsiveness to problems and complaints and the level of satisfaction with the Bidder's overall performance.

4. Local Contractor
   As part of our mission the North Fork John Day Watershed Council strives to support our local community and economy. We place value on hiring and working with contractors from our local area here in the John Day Basin.

15. FORM OF AGREEMENT BETWEEN COUNCIL AND CONTRACTOR

The form of the Contract to be executed between COUNCIL and CONTRACTOR for performance of the work is attached and included in the Bid Documents.

16. EXECUTION OF CONTRACT

A. Notwithstanding any delay in the preparation and execution of the Contract, each bidder shall be prepared upon written notice of bid acceptance, to commence work on or before the date advertised in the Invitation to Bid, following receipt of notice to proceed from the COUNCIL. Work is expected to be completed within timelines established in the Contract.

B. The successful bidder shall assist and cooperate with the COUNCIL in preparing the Contract. The Contract shall be ready for all signatures within five (5) business days following bid selection. CONTRACTOR shall return the Contract to the COUNCIL within five (5) business days of Contract receipt.

C. CONTRACTOR shall contact the COUNCIL at least 24 hours prior to commencement of work.

17. TAX COMPLIANCE CERTIFICATION

Pursuant to ORS 305.385, successful bidder shall certify that it is in compliance with Oregon's tax laws.

PART III

BID PROPOSAL

1: COST

Date: _____, 2021

North Fork John Day Watershed Council
691 Hwy 395 N.
Long Creek, Oregon 97856

Attention: Valeen Madden, Executive Director:

The undersigned bidder declares that bidder has carefully examined the site of proposed work and has made such investigations necessary to determine the character of material and conditions to be encountered to construct large woody debris structures. The Project Area is approximately 11.5 miles north of Monument Oregon on the boundary of BLM land and the Umatilla National Forest. The undersigned hereby proposes to furnish all equipment, labor, and tools incidental to completion of work and to perform all work to complete the project as directed by COUNCIL representatives on-site, the Bid Documents, conditions of the Contract and any Supplemental General Conditions, at the following prices calculated using:

1. 2.8 MILES Labor and materials for 'Fair-Conditioned' fence

_____	_____	_____
(Unit price per foot written out in words)	(Per foot)	(Unit Price*Hours)

2. 4.6 MILES Labor and materials for 'Non-Functional' fence

_____	_____	_____
(Unit price per foot written out in words)	(Per Foot)	(Unit Price*Hours)

3. All Required Mobilization and Demobilization for fence inspection, repair and construction

_____	All Required	_____
(Unit price written out in words)		(Lump Sum)

4. Deconstruction, removal and disposal of 'Non-Functional' fence

_____	All Required	_____
(Unit price written out in words)		(Lump Sum)

TOTAL EXTENDED AMOUNT _____
(Sum of All Item Totals)

2. BIDDER REFERENCES

Bidder shall provide three (3) professional references for similar work performed within the last five (5) years, including a brief description of the work, contract amount, and contact information for a contract representative who can speak to the quality of the bidder's performance. (May attach additional sheet w/ descriptions of work completed)

1) Reference Company Name: _____

Company Contract Representative: _____

Contract Telephone: _____

Description of work completed w/ Reference Company (Including brief description of work performed, equipment used, and any problems/delays which arose and how they were addressed):: _____

_____

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2) Reference Company Name: _____

Company Contract Representative: _____

Contract Telephone: _____

Description of work completed w/ Reference Company (Including brief description of work performed, equipment used, and any problems/delays which arose and how they were addressed): _____

3) Reference Company Name: _____

Company Contract Representative: _____

Contract Telephone: _____

Description of work completed w/ Reference Company (Including brief description of work performed, equipment used, and any problems/delays which arose and how they were addressed): _____

3. SUBCONTRACTOR REFERENCES

Bidder account(s) of subcontractor qualifications and experience in the last 5 years, as related to the performance of the Scope of Work.

1) Subcontractor Business Name:

_____

Bidder account of subcontractor qualifications and experience in the last 5 years as it relates to the RFQ Scope of Work:

_____

_____

_____

_____

2) Subcontractor Business Name:

_____

Bidder account of subcontractor qualifications and experience in the last 5 years as it relates to the RFQ Scope of Work:

_____

_____

_____

3) Subcontractor Business Name &:

_____

Bidder account of subcontractor qualifications and experience in the last 5 years as it relates to the RFQ Scope of Work:

_____

_____

_____

COUNCIL'S RIGHT RESERVED:

To reject any or all bids, to waive informalities, and to accept only such bids as may appear to COUNCIL'S own best interests.

The undersigned understands that time and estimated work may be shifted between bid items to better accommodate the actual work on the ground, in such cases the bid hourly rate for the operated piece of equipment will take precedence.

The undersigned also agrees that CONTRACTOR will have equipment and qualified operators available as specified in the Contract and will expect to commence work after August 1, 2021. Fire hazard and weather conditions may require adjustment of the start date and could possibly interrupt, delay or extend construction activities.

It is understood that time is of the essence in the execution of the Contract. In order to assure the success of this project, the completion date designated herein may be a prime consideration in the award of the Contract.

CONDITIONS:

COUNCIL reserves the right to reject any and/or all bids and to waive all formalities.

CONTRACTOR and subcontractor(s) shall provide Workers Compensation as required by the State of Oregon; general liability insurance with extended coverage through an insurance company licensed to do business in the State of Oregon, indicating at minimum $1,000,000 coverage per incident and $2,000,000 aggregate. Evidence of such coverage shall be provided to the COUNCIL. Evidence may be in the form of Notice of Compliance/Certificate, or by indicating the policy number and expiration date in the appropriate section of the Certificate of Insurance.

CONTRACTOR shall comply with the requirements of the Oregon prevailing wage rates under ORS 279C.800 to 279C.870 or federal Davis-Bacon prevailing wages, whichever is higher. CONTRACTOR shall be required to provide copies of certified payroll to the COUNCIL for all Davis-Bacon Act wages.

The undersigned certifies compliance with State statutory requirements governing registration of corporation and/or assumed business name.

The bidder shall state whether bidder is doing business as an individual, a co-partnership or as a corporation. If a co-partnership, all partners are named and the person signing on behalf of the co-partnership states Bidder's position with the co-partnership. If a corporation, the Bidder gives the state of incorporation, whether it is licensed to do business in the State of Oregon, and the position of the person signing on behalf of the corporation.

The undersigned Bidder hereby represents that this bid is made without connection with any person, firm or corporation making a bid on the same material, and is in all respects fair and without collusion or fraud.

The undersigned Bidder hereby certifies that it has not discriminated against minority, women or emerging small business enterprises in obtaining any required subcontractors.

Bidder certifies that it does not discriminate in any way whatsoever, on the basis of race, creed, color, national origin, or by any other means.

Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Bidder is a Resident Bidder? (Yes or No) _____

By signing and returning this bid proposal form, the Bidder is acknowledging acceptance of and the intent to abide by the terms and conditions included as set forth in the bid documents.

BIDDER REGISTERED NAME:

_____

ADDRESS: _____

STATE IN WHICH INCORPORATED: _____

BY: _____ (signature)

NAME/TITLE: _____ (please type or print)

DATE: _____ TELEPHONE: _____

End Bid Proposal

SUMMARY OF BID ITEMS/MEASUREMENT FOR PAYMENT

The contract price for each item shall constitute full compensation for furnishing all equipment, labor, appliances, transportation costs, and incidentals, and performing all operations necessary to construct and complete the items in accordance with this contract. Payment for each item shall be considered as full compensation notwithstanding that minor features may not be mentioned herein. Work paid for under one item will not be paid for under any other item. No other separate payment will be made for any other work, services or operations required by the CONTRACTOR to complete the project in accordance with these specifications, and all costs thereof, including the costs of furnishing any required items, shall be considered as incidental to the work. All work will be directed by a COUNCIL representative.

1. Bid Item 1 " Labor and Materials for Repair of Fair-Conditioned Fence "

    A. Work shall include but not be limited to:

        1. Completion of repairs where necessary
        2. Reconstruction where necessary (Collapsed/severely damaged short segments)

    B. Measurement and Payment: Per foot of fence repaired and/or reconstructed

2. Bid Item 2 "Labor and Materials for Non-Functional Fence"

    A. Work shall include but not be limited to:

        1. Construction of new 4-wire fence according to the alignment in the Project Map as well as following the original fence line (within reason) and the Wire Fence Specifications

    B. Measurement and Payment: Per foot of fence constructed

3. Bid Item 3 " All Required Mobilization and Demobilization for Fence Inspection, Repair and Construction"

    A. Work shall include but not be limited to:

        1. All required mobilization and demobilization for fence inspection, repair and construction (Bid items 1 and 2)

    B. Measurement and Payment: Lump sum

4. Bid Item 4 "Deconstruction, removal and disposal of non-functional fence"

    A. Work shall include but not be limited to:

        1. Deconstruction and disposal of non-functional fence.

B. Measurement and Payment: Per foot of fence removed and disposed of.

END OF SUMMARY OF BID ITEMS

Appendix A: Scope of Work,Project Maps, and Fence Specifications

This Contract is entered into to accomplish the following tasks for the following purposes:

Project Description
Construct and repair fence along the boundary between the Umatilla National Forest – Heppner Ranger District and the Bureau of Land Management lands near Boneyard Canyon

(Scope of Work)
August 17, 2021 – May 30, 2022

A) Repair of 'Fair Conditioned' fence

Description of Work
Work item shall include, but not be limited to:

- Furnishing materials necessary to complete necessary repairs on fair conditioned fence
- Repairing all broken wires, tightening loose wires, and realigning wires to correspond with the existing fence construction specifications (e.g. number of wires, wire spacing, etc.)
- Restoring all missing, broken, and loose wire clips, staples, wood stays, and steel posts to replicate the existing fence construction specification (e.g. wood stay spacing, steel post spacing, etc.)
- Repairing or reconstructing existing fence fixtures (e.g. H-Braces, rock jacks, gates, water crossings, etc.) as necessary to restore them to their original construction specifications or functionality.
- Installing new solid fence structures where necessary to support the existing fence.

B) Reconstruction of 'Non-Functional' fence

Description of Work
Work item shall include, but not be limited to:

- Deconstruction, removal, and disposal of non-functional fence materials
- Reconstruction of non-functional fence based on the alignment in the Project Map (as well as following the original fence alignment where practicable, and the Wire Fence Specifications

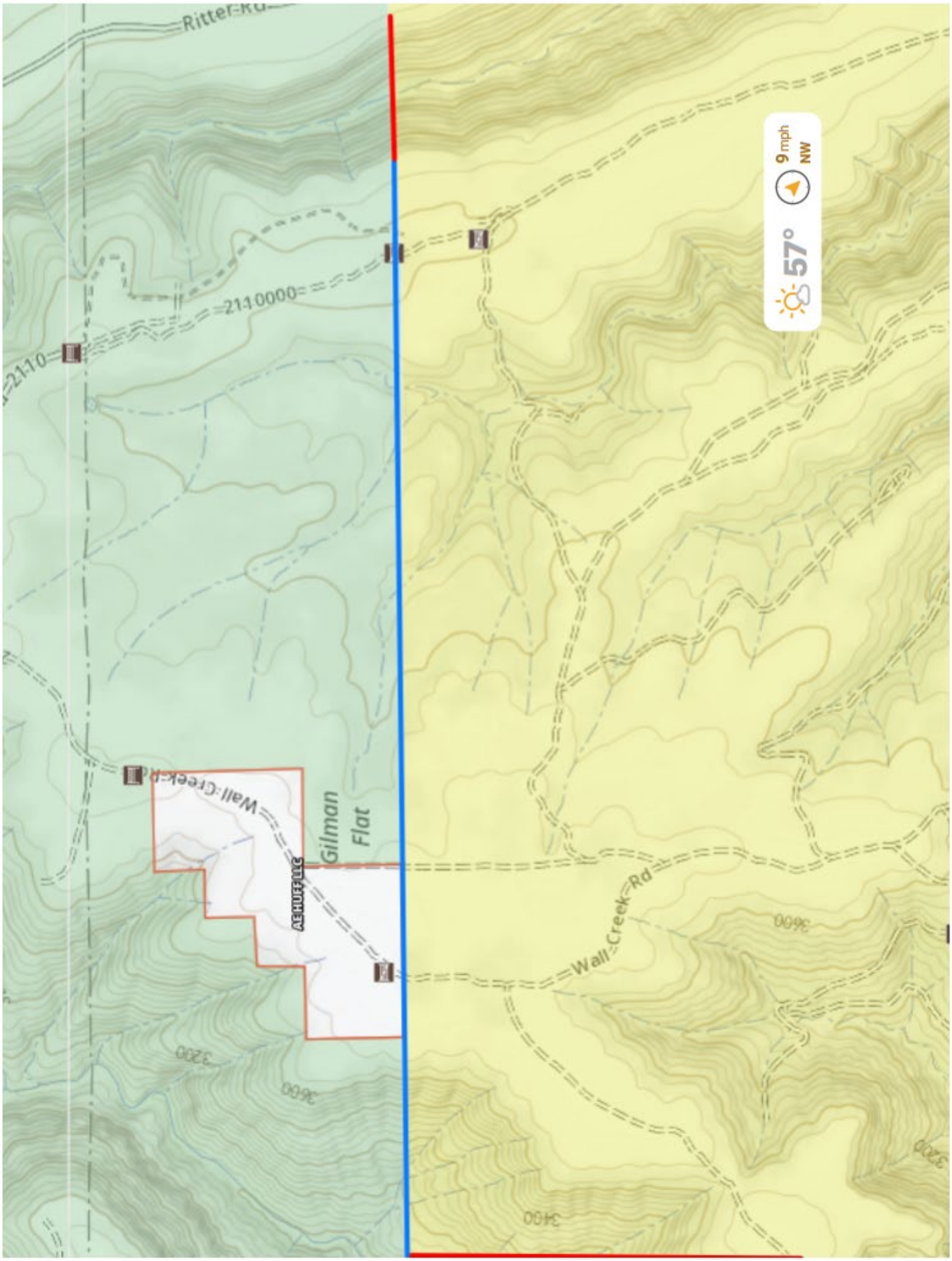
Additional Requirements

- **At Contract signing**, CONTRACTOR to provide COUNCIL:
    1) CONTRACTOR completed W-9 form
    2) CONTRACTOR and Subcontractor certificate(s) of General Liability showing ***NFJDWC as an additional insured***
    3) CONTRACTOR and Subcontractor proof of Worker's Compensation
- CONTRACTOR must **submit itemized Prevailing Wage reports** with each invoices submitted to COUNCIL for payment.
- Vehicles will not be allowed to cross streams without approval exception between July 15-August 15, 2021.
- CONTRACTOR will follow USFS fire restrictions and applicable OSHA standards in place during the contract period.
- CONTRACTOR must have a working chainsaw on site at all times.
- Water tender (or equivalent) must be on site, prior to operating mechanized equipment, once IFPL reaches Level II.
- No equipment fluids will be changed on site and repairs to any vehicle or equipment fluid leaks must be repaired immediately.
- Maintain a daily clean work site. All litter, debris, and construction supplies will be removed from the contract site upon completion.

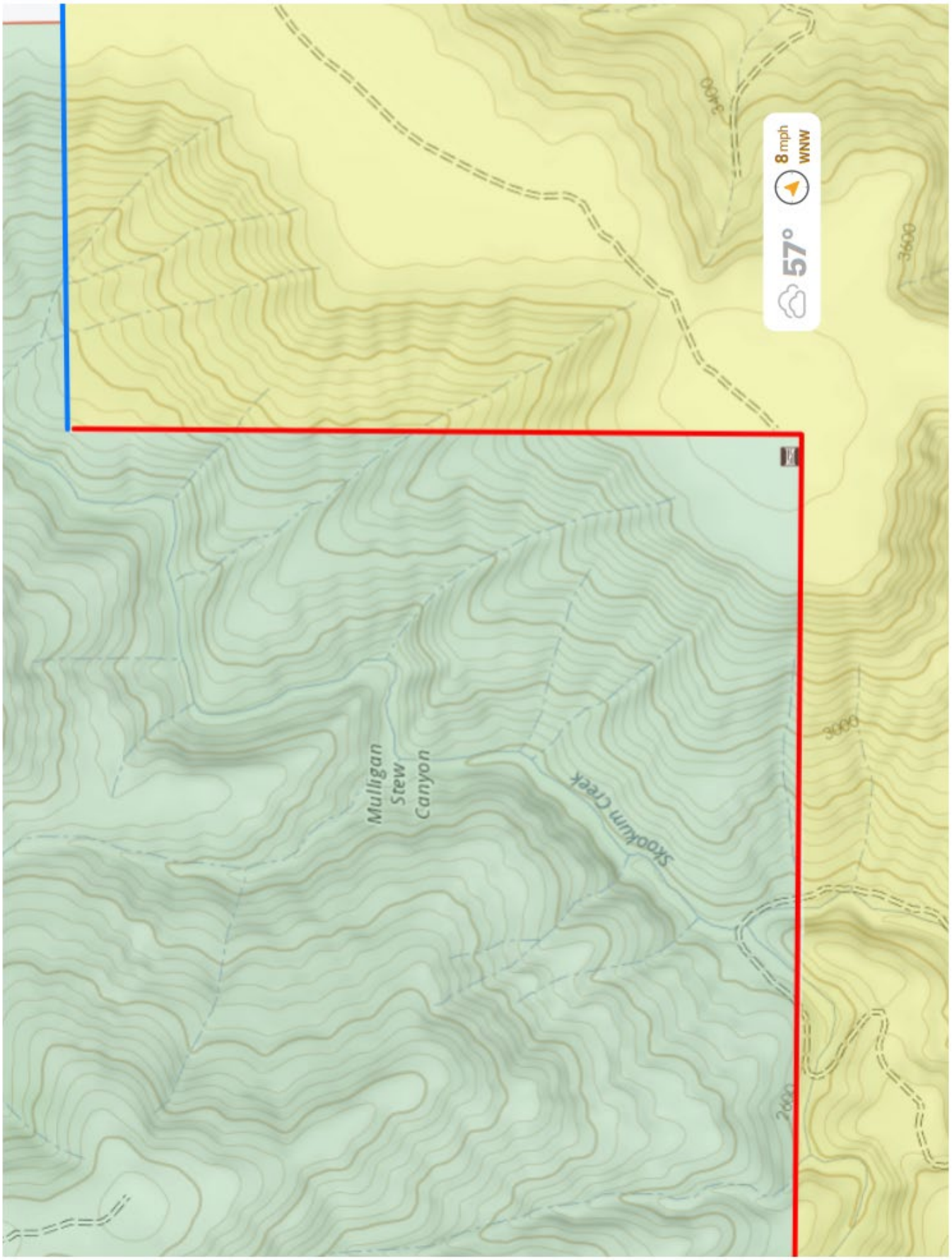
BLM/ UNF Boundary Fence Project Overview
Project Area
N
Streams
Roads
Boundary Fence
Fair
Non-functional

BLM/UNF Boundary Fence Preliminary Feature & Structure Inventory
N
Corner
Ditch/Dip
Gate
Stream Crossing
Vertical Angle Change
Boundary Fence
Fair
Non-functional
2
Miles

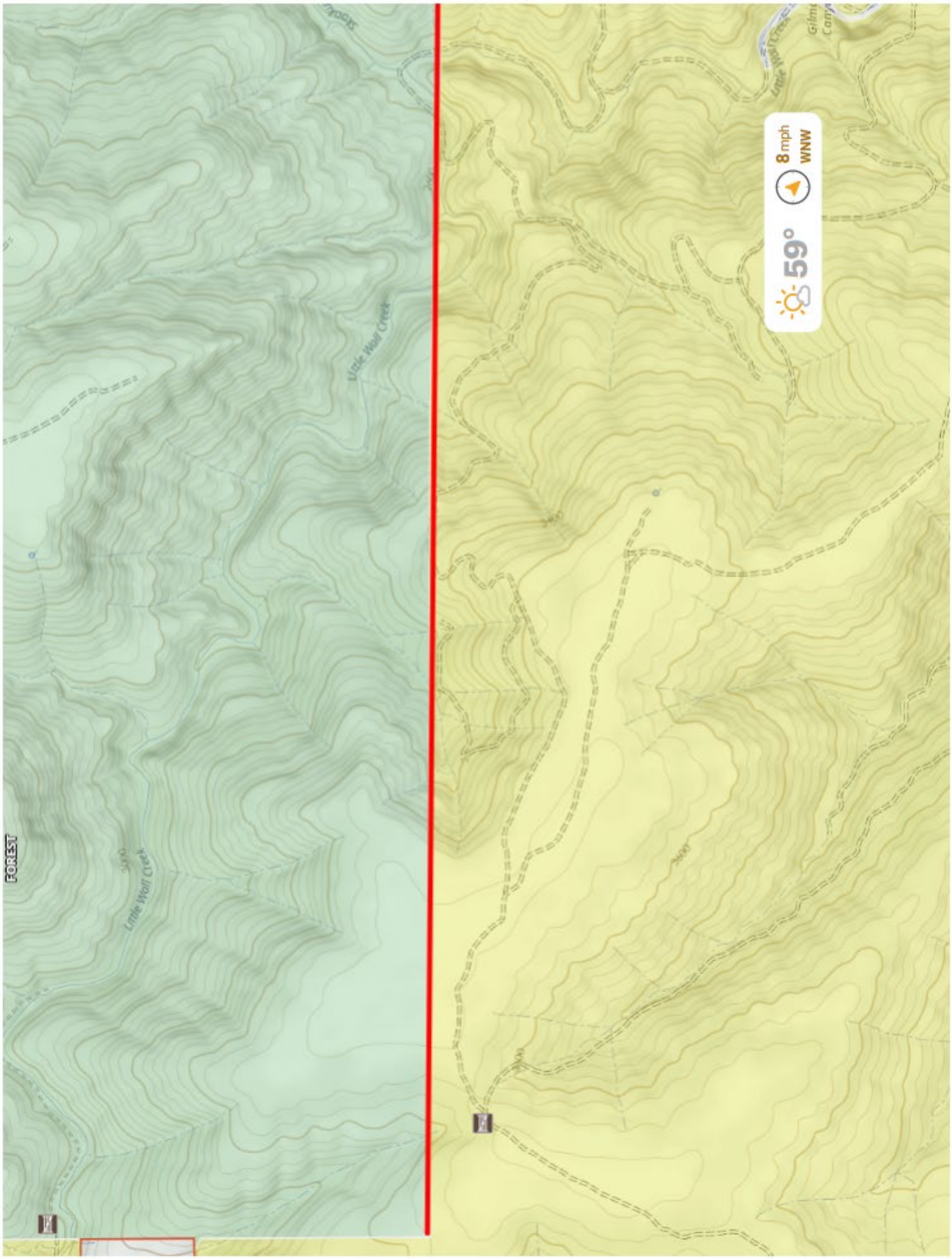
BLM-UNF Eastern Fence Portion Topography



BLM-UNF Central Fence Portion Topography



BLM-UNF Western Fence Portion Topography



NORTH FORK
JOHN DAY
WATERSHED COUNCIL

BLM/UNF Boundary Fence

4-Strand Barbed Wire Fencing Specifications

SITE PREPERATION

Corridor Clearing and Snag Removal:

- The corridor shall be cleared of all trees (Excluding those used as tree nailers), brush, downed timber, rocks, and any overhanging branches up to a 6-foot clearance height from the ground to allow construction, operation, and maintenance of the of the fence.
- All fence corridor clearing shall be done using manual or powered hand tools, except as authorized by the COUNCIL.
- No vegetation within 20 feet of a stream shall be damaged or removed unless directed by the COUNCIL.
- Dead standing trees that could damage the fence if they fall shall be felled by the CONTRACTOR and left on the side of the fence designated by the COUNCIL prior to the new fence being constructed. The COUNCIL's Authorized Representative will determine which trees are to be felled.

INSTALLATION AND USE OF FENCE MATERIALS AND STRUCTURES

General:

- As designated by the COUNCIL, barbed and barbless wire shall be used for all general fence construction.
- High tensile smooth wire, barbless wire, or 9-gauge wire shall be used for all tensioning wires, as specified by the COUNCIL.
- Wire shall be attached to steel posts with commercial wire fasteners/clips.
- Any wire having a nick, kink, or sharp bend shall be replaced or cut and spliced. High tensile smooth wire will be spliced with three nicopress sleeves.
- No barbed or barbless wire ends shall be left protruding from any fence structure and wire ends shall be bent down into the wood structure. High tensile wire ends shall be cut off a maximum of one inch from the last nicopress sleeve.
- All jacks and stays shall be placed vertically in the fence and located such that the wires maintain the specified spacing.
- All fence wires shall be tightened with wire stretchers. Wire shall have the spool slack removed, but not all the stretch from the wire. All barbed wire shall be tensioned to a minimum of 150 pounds' tension using a fence stretcher with a minimum Working load limit of 250 pounds. Short spans and long spans shall have the same tension.
- Each barbed wire tie off shall be wrapped twice around the wood tie off post and tied back on itself with six complete, tight wraps, and secured with a staple.

Wire Usage:

Combination Smooth and Barbed Wire Fence:

In many situations, a combination of smooth wire and barbed wire can effectively contain livestock and will allow for easier wildlife passage. Smooth wire should be used for the top and bottom wires and one to two barbed wire strands shall be used for the center strands. Barbless twisted cable wire or coated wire will increase visibility for wildlife. The top wire should be 40" to 42 inches high or lower and the bottom wire at least 18 inches above the ground to provide wildlife clearance. Allow at least 12 inches between the top and second wires.

Wire Spacing:

For 4 wire fence stretches the wire heights or spacing shall be the following as measured from the ground up:

- 1st wire - 18 inches (Barbless Wire)
- 2nd wire - 24 inches (Barbed Wire)
- 3rd wire - 30 inches (Barbed Wire)
- 4th wire – 40-42 inches (Barbless Wire)

12-1/2-gauge barbed and barbless wire shall be used for all of the following purposes:

- Fence Construction
- Depression Structures
- Gates

12-1/2-gauge barbless wire shall be used for all of the following purposes:

- Gate Loops and Hitch Sticks
- Tensioning Wires
- Stay Let-Down Fastener
- Hogwire & Steel Panel Loops
- Any Braces, i.e., where Jack Braces are wired to the ground pieces.
- Rock Tie Downs
- Steel Foot Attachments

9-gauge smooth wire shall be used for all of the following purposes:

- Gate Loops and Hitch Sticks
- Tensioning Wires
- Stay Let-Down Fastener
- Hogwire & Steel Panel Loops
- Any Braces, i.e., where Jack Braces are wired to the ground pieces.
- Rock Tie Downs
- Steel Foot Attachments

High tensile smooth wire shall be used for:

- Tensioning Wires

Splicing Wires:

Splices in barbed or barbless wire shall be made by forming a single loop and then wrapping the wire tightly back on itself with 6 complete wraps. The other wire shall then be inserted through the loop and wrapped tightly back on itself with 6 complete wraps.

Snubbing Wires:

A snubbing wire is a 12 ½ gauge barbless wire double looped around a solid fence structure pivot post and a stay with the barbed fence wires held between the post and stay. Snubbing wires shall be used any time the barbed wire is pulling away from the wood and would pull out the staple. The snubbing wires shall only be used on a case by case basis (i.e., if directed by the COUNCIL's Authorized Representative to build a jack on an opposite side of the pull).

Inline Wire Strainers:

Strainers shall be attached to all high tensile tensioning wires. Strainers shall be installed in the center of each H-Brace being tensioned. Double looped 12 ½ gauge barbless or 9-gauge wire with twitch sticks may be substituted for inline wire strainers when directed by the COUNCIL's Authorized Representative.

Stretch Lengths:

All stretches of fence between any two stretch points or Pivot Posts shall be built straight. Stretches may be as short as 100 feet or as long as 1,000 feet. Locations of end structures shall be determined by the COUNCIL's Authorized Representative and staked, flagged or otherwise marked on the ground.

Intermediate end structures not otherwise required for other reasons (i.e. gates, for example) will be required in certain stretches to reduce stretch length as determined by the COUNCIL's Authorized Representative.

Horizontal and Vertical Changes:

The COUNCIL's Authorized Representative will specify the type of structures to be used at each horizontal angle change location, generally using the following guidelines. (In the event ground or other conditions render the listed structures unsuitable, then a more substantial structure, such as a Jack or Crib shall be used). Jacks may be used interchangeably for any structure listed herein except cribs.

Horizontal Angle Changes

- 0-45 degrees: Shall be made with single H-Braces that bisect the fence angle, jack, or crib.
- 45 or greater degrees: Shall be made with (2) double H-Braces, jack, or crib.

Vertical Angle Changes

- 0-15 degrees: Use Steel posts at top and bottom of breaks in slope or use jacks. Steel post anchors may also be utilized at bottom of slope breaks.
- Greater than 15 degrees: Use in-line H-braces at the top and bottom of breaks in slope or use jacks or cribs. Add steel feet to counteract uplift forces.
- Dip and Depression structures: Steel post anchors may be used for minor depressions.

Construction of Solid Fence Structures:

Solid fence structures are defined as double H-Braces, triple H-Braces, deadman H-Braces, single H-Braces, single pivot post with deadman, jacks, cribs, single wood posts, tree nailer, tree tie, and depression structures.

Spacing:

The spacing of solid fence structures between any two corners, dip, rise slope change, and/or end structures shall be 200 feet. At the end of a stretch of fence that will not divide equally by 200 feet, the post spacing shall be divided equidistantly, with no solid fence structure being farther apart than 200 feet (i.e. 380 feet divided by 2 equals 190 feet). For wire fences, spacing of solid fence structures may be adjusted at the COUNCIL's discretion to fit the contour and/or fence line, but will not be greater than 1000 feet between any two solid fence structures.

Trimming:

Galvanized steel pipe is preferred for all fence structures where practicable. Any Wooden fence structures shall not have ends protruding into the fence right-of-way. All excessive material shall be cut off.

Deviations from Contract Documents:

All structures shall be constructed as shown on the drawings and as stated herein.

Single Galvanized Steel Posts:

Single galvanized steel pipe posts shall be used in all straight sections of fence on solid ground where the post depth criterion is able to be met.

A single galvanized steel pipe post shall be required at the top and bottom of all abrupt breaks in slope between 0 and 15 degrees. A steel foot shall be installed with galvanized steel pipe posts placed at the bottom of all abrupt breaks in slope between 5 and 15 degrees. In line H-Braces shall be used at the top and bottom of all abrupt breaks in slope over 15 degrees. Steel anchors, jacks, cribs, or other approved structures shall be used if post depth criteria cannot be met or the ground shows evidence of being wet or marshy, or as determined by the COUNCIL's Authorized Representative.

Steel Tee Posts:

Steel tee posts are to be placed at a maximum of 16-foot intervals between any two solid fence structures. Steel posts are to be set in a straight line and standing vertical plumb. Posts are to be driven into the ground 24 inches with 48 inches left above the ground. In rocky conditions where steel tee posts cannot be effectively driven to specified depths, pilot holes will be drilled into the ground to allow for steel tee posts to be installed with the spade removed. The drilled holes are to be of a maximum diameter to require the driving of the steel tee post to depth and retain equivalent rigidity to a fully driven post. All steel tee posts must have the wire holding knobs facing exactly perpendicular to the fence wires. Steel tee posts shall not be used at the top or bottom of abrupt breaks or as a substitute for any other solid fence structure. Steel tee posts shall not be installed such that the fence exerts a net upward force on the steel post. Surface Rock Jacks may be built every 50 feet with eight fence stays evenly spaced between Jacks as an alternative to installing steel tee posts in areas not inaccessible to drilling equipment as determined by the COUNCIL's Authorized Representative.

H-BRACES

General:

H-Braces shall be used as end structures and at locations as described in Section: "HORIZONTAL AND VERTICAL CHANGES" when post criteria are met.

H-Braces shall not be used when post depth criteria cannot be met; Topography or wet or marshy conditions indicate that the H-Brace may not hold.

Single H-Braces (SHB):

Single H-Braces shall be used at the top and bottom of all abrupt breaks in slope greater than 15 degrees unless post depth criteria cannot be met because of local topography or the soil is wet or marshy as determined by the COUNCIL's Authorized Representative. Single H-Braces used on horizontal fence angle changes of less than 45 degrees shall bisect the angle of the fence.

There are two posts used in a single H-Brace. The side of the posts to which the fence wires are attached shall be aligned in a straight line with each other and with the first line post in the stretch of fence.

The top of the cross member shall be 42 inches above the ground and installed level. Notches in H-Brace posts to accommodate cross members (4-inch x 6-inch x 8 foot beams or approved alternative) shall be between ½ inch and 1 inch in depth.

For inline single H-Braces used in breaks of slope greater than 15 degrees there are two separate tensioning wires used. The tensioning wires shall be looped around the bottom of one post 6 inches above the ground and around the other post just above the top of the cross member and vice versa. The tensioning wires shall be held in place with dip or rise nails and

then secured to the posts with one staple at each end. A wire strainer or twitch stick shall be inserted in each wire loop and ratcheted or twisted until the wire is taut.

Single H-Brace (Bisecting H-Brace):

For single H-Braces that bisect the angle of the fence only one tensioning wire shall be used. The tensioning wire shall be looped around the pivot post 6 inches above the ground and around the other post just above the cross member. The tensioning wire shall be held in place with dip or rise nails and then secured to the posts with one staple at each end. A wire strainer or twitch stick shall be inserted in each wire loop and ratcheted or twisted until the wire is taut.

Double H-Brace (DHB):

One double H-Brace shall be used at the ends of all stretches, unless post depth criteria cannot be met because of local topography or the soils are wet or marshy as determined by the COUNCIL Authorized Representative.

There are three 6-inch posts used in a double H-Brace. The side of each of the posts in a double H-Brace to which the fence wires are attached shall be aligned in a straight line with each other and with the first line post in the stretch of fence.

The top of the cross member that is attached to the tie-off (first) post and to the middle (second) post shall be 42 inches above the ground and installed level. The cross member that is attached to the middle post and the end (third) post shall be placed diagonally, with the high end being attached to the middle post 42 inches from the ground, and the low end being attached to the end post 6 to 8 inches above the ground.

Notches in H-Brace Posts to accommodate cross members (4-inch x 6-inch x 8-foot long beams or approved alternative) shall be between ½ inch and 1 inch in depth.

There are two separate tensioning wires used in a double H-Brace. The first tensioning wire will be looped around the tie-off (first) post 6 inches above the ground and around the middle (second) post just above the cross member. The second tensioning wire will be looped around the middle (second) post 6 inches above the ground and around the end (third) post just above the top of the diagonal brace approximately 14 to 16 inches above the ground. The tensioning wires shall be held in place with dip or rise nails and then secured to the posts with one staple at each end. A wire strainer or twitch stick shall be inserted in each wire loop and ratcheted or twisted until the wire is taut.

On the side opposite the fence wires, a 2-inch x 6-inch x 16-foot-long board or half round shall be attached to all three posts. The top of this board shall be 42 inches above the ground. This board shall be secured to each of the three posts with two 50d nails into each of the three posts.

ROCK JACKS

Rock jacks can be used where steel pipe cannot be drilled/driven.

General:

There are two types of Rock Jacks: Set Post Rock Jacks (SPJ) and Surface Rock Jacks (SRJ). Set post rock jacks shall be used at horizontal fence breaks and at the end of fence stretches. Surface rock jacks shall be used at vertical fence breaks or to supply spacing support requirements for straight sections of fence. Jacks can be utilized when the ground is not accessible to power post driving equipment or suitable for holding fence posts; either in wet or marshy sites or where post depth criteria cannot be met as determined by the COUNCIL's Authorized Representative.

Set Post Rock Jack Construction:

A pivot post shall be driven or dug into the ground a 12 to 36 inches and shall be aligned horizontally with the first adjacent line posts in the section of fence. Two diagonal split jack braces shall be nailed approximately 6 inches down from the top and on either side of the pivot post. The braces shall crisscross and angle towards the ground at about 60 degrees from the post and spread away from each other approximately 5 feet, forming a V-shaped support. The diagonal braces shall be oriented to brace into the post against the direction of the fence tension.

Two ground brace pieces shall then be nailed to the post, one on each side, about 4 inches above the ground. Ground pieces shall be level and extend back from the post horizontally at about a 60-degree angle to each other, crossing the diagonal support braces.

Ground pieces shall be placed on the outside of the diagonal braces and must extend beyond the diagonal braces 6 to 8 inches. Where the ground pieces intersect their respective diagonal braces, they shall be nailed to the diagonal braces so as to create a level floor. Diagonal braces shall extend beyond the ground pieces and rest on stable rock supports at ground level.

A final split jack brace shall be placed across and nailed to the ground pieces to tie the two diagonal braces together. This brace shall not extend more than 6 inches beyond the ground braces and becomes part of the platform to support rock ballast placement.

Split wood stay material shall be used to make up the remaining rock platform by placing them as joists across the ground braces. This joist flooring is not to be nailed to the ground pieces.

All flooring will be trimmed if it extends more than 6 inches beyond ground brace members. Prior to placing any ballast rock on the platform, support rocks shall be placed under each ground piece (one rock at each end) so that all weight rests upon the support rocks. Support rocks shall not be stacked on each other.

Jack structures shall be wired together with one loop of barbless wire twisted tight around all brace and post junctions. All wood bracing shall be secured with two 50d spikes.

At least 300 pounds of ballast rock shall be placed on the platform.

Surface Rock Jack Construction:

Place two split wood jack braces in a triangle with the bottom of the braces approximately 5 feet apart and the top of the braces crisscrossing at 40 inches above the ground, forming a teepee-shaped support. Nail the braces together at the crossing junction.

A third vertical support brace shall be placed and nailed in between the v-notch of the teepee shaped support and angle toward to the ground at about 60 degrees to keep the teepee shaped support standing vertical.

Two ground brace pieces shall be nailed to the outside of the teepee-shaped support, one on each brace, about 4 inches above the ground. Ground pieces shall be level and extend back horizontally, crossing the vertical support brace. Ground pieces shall be placed on the outside of the vertical support brace. Where the ground pieces intersect with the vertical support brace, they shall be nailed to create a level floor. The teepee-shaped braces and vertical support brace shall extend beyond the ground pieces and rest on stable rock supports at ground level.

A final split wood brace shall be placed across and nailed to the inside of the joint between the teepee braces and the ground pieces to tie the all jack braces together. This brace shall not extend more than 6 inches beyond the outside of the ground braces and becomes part of the platform to support rock ballast placement.

Split wood stays shall be used to make up the remaining rock platform by placing them as joists across the ground braces. This joist flooring is not to be nailed to the ground pieces. All flooring will be trimmed if it extends more than 6 inches beyond ground brace members.

Prior to placing any rocks on the rock platform, support rocks shall be placed under each ground piece (one rock at each end and one in the center) so that all weight rests upon the support rocks. Support rocks shall not be stacked on each other. Jack structures shall be wired together with one loop of barbless wire twisted tight around all brace junctions. All wood bracing shall be secured with two 50d spikes.

At least 300 pounds of rock shall be placed on the platform.

CRIBS

General:

Cribs may be used in wet or marshy areas where an H-Brace or other solid fence structures may not hold as determined by the COUNCIL's Authorized Representative.

Cribs may also be used as end structures in place of any other solid fence structure when post depth criteria cannot be met or in wet or marshy areas as determined by the COUNCIL's Authorized Representative.
Crib Construction:

Four – 6-inch posts shall be installed plumb, parallel with each other, and evenly spaced 5 feet apart so that their outside edges are square. Posts shall be driven or dug into the ground a 12 to 36 inches and shall be aligned horizontally with the first adjacent line posts in the section of fence.

Board floor joists shall be nailed at least 4 inches above the ground on the inner side of the square between two sets of posts directly across from each other to support floor joist placement. Floor joists shall be level so the crib bottom, which is laid on top of them, will also be level, both side-to-side and front-to-back. Three support rocks (one rock on each end and one in the center) shall be evenly spaced under each floor joist so that the joists rest firmly on the rocks. Support rocks shall be wider than the joists they support. Support rocks shall not be stacked on each other. All support rocks shall be placed under the joists prior to placing any rocks in the crib.

Lay floor board pieces on top of and perpendicular to the floor joists so that the floor pieces are no more than 2 inches apart across the entire floor of the crib. The two side boards which are laid directly on top of the floor pieces shall be laid flat. These side boards shall then be nailed to each floor piece with one nail. The remaining side boards will be installed on their edges, alternating sides in a log cabin fashion and then nailed to the inside of the posts to a height of approximately 42 inches. Install two diagonal braces on all cribs. The diagonal braces shall be attached on opposite sides of the crib with the high end oriented towards the posts that have the wire attached to them. The diagonal braces shall be fitted flush against the side boards at an angle extending from the top of the side boards to the crib floor. Each diagonal brace shall be nailed to each of the side boards.

Two additional board cross braces shall be crisscrossed and nailed level between opposite posts. The top of the first brace shall be approximately36 inches above the ground and the other brace shall be approximately 42 inches above the ground.

The Crib shall be filled with rocks to a level even with the highest side board. All boards shall be attached to the corner posts with two 20d nails in each end.

FLEXIBLE FENCE STRUCTURES – STAYS

General:

Wood Stays shall be installed between solid fence structures and steel posts. Stays shall be installed plumb and equally spaced no greater than 5 ½ feet apart (e.g. two stay evenly spaced between steel posts). Stays used on depression structure fences shall be independent of stays used on the adjacent wire fence. Stays shall be used where the vertical force exerted by the

fence wires is either zero or in an upward direction. Stays will not be used to hold fence wires up to the wire height specifications.

Depression Structures:

Depression structures shall be used in depressions where the maximum distance between solid fence structures on opposite banks of the depression is 30 feet and minimum bank height is 2 ½ feet or greater. Use wood stays and barbed wire.

0-15 Feet Across: Use three solid fence structures (one placed at the top of each bank on opposite sides of the depression and one in the middle of the depression). Steel feet must be installed on the middle post in each structure.

15-30 Feet Across: Use four solid fence structures (one placed at the top and bottom of each bank on opposite sides of the depression). Steel feet must be installed on each structure in the bottom of the depression.

SUPPORT SYSTEMS

Support systems are of two types:

Deadman Post:

A deadman post shall be used as the anchor post for all single pivot post with deadman and deadman H-Brace structures. In either structure the deadman post shall bisect the angle of the fence. The deadman post shall be located approximately 7 feet from the Pivot Post, leaning away from the pivot post at an angle (30 degrees), and driven into the ground a minimum of 42 inches. The top will only be cut off as directed by the COUNCIL's Authorized Representative.

The deadman tensioning wire shall be looped around the deadman Post 6 inches above the ground and around the top of the pivot post (refer to Single Pivot Post with deadman or deadman H-Brace for wire location). The tensioning wire shall be held in place with rise or dip nails and then be secured to the posts with one staple at each end. A wire strainer or twitch stick shall be inserted in the wire loop and ratcheted or twisted until the wire is taut.

Steel Feet:

Steel feet shall be used only on posts that have been installed to meet depth criteria. If post depth criteria cannot be met a jack or crib shall be installed.

Thirty-six-inch steel feet shall always be used in pairs (one steel foot on each side of a post), and installed parallel with the fence line.
Steel Feet are recommended to be used on:

1) posts placed in depressions where the bottom wire exceeds 20 inches above the ground;

2) single posts at the bottom of abrupt breaks (breaks greater than 10 degrees) in slope;

3) the post closest to the slope change of a single H-Brace used in the bottom of dips greater than 15 degrees;

4) all pivot posts;

5) the tie-off post of all double H-Braces; and

6) posts placed in wet or marshy ground (except for crib and jack posts).

Each steel foot shall have a double strand of barbless wire secured to its middle by looping the wire through the hole and then wrapping it back on itself with at least 6 complete wraps. The other end of the barbless wire shall be attached to the post with two 2-inch staples and wrapped around the post as explained below.

Each steel foot shall be driven into the ground at a 45-degree angle until its top is below ground level.

The wires for the first steel foot shall be stapled to the front (fence line) side of the post and wrapped in a clockwise direction around the backside of the post. This steel foot shall then be driven into the ground at the side of the post as shown in the drawings.

The second steel foot shall be installed in the same manner as the first steel foot except that:

1) Wires shall be wrapped in a counter-clockwise direction.

2) Wires shall be stapled to the opposite side of the post from the wires of the first steel foot.

3) It shall be driven into the ground in the opposite direction of the first Steel Foot.

ROCK FOR FENCING STRUCTURES, STEEL POST ANCHORS AND ROCK TIE DOWNS

General:

Determining a source of rock will be the responsibility of the CONTRACTOR. However, it is anticipated that all rock to be used for Rock Cribs and Jacks may be obtained near the Project site. It shall be the CONTRACTOR's responsibility to collect and transport all rock. Rock shall not be removed from a stream or any archaeological/historic sites or structures.

Steel Post Anchors:

Steel post anchors shall be used primarily in depressions where the bottom wire is greater than 16 inches above the ground, but less than 36 inches above the ground. Steel post anchors shall not be substituted for any other structure.

Two steel tee posts shall be driven a minimum of 36 inches deep at opposing 45-degree angles directly under and in line with the fence. The posts must intersect 4 to 8 inches above the existing ground. Barbless wire shall then be wrapped at least twice around the intersecting posts in each of two directions so as to secure the posts together into the anchor. After forming the anchor, twist one end of the barbless wire around the other protruding end at least six complete wraps. The protruding longest end of the barbless wire will then be extended vertically and secured to the fence wires in series with single wire wraps to maintain appropriate wire spacing and height. The protruding wire shall be wrapped six times around the top fence wire.

Rock Tie Downs:

Rock Tie Downs shall be used primarily in small depressions where the bottom wire is greater than 16 inches above the ground, but less than 20 inches above the ground. Rock tie downs shall not be substituted for any other structure.

Barbless wire shall be wrapped at least twice around the rock in each of two directions so as to form a "cradle" for the rock. After forming the cradle, twist one end of the barbless wire around the other protruding end, forming at least six complete wraps. The protruding longest end of the barbless wire shall then be extended up along one side of a stay and stapled. Bend the barbless wire back down on itself and, using a second staple, staple the two wires to the stay, (See Drawings).

Rocks shall not hang from the fence, they must rest on the ground and hold the bottom wire to a height of 14 to 16 inches above the ground.

Stays shall be cut off 4 inches below the bottom fence wire so that the rock tie down can be placed directly under the stay.

Rock Tie Downs in Water:

Rock tie downs associated with stream crossings, ditches, or other water will be constructed as stated above except that the cradle wires shall be snugly wrapped to the rock and then a single loop shall be made and dead ended. A separate wire shall be run through the cradle loop, wrapped back on itself, and then single wrapped around each fence wire from the bottom strand to the top strand. The wire will then be wrapped back around itself with one wrap. This will allow the rock tie down to be removed in the winter months and reused the following spring.

NAILS AND NAILING

In general, galvanized steel pipe is preferred for bracing structures but where wood is necessary the following shall apply:

Twenty penny (20d) nails shall be used for all end and corner structure construction.

Fifty penny (50d) nails shall be used for all rock jacks and half round applications.

Twenty penny (20d) rise nails shall be used on all structures where the wire pulls in a downward direction when the tensioned wire is held at its proper height.

Twenty penny (20d) Dip nails shall be used on all structures where the wire pulls in an upward direction when the tensioned wire is held at its proper height.

To prevent splitting lumber or stays, nails shall not be placed closer than three (3) inches to the end of any piece of lumber. A pilot hole may be drilled to prevent lumber splitting, but shall be no more than one-half the diameter and depth of the nail to be used. Any wood which is split as a result of nailing shall be replaced.

When constructing wood structures use two nails at each joint and place the nails at a binding angle. At least half of each nail shall extend into the adjoining piece. Nails which extend through a member and expose the pointed end shall be bent over flat, and parallel to the wood surface. Nailed and stapled junctions shall have sound wood against sound wood; no bark shall be in between.

STAPLES AND STAPLING

One and one half inch (1 ½") long fence staples shall be used to attach all wires to stays and shall be used to attach all wires to Solid Fence Structures and for all rise, dip, and glide staples. Staples shall be a minimum 9-gauge and treated for corrosion protection. Reverse barbed staples are preferred to improve long term staple retention.

Glide staples shall be used on all corners where tension wires are attached to protect the subject post from the wire cutting into it. All wires shall be stapled to all posts.

Staples shall be driven in all structures at an angle. Rotate the staple slightly (20 to 30 degrees off vertical) away from the flat surface of the point on the upper leg of the staple.

Staples used to attach tensioning wires to any solid fence structure shall be driven in fully, but so as to allow the wire to move back and forth freely.

All wires shall be stapled solidly to stays.

On Pivot Posts, sufficient glide staples shall be used so as to prevent wires from cutting into the posts.

For posts at the top of small rises, staples shall be driven at a downward angle into the post. For posts in the bottom of small depressions or dips, staples shall be driven at an upward angle into the post.

On steep rises or dips, rise or dip nails shall be used in combination with staples.

WIRE GATES

General:

Gates shall be constructed at the locations as they are marked on the ground. All Gates shall be built as shown on the attached drawings. Gates shall contain five wires unless otherwise specified by the COUNCIL's Authorized Representative. Wires shall be taut, but allow for proper gate operation.

All gates shall be 12-1/2 gauge barbed wire.

Each gate wire shall be double wrapped around the end piece, tied back on itself with six complete tight wraps, and stapled to the end piece with 1-1/2 inch staples.

All wires will be stapled to stays.

Stays shall be 2-inch x 3-inch x 4-foot split wood material.

Gates shall have stays evenly spaced a maximum of 5 feet from gate ends or another stay.

Barbed wire shall be stapled solidly to all stays and end pieces.

Gate ends shall be 3 to 4-inch diameter by 5-foot-long round wood pieces. At the stand-up (stationary) end of the gate, wrap a double loop of barbless wire around the Double-H or Set

Post Rock Jack end post just below the top strand of fence wire and around the gate end and wrap the wire loop ends back on itself with three complete wraps. Staple the loop to the end structure only. Repeat this procedure just above the bottom strand of fence wire. Insert the gate end into these loops.

At the let-down (opening) end of the gate, wrap a single loop of barbless wire around the end post 4-6 inches above the ground and around the gate end and wrap the wire loop ends back on itself with four complete wraps. Staple the loop to the end structure only. The bottom of the gate end pole (let down-end) shall be inserted into this loop with approximately 4 to 6 inches of open loop between the end structure and the gate end pole. Install a gate tightener to the top of the end post. (See Drawings)

Gate Tighteners:

Attach a 6 to 10-inch-long piece of ¼ inch sized chain to the handle (2-foot-long pole, 3-4 inches in diameter) 4 inches from the end of the pole by running a double strand of wire through the last chain link and around the handle, twisted tight. Repeat the above between the end post structure and the other end link 40 inches above the ground, (the length of chain required for each handle will vary by gate). Wrap a separate double loop of barbless wire

around the end post 40 inches above the ground and around the gate end and twist the wire loop back on itself with four complete wraps. This handle/tightener will bring the gate snugly tight, allowing the double wire loop to be dropped over the top of gate end pole. Staple the loop to the end structure post only. The gate tightener shall act as a latch. The wire loop shall be separate from the gate tightener and act as an additional latch on the gate.

STREAM CROSSING STRUCTURES (SC)

General:

Stream crossing structures shall be used at all points where a single fence is suspended across a stream to end a section of riparian corridor fencing. The stream crossing structure locations will be staked on the ground by the COUNCIL's Authorized Representative. Stream crossing structures are separated from the riparian fence line so high water events will not affect the rest of the fence.

POSTS

General:

Galvanized steel pipe posts shall be used to construct all solid fence structures, including single posts in straight sections of fence (line posts) and deadman posts except where otherwise directed.

Installation:

All posts shall be driven 3 feet into the undisturbed ground with a COUNCIL approved mechanized post pounder (e.g. Shaver Manufacturing Company LLC. Model HD-8 or COUNCIL approved equivalent) capable of driving a 6-inch diameter wood post to a depth of 3 feet in rough terrain. A 3-inch diameter pilot hole may be created to facilitate post driving operations. In areas inaccessible to a power post driver or if ground conditions are determined by the COUNCIL's Authorized Representative to be too rocky for driving or drilling posts, alternative structures shall be installed as directed by COUNCIL's Authorized Representative.

Deadman posts shall be machine pounded into the ground a minimum of 42 inches.

Single posts shall be driven 3 feet into the ground. If the 3-foot minimum depth criterion is not met, the post shall be used as either a set post jack or a crib post.

Set post jack and crib posts shall be driven as deep as possible, to a maximum of 3 feet. No posts shall extend more than 4 feet out of the ground.

Posts that are split or mushroomed, thereby leaving less than 4.0 feet of solid post above the ground, shall be removed and replaced.

Alignment Tolerances:

- Vertical: Must be aligned vertically within ¼ inch per foot of post extending above the ground.
- Horizontal: Straight sections of fence shall have the posts placed within plus or minus 1 inch of true alignment, as measured from a taught wire stretched between corners or stretch points.

STEEL FENCE STRUCTURES:

General:

Steel fence structure specifications are as stated in the previous sections of these technical specifications and drawings for the applicable wood structure except as provided below.

Materials:

All steel post and steel brace materials shall meet the minimum criteria describe in the table below and be free from decay or defect that may reduce its functional life or current durability.

Component	Material Type	Minimum Diameter/Weight	Minimum Post Depth	Minimum Lengths
Steel Posts - Used to construct H-Braces, Single Posts, Deadman Posts & Rail Fence Posts	Steel, round	2-3/8" OD, wall thickness 0.154" (sch. 40)	3 feet	7 feet
	Steel, angle	2-1/2” X 2-1/2” X 1/4"		
Steel Braces - Used for H-Brace Cross Members, Deadman Tensioning Members, Fence Rails	Steel, round	2" OD, wall thickness 0.145" (sch. 40)	NA	8 feet
	Steel, angle	2" X 2" X 1/4"		

Welding:

All steel welding must comply with American Welding Society Standards.

Steel Posts:

Steel Posts shall be used in replacement of wood posts and driven to the specified depth. In rocky conditions where posts cannot be effectively driven to specified depths, a pilot hole will be drilled into the ground to allow for post placement. Pilot holes will be of minimum diameter to allow for the installation of the supplied steel post materials with adequate tension to securely retain the post at the specified depth and alignment following attachment of the fence wires and/or application of fence tension. All steel posts installed as part of an H-Brace or as a signal post must be fitted with wire supporting rings (e.g. 1" dia. nuts, cold shut chain link, etc.) to support the alignment of the fence wires at the applicable spacing criteria. Rings must be securely welded to the posts.

Steel Braces:

Steel braces shall be installed as cross members for H-Braces, as deadman tensioning members in replacement of associated tensioning wires, or as rails for steel rail fencing. Cross and tensioning members must be fitted inset and centrally aligned to the steel post or deadman and securely attached with continuous welding. Weld voids within the attachment joint will not be allowed. Pipe joints shall be welded solid and contain no openings to the pipe interior. No additional bracing or tensioning wires are required for H-Brace or deadman Structures, unless ordered by the COUNCIL's Authorized Representative.

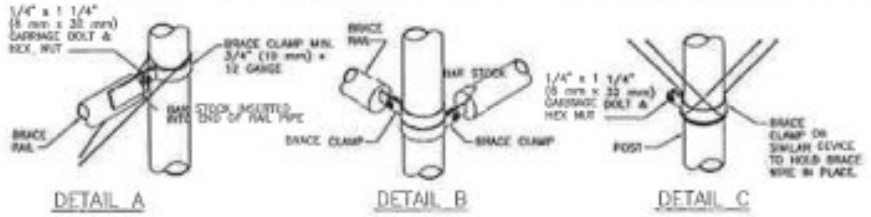
Steel Rail Fencing:

Steel rail fencing shall be installed in fence sections and structures as an alternative to board or half round fencing. Steel posts shall be used in replacement of wood posts. Four rails of steel brace material will be fitted and continuously welded horizontally on the side of the steel posts facing the predominate livestock use. The top rail shall be set at height of 48 inches with the other three being evenly spaced between the top rail and the ground. Horizontal rail sections shall be butt welded to create a continuous rail and shaped to follow changes in the topography. All resulting pipes ends must be capped or plugged with steel, concrete, or COUNCIL approved alternative.

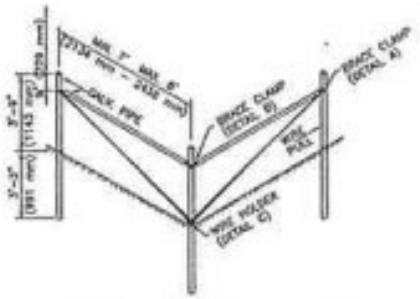
Any section of continuous steel rail fencing constructed that exceeds 100 feet in length shall be fitted with an expansion sleeve on each rail in a central location. A 3 to 4-inch-wide void shall be cut in the rail to allow for the metal to expand and contract freely with temperature changes. These vacant sections shall be covered with oversized fabricated sleeve that extends a minimum of 6 inches over the adjacent rail ends. One side of the sleeve will be welded solid to the rail and the other shall be left free to allow the rail to slide back and forth within the sleeve. All sleeves must be close fitting to maintain the rails rigidity.

Steel Figure 4 Structures:

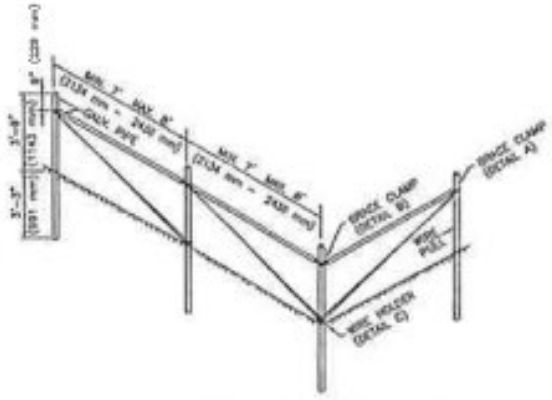
Where necessary, steel figure 4 structures may be used instead of steel posts according to the drawings attached and as designated by the COUNCIL



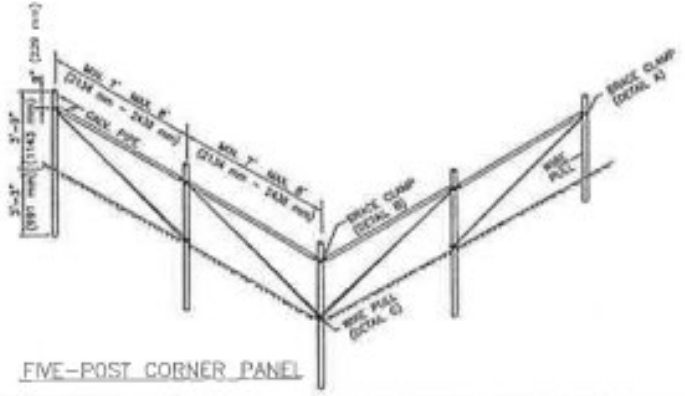
DETAIL A DETAIL B DETAIL C



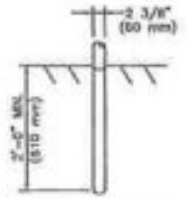
THREE-POST CORNER PANEL



FOUR-POST CORNER PANEL



FIVE-POST CORNER PANEL



ALTERNATE POST INSTALLATION IN ROCK

NOTES:

1. BRACE WIRE SHALL BE WRAPPED TWO TIMES AROUND PANEL AS SHOWN ON DRAWING. EACH WRAP SHALL BE LOOPED ONCE AROUND THE POST. THE BRACE WIRES WILL THEN BE TWISTED TIGHT.
2. THE POST AND BRACES SHALL BE THE FOLLOWING SIZES:
   POST PIPE 2" (51 mm) SCHEDULE 40 (2.375" [60 mm] O.D. 3.65 [1.7 kg] (1.93 /FT.))
   BRACE PIPE 1 1/4" (32 mm) SCHEDULE 40 (1.660" [42 mm] O.D. 2.27 [1.0 kg] (1.63 /ft.)
3. WIRES SHALL BE TIED TO EACH POST WITH 12 1/2 - GAUGE WIRE TWISTED TIGHT.
4. THE CONTRACTING OFFICER WILL DETERMINE WHERE TO USE THE ALTERNATE POST INSTALLATION IN ROCK. AN UNDERSIZED HOLE SHALL BE DRILLED IN THE ROCK FOR THIS INSTALLATION.
5. ALL FITTINGS AND TIE WIRE SHALL BE GALVANIZED.
6. WITH THE APPROVAL OF THE CONTRACTING OFFICER, OTHER METHODS MAY BE SUBSTITUTED FOR THE CLAMP FOR HOOKING DOWN THE BRACE WIRE.
7. THE METRIC CONVERSIONS ARE PROVIDED IN PARENTHESIS FOLLOWING THE ENGLISH UNITS.

ALWAYS THINK SAFETY

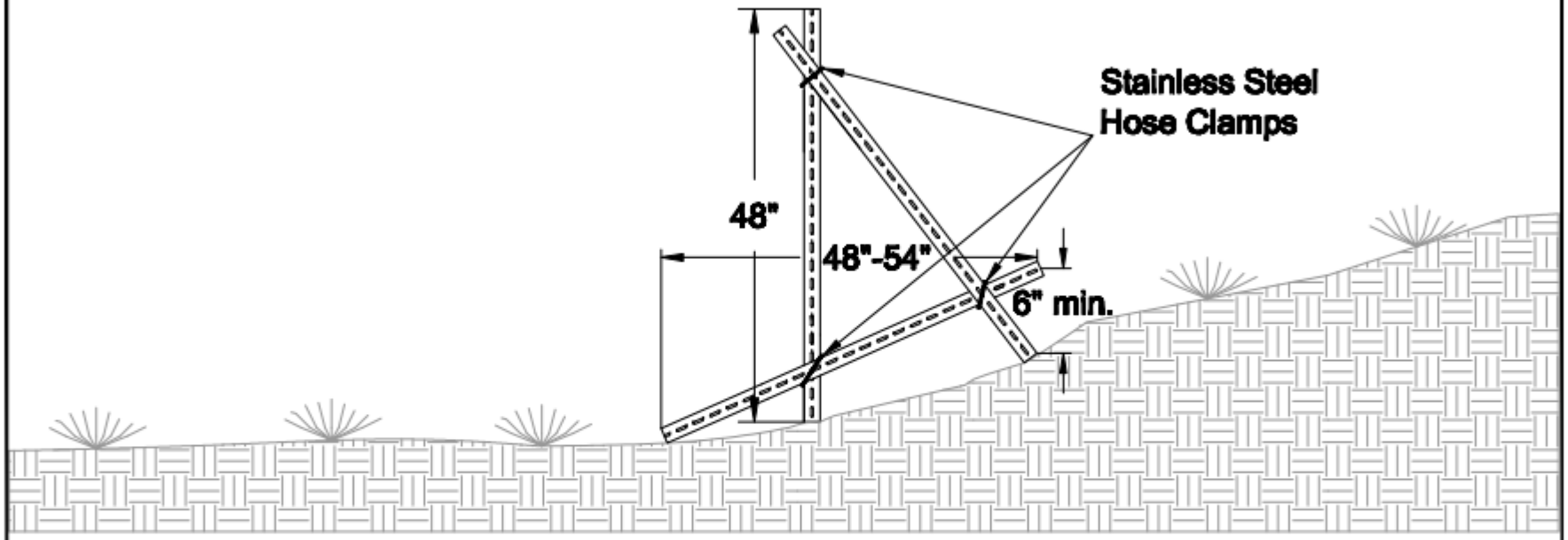
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
ADM Staff — Prineville District Office

CORNER PANELS (GALVANIZED STEEL PIPE)

PRINEVILLE DISTRICT — OREGON

DESIGNED	/s/ Zach Morgan
REVIEWED	/s/ Dana Cork
APPROVED	/s/ Dana Cork
DRAWN	DW — SCALE NTS
DATE	July 2018 — SHEET 1 OF 1
DRAWING NO.	OR050-02024-013-1

STEEL FIGURE 4 INSTALLATION



SPECIFICATIONS:

1. FABRICATED FROM TYPE 133 STEEL POSTS.
2. FENCE POST BLADES SHALL BE REMOVED.
3. POSTS SHALL REST ON THE SOIL SURFACE --- NOT POUNDED INTO THE GROUND.

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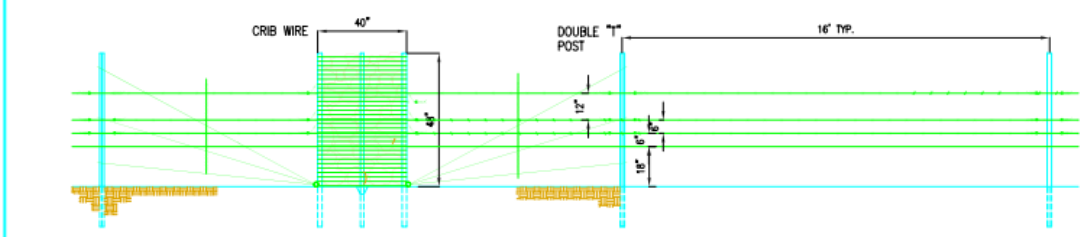
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management

STEEL FIGURE 4 FENCE INSTALLATION

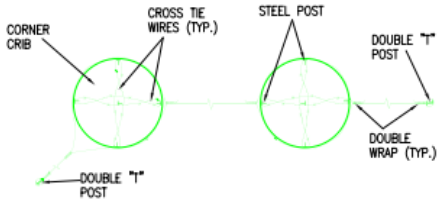
PRINEVILLE DISTRICT OREGON

DESIGNED /s/ Zach Morgan
REVIEWED /s/ Dana Cork
APPROVED /s/ Dana Cork

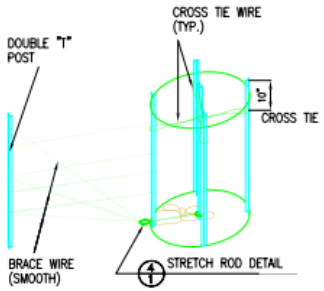
DRAWN ZMM	SCALE NTS
DATE August 2009	SHEET 1 OF 1
DRAWING NO. [illegible]	



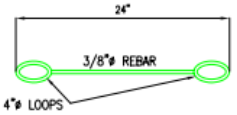
1/1 STANDARD CRIB & STRESS PANEL



2/1 CORNER & STRESS CRIB



5/1 STRETCH ROD

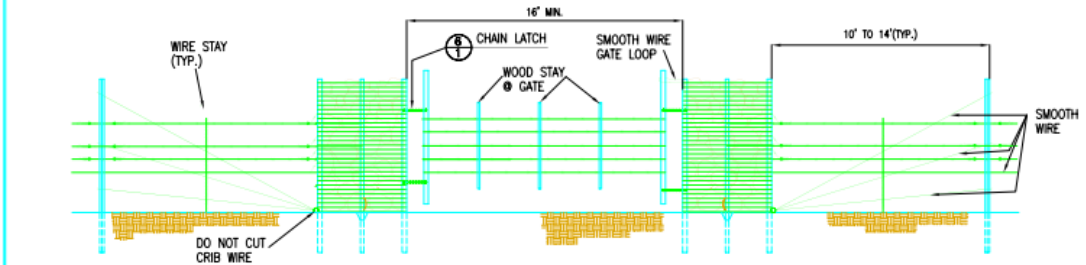


4/1 STRETCH ROD REBAR

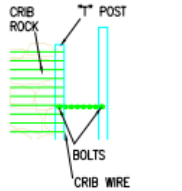
SPECIFICATIONS

ROCK CRIBS (CORNER, END AND STRESS) SHALL BE CONSTRUCTED AS PER SECTION 2824 OF THE SPECIFICATIONS, THE TYPICAL DRAWINGS AND AS LISTED BELOW:

1. Rock crib base shall be level.
2. Center "T" post shall be driven at the center of corner or stress crib.
3. Crib wire shall be overlapped twelve inches plus one square on each end used for securing mesh wire.
4. All wire terminations shall be double wrapped around double "T" post and tied off by wrapping the incoming wire a minimum of four times.
5. Crib stretch rod shall be placed over center "T" post and lined to incoming fence line. Flat rock shall be placed under the stretch rod to keep it off the ground.
6. Crib rock shall be twelve inches maximum and three inches minimum diameter. Rock shall be hand placed with small rock filling voids.
7. Cross tie wire shall be a double loop & run from the outside post to the outside posts in both directions.
8. No stretching of fence using the crib posts as an anchor will be allowed.
9. Horizontal panel wires (four) shall be installed hand tight only and shall not relieve any tension from brace wires. This work shall be performed last.
10. Clip crib wire to each crib post, four clips per post.
11. Cross tie with smooth wire when 80% of crib is filled with rock.
12. Clip each post top, bottom and 2 in between to hold rock crib wire.
13. Rock crib wire 2 x 4 x 48" (12 1/2 guage) welded.
14. The bottom of the Rock Crib wire shall not be cut at the ground level.
15. Cribs shall be 40"ø and 48" high and filled completely with rock as specified above.



3/1 STANDARD ROCK CRIB & GAP GATE



6/1 CHAIN LATCH

REV. NO.	DESCRIPTION	DATE	APPROVED

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
DIVISION OF OPERATIONS — OREGON STATE OFFICE

TYPICAL FENCING DETAILS

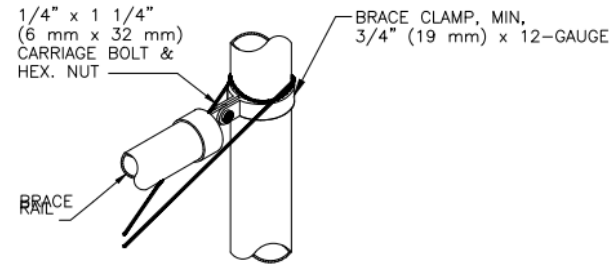
4 WIRE FENCE & ROCK CRIBS

DESIGNED
REVIEWED
APPROVED

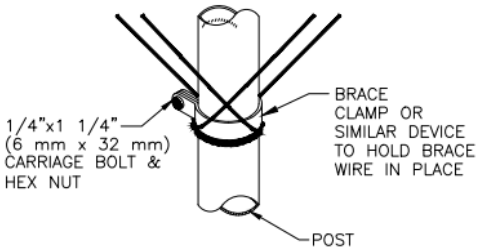
DRAWN: C.G. | SCALE: NTS
DATE: 05/04/06 | SHEET 1 OF 1
DRAWING NO.

ACAD2005
4-WIRE-ROCKCRIB.DWG

◆ PLOT INFORMATION
DDATTE TO ACCESS



DETAIL A



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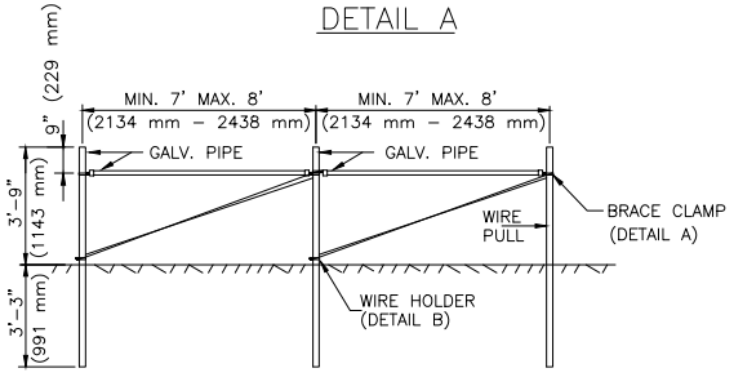
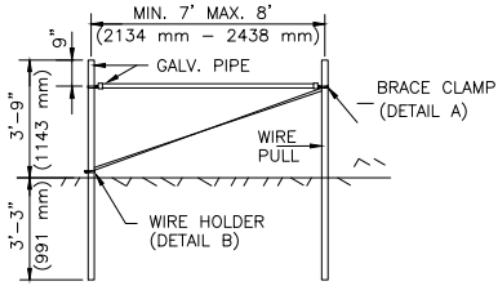
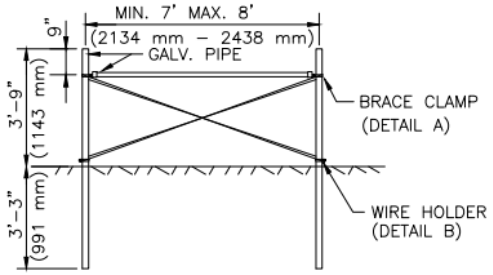


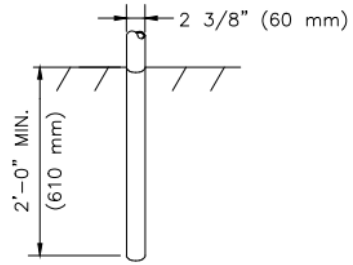
THREE-POST END PANEL



TWO-POST END PANEL



STRESS PANEL



ALTERNATE POST
INSTALLATION IN ROCK

NOTES:

1. BRACE WIRE SHALL BE WRAPPED TWO TIMES AROUND PANEL AS SHOWN ON DRAWING. EACH WRAP SHALL BE LOOPED ONCE AROUND THE POST. THE BRACE WIRES WILL THEN BE TWISTED TIGHT.
2. THE POST AND BRACES SHALL BE THE FOLLOWING SIZES:
   POST PIPE 2" (51 mm) SCHEDULE 40 [2.375" (60 mm) O.D. 3.65 (1.7 kg) LBS./FT.]
   BRACE PIPE 1 1/4" (32 mm) SCHEDULE 40 [1.660" (42 mm) O.D. 2.27 (1.0 kg) LBS./ft.]
3. WIRES SHALL BE TIED TO EACH POST WITH 12 1/2 - GAUGE WIRE TWISTED TIGHT IN AN UNDERSIZED HOLE
4. THE CONTRACTING OFFICER WILL DETERMINE WHERE TO USE THE ALTERNATE POST INSTALLATION IN ROCK. SHALL BE DRILLED IN THE ROCK FOR THIS INSTALLATION.
5. ALL FITTINGS AND TIE WIRE SHALL BE GALVANIZED.
6. WITH THE APPROVAL OF THE CONTRACTING OFFICER, OTHER METHODS MAY BE SUBSTITUTED FOR THE CLAMP FOR HOLDING DOWN THE BRACE WIRE.
7. THE METRIC CONVERSIONS ARE PROVIDED IN PARENTHESIS FOLLOWING THE ENGLISH UNITS.

ALWAYS THINK SAFETY

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management

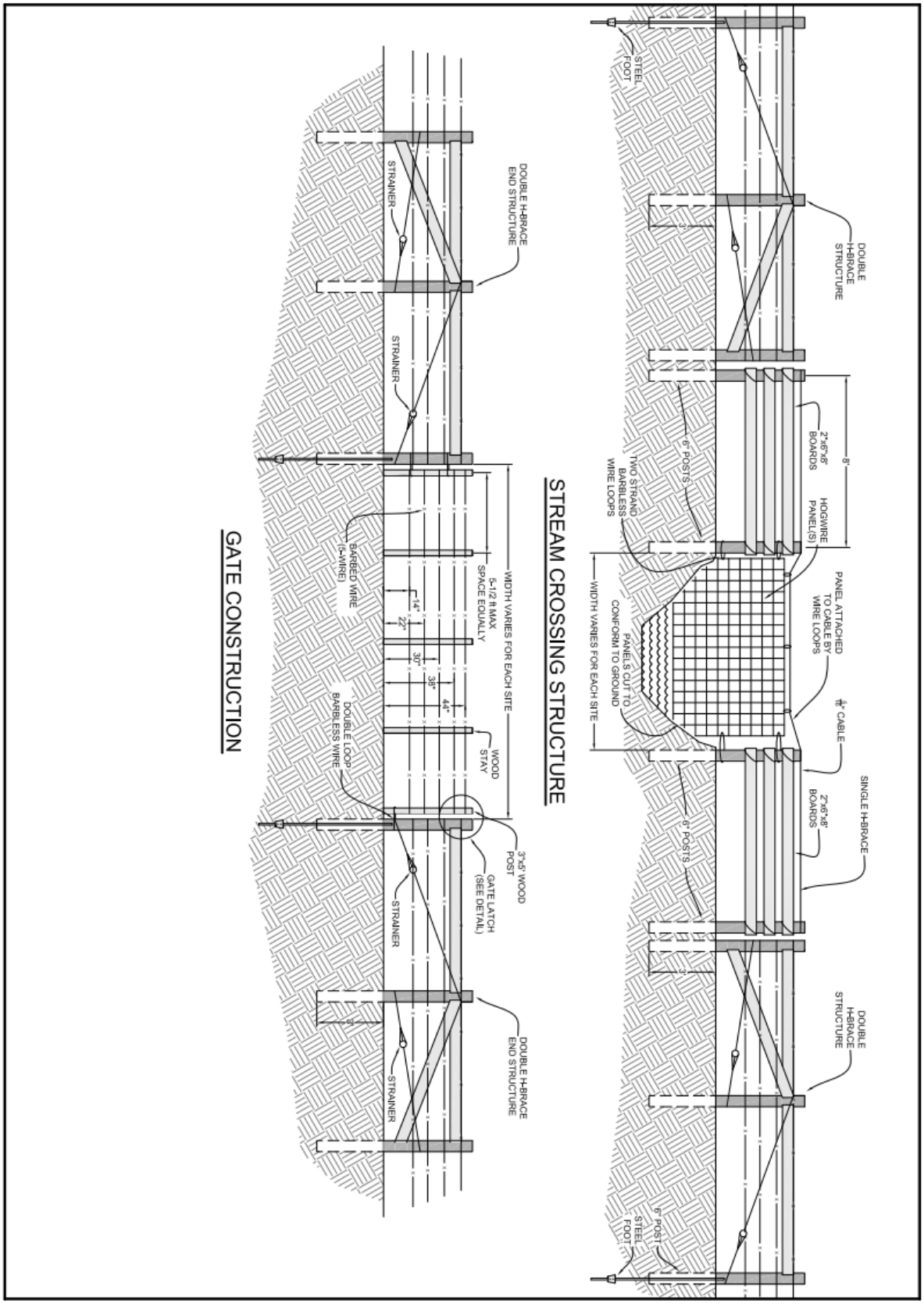
ADM Staff — Prineville District Office

STRESS PANELS (GALVANIZED STEEL PIPE)

PRINEVILLE DISTRICT — OREGON

DESIGNED	/s/ Zach Morgan
REVIEWED	/s/ Dana Cork
APPROVED	/s/ Dana Cork
DRAWN	ZMM
SCALE	NTS
DATE	July 2016
SHEET	1 OF 1
DRAWING NO.	OR050-02824-013-1

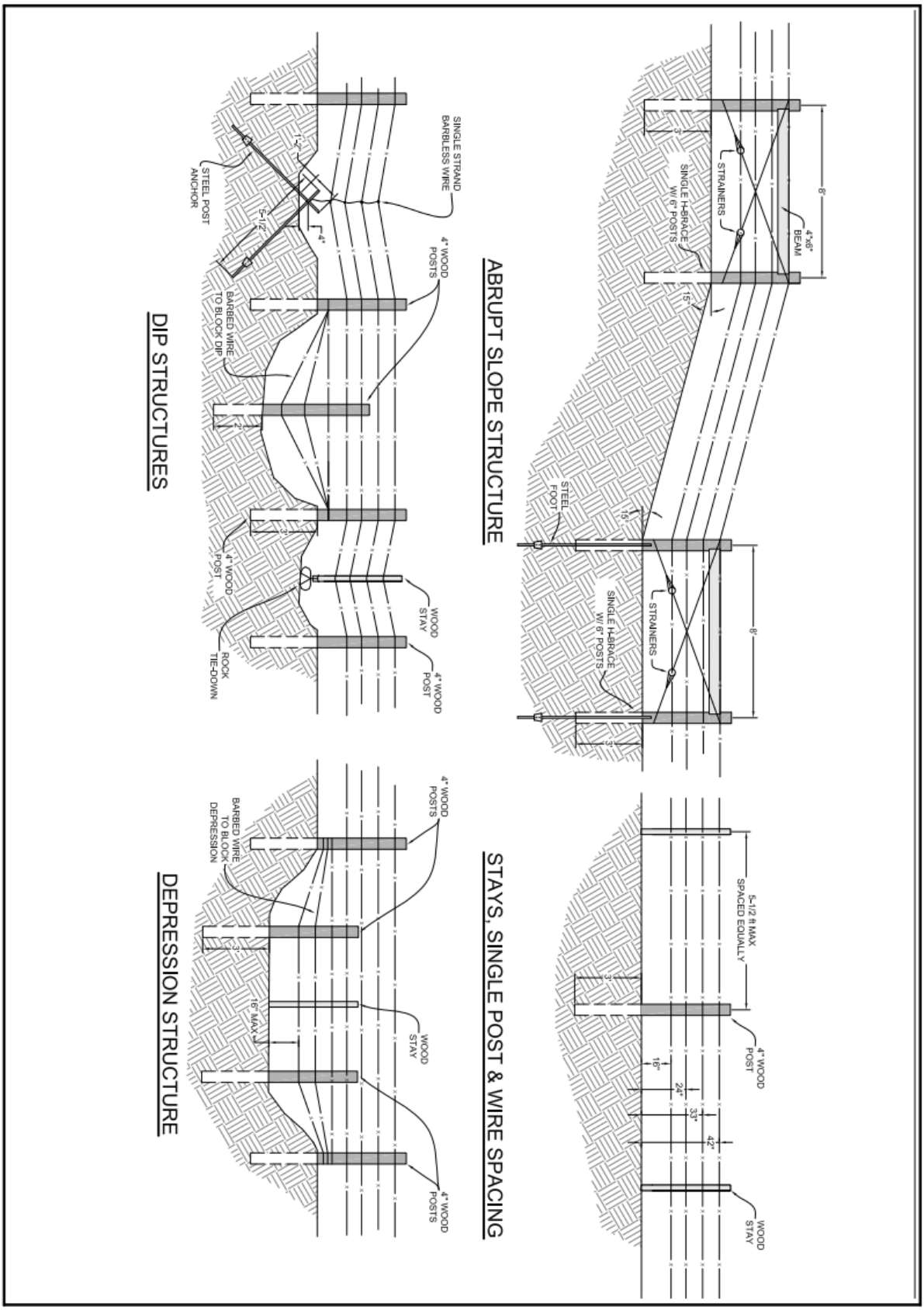
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
ADM Staff
Prineville District Office
FENCE-DRAINAGE CROSSING
Type A
PRINEVILLE DISTRICT
OREGON
DESIGNED Zach Morgan
REVIEWED Dana Cork
APPROVED Dana Cork
DRAWN ZMM
SCALE NTS
DATE January 2008
SHEET OF
DRAWING NO. OR050-02836-1
ALWAYS THINK SAFETY
Install prefabricated fence panel similar to other side
No barbs, this wire only
A
B
C
D
Additional barbwire as required
16'-6" C.C. maximum
2 strands (min.) of 9-guage galv. wire
Deadman - minimum 50lbs.
16'-6" C.C. maximum or bank to bank width
Single 5'6" steel post (typ.)
18"
(1) 4'-0" long post attached to double steel post @ 3 locations
(2) 5'-6" steel posts (typ. both sides)
(1) 5'-6" steel post
Drainage crossing
Prefabricated fence panel (Easy Panel)
Wire design and spacing same as main fence
ELEVATION
NOTE:
The 4 strands of fence wire are required across the prefabricated fence panels, but are not shown for clarity purposes.



GRANT SOIL AND WATER CONSERVATION DISTRICT
721 S. CANYON BLVD.
JOHN DAY, OREGON 97845
(541) 575-0135
DRAWING: FENCE-CONSTRUCTION-DETAILS.dwg

FENCE CONSTRUCTION DETAILS

DATE: MAR 2013
SCALE: NOTED
DRAWN: BA
CHECKED: JK
SHEET C-3
OF 8 SHEETS



GRANT SOIL AND WATER CONSERVATION DISTRICT

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(541) 575-0135
DRAWING: FENCE-CONSTRUCTION-DETAILS.dwg

FENCE CONSTRUCTION DETAILS

DATE: MAR 2013
SCALE: NOTED
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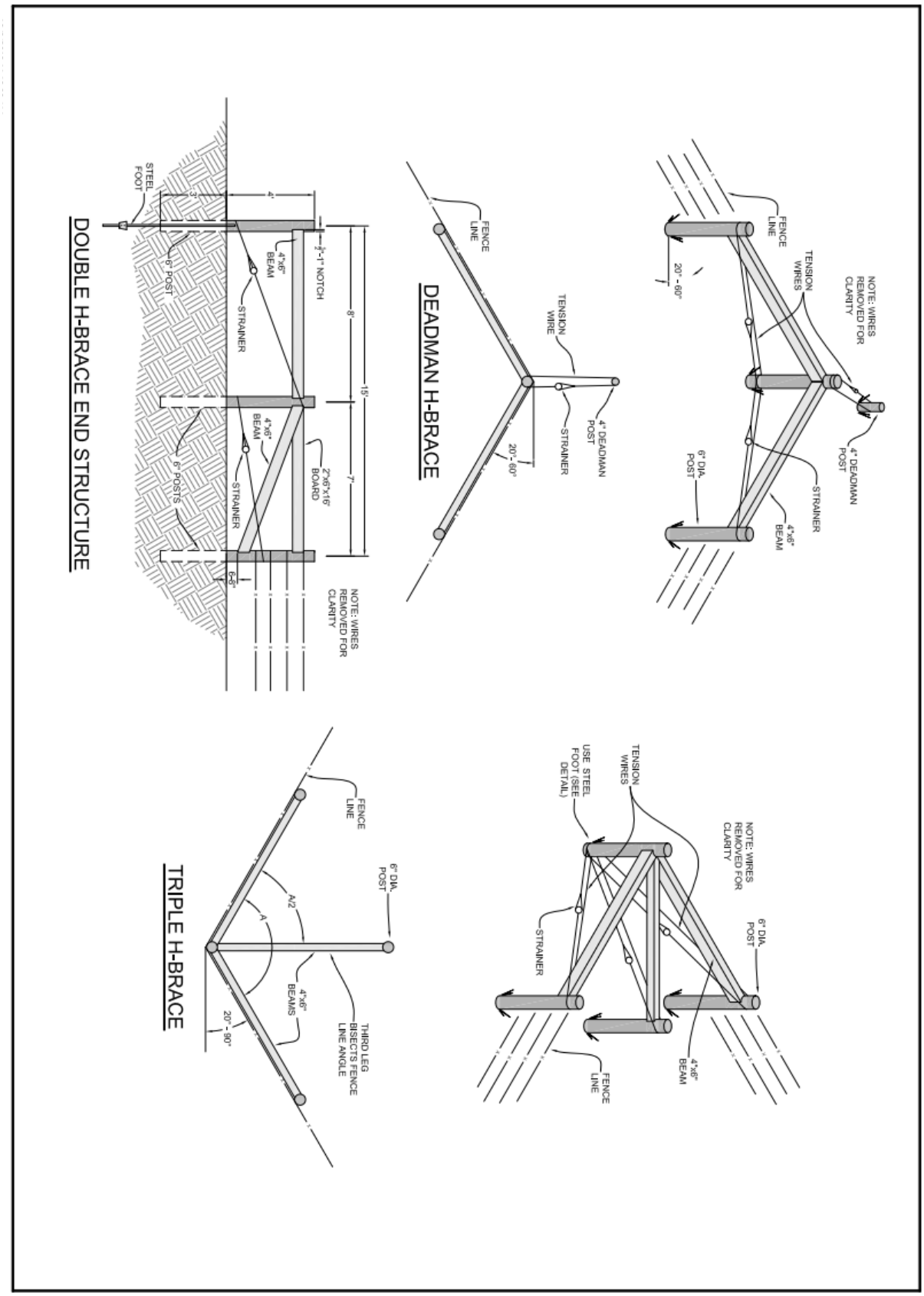
CHECKED: JK
SHEET C-1
OF 8 SHEETS



GRANT SOIL AND WATER CONSERVATION DISTRICT

721 S. CANYON BLVD.
JOHN DAY, OREGON 97845
(541) 575-0135
DRAWING: FENCE-CONSTRUCTION-DETAILS.dwg

DATE: MAR 2013
SCALE: NOTED
DRAWN: BA
CHECKED: JK
SHEET C-2
OF 8 SHEETS

FENCE CONSTRUCTION DETAILS

GRANT SOIL AND WATER CONSERVATION DISTRICT
721 S. CANYON BLVD.
JOHN DAY, OREGON 97845
(541) 575-0135
DRAWING: FENCE-CONSTRUCTION-DETAILS.dwg

FENCE CONSTRUCTION DETAILS

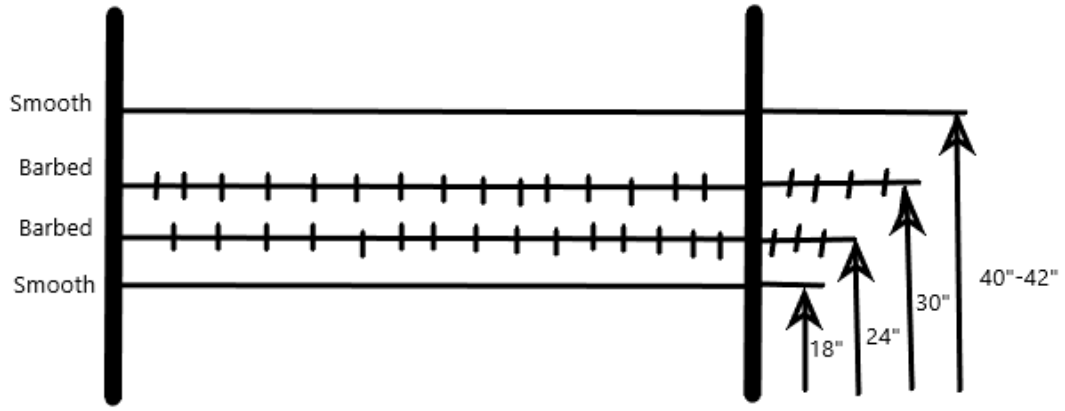
DATE: MAR 2013
SCALE: NOTED
DRAWN: BA
CHECKED: JK
SHEET C-4
OF 8 SHEETS

GRANT SOIL AND WATER CONSERVATION DISTRICT
721 S. CANYON BLVD.
JOHN DAY, OREGON 97845
(541) 575-0135
DRAWING: FENCE-CONSTRUCTION-DETAILS.dwg

FENCE CONSTRUCTION DETAILS

DATE: MAR 2013
SCALE: NOTED
DRAWN: BA
CHECKED: JK
SHEET C-8
OF 8 SHEETS

Wildlife Friendly 4-Wire Fence: Spacing and Wire Types



NORTH FORK JOHN DAY WATERSHED COUNCIL

Contract For: Fencing

Project Name: BLM/UNF Boundary Fence

Contractor:
[CONTRACTOR]
[ADDRESS]
[CITY, STATE ZIP]
[PHONE NUMBER]

Representative:
[CONTRACTOR REP NAME]
[CONTRACTOR PHONE NUMBER]

Project Sponsor:
North Fork John Day Watershed Council
P.O. Box 444
Long Creek, Or 97856
(541) 421-3018

Representative:
Alex Rice, Restoration Project Coordinator
Alex@nfjdwc.org

Valeen Madden, Executive Director
valeen@nfjdwc.org

This Contract is between the Project Sponsor, the North Fork John Day Watershed Council, hereafter called, "COUNCIL" and the Contractor as identified above, hereafter called, "CONTRACTOR" in consideration of the mutual covenants contained herein. This Contract consists of the following: this Contract less all Attachments; Exhibit A (Scope of Work), Exhibit B (Project Map), Exhibit C (Wire Fence Specifications) Exhibit D (Buck-and-Pole Fence Specifications).

STATEMENT OF WORK

A. Performance:
CONTRACTOR agrees to perform the work under this Contract as described in Exhibit A: Scope of Work and BLM/UNF Boundary Fence RFQ and any Addenda attached to this document.

B. Term of Contract:
This Contract will become effective upon signature by both parties. CONTRACTOR agrees to complete all contracted services no later than **May 30, 2022** (unless otherwise agreed upon by CONTRACTOR and COUNCIL). CONTRACTOR and COUNCIL shall mutually agree upon the schedule of performance of CONTRACTOR'S services.

C. Location:
The project will occur in Grant County:
Near Boneyard Canyon and the Gilman Flats located on Bureau of Land Managemetn property located in Township/Range/Section: 07S 28E Sections 1-18 Taxlot: 100, 500, 600, 700, 900, 901, 1000 and 1201, within the North Fork of the John Day River watershed.

D. Supplies and Materials:

CONTRACTOR agrees to furnish all necessary equipment, tools, labor, and transportation required to perform all tasks of the project as described in Exhibit A: Scope of Work.

E. Compensation:
This Contract is awarded per winning bid in the amount of **$XX,XXX.XX and shall not exceed** that total amount without mutual written consent of CONTRACTOR and COUNCIL. CONTRACTOR shall invoice COUNCIL monthly during Contract implementation, up until such time as 75% of the cost of the Contract has been met. COUNCIL shall pay CONTRACTOR the full amount of each invoice within thirty days of receipt of invoice. The final 25% of the compensation will be paid within thirty days of accomplishing all tasks as described in Exhibit A: Scope of Work to be provided by CONTRACTOR, providing that CONTRACTOR has met all conditions and requirements of this Contract. All invoices must contain the following:

- Date range for work completed
- Prevailing Wage reports
- Description of activities, Units (Feet)
- Unit price and a total

All invoices for work performed under this Contract shall be sent to: NFJDWC at P.O. Box 444 Long Creek, OR 97856 or electronically to alex@nfjdwc.org.

F. Assignment:
CONTRACTOR shall not assign or transfer any interest in this Contract without the express written consent of COUNCIL.

G. Amendments:
Terms of this Contract may not be waived, altered, modified, supplemented or amended in any manner whatsoever, except by written instrument signed by both parties.

H. Termination:
This Contract may be terminated under any of the following conditions:

1. At any time by mutual consent of the parties.
2. If funding from federal, state or other sources is not obtained and continued at levels sufficient to allow for purchase of the indicated quantity of services, the Contract may be modified to accommodate reduction in funds.
3. If federal or state laws, rules, regulations, or guidelines are modified, changed or interpreted in such a way that the services are no longer allowable or appropriate for purchase under this Contract or are no longer eligible for the funding proposed for payments authorized by this Contract; including CONTRACTOR Prevailing Wage compliance.
4. If any license or certification required by law or regulation to be held by CONTRACTOR or its subcontractors, to provide the services required by this Contract is for any reason denied, revoked, or not renewed.
5. If CONTRACTOR fails to commence work diligently, prosecute the work, and complete the work within specifications and within time frames set forth under this Contract.
6. Upon 2 days written notice by COUNCIL for any other reason specified in writing.

Any termination of this Contract under Paragraph A. of this section shall be without prejudice to any obligations or liabilities of either party already accrued prior to such termination.

The rights and remedies of COUNCIL provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

I. Force Majeure:
CONTRACTOR shall not be responsible for delay or default by fire, riot, acts of nature and war, which is beyond the CONTRACTOR's reasonable control.

J. Reciprocal Indemnity:

CONTRACTOR, its subcontractors, agents and employees will defend (subject to any limitation imposed by ORS Chapter 180), save, hold harmless, and indemnify the COUNCIL, and their officers, directors, agents, managers, family and employees from and against all claims, suits, actions, losses, damages, liabilities, costs and expenses of any nature resulting from or arising out of, or relating to the activities of the CONTRACTOR, its subcontractors, agents or employees under this Contract or in the implementation of the project.

COUNCIL will defend (subject to any limitation imposed by ORS Chapter 180), save, hold harmless, and indemnify CONTRACTOR, its subcontractors, agents and employees from and against all claims, suits, actions, losses, damages, liabilities, costs and expenses of any nature resulting from or arising out of, or relating to the activities of the COUNCIL or its officers, directors, agents, managers, or employees under this Contract or in the implementation of the project.

K. Compliance With Applicable Laws:
CONTRACTOR and its subcontractors, agents and employees agrees to comply with all federal, state, county and local laws, ordinances and regulations applicable to this Contract. Documentation of federal, state, county and local laws, ordinances and regulations will be made available to CONTRACTOR upon request.

CONTRACTOR shall comply with the requirements of the Oregon prevailing wage rates under ORS 279C.800 to 279C.870 or federal Davis-Bacon prevailing wages, whichever is higher. CONTRACTOR shall be required to provide copies of certified payroll to the COUNCIL for all Davis-Bacon Act wages.

L. Insurance:
CONTRACTOR and subcontractors shall secure at its expense and keep in effect during the term of this CONTRACT Workers Compensation as required by the State of Oregon and comprehensive general liability insurance with extended coverage endorsement from an insurance company authorized to do business in the State of Oregon. The limits shall be not less than one million dollars ($1,000,000.00) per occurrence with a two million dollars ($2,000,000) aggregate coverage. The liability insurance coverage carried by the Contractor and its subcontractors, and required for performance of this CONTRACT shall include the COUNCIL, its officers, directors, agents, manager and employees as named Additional Insured. Certificate of insurance will be delivered to the COUNCIL by start of operations.

THIS CONTRACT, INCLUDING ALL MATERIALS INCORPORATED BY REFERENCE, CONSTITUTES THE ENTIRE CONTRACT BETWEEN THE PARTIES ON THIS SUBJECT. THERE ARE NO UNDERSTANDINGS, CONTRACTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HERE REGARDING THIS CONTRACT. NO WAIVER, CONSENT, MODIFICATION OR CHANGE OF TERMS OF THIS CONTRACT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY BOTH PARTIES. SUCH WAIVER, CONSENT, MODIFICATION OR CHANGE, IF MADE, SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. THE FAILURE OF THE COUNCIL TO ENFORCE ANY PROVISION OF THIS CONTRACT SHALL NOT CONSTITUTE A WAIVER BY THE COUNCIL OF THAT OR ANY OTHER PROVISION. CONTRACTOR, BY EXECUTING THIS CONTRACT, HEREBY ACKNOWLEDGES THAT CONTRACTOR HAS READ THIS CONTRACT, UNDERSTANDS IT AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

IN WITNESS WHEREOF, CONTRACTOR and COUNCIL have executed this Contract.

CONTRACTOR	**North Fork John Day Watershed Council**
_____	_____
Name (Print)	Executive Director (Print)
_____	_____
Signature	Signature
_____	_____
Date	Date

Exhibit A: Scope of Work

This Contract is entered into to accomplish the following tasks for the following purposes:

Project Description

Fence repair and construction according to alignment in PROJECT MAP (Exhibit B) and fence specs (Exhibit C and Exhibit D) and with guidance from the COUNCIL.

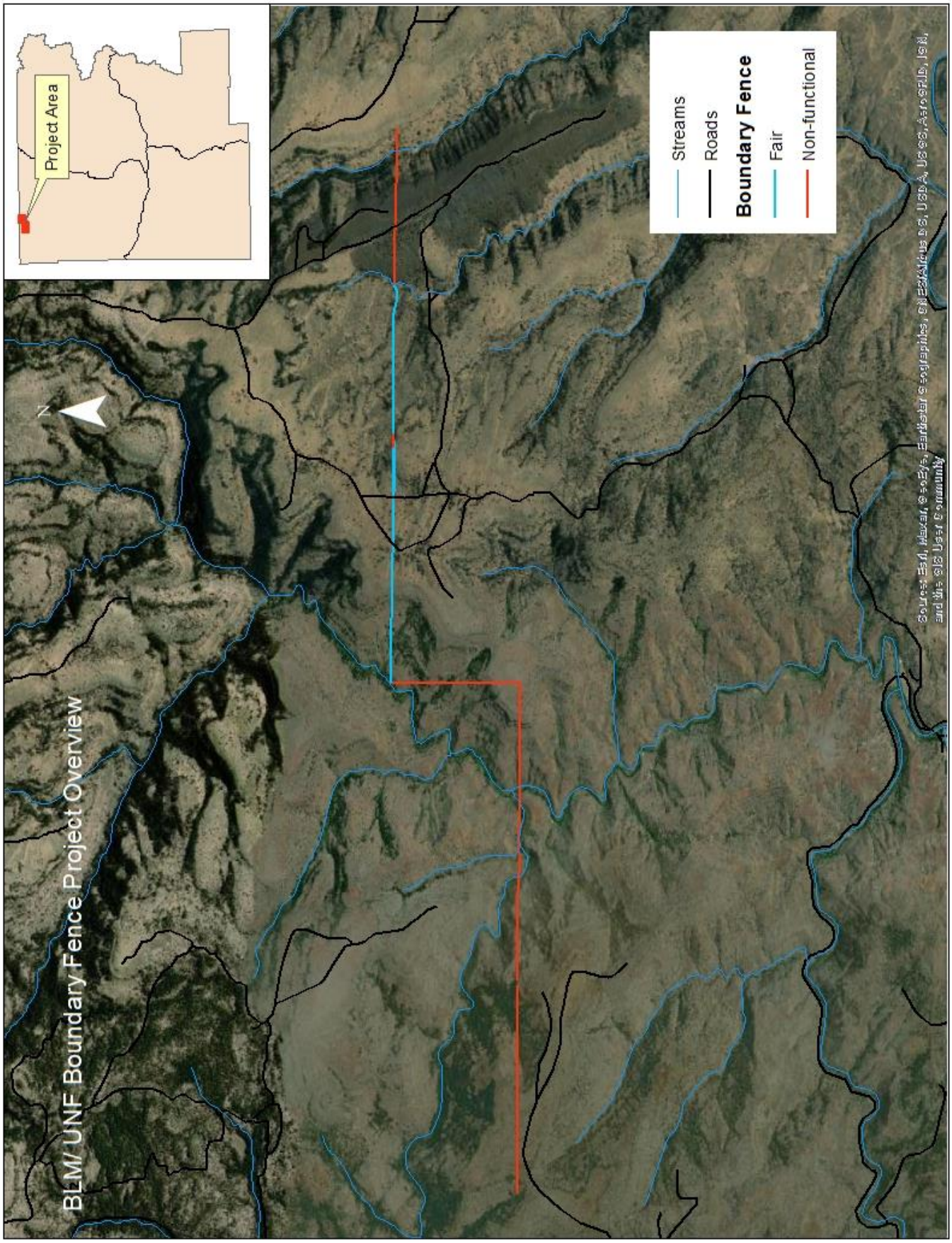
Wire fence materials are to be furnished by the CONTRACTOR.

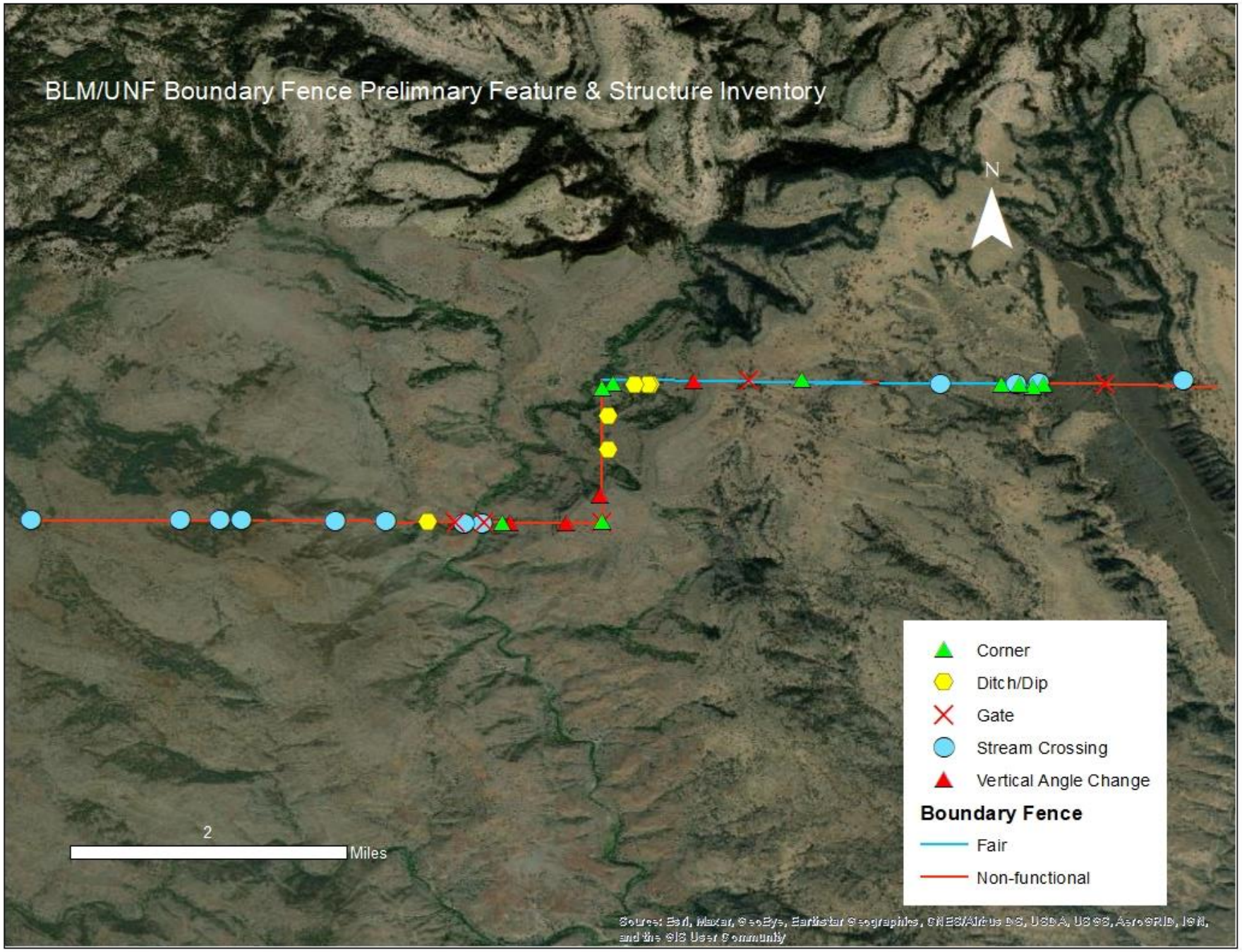
Scope of Work	
Fence construction	
July 6-October 1	
Repair of Fair Conditioned Fence	Repair of fencing on the Boundary of Bureau of Land Management Property and the Heppner Ranger District of the Umatilla National Forest
Description of work	1) Furnishing materials necessary to complete necessary repairs on fair conditioned fence 2) Repairing all broken wires, tightening loose wires, and realigning wires to correspond with the existing fence construction specifications (e.g. number of wires, wire spacing, etc.) 3) Restoring all missing, broken, and loose wire clips, staples, wood stays, and steel posts to replicate the existing fence construction specification (e.g. wood stay spacing, steel post spacing, etc.) 4) Repairing or reconstructing existing fence fixtures (e.g. H-Braces, rock jacks, gates, water crossings, etc.) as necessary to restore them to their original construction specifications or functionality. 5) Installing new solid fence structures where necessary to support the existing fence.
July 6-October 1	
Reconstruction of Non-Fucntional Fence	Reconstruction on non-functioning and collapsed fencing on the Boundary of Bureau of Land Management Property and the Heppner Ranger District of the Umatilla National Forest
Description of work	1) Deconstruction, removal, and disposal of non-functional fence materials 2) Reconstruction of non-functional fence based on the alignment in the Project Map (Exhibit B) as well as following the original fence alignment where practicable, and the Wire Fence Specifications (Exhibit C)
Additional Requirements	

- **At Contract signing**, CONTRACTOR to provide COUNCIL:
  1) CONTRACTOR completed W-9 form
  2) CONTRACTOR and Subcontractor certificate(s) of General Liability showing ***NFJDWC as an additional insured***
  3) CONTRACTOR and Subcontractor proof of Worker's Compensation
- CONTRACTOR must **submit itemized Prevailing Wage reports** with each invoices submitted to COUNCIL for payment.
- Vehicles will not be allowed to cross streams without approval exception between July 15-August 15, 2021.
- CONTRACTOR will follow USFS and BLM fire restrictions and applicable OSHA standards in place during the contract period.
- CONTRACTOR must have a working chainsaw on site at all times.
- Water tender (or equivalent) must be on site, prior to operating mechanized equipment, once IFPL reaches Level II.
- No equipment fluids will be changed on site and repairs to any vehicle or equipment fluid leaks must be repaired immediately.
- Maintain a daily clean work site. All litter, debris, and construction supplies will be removed from the contract site upon completion.

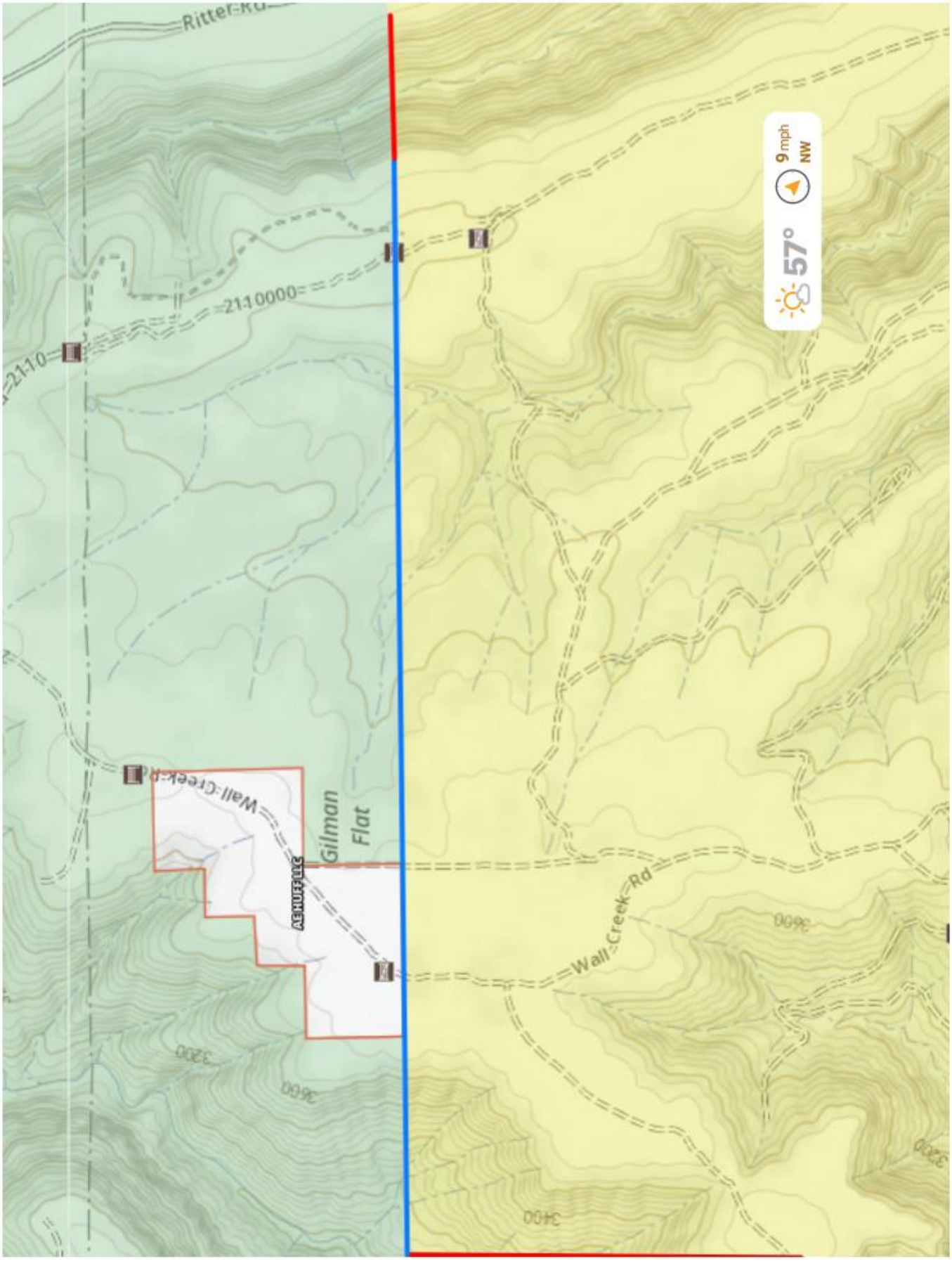
Total cost is not to exceed [$XX,XXX].

Exhibit B: Project Maps

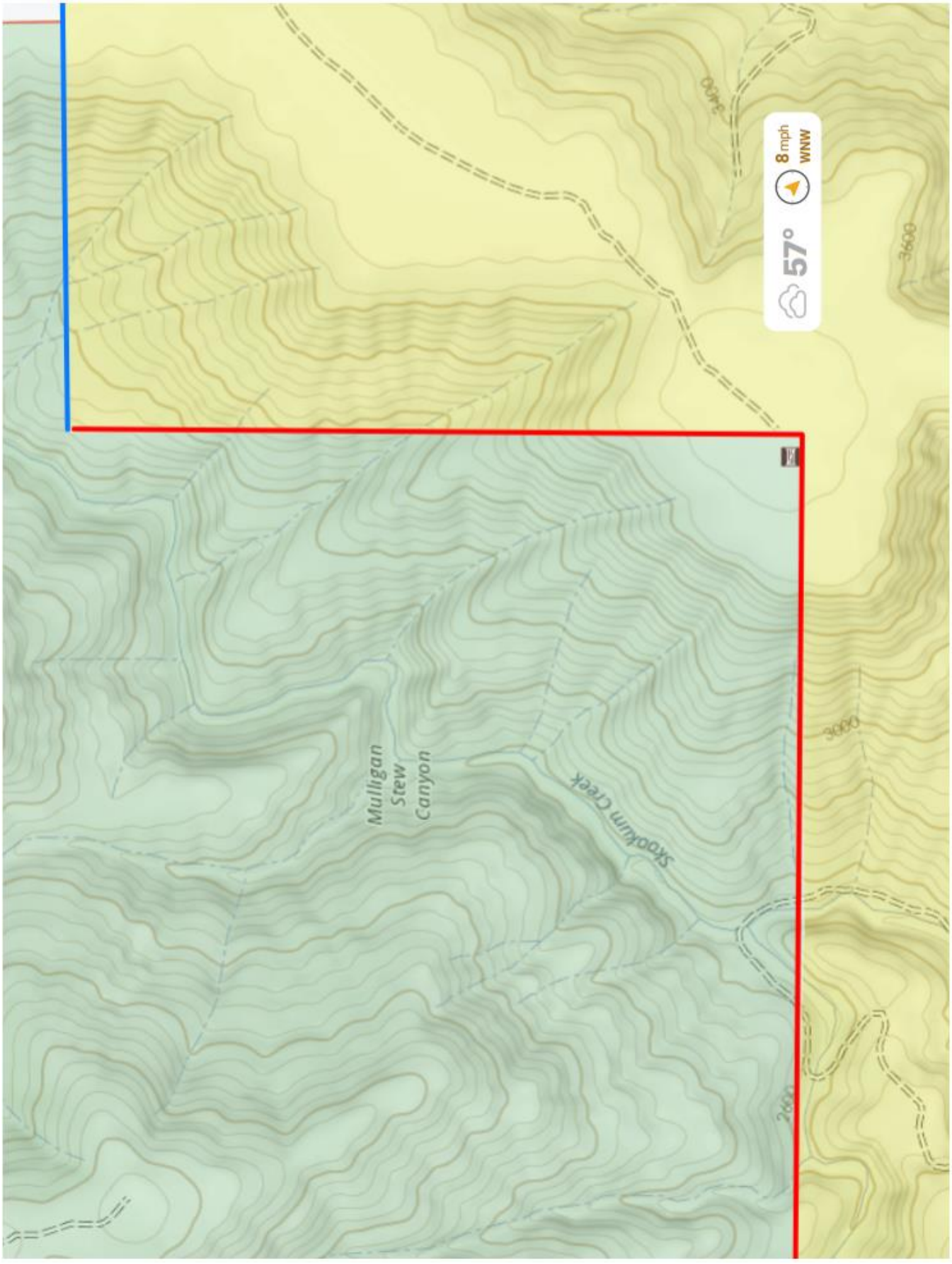



BLM/UNF Boundary Fence Prelimnary Feature & Structure Inventory
N
2
Miles
Corner
Ditch/Dip
Gate
Stream Crossing
Vertical Angle Change
Boundary Fence
Fair
Non-functional
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

BLM-UNF Eastern Fence Portion Topography



BLM-UNF Central Fence Portion Topography



BLM-UNF Western Fence Portion Topography

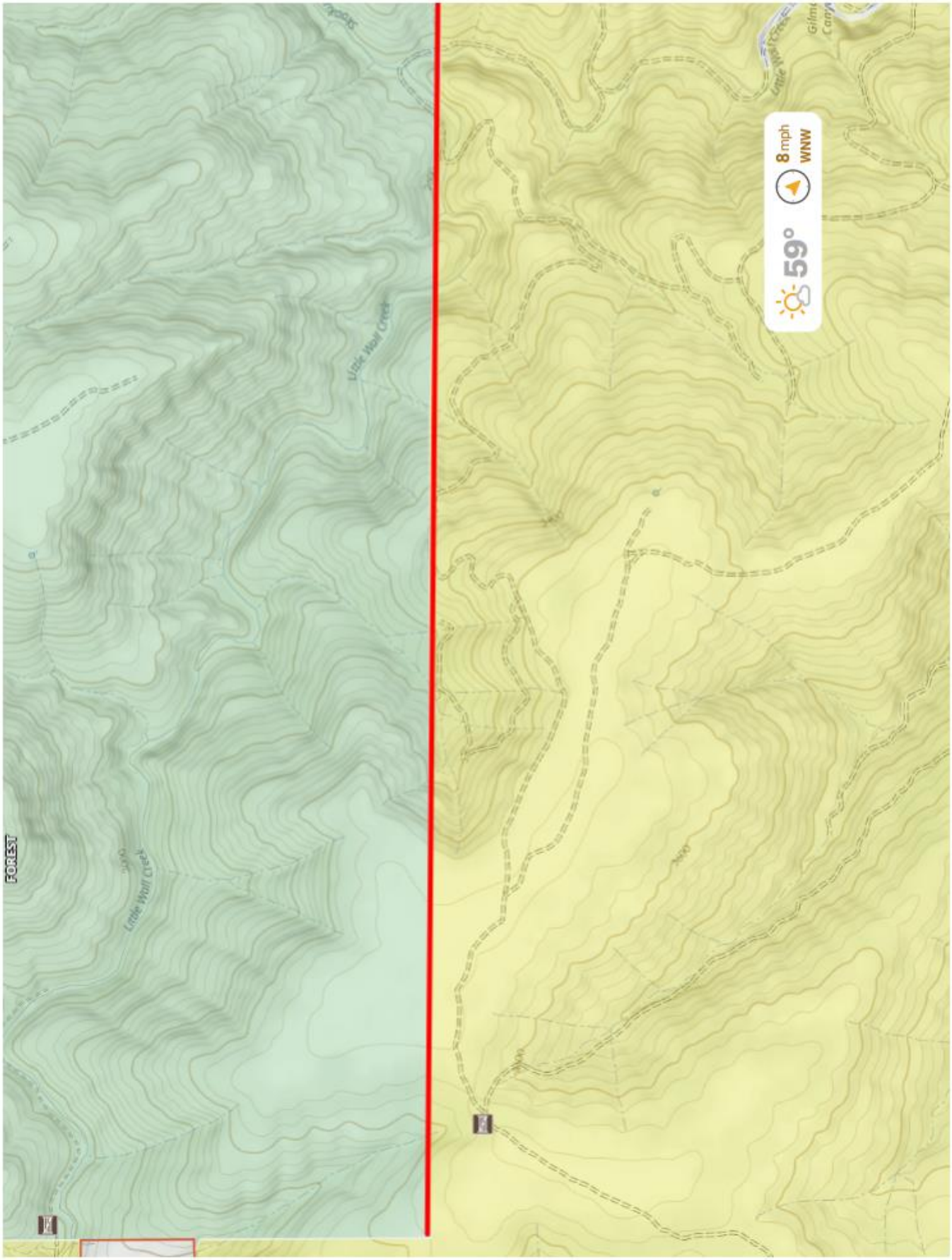


Exhibit C: Wire Fence Specifications

NORTH FORK
JOHN DAY
WATERSHED COUNCIL

BLM/UNF Boundary Fence

4-Strand Barbed Wire Fencing Specifications

SITE PREPERATION

Corridor Clearing and Snag Removal:

- The corridor shall be cleared of all trees (Excluding those used as tree nailers), brush, downed timber, rocks, and any overhanging branches up to a 6-foot clearance height from the ground to allow construction, operation, and maintenance of the of the fence.
- All fence corridor clearing shall be done using manual or powered hand tools, except as authorized by the COUNCIL.
- No vegetation within 20 feet of a stream shall be damaged or removed unless directed by the COUNCIL.
- Dead standing trees that could damage the fence if they fall shall be felled by the CONTRACTOR and left on the side of the fence designated by the COUNCIL prior to the new fence being constructed. The COUNCIL's Authorized Representative will determine which trees are to be felled.

INSTALLATION AND USE OF FENCE MATERIALS AND STRUCTURES

General:

- As designated by the COUNCIL, barbed and barbless wire shall be used for all general fence construction.
- High tensile smooth wire, barbless wire, or 9-gauge wire shall be used for all tensioning wires, as specified by the COUNCIL.
- Wire shall be attached to steel posts with commercial wire fasteners/clips.
- Any wire having a nick, kink, or sharp bend shall be replaced or cut and spliced. High tensile smooth wire will be spliced with three nicopress sleeves.
- No barbed or barbless wire ends shall be left protruding from any fence structure and wire ends shall be bent down into the wood structure. High tensile wire ends shall be cut off a maximum of one inch from the last nicopress sleeve.
- All jacks and stays shall be placed vertically in the fence and located such that the wires maintain the specified spacing.
- All fence wires shall be tightened with wire stretchers. Wire shall have the spool slack removed, but not all the stretch from the wire. All barbed wire shall be tensioned to a minimum of 150 pounds' tension using a fence stretcher with a minimum Working load limit of 250 pounds. Short spans and long spans shall have the same tension.
- Each barbed wire tie off shall be wrapped twice around the wood tie off post and tied back on itself with six complete, tight wraps, and secured with a staple.

Wire Usage:

Combination Smooth and Barbed Wire Fence:

In many situations, a combination of smooth wire and barbed wire can effectively contain livestock and will allow for easier wildlife passage. Smooth wire should be used for the top and bottom wires and one to two barbed wire strands shall be used for the center strands. Barbless twisted cable wire or coated wire will increase visibility for wildlife. The top wire should be 40" to 42 inches high or lower and the bottom wire at least 18 inches above the ground to provide wildlife clearance. Allow at least 12 inches between the top and second wires.

Wire Spacing:

For 4 wire fence stretches the wire heights or spacing shall be the following as measured from

the ground up:

- 1st wire - 18 inches (Barbless Wire)
- 2nd wire - 24 inches (Barbed Wire)
- 3rd wire - 30 inches (Barbed Wire)
- 4th wire – 40-42 inches (Barbless Wire)

12-1/2-gauge barbed and barbless wire shall be used for all of the following purposes:

- Fence Construction
- Depression Structures
- Gates

12-1/2-gauge barbless wire shall be used for all of the following purposes:

- Gate Loops and Hitch Sticks
- Tensioning Wires
- Stay Let-Down Fastener
- Hogwire & Steel Panel Loops
- Any Braces, i.e., where Jack Braces are wired to the ground pieces.
- Rock Tie Downs
- Steel Foot Attachments

9-gauge smooth wire shall be used for all of the following purposes:

- Gate Loops and Hitch Sticks
- Tensioning Wires
- Stay Let-Down Fastener
- Hogwire & Steel Panel Loops
- Any Braces, i.e., where Jack Braces are wired to the ground pieces.
- Rock Tie Downs
- Steel Foot Attachments

High tensile smooth wire shall be used for:

- Tensioning Wires

Splicing Wires:

Splices in barbed or barbless wire shall be made by forming a single loop and then wrapping the wire tightly back on itself with 6 complete wraps. The other wire shall then be inserted through the loop and wrapped tightly back on itself with 6 complete wraps.

Snubbing Wires:

A snubbing wire is a 12 ½ gauge barbless wire double looped around a solid fence structure pivot post and a stay with the barbed fence wires held between the post and stay. Snubbing wires shall be used any time the barbed wire is pulling

away from the wood and would pull out the staple. The snubbing wires shall only be used on a case by case basis (i.e., if directed by the COUNCIL's Authorized Representative to build a jack on an opposite side of the pull).

Inline Wire Strainers:

Strainers shall be attached to all high tensile tensioning wires. Strainers shall be installed in the center of each H-Brace being tensioned. Double looped 12 ½ gauge barbless or 9-gauge wire with twitch sticks may be substituted for inline wire strainers when directed by the COUNCIL's Authorized Representative.

Stretch Lengths:

All stretches of fence between any two stretch points or Pivot Posts shall be built straight. Stretches may be as short as 100 feet or as long as 1,000 feet. Locations of end structures shall be determined by the COUNCIL's Authorized Representative and staked, flagged or otherwise marked on the ground.

Intermediate end structures not otherwise required for other reasons (i.e. gates, for example) will be required in certain stretches to reduce stretch length as determined by the COUNCIL's Authorized Representative.

Horizontal and Vertical Changes:

The COUNCIL's Authorized Representative will specify the type of structures to be used at each horizontal angle change location, generally using the following guidelines. (In the event ground or other conditions render the listed structures unsuitable, then a more substantial structure, such as a Jack or Crib shall be used). Jacks may be used interchangeably for any structure listed herein except cribs.

Horizontal Angle Changes

- 0-45 degrees: Shall be made with single H-Braces that bisect the fence angle, jack, or crib.
- 45 or greater degrees: Shall be made with (2) double H-Braces, jack, or crib.

Vertical Angle Changes

- 0-15 degrees: Use Steel posts at top and bottom of breaks in slope or use jacks. Steel post anchors may also be utilized at bottom of slope breaks.
- Greater than 15 degrees: Use in-line H-braces at the top and bottom of breaks in slope or use jacks or cribs. Add steel feet to counteract uplift forces.

- Dip and Depression structures: Steel post anchors may be used for minor depressions.

Construction of Solid Fence Structures:

Solid fence structures are defined as double H-Braces, triple H-Braces, deadman H-Braces, single H-Braces, single pivot post with deadman, jacks, cribs, single wood posts, tree nailer, tree tie, and depression structures.

Spacing:

The spacing of solid fence structures between any two corners, dip, rise slope change, and/or end structures shall be 200 feet. At the end of a stretch of fence that will not divide equally by 200 feet, the post spacing shall be divided equidistantly, with no solid fence structure being farther apart than 200 feet (i.e. 380 feet divided by 2 equals 190 feet). For wire fences, spacing of solid fence structures may be adjusted at the COUNCIL's discretion to fit the contour and/or fence line, but will not be greater than 1000 feet between any two solid fence structures.

Trimming:

Galvanized steel pipe is preferred for all fence structures where practicable. Any Wooden fence structures shall not have ends protruding into the fence right-of-way. All excessive material shall be cut off.

Deviations from Contract Documents:

All structures shall be constructed as shown on the drawings and as stated herein.

Single Galvanized Steel Posts:

Single galvanized steel pipe posts shall be used in all straight sections of fence on solid ground where the post depth criterion is able to be met.

A single galvanized steel pipe post shall be required at the top and bottom of all abrupt breaks in slope between 0 and 15 degrees. A steel foot shall be installed with galvanized steel pipe posts placed at the bottom of all abrupt breaks in slope between 5 and 15 degrees. In line H-Braces shall be used at the top and bottom of all abrupt breaks in slope over 15 degrees. Steel anchors, jacks, cribs, or other approved structures shall be used if post depth criteria cannot be met or the ground shows evidence of being wet or marshy, or as determined by the COUNCIL's Authorized Representative.

Steel Tee Posts:

Steel tee posts are to be placed at a maximum of 16-foot intervals between any two solid fence structures. Steel posts are to be set in a straight line and standing vertical plumb. Posts are to be driven into the ground 24 inches with 48 inches left above the ground. In rocky conditions where steel tee posts cannot be effectively driven to specified depths, pilot holes will be drilled into the ground to allow for steel tee posts to be installed with the spade removed. The drilled

holes are to be of a maximum diameter to require the driving of the steel tee post to depth and retain equivalent rigidity to a fully driven post. All steel tee posts must have the wire holding knobs facing exactly perpendicular to the fence wires. Steel tee posts shall not be used at the top or bottom of abrupt breaks or as a substitute for any other solid fence structure. Steel tee posts shall not be installed such that the fence exerts a net upward force on the steel post. Surface Rock Jacks may be built every 50 feet with eight fence stays evenly spaced between Jacks as an alternative to installing steel tee posts in areas not inaccessible to drilling equipment as determined by the COUNCIL's Authorized Representative.

H-BRACES

General:

H-Braces shall be used as end structures and at locations as described in Section: "HORIZONTAL AND VERTICAL CHANGES" when post criteria are met.

H-Braces shall not be used when post depth criteria cannot be met; Topography or wet or marshy conditions indicate that the H-Brace may not hold.

Single H-Braces (SHB):

Single H-Braces shall be used at the top and bottom of all abrupt breaks in slope greater than 15 degrees unless post depth criteria cannot be met because of local topography or the soil is wet or marshy as determined by the COUNCIL's Authorized Representative. Single H-Braces used on horizontal fence angle changes of less than 45 degrees shall bisect the angle of the fence.

There are two posts used in a single H-Brace. The side of the posts to which the fence wires are attached shall be aligned in a straight line with each other and with the first line post in the stretch of fence.

The top of the cross member shall be 42 inches above the ground and installed level. Notches in H-Brace posts to accommodate cross members (4-inch x 6-inch x 8 foot beams or approved alternative) shall be between ½ inch and 1 inch in depth.

For inline single H-Braces used in breaks of slope greater than 15 degrees there are two separate tensioning wires used. The tensioning wires shall be looped around the bottom of one post 6 inches above the ground and around the other post just above the top of the cross member and vice versa. The tensioning wires shall be held in place with dip or rise nails and then secured to the posts with one staple at each end. A wire strainer or twitch stick shall be inserted in each wire loop and ratcheted or twisted until the wire is taut.

Single H-Brace (Bisecting H-Brace):

For single H-Braces that bisect the angle of the fence only one tensioning wire shall be used. The tensioning wire shall be looped around the pivot post 6 inches above the ground and around the other post just above the cross member. The tensioning wire shall be held in place with dip or rise nails and then secured to the posts with one staple at each end. A wire strainer or twitch stick shall be inserted in each wire loop and ratcheted or twisted until the wire is taut.

Double H-Brace (DHB):

One double H-Brace shall be used at the ends of all stretches, unless post depth criteria cannot be met because of local topography or the soils are wet or marshy as determined by the COUNCIL Authorized Representative.

There are three 6-inch posts used in a double H-Brace. The side of each of the posts in a double H-Brace to which the fence wires are attached shall be aligned in a straight line with each other and with the first line post in the stretch of fence.

The top of the cross member that is attached to the tie-off (first) post and to the middle (second) post shall be 42 inches above the ground and installed level. The cross member that is attached to the middle post and the end (third) post shall be placed diagonally, with the high end being attached to the middle post 42 inches from the ground, and the low end being attached to the end post 6 to 8 inches above the ground.

Notches in H-Brace Posts to accommodate cross members (4-inch x 6-inch x 8-foot long beams or approved alternative) shall be between ½ inch and 1 inch in depth.

There are two separate tensioning wires used in a double H-Brace. The first tensioning wire will be looped around the tie-off (first) post 6 inches above the ground and around the middle (second) post just above the cross member. The second tensioning wire will be looped around the middle (second) post 6 inches above the ground and around the end (third) post just above the top of the diagonal brace approximately 14 to 16 inches above the ground. The tensioning wires shall be held in place with dip or rise nails and then secured to the posts with one staple at each end. A wire strainer or twitch stick shall be inserted in each wire loop and ratcheted or twisted until the wire is taut.

On the side opposite the fence wires, a 2-inch x 6-inch x 16-foot-long board or half round shall be attached to all three posts. The top of this board shall be 42 inches above the ground. This board shall be secured to each of the three posts with two 50d nails into each of the three posts.

ROCK JACKS

Rock jacks can be used where steel pipe cannot be drilled/driven.

General:

There are two types of Rock Jacks: Set Post Rock Jacks (SPJ) and Surface Rock Jacks (SRJ). Set post rock jacks shall be used at horizontal fence breaks and at the end of fence stretches. Surface rock jacks shall be used at vertical fence breaks or to supply spacing support requirements for straight sections of fence. Jacks can be utilized when the ground is not accessible to power post driving equipment or suitable for holding fence posts; either in wet or marshy sites or where post depth criteria cannot be met as determined by the COUNCIL's Authorized Representative.

Set Post Rock Jack Construction:

A pivot post shall be driven or dug into the ground a 12 to 36 inches and shall be aligned horizontally with the first adjacent line posts in the section of fence. Two diagonal split jack braces shall be nailed approximately 6 inches down from the top and on either side of the pivot post. The braces shall crisscross and angle towards the ground at about 60 degrees from the post and spread away from each other approximately 5 feet, forming a V-shaped support. The diagonal braces shall be oriented to brace into the post against the direction of the fence tension.

Two ground brace pieces shall then be nailed to the post, one on each side, about 4 inches above the ground. Ground pieces shall be level and extend back from the post horizontally at about a 60-degree angle to each other, crossing the diagonal support braces.

Ground pieces shall be placed on the outside of the diagonal braces and must extend beyond the diagonal braces 6 to 8 inches. Where the ground pieces intersect their respective diagonal braces, they shall be nailed to the diagonal braces so as to create a level floor. Diagonal braces shall extend beyond the ground pieces and rest on stable rock supports at ground level.

A final split jack brace shall be placed across and nailed to the ground pieces to tie the two diagonal braces together. This brace shall not extend more than 6 inches beyond the ground braces and becomes part of the platform to support rock ballast placement.

Split wood stay material shall be used to make up the remaining rock platform by placing them as joists across the ground braces. This joist flooring is not to be nailed to the ground pieces.

All flooring will be trimmed if it extends more than 6 inches beyond ground brace members. Prior to placing any ballast rock on the platform, support rocks shall be placed under each ground piece (one rock at each end) so that all weight rests upon the support rocks. Support rocks shall not be stacked on each other.

Jack structures shall be wired together with one loop of barbless wire twisted tight around all brace and post junctions. All wood bracing shall be secured with two 50d spikes.

At least 300 pounds of ballast rock shall be placed on the platform.

Surface Rock Jack Construction:

Place two split wood jack braces in a triangle with the bottom of the braces approximately 5 feet apart and the top of the braces crisscrossing at 40 inches above the ground, forming a teepee-shaped support. Nail the braces together at the crossing junction.

A third vertical support brace shall be placed and nailed in between the v-notch of the teepee shaped support and angle toward to the ground at about 60 degrees to keep the teepee shaped support standing vertical.

Two ground brace pieces shall be nailed to the outside of the teepee-shaped support, one on each brace, about 4 inches above the ground. Ground pieces shall be level and extend back horizontally, crossing the vertical support brace. Ground pieces shall be placed on the outside of the vertical support brace. Where the ground pieces intersect with the vertical support brace, they shall be nailed to create a level floor. The teepee-shaped braces and vertical support brace shall extend beyond the ground pieces and rest on stable rock supports at ground level.

A final split wood brace shall be placed across and nailed to the inside of the joint between the teepee braces and the ground pieces to tie the all jack braces together. This brace shall not extend more than 6 inches beyond the outside of the ground braces and becomes part of the platform to support rock ballast placement.

Split wood stays shall be used to make up the remaining rock platform by placing them as joists across the ground braces. This joist flooring is not to be nailed to the ground pieces. All flooring will be trimmed if it extends more than 6 inches beyond ground brace members.

Prior to placing any rocks on the rock platform, support rocks shall be placed under each ground piece (one rock at each end and one in the center) so that all weight rests upon the support rocks. Support rocks shall not be stacked on each other. Jack structures shall be wired together with one loop of barbless wire twisted tight around all brace junctions. All wood bracing shall be secured with two 50d spikes.

At least 300 pounds of rock shall be placed on the platform.

CRIBS

General:

Cribs may be used in wet or marshy areas where an H-Brace or other solid fence structures may not hold as determined by the COUNCIL's Authorized Representative.

Cribs may also be used as end structures in place of any other solid fence structure when post depth criteria cannot be met or in wet or marshy areas as determined by the COUNCIL's Authorized Representative.

Crib Construction:

Four – 6-inch posts shall be installed plumb, parallel with each other, and evenly spaced 5 feet apart so that their outside edges are square. Posts shall be driven or dug into the ground a 12 to 36 inches and shall be aligned horizontally with the first adjacent line posts in the section of fence.

Board floor joists shall be nailed at least 4 inches above the ground on the inner side of the square between two sets of posts directly across from each other to support floor joist placement. Floor joists shall be level so the crib bottom, which is laid on top of them, will also be level, both side-to-side and front-to-back. Three support rocks (one rock on each end and one in the center) shall be evenly spaced under each floor joist so that the joists rest firmly on the rocks. Support rocks shall be wider than the joists they support. Support rocks shall not be stacked on each other. All support rocks shall be placed under the joists prior to placing any rocks in the crib.

Lay floor board pieces on top of and perpendicular to the floor joists so that the floor pieces are no more than 2 inches apart across the entire floor of the crib. The two side boards which are laid directly on top of the floor pieces shall be laid flat. These side boards shall then be nailed to each floor piece with one nail. The remaining side boards will be installed on their edges, alternating sides in a log cabin fashion and then nailed to the inside of the posts to a height of approximately 42 inches. Install two diagonal braces on all cribs. The diagonal braces shall be attached on opposite sides of the crib with the high end oriented towards the posts that have the wire attached to them. The diagonal braces shall be fitted flush against the side boards at an angle extending from the top of the side boards to the crib floor. Each diagonal brace shall be nailed to each of the side boards.

Two additional board cross braces shall be crisscrossed and nailed level between opposite posts. The top of the first brace shall be approximately36 inches above the ground and the other brace shall be approximately 42 inches above the ground.

The Crib shall be filled with rocks to a level even with the highest side board. All boards shall be attached to the corner posts with two 20d nails in each end.

FLEXIBLE FENCE STRUCTURES – STAYS

General:

Wood Stays shall be installed between solid fence structures and steel posts. Stays shall be installed plumb and equally spaced no greater than 5 ½ feet apart (e.g. two stay evenly spaced between steel posts). Stays used on depression structure fences shall be independent of stays used on the adjacent wire fence. Stays shall be used where the vertical force exerted by the fence wires is either zero or in an upward direction. Stays will not be used to hold fence wires up to the wire height specifications.

Depression Structures:

Depression structures shall be used in depressions where the maximum distance between solid

fence structures on opposite banks of the depression is 30 feet and minimum bank height is 2

½ feet or greater. Use wood stays and barbed wire.

0-15 Feet Across: Use three solid fence structures (one placed at the top of each bank on opposite sides of the depression and one in the middle of the depression). Steel feet must be installed on the middle post in each structure.

15-30 Feet Across: Use four solid fence structures (one placed at the top and bottom of each bank on opposite sides of the depression). Steel feet must be installed on each structure in the bottom of the depression.

SUPPORT SYSTEMS

Support systems are of two types:

Deadman Post:

A deadman post shall be used as the anchor post for all single pivot post with deadman and deadman H-Brace structures. In either structure the deadman post shall bisect the angle of the fence. The deadman post shall be located approximately 7 feet from the Pivot Post, leaning away from the pivot post at an angle (30 degrees), and driven into the ground a minimum of 42 inches. The top will only be cut off as directed by the COUNCIL's Authorized Representative.

The deadman tensioning wire shall be looped around the deadman Post 6 inches above the ground and around the top of the pivot post (refer to Single Pivot Post with deadman or deadman H-Brace for wire location). The tensioning wire shall be held in place with rise or dip nails and then be secured to the posts with one staple at each end. A wire strainer or twitch stick shall be inserted in the wire loop and ratcheted or twisted until the wire is taut.

Steel Feet:

Steel feet shall be used only on posts that have been installed to meet depth criteria. If post depth criteria cannot be met a jack or crib shall be installed.

Thirty-six-inch steel feet shall always be used in pairs (one steel foot on each side of a post), and installed parallel with the fence line.

Steel Feet are recommended to be used on:

1) posts placed in depressions where the bottom wire exceeds 20 inches above the ground;

2) single posts at the bottom of abrupt breaks (breaks greater than 10 degrees) in slope;

3) the post closest to the slope change of a single H-Brace used in the bottom of dips greater than 15 degrees;

4) all pivot posts;

5) the tie-off post of all double H-Braces; and

6) posts placed in wet or marshy ground (except for crib and jack posts)

Each steel foot shall have a double strand of barbless wire secured to its middle by looping the wire through the hole and then wrapping it back on itself with at least 6 complete wraps. The other end of the barbless wire shall be attached to the post with two 2-inch staples and wrapped around the post as explained below.

Each steel foot shall be driven into the ground at a 45-degree angle until its top is below ground level.

The wires for the first steel foot shall be stapled to the front (fence line) side of the post and wrapped in a clockwise direction around the backside of the post. This steel foot shall then be driven into the ground at the side of the post as shown in the drawings.

The second steel foot shall be installed in the same manner as the first steel foot except that:

1) Wires shall be wrapped in a counter-clockwise direction.

2) Wires shall be stapled to the opposite side of the post from the wires of the first steel foot.

3) It shall be driven into the ground in the opposite direction of the first Steel Foot.

ROCK FOR FENCING STRUCTURES, STEEL POST ANCHORS AND ROCK TIE DOWNS

General:

Determining a source of rock will be the responsibility of the CONTRACTOR. However, it is anticipated that all rock to be used for Rock Cribs and Jacks may be obtained near the Project site. It shall be the CONTRACTOR's responsibility to collect and transport all rock. Rock shall not be removed from a stream or any archaeological/historic sites or structures.

Steel Post Anchors:

Steel post anchors shall be used primarily in depressions where the bottom wire is greater than 16 inches above the ground, but less than 36 inches above the ground. Steel post anchors shall not be substituted for any other structure.

Two steel tee posts shall be driven a minimum of 36 inches deep at opposing 45-degree angles directly under and in line with the fence. The posts must intersect 4 to 8 inches above the existing ground. Barbless wire shall then be wrapped at least twice around the intersecting posts in each of two directions so as to secure the posts together into the anchor. After forming the anchor, twist one end of the barbless wire around the other protruding end at least six complete wraps. The protruding longest end of the barbless wire will then be extended vertically and secured to the fence wires in series with single wire wraps to maintain appropriate wire spacing and height. The protruding wire shall be wrapped six times around the top fence wire.

Rock Tie Downs:

Rock Tie Downs shall be used primarily in small depressions where the bottom wire is greater than 16 inches above the ground, but less than 20 inches above the ground. Rock tie downs shall not be substituted for any other structure.

Barbless wire shall be wrapped at least twice around the rock in each of two directions so as to form a "cradle" for the rock. After forming the cradle, twist one end of the barbless wire around the other protruding end, forming at least six complete wraps. The protruding longest end of the barbless wire shall then be extended up along one side of a stay and stapled. Bend the barbless wire back down on itself and, using a second staple, staple the two wires to the stay, (See Drawings).

Rocks shall not hang from the fence, they must rest on the ground and hold the bottom wire to a height of 14 to 16 inches above the ground.

Stays shall be cut off 4 inches below the bottom fence wire so that the rock tie down can be placed directly under the stay.

Rock Tie Downs in Water:

Rock tie downs associated with stream crossings, ditches, or other water will be constructed as stated above except that the cradle wires shall be snugly wrapped to the rock and then a single loop shall be made and dead ended. A separate wire shall be run through the cradle loop, wrapped back on itself, and then single wrapped around each fence wire from

the bottom strand to the top strand. The wire will then be wrapped back around itself with one wrap. This will allow the rock tie down to be removed in the winter months and reused the following spring.

NAILS AND NAILING

In general, galvanized steel pipe is preferred for bracing structures but where wood is necessary the following shall apply:

Twenty penny (20d) nails shall be used for all end and corner structure construction.

Fifty penny (50d) nails shall be used for all rock jacks and half round applications.

Twenty penny (20d) rise nails shall be used on all structures where the wire pulls in a downward direction when the tensioned wire is held at its proper height.

Twenty penny (20d) Dip nails shall be used on all structures where the wire pulls in an upward direction when the tensioned wire is held at its proper height.

To prevent splitting lumber or stays, nails shall not be placed closer than three (3) inches to the end of any piece of lumber. A pilot hole may be drilled to prevent lumber splitting, but shall be no more than one-half the diameter and depth of the nail to be used. Any wood which is split as a result of nailing shall be replaced.

When constructing wood structures use two nails at each joint and place the nails at a binding angle. At least half of each nail shall extend into the adjoining piece. Nails which extend through a member and expose the pointed end shall be bent over flat, and parallel to the wood surface. Nailed and stapled junctions shall have sound wood against sound wood; no bark shall be in between.

STAPLES AND STAPLING

One and one half inch (1 ½") long fence staples shall be used to attach all wires to stays and shall be used to attach all wires to Solid Fence Structures and for all rise, dip, and glide staples. Staples shall be a minimum 9-gauge and treated for corrosion protection. Reverse barbed staples are preferred to improve long term staple retention.

Glide staples shall be used on all corners where tension wires are attached to protect the subject post from the wire cutting into it. All wires shall be stapled to all posts.

Staples shall be driven in all structures at an angle. Rotate the staple slightly (20 to 30 degrees off vertical) away from the flat surface of the point on the upper leg of the staple.

Staples used to attach tensioning wires to any solid fence structure shall be driven in fully, but so as to allow the wire to move back and forth freely.

All wires shall be stapled solidly to stays.

On Pivot Posts, sufficient glide staples shall be used so as to prevent wires from cutting into the posts.

For posts at the top of small rises, staples shall be driven at a downward angle into the post. For posts in the bottom of small depressions or dips, staples shall be driven at an upward angle into the post.

On steep rises or dips, rise or dip nails shall be used in combination with staples.

WIRE GATES

General:

Gates shall be constructed at the locations as they are marked on the ground. All Gates shall be built as shown on the attached drawings. Gates shall contain five wires unless otherwise specified by the COUNCIL's Authorized Representative. Wires shall be taut, but allow for proper gate operation.

All gates shall be 12-1/2 gauge barbed wire.

Each gate wire shall be double wrapped around the end piece, tied back on itself with six complete tight wraps, and stapled to the end piece with 1-1/2 inch staples.

All wires will be stapled to stays.

Stays shall be 2-inch x 3-inch x 4-foot split wood material.

Gates shall have stays evenly spaced a maximum of 5 feet from gate ends or another stay.

Barbed wire shall be stapled solidly to all stays and end pieces.

Gate ends shall be 3 to 4-inch diameter by 5-foot-long round wood pieces. At the stand-up

(stationary) end of the gate, wrap a double loop of barbless wire around the Double-H or Set

Post Rock Jack end post just below the top strand of fence wire and around the gate end and wrap the wire loop ends back on itself with three complete wraps. Staple the loop to the end structure only. Repeat this procedure just above the bottom strand of fence wire. Insert the gate end into these loops.

At the let-down (opening) end of the gate, wrap a single loop of barbless wire around the end post 4-6 inches above the ground and around the gate end and wrap the wire loop ends back on itself with four complete wraps. Staple the loop to the end structure only. The bottom of the gate end pole (let down-end) shall be inserted into this loop with approximately 4 to 6

inches of open loop between the end structure and the gate end pole. Install a gate tightener to the top of the end post. (See Drawings)

Gate Tighteners:

Attach a 6 to 10-inch-long piece of ¼ inch sized chain to the handle (2-foot-long pole, 3-4 inches in diameter) 4 inches from the end of the pole by running a double strand of wire through the last chain link and around the handle, twisted tight. Repeat the above between the end post structure and the other end link 40 inches above the ground, (the length of chain required for each handle will vary by gate). Wrap a separate double loop of barbless wire around the end post

40 inches above the ground and around the gate end and twist the wire loop back on itself with four complete wraps. This handle/tightener will bring the gate snugly tight, allowing the double wire loop to be dropped over the top of gate end pole. Staple the loop to the end structure post only. The gate tightener shall act as a latch. The wire loop shall be separate from the gate tightener and act as an additional latch on the gate.

STREAM CROSSING STRUCTURES (SC)

General:

Stream crossing structures shall be used at all points where a single fence is suspended across a stream to end a section of riparian corridor fencing. The stream crossing structure locations will be staked on the ground by the COUNCIL's Authorized Representative. Stream crossing structures are separated from the riparian fence line so high water events will not affect the rest of the fence.

POSTS

General:

Galvanized steel pipe posts shall be used to construct all solid fence structures, including single posts in straight sections of fence (line posts) and deadman posts except where otherwise directed.

Installation:

All posts shall be driven 3 feet into the undisturbed ground with a COUNCIL approved mechanized post pounder (e.g. Shaver Manufacturing Company LLC. Model HD-8 or COUNCIL approved equivalent) capable of driving a 6-inch diameter wood post to a depth of 3 feet in rough terrain. A 3-inch diameter pilot hole may be created to facilitate post driving operations. In areas inaccessible to a power post driver or if ground conditions are determined by the COUNCIL's Authorized Representative to be too rocky for driving or drilling posts, alternative structures shall be installed as directed by COUNCIL's Authorized Representative.

Deadman posts shall be machine pounded into the ground a minimum of 42 inches.

Single posts shall be driven 3 feet into the ground. If the 3-foot minimum depth criterion is not met, the post shall be used as either a set post jack or a crib post.

Set post jack and crib posts shall be driven as deep as possible, to a maximum of 3 feet. No posts shall extend more than 4 feet out of the ground.

Posts that are split or mushroomed, thereby leaving less than 4.0 feet of solid post above the ground, shall be removed and replaced.

Alignment Tolerances:

- Vertical: Must be aligned vertically within ¼ inch per foot of post extending above the ground.
- Horizontal: Straight sections of fence shall have the posts placed within plus or minus 1 inch of true alignment, as measured from a taught wire stretched between corners or stretch points.

STEEL FENCE STRUCTURES:

General:

Steel fence structure specifications are as stated in the previous sections of these technical specifications and drawings for the applicable wood structure except as provided below.

Materials:

All steel post and steel brace materials shall meet the minimum criteria describe in the table below and be free from decay or defect that may reduce its functional life or current durability.

Component	Material Type	Minimum Diameter/Weight	Minimum Post Depth	Minimum Lengths
Steel Posts - Used to construct H-Braces, Single Posts, Deadman Posts & Rail Fence Posts	Steel, round	2-3/8" OD, wall thickness 0.154" (sch. 40)	3 feet	7 feet
	Steel, angle	2-1/2" X 2-1/2" X 1/4"		
Steel Braces - Used for H-Brace Cross Members, Deadman Tensioning Members, Fence Rails	Steel, round	2" OD, wall thickness 0.145" (sch. 40)	NA	8 feet
	Steel, angle	2" X 2" X 1/4"		

Welding:

All steel welding must comply with American Welding Society Standards.

Steel Posts

Steel Posts shall be used in replacement of wood posts and driven to the specified depth. In rocky conditions where posts cannot be effectively driven to specified depths, a pilot hole will be drilled into the ground to allow for post placement. Pilot holes will be of minimum diameter to allow for the installation of the supplied steel post materials with adequate tension to securely retain the post at the specified depth and alignment following attachment of the fence wires and/or application of fence tension. All steel posts installed as part of an H-Brace or as a signal post must be fitted with wire supporting rings (e.g. 1" dia. nuts, cold shut chain link, etc.) to support the alignment of the fence wires at the applicable spacing criteria. Rings must be securely welded to the posts.

Steel Braces:

Steel braces shall be installed as cross members for H-Braces, as deadman tensioning members in replacement of associated tensioning wires, or as rails for steel rail fencing. Cross and tensioning members must be fitted inset and centrally aligned to the steel post or deadman and securely attached with continuous welding. Weld voids within the attachment joint will not be allowed. Pipe joints shall be welded solid and contain no openings to the pipe interior. No additional bracing or tensioning wires are required for H-Brace or deadman Structures, unless ordered by the COUNCIL's Authorized Representative.

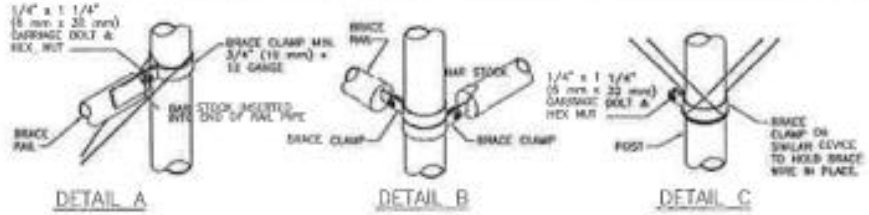
Steel Rail Fencing:

Steel rail fencing shall be installed in fence sections and structures as an alternative to board or half round fencing. Steel posts shall be used in replacement of wood posts. Four rails of steel brace material will be fitted and continuously welded horizontally on the side of the steel posts facing the predominate livestock use. The top rail shall be set at height of 48 inches with the other three being evenly spaced between the top rail and the ground. Horizontal rail sections shall be butt welded to create a continuous rail and shaped to follow changes in the topography. All resulting pipes ends must be capped or plugged with steel, concrete, or COUNCIL approved alternative.

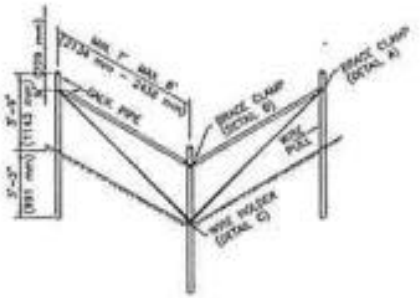
Any section of continuous steel rail fencing constructed that exceeds 100 feet in length shall be fitted with an expansion sleeve on each rail in a central location. A 3 to 4-inch-wide void shall be cut in the rail to allow for the metal to expand and contract freely with temperature changes. These vacant sections shall be covered with oversized fabricated sleeve that extends a minimum of 6 inches over the adjacent rail ends. One side of the sleeve will be welded solid to the rail and the other shall be left free to allow the rail to slide back and forth within the sleeve. All sleeves must be close fitting to maintain the rails rigidity.

Steel Figure 4 Structures:

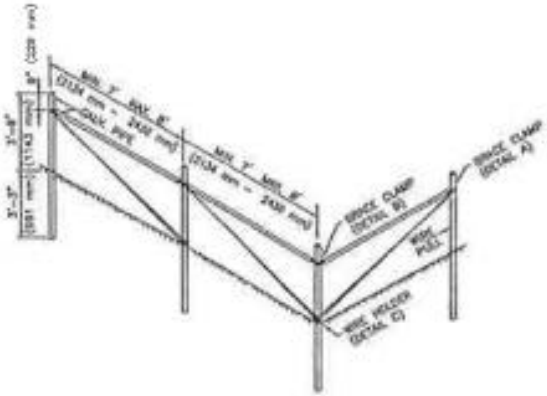
Where necessary, steel figure 4 structures may be used instead of steel posts according to the drawings attached and as designated by the COUNCIL



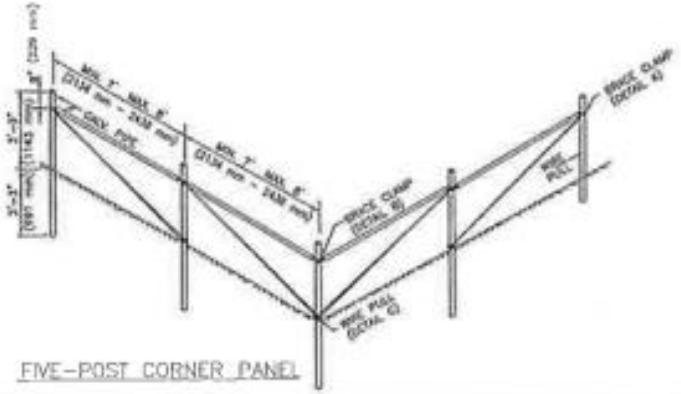
DETAIL A DETAIL B DETAIL C



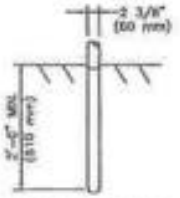
THREE-POST CORNER PANEL



FOUR-POST CORNER PANEL



FIVE-POST CORNER PANEL



ALTERNATE POST
INSTALLATION IN ROCK

NOTES:

1. BRACE WIRE SHALL BE WRAPPED TWO TIMES AROUND PANEL AS SHOWN ON DRAWING. EACH WRAP SHALL BE LOOPED ONCE AROUND THE POST. THE BRACE WIRES WILL THEN BE TWISTED TIGHT.
2. THE POST AND BRACES SHALL BE THE FOLLOWING SIZES:
   POST PIPE 2" (51 mm) SCHEDULE 40 (2.375" (60 mm) O.D. 5.02 (3.7 kg) LBS./FT.)
   BRACE PIPE 1 1/4" (32 mm) SCHEDULE 40 (1.660" (42 mm) O.D. 2.27 (1.9 kg) LBS./FT.)
3. WIRES SHALL BE TIED TO EACH POST WITH 12 1/2 - GAUGE WIRE TWISTED TIGHT.
4. THE CONTRACTING OFFICER WILL DETERMINE WHERE TO USE THE ALTERNATE POST INSTALLATION IN ROCK. AN UNDERSIZED HOLE SHALL BE DRILLED IN THE ROCK FOR THIS INSTALLATION.
5. ALL FITTINGS AND TIE WIRE SHALL BE GALVANIZED.
6. WITH THE APPROVAL OF THE CONTRACTING OFFICER, OTHER METHODS MAY BE SUBSTITUTED FOR THE CLAMP FOR HOLDING DOWN THE BRACE WIRE.
7. THE METRIC CONVERSIONS ARE PROVIDED IN PARENTHESIS FOLLOWING THE ENGLISH UNITS.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
ADM Shirt — Prineville District Office

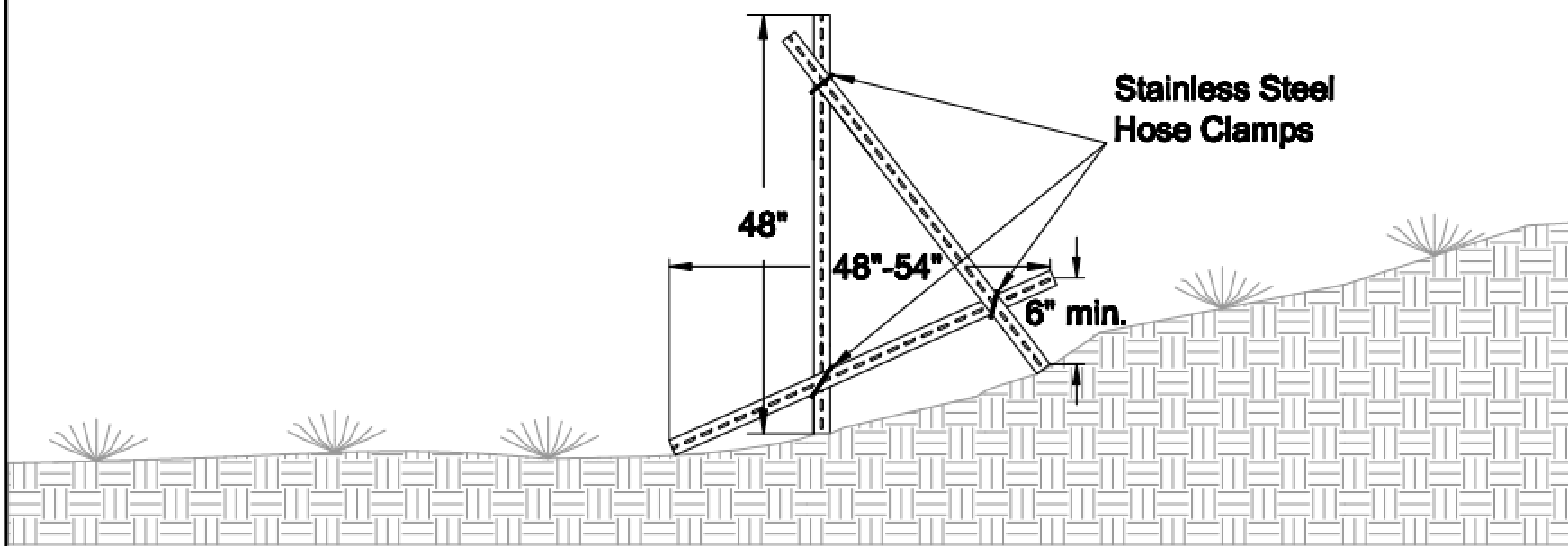
CORNER PANELS (GALVANIZED STEEL PIPE)

PRINEVILLE DISTRICT — OREGON

DESIGNED /s/ Zach Morgan
DRAWN /s/ Dana Cork
APPROVED /s/ Dana Cork

DRAWN ZMM	SCALE NTS
DATE July 2014	SHEET 1 OF 1
DRAWING NO. OR050-02024-013-1	

STEEL FIGURE 4 INSTALLATION



SPECIFICATIONS:

1. FABRICATED FROM TYPE 133 STEEL POSTS.
2. FENCE POST BLADES SHALL BE REMOVED.
3. POSTS SHALL REST ON THE SOIL SURFACE --- NOT POUNDED INTO THE GROUND.

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STEEL FIGURE 4 FENCE INSTALLATION

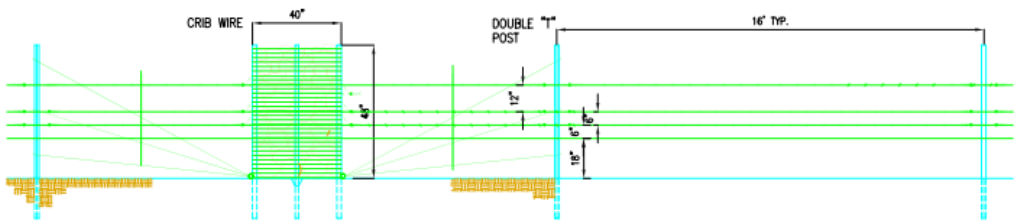
/s/ Zach Morgan

/s/ Dana Cork

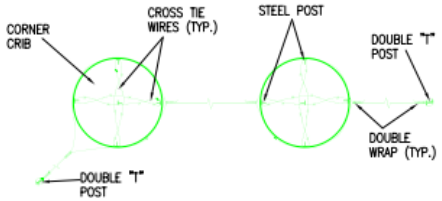
/s/ Dana Cork

DRAWN ZMM | SCALE NTS

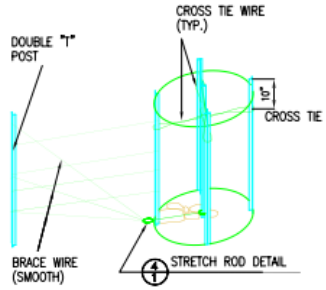
DATE August 2008 | SHEET 1 OF 1



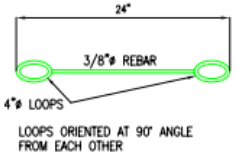
1/1 STANDARD CRIB & STRESS PANEL



2/1 CORNER & STRESS CRIB



5/1 STRETCH ROD

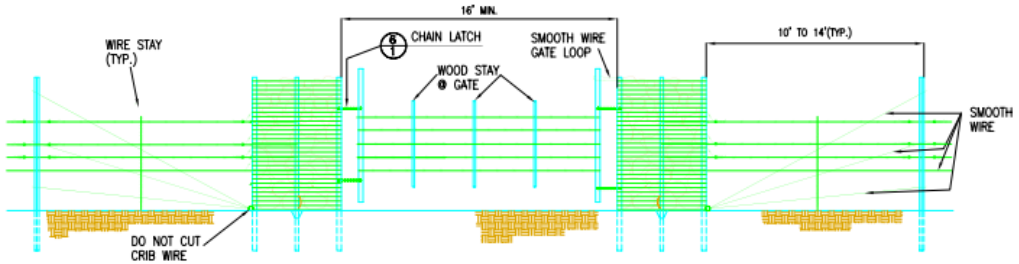


4/1 STRETCH ROD REBAR

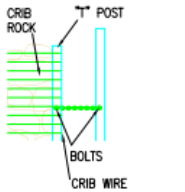
SPECIFICATIONS

ROCK CRIBS (CORNER, END AND STRESS) SHALL BE CONSTRUCTED AS PER SECTION 2824 OF THE SPECIFICATIONS, THE TYPICAL DRAWINGS AND AS LISTED BELOW:

1. Rock crib base shall be level.
2. Center "T" post shall be driven at the center of corner or stress crib.
3. Crib wire shall be overlapped twelve inches plus one square on each end used for securing mesh wire.
4. All wire terminations shall be double wrapped around double "T" post and tied off by wrapping the incoming wire a minimum of four times.
5. Crib stretch rod shall be placed over center "T" post and lined to incoming fence line. Flat rock shall be placed under the stretch rod to keep it off the ground.
6. Crib rock shall be twelve inches maximum and three inches minimum diameter. Rock shall be hand placed with small rock filling voids.
7. Cross tie wire shall be a double loop & run from the outside post to the outside posts in both directions.
8. No stretching of fence using the crib posts as an anchor will be allowed.
9. Horizontal panel wires (four) shall be installed hand tight only and shall not relieve any tension from brace wires. This work shall be performed last.
10. Clip crib wire to each crib post, four clips per post.
11. Cross tie with smooth wire when 80% of crib is filled with rock.
12. Clip each post top, bottom and 2 in between to hold rock crib wire.
13. Rock crib wire 2 x 4 x 48" (12 1/2 guage) welded.
14. The bottom of the Rock Crib wire shall not be cut at the ground level.
15. Cribs shall be 40"ø and 48" high and filled completely with rock as specified above.



3/1 STANDARD ROCK CRIB & GAP GATE



6/1 CHAIN LATCH

REV. NO.	DESCRIPTION	DATE	APPROVED

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
DIVISION OF OPERATIONS — OREGON STATE OFFICE

TYPICAL FENCING DETAILS

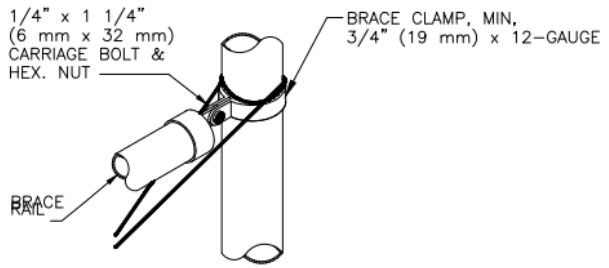
4 WIRE FENCE & ROCK CRIBS

DESIGNED
REVIEWED
APPROVED

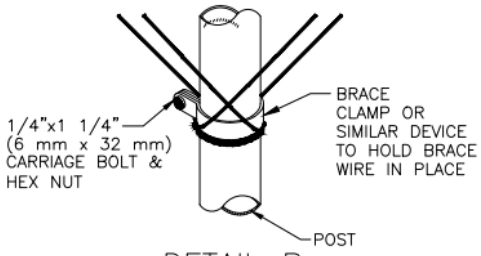
DRAWN: C.G. | SCALE: NTS
DATE: 05/04/06 | SHEET 1 OF 1
DRAWING NO.

ACAD2005
4-WIRE-ROCKCRIB.DWG

◆ PLOT INFORMATION
DDATTE TO ACCESS



DETAIL A



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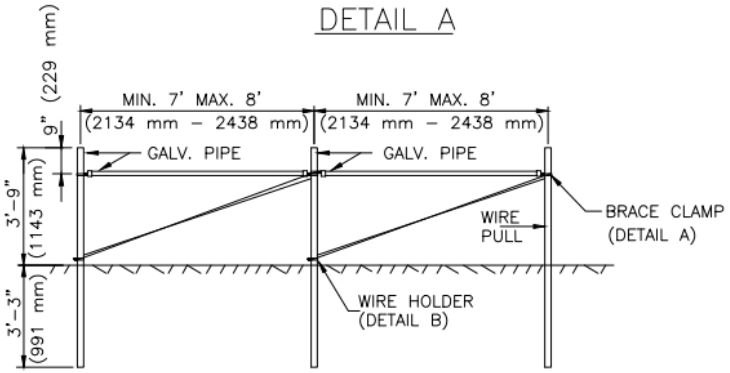
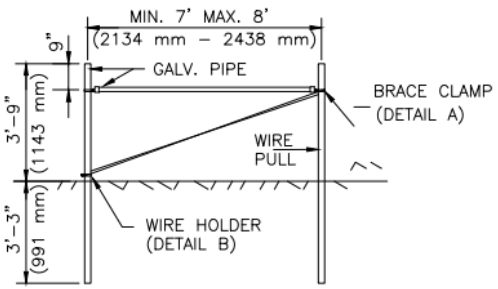
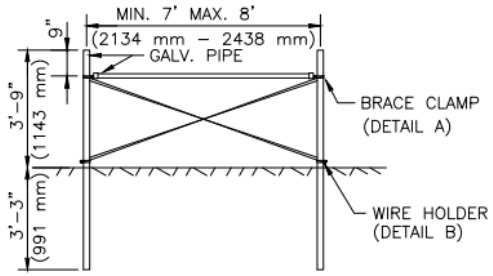


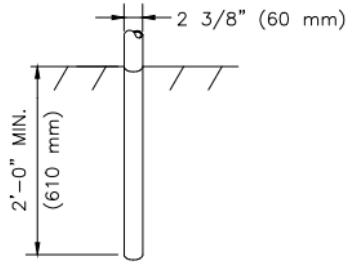
THREE-POST END PANEL



TWO-POST END PANEL



STRESS PANEL



ALTERNATE POST
INSTALLATION IN ROCK

NOTES:

1. BRACE WIRE SHALL BE WRAPPED TWO TIMES AROUND PANEL AS SHOWN ON DRAWING. EACH WRAP SHALL BE LOOPED ONCE AROUND THE POST. THE BRACE WIRES WILL THEN BE TWISTED TIGHT.
2. THE POST AND BRACES SHALL BE THE FOLLOWING SIZES:
   POST PIPE 2" (51 mm) SCHEDULE 40 [2.375" (60 mm) O.D. 3.65 (1.7 kg) LBS./FT.]
   BRACE PIPE 1 1/4" (32 mm) SCHEDULE 40 [1.660" (42 mm) O.D. 2.27 (1.0 kg) LBS./ft.]
3. WIRES SHALL BE TIED TO EACH POST WITH 12 1/2 - GAUGE WIRE TWISTED TIGHT IN AN UNDERSIZED HOLE
4. THE CONTRACTING OFFICER WILL DETERMINE WHERE TO USE THE ALTERNATE POST INSTALLATION IN ROCK. SHALL BE DRILLED IN THE ROCK FOR THIS INSTALLATION.
5. ALL FITTINGS AND TIE WIRE SHALL BE GALVANIZED.
6. WITH THE APPROVAL OF THE CONTRACTING OFFICER, OTHER METHODS MAY BE SUBSTITUTED FOR THE CLAMP FOR HOLDING DOWN THE BRACE WIRE.
7. THE METRIC CONVERSIONS ARE PROVIDED IN PARENTHESIS FOLLOWING THE ENGLISH UNITS.

ALWAYS THINK SAFETY

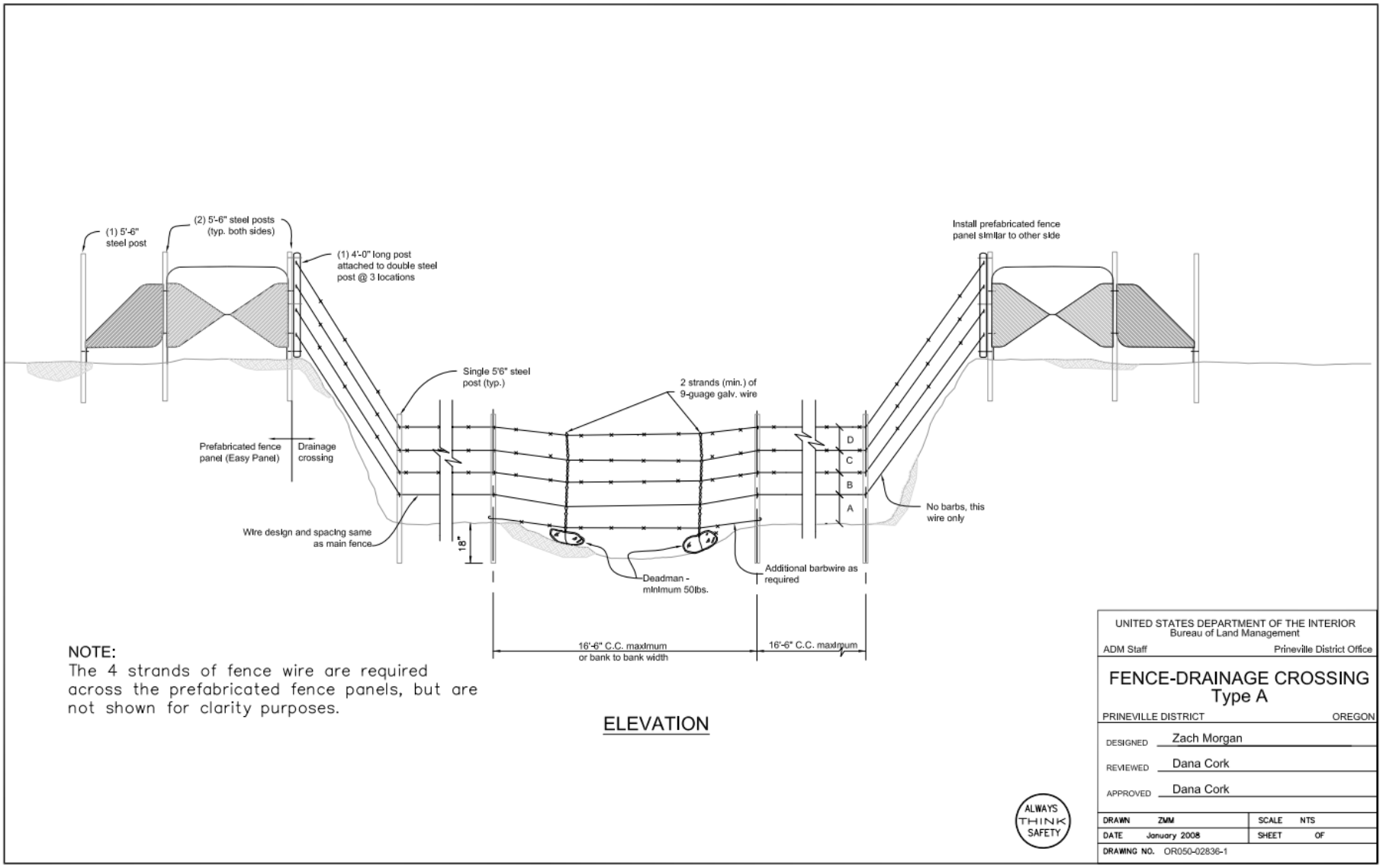
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management

ADM Staff — Prineville District Office

STRESS PANELS (GALVANIZED STEEL PIPE)

PRINEVILLE DISTRICT — OREGON

DESIGNED	/s/ Zach Morgan
REVIEWED	/s/ Dana Cork
APPROVED	/s/ Dana Cork
DRAWN	ZMM
SCALE	NTS
DATE	July 2016
SHEET	1 OF 1
DRAWING NO.	OR050-02824-013-1



NOTE:
The 4 strands of fence wire are required across the prefabricated fence panels, but are not shown for clarity purposes.

ELEVATION

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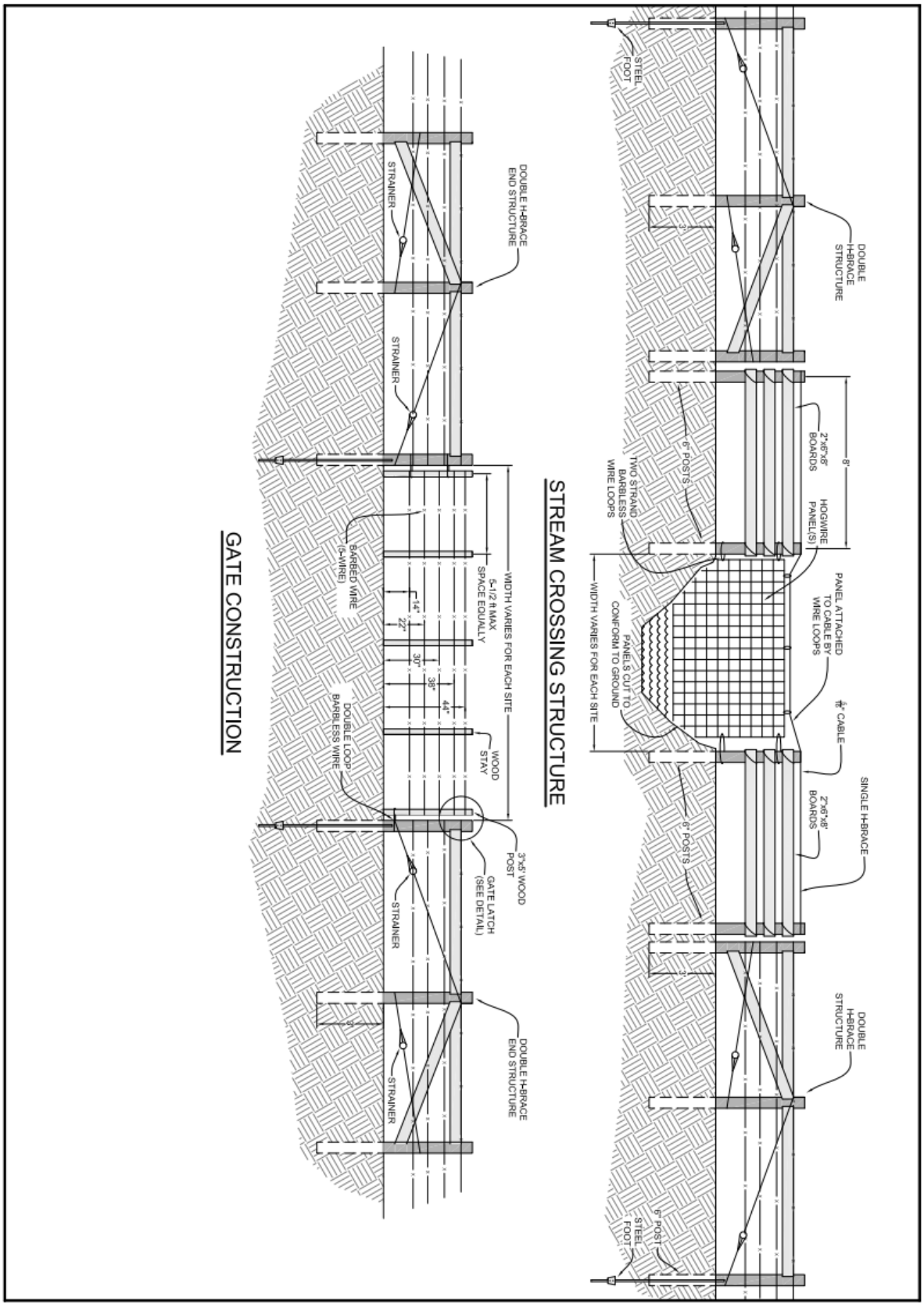
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management

ADM Staff — Prineville District Office

FENCE-DRAINAGE CROSSING Type A

PRINEVILLE DISTRICT — OREGON

DESIGNED	Zach Morgan
REVIEWED	Dana Cork
APPROVED	Dana Cork
DRAWN ZMM	SCALE NTS
DATE January 2008	SHEET OF
DRAWING NO.	OR050-02836-1



GRANT SOIL AND WATER CONSERVATION DISTRICT

721 S. CANYON BLVD.
JOHN DAY, OREGON 97845
(541) 575-0135
DRAWING: FENCE-CONSTRUCTION-DETAILS.dwg

FENCE CONSTRUCTION DETAILS

DATE: MAR 2013
SCALE: NOTED
DRAWN: BA
CHECKED: JK
SHEET C-3
OF 8 SHEETS

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FENCE CONSTRUCTION DETAILS

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SCALE: NOTED
DRAWN: BA
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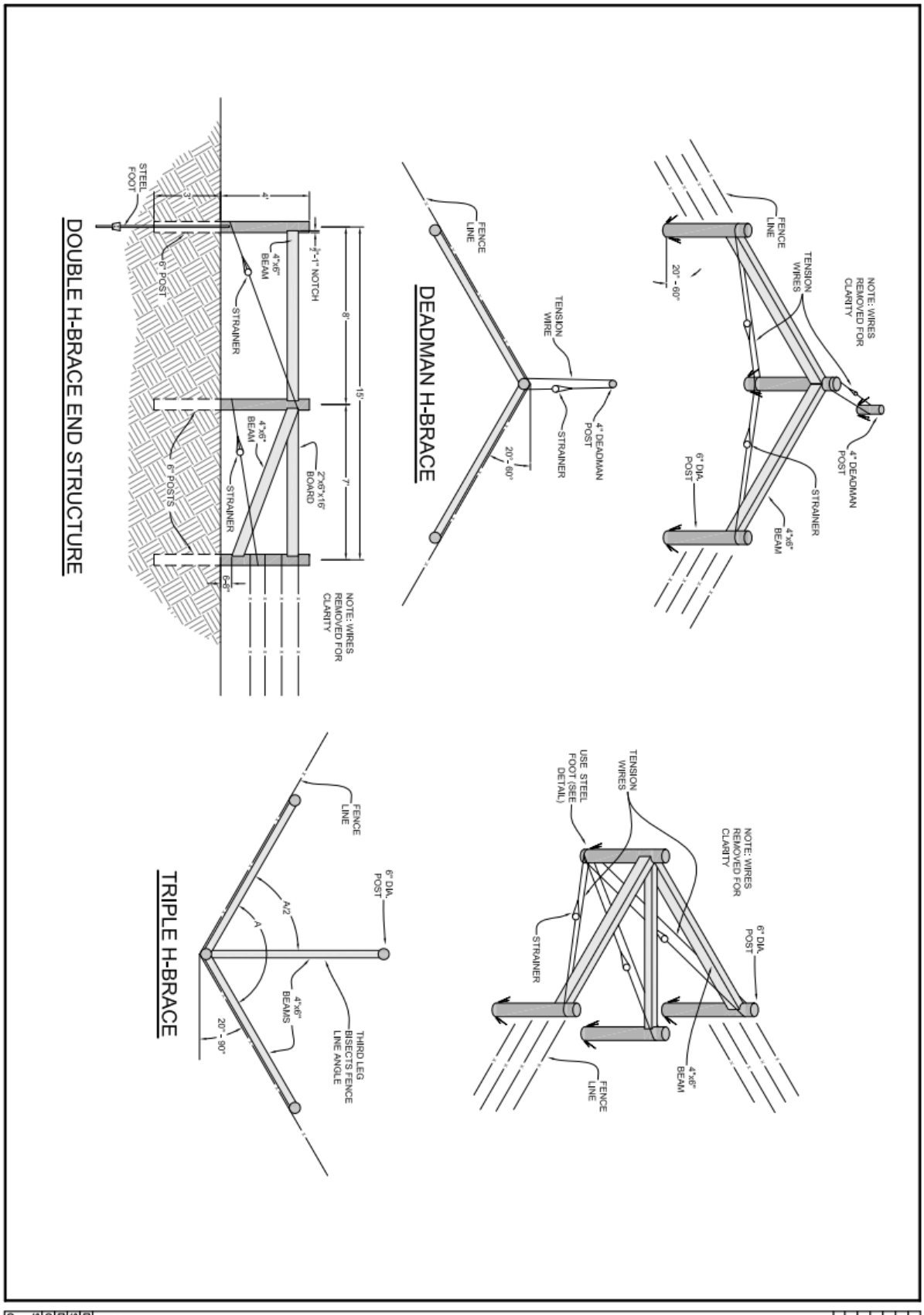
SHEET C-1
OF 8 SHEETS



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SHEET C-2
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FENCE CONSTRUCTION DETAILS

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SHEET C-4
OF 8 SHEETS

BARBED WIRE FENCE DETAIL

BARBED WIRE ROCK JACK DETAIL

FENCE CONSTRUCTION DETAILS

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DRAWN: BA
CHECKED: JK
SHEET C-8
OF 8 SHEETS

Wildlife Friendly 4-Wire Fence: Spacing and Wire Types