The Confederated Tribes of the Colville Reservation
P.O. Box 150, Nespelem, WA 99155
(509) 634-2310
FAX: (509) 634-2325

Closing date: November 8th, 2018 **Posted: October 25th, 2018**

REQUEST FOR BIDS
For
Haden Creek Spring Developments and Fencing EQIP Contract

Scope of Work: The Colville Tribal Range Program is requesting bids to install three (3) 1,200+ gallon livestock troughs (1 aluminum and 2 tire) with 900ft of HDPE (SIDR) 100psi piping. Also construction of 2,750 feet 4-strand of wildlife-friendly fencing around a riparian area on Haden Creek Road. A detailed Scope of Work is attached in EXHIBIT B.

Location Description: The location of this contract within Range Unit 5 off the Lyman Lake/Moses Road, Haden Creek Road, and Lost Creek Campground. The spring developments are within Township 34 North; and Range 30 East; Section(s) 5 and 12. The fencing falls within Township 34 North; and Range 29 East; Section 13.

Construction Site Inspections: The Range Program upon request may arrange for an inspection of the construction site no later than seven (7) working days prior to the stated deadline for submission of bids. Site inspections can be arranged by calling the Range Program at (509) 634-2307, (509) 634-2310 or by visiting the Range Program in person. Such requests can be granted when received a week in advance. Requests made **less than a week** before the closing date **MAY or MAY NOT** be granted.

***Award of contract shall be made to the responsive bidder based upon Indian Preference and Title 10 Certification according to Tribal Code 10-3-7(a) subpart (2). This Request for Bid is open to all bidders.**

Contractor must bid on the entire project to be considered. The contractor shall comply with all regulations and provisions of the Tribal Employment Rights Ordinance (TERO).

To qualify for consideration all bid packets submitted must include the following documents:

- Exhibit "A" Bid Sheet (dollar amount of proposal)
- Exhibit "E" Work Plan schedule of completion (time and manpower required to complete the project)
- Copy of Blue Card – to qualify as an Indian preference contractor the business owner must provide a copy of the individuals blue card.
- Copy of Title Ten Certification – to qualify as a Title Ten Certified contractor.
- Provide proof of Contractors Liability Insurance in the amount of at least $1,000,000.

- Solid Waste Disposal Plan (must be submitted on form from CCT Planning/Solid Waste Enforcement)
- List of References (second page of Exhibit "A" or on a separate sheet) that demonstrates that the contractor has successfully completed similar work.

If a contract is not entered into within a reasonable time after selecting the proposal, the Tribes may elect to cancel the award or award the Contract to the next highest ranked Bidder. The Tribes shall not be bound or in any way obligated until both parties have executed a contract. No party may incur any chargeable costs prior to the execution of a final contract.

After opening and ranking, an award may be made on the basis of the proposals initially submitted, without discussion, clarification or modification. The Tribes may discuss cost reduction and other elements of the Bidder's proposal with the selected Bidder. If the Tribes determines that it is unable to reach a contract satisfactory to the Tribes with the selected Bidder, then the Tribes will terminate discussions with the selected Bidder and proceed to the next Bidder in order of selection ranking until a contract is reached, the Tribes has rejected all proposals, or the Tribes determines that it is in its interest to re-open the bid or temporarily or permanently abandon the procurement.

The Tribes reserves the right to award a contract for all or any portion of the requirements proposed by reason of this request, to award multiple Contracts, or to reject any and all proposals if deemed to be in the best interests of the Tribes. The Tribes additionally reserves the right to re-solicit for proposals or to reject any and all proposals if deemed to be in the best interests of the Tribes, and to temporarily or permanently abandon the procurement.

For additional information concerning this Request for Bids, please contact Jessica Utt at (509) 634-2307.

The Contractor will:
Prior to commencing work the Contractor will know and understand the Exhibit "D" Specifications listed for this contract.

No work shall take place until a TERO Compliance and Utilization Plan has been signed, approved, and filed with the TERO Office.

Prior to commencing work the Contractor will provide proof of Workers Compensation Insurance.

Prior to commencing work the Contractor will inform the Range Program's COR when beginning work, so a Start Work Order maybe issued.

Complete the work within 30 days of the start work order being signed by the Contracting Officer Representative, unless otherwise specified, and be finished no later than November 30th, 2019.

The contractor shall comply with Tribal occupational safety and health regulations.

The contractor shall protect and avoid disturbing survey monuments, and bearing trees. Monuments and bearing trees disturbed or lost due to the contractor's action will be re-established at the contractor's expense.

The contractor will install all range improvements in the location designated and will notify the Range COR if/when a deviation from the project plan is necessary **PRIOR** to construction. Improvements that are to be repaired are not to be moved from their existing location without **PRIOR** approval from the COR.

The contractor shall supply **ALL** materials, equipment, tools, transportation, supervision, operating supplies, safety measures and labor to successfully complete the contract. All materials and equipment must be hauled to the work site by the contractor.

Vehicles, ATV's or any other motorized equipment, will be operated responsibly to minimize damage to the vegetation and soils.

Complete work to specifications provided, where applicable fencing specifications will also include:

> Clear a path for the fence as necessary that is free of debris including shrubs and trees less than six (6) inches in diameter. Remove all snags with the potential to fall onto the fence.
>
> Clean up and remove all wire, T-posts, treated wooden posts, and/or other materials from the project to a pre-approved site. The Colville Tribal Recycling Program will accept fencing materials, except treated wooden posts. Treated wooden posts are accepted at the county landfill. Should the Contractor fail to perform clean up, the cost of the removal and disposal shall be deducted from the final payment.

The contractor will notify the COR and schedule an inspection date no more than once per week. The Range Program will process partial payment for each completed and approved segment.

The contractor shall IMMEDIATELY suspend all project activities and notify the Tribal Archaeology Department and/or Tribal Historic Preservation Office if ANY cultural find is encountered. This includes but is NOT limited to arrow points, pottery, tools, bones and the like. History & Archaeology Department phone number is 509-634-2691.

Contractor shall comply with Industrial Fire Precaution requirements as administered by Mt. Tolman Fire Center. Failure to do so could result in the contractor being held liable for any fire directly related to equipment operation or operator negligence.

The Range Program will:
Mark work sites by flagging or other means.

Provide maps and necessary specifications for construction.

Provide a pre-construction tour of the project site if requested.

Ensure that the Contractor has secured any and all necessary permits and documentation required by the Colville Confederated Tribes for project implementation on the site.

The Range Program will maintain close communication with Mt. Tolman Fire Center, and the Tribal History & Archaeology Department to ensure that all cultural and natural resource concerns are adequately addressed and/or resolved.

The Range Program COR will arrange, at the contractor's request, to have a technical representative present on site to offer technical assistance and answer questions concerning contract specifications through the course of the project. Requests for technical assistance must be scheduled in advance.

Conditions:
A pre-construction meeting will take place between the Contractor(s), COR, and any other necessary agency personnel before work is to begin.

** This contract is primarily funded by the Natural Resource Conservation Service (NRCS) Environmental Quality Incentive Program (EQIP). The Range Program will withhold twenty percent (20%) of the Contract Payment until a NRCS staff member inspects and approves the completed work. The contractor should be aware that the Colville Tribes have no control over NRCS and scheduling of their personnel to perform the final inspection, this situation can result in significant delay in receiving final payment.

No start-up advances, capital or materials will be granted to the contractor for the project. Partial payments for completed and approved work at the agreed upon contract amount will be paid to the contractor periodically.

No change orders will be granted for the project due to misjudgment or errors in initial bid price.

Start of Work:
Once the contract is awarded and approved the date for actual start of work will be coordinated between the Contractor and the Contracting Officer Representative but work must be completed by November 30th, 2018.

Stop Work Orders:
Will be issued if any concerns arise during the duration of the contract such as, changes in weather conditions, which may include but are not limited to erosion, increased fire danger /shutting down the woods, too much snow on the ground, and/or an inability to access the project site. The COR may adjust the contract length to compensate for these situations.

Conditions for Default and Cancellations of Contract:

- *Failure to meet completion date*: The Colville Tribes may declare the contract in default if the contractor fails to complete work by the specified completion date. Requests for extension of time limits must be in writing from the contractor and must be received by the Range Program five (5) days prior to specified completion date.

- *Contract specifications not met*: Work not performed according to the contract specifications shall be grounds for default.

- *Loss of eligibility for future contracts*: If a contractor defaults on a contract, he/she will not be eligible for future Range Program contracts for a period of one year. His/her eligibility will be reconsidered upon application to the contracting officer.

- *Relationship to other contracts*: If the contractor holds more than two Range Program contracts and fails to meet the schedule outlined in the work plan submitted, the COR may at his/her absolute discretion declare all contracts in default.

EXHIBIT "A"

REQUEST FOR BID

for

Haden Creek Spring Developments and Fencing EQIP Contract

PROGRAM: **Range**

CLOSING DATE: Thursday, November 8th 2018

PROJECT DESCRIPTION: Install three (3) 1,200+ gallon livestock troughs (1 aluminum and 2 tire) with 900ft of HDPE (SIDR) 100psi piping. Also construction of 2,750 feet 4-strand of wildlife-friendly fencing around a riparian area on Haden Creek Road.

Contractor Name:	
Contractor Address:	
Contractor License	_____yes _____no License # _____
Do you claim Indian Preference? (Provide blue card copy in submitted bid)	_____yes _____no
ARE YOU TITLE 10 CERTIFIED? (Provide copy of certification in submitted bid)	_____yes _____no
WHAT TRIBE ARE YOU AFFILIATED WITH?	
ENROLLMENT NUMBER	
PHONE NUMBER	
MESSAGE NUMBER	

I hereby submit my bids in the amounts of:

Bid for installing three (3) 1,200+ gallon spring developments: $_____.

Bid for installing approximately 2,750ft. of Wildlife-Friendly Fencing:

$_____.

Total Contract Value: $_____.

References - Please list previous clients for which your business has completed similar contracts. A minimum of three REQUIRED, five or more preferred.

	NAME	ADDRESS	PHONE #
1.			
2.			
3.			
4.			
5.			

COMMENTS:_____

_____

_____

_____

_____

_____

Signature of Proposed Bidder Date

Prospective Bidders: Please examine the included scope of work, specification attachments, and maps. In addition, you should visit the sites described prior to bidding. Contact Jessica Utt of the Range Program of the Colville Confederated Tribes at (509)-634-2307 with any questions.

SUBMIT BIDS IN A SEALED ENVELOPE LABELED: ***Sealed Bid Haden Creek Spring Developments and Fencing EQIP Contract***

****Failure to properly label envelopes will result in rejection of bid**

Sealed Bids for this project may be submitted in person or by mail to:

Range Program
Attn: Jessica Utt
PO Box 150
Nespelem, WA 99155

BIDS WILL BE RECEIVED AT CCT RANGE PROGRAM, UNTIL 2:00 P.M. on Thursday November 8th, 2018, OR MAY BE POSTMARKED BY Thursday November 8th, 2018,

THE BID OPENING WILL TAKE PLACE ON TUESDAY, NOVEMBER 13th, 2018 AT 2PM IN THE LUCY COVINGTON GOVERNMENT CENTER, 3RD FLOOR, NORTHEAST WING, ROOM 326.

EXHIBIT "B"
SCOPE of WORK

The Colville Tribal Range Department is requesting bids for Haden Creek Spring Development and Fencing EQIP Contract

Physical Conditions: Install three (3) 1,200+ gallon livestock troughs (1 aluminum and 2 tire) with 900ft of HDPE (SIDR) 100psi piping. Also construction of 2,750 feet 4-strand of wildlife-friendly fencing around a riparian area on Haden Creek Road.

Construction Features for Spring Developments:
Catch Box: Dig down to the impervious layer (clay, bedrock, ect.). Then a trench will be made for the catch box area. The bottom width, side slopes, and grade line of the trench shall be to the dimensions of the drawings. After the trench has been created, reinstall new catch box. Then lay the plastic cutoff (plastic sheeting) on the impervious layer on downhill side to minimize migration of water beyond collection box and lay out filter fabric on top of the plastic cutoff. A layer of drain rock will need to be placed on top of the fabric to be used as bedding for the new 36 inch culvert double wall, which will need to be prepped for an inlet and outlet before installing. Add both the inlet and outlet pipe to the culvert double wall. Continue to put drain rock in until you reach the inlet and outlet holes so you are able to install piping for each. The inlet pipe length will vary depending on the spring development, but all collection pipe will be 4 inches in diameter. The outlet pipe will first be 20 ft. of 1 ¼ inch steel pipe for all spring developments; however the length of PVC pipe used will vary for each spring development. The pipe will need to be buried below the frost line. After the pipe has been installed, backfilling of the trench will begin. The backfilling material will be the material from trench excavation, free of rock fragments larger than 3 inches and will contain no frozen soil, sod, brush, roots or other perishable material. During backfilling the pipe shall be sufficiently loaded around the sides to prevent separation from the bedding. A Detailed Drawing can be found in "Exhibit D."

Aluminum: One (1) 1,200 gallon aluminum livestock troughs will be installed. Leveled at a minimum of 20 feet by 24 feet. The contractor will need to excavate 6 inches deep and extend to the dimensions of the trough, so the trough will be placed 6 inches below grade. Non-woven geotextile fabric will need to be placed inside the excavated area and extended minimum 6 feet in all directions from the trough. A minimum 6" layer of 1 ¼ inch minus angular rock shall be placed on geotextile under the trough. Trough will need to be placed on top of the 1 ¼ inch minus rock on the excavated area at a slight uphill to allow the pipe to fully drain at the end of the season. A 2" galvanized inlet pipe will come in through the bottom of each trough and a float valve will be attached to the inlet pipe. A ball valve shall be installed on the end of the inlet riser. The outlet riser shall be 3" aluminum pipe and shall leave from the bottom of the trough. Install six (6), 6" x 5' posts, 2 on the long sides and 1 at each corner of the aluminum troughs. These posts must be placed as close to the trough corners as possible. Attach three (3) 2" x 6" boards to the posts, creating a triangular brace on both ends of the trough for stabilization. (Please refer to attached design "1200 Gallon Aluminum Trough Detail"). Once the trough is set, with piping and posts installed, a minimum of six (6) inches of 1 ¼ inch minus gravel must be put around the trough and sloped so the excess water will drain to the sump. Contractor will need to install a Sump where the overflow of water from the Cisterns can drain into. A Sump is a 3ft.

by 3ft. hole dug into the ground lined with non-woven geotextile fabric. The geotextile fabric will be laid down and washed rock will be put onto the geotextile.

Tire Trough: Complete all pipe connections to and inside the tire trough as shown in "Exhibit D", with a 1 ¼ inch supply line coming into the trough and 20 ft. of 2 inch diameter overflow drain pipe to the sump. After all buried pipe has been installed, a level site shall be prepared for the trough to the dimensions shown on the drawings in "Exhibit D." The tire troughs used will be 8 feet in diameter and will hold 1,300 gallons. The tire troughs will first need to be buried to where a max of 24 inches is above the soil. The tire troughs will need to be sealed at the bottom with a minimum of 6 inches of concrete. The troughs will have rock/gravel geotextile reinforcement laid around them to limit any additional soil erosion damages and minimize hoof compaction to ground surface from livestock. The heavy use watering trough pad will be cleared and leveled approximately 20 foot x 20 foot using a backhoe blade. Then geotextile fabric will need to be put down to cover the trough pad. 4 inch minus angular rock will then be put down on top of the geotextile fabric to limit soil damage, enough rock should be laid to where there are no gaps in between. 5/8 inch minus gravel will be spread and layered over the 4 inch minus angular rock. Refer to "Exhibit D" for Specifications and Design of tire trough spring developments. **Wildlife friendly ramps must be installed in each of the tire troughs.**

In-Line Drain Valve: Will be installed before the trough to allow water to enter the trough or drain the water to the sump/daylight. This will require a drain valve and a 6 inch diameter valve box with cover.

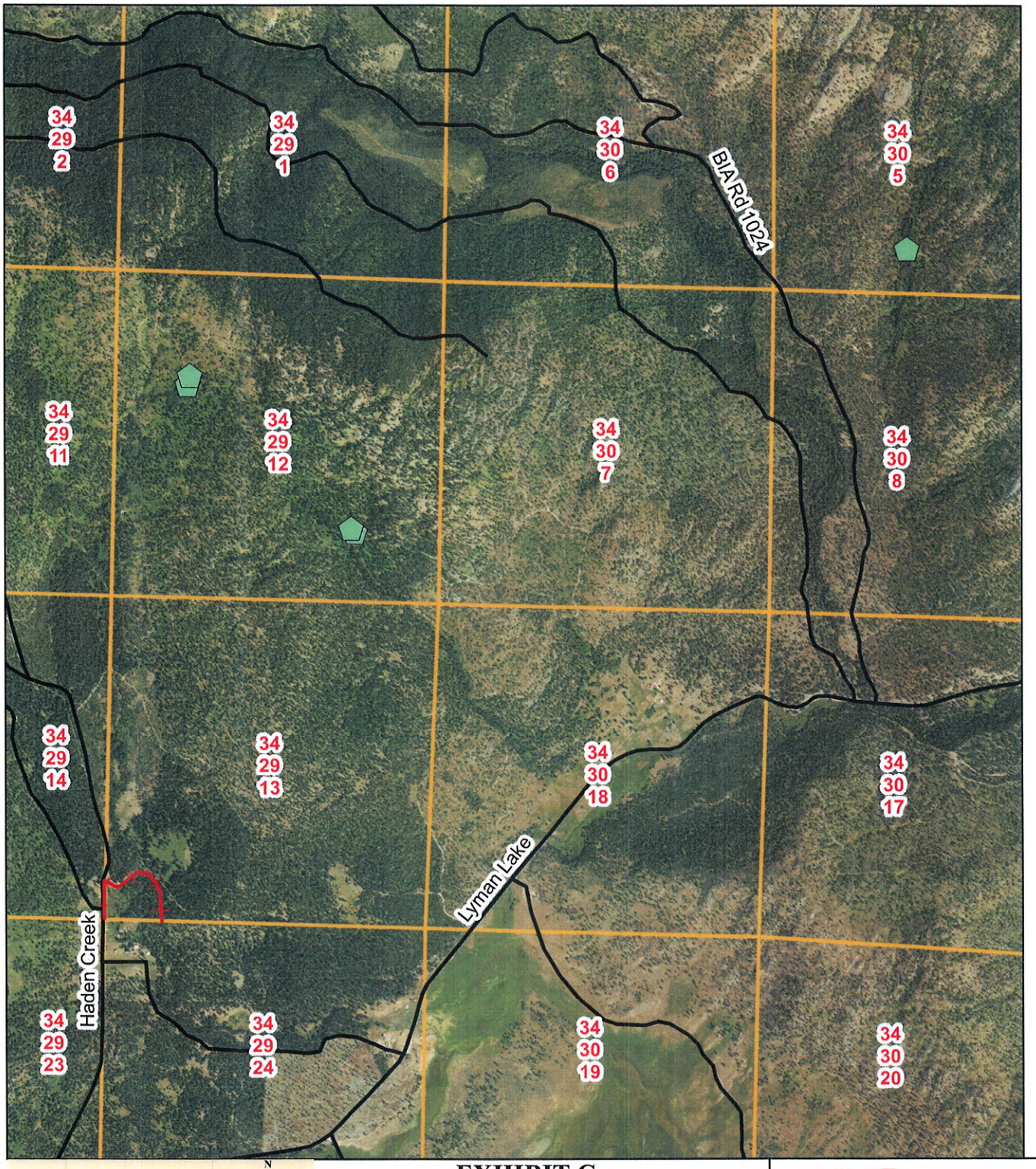
Sump/Daylight: The outlet piping from the trough will allow the overflow of water to flow to the sump/daylight.

Construction of Welded Wire Fencing: These will go around the catch box. The fence will consist of installing wooden treated posts (3-4 inch diameter, 8 feet long) with a 7 ½ foot spacing between posts and embedding each post 30 inches below ground level. Corner posts need to be a minimum of 8 feet long, embedded a minimum of 36 inches into the ground, and must be a minimum of 6 inches in diameter. Attach a 4 feet tall by 16 feet wide welded wire panel between each post with a little overlap, then use a staple to connect them to the posts. Place 3 inch plus diameter, 16 foot long rails 6 inches above the top of the panel. Rails should be attached to the treated post by using 6 inch spikes.

Construction Features for Fencing: Construct 2,750 feet of new wildlife-friendly fence that will attach to an existing fence-line using an H-brace. This will be the the starting point of the fence. Install a 4-way H-brace where the fence changes direction at a 20 – 60 degree angle. The fence will consist of 4 strands of barbed and barbless 12.5 gauge wire, with metal t-posts (1.33lbs 6 feet) installed every 16 feet with two metal stays between each post. Install a H-brace by using 2 (5 inch diameter, 7-8 feet long) posts and 1 rail (4inch diameter, 8 feet long) and **double wrap** wires around the post for the twister, attach 4-strand barbed wire. H-braces should be installed at corners, gates, slope breaks and/or every ¼ mile.

Construction Sites: Please review the attached maps showing the construction locations.

Haden Creek Spring Developments and Fencing EQIP Contract

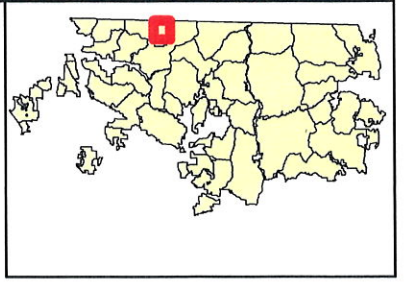


Legend

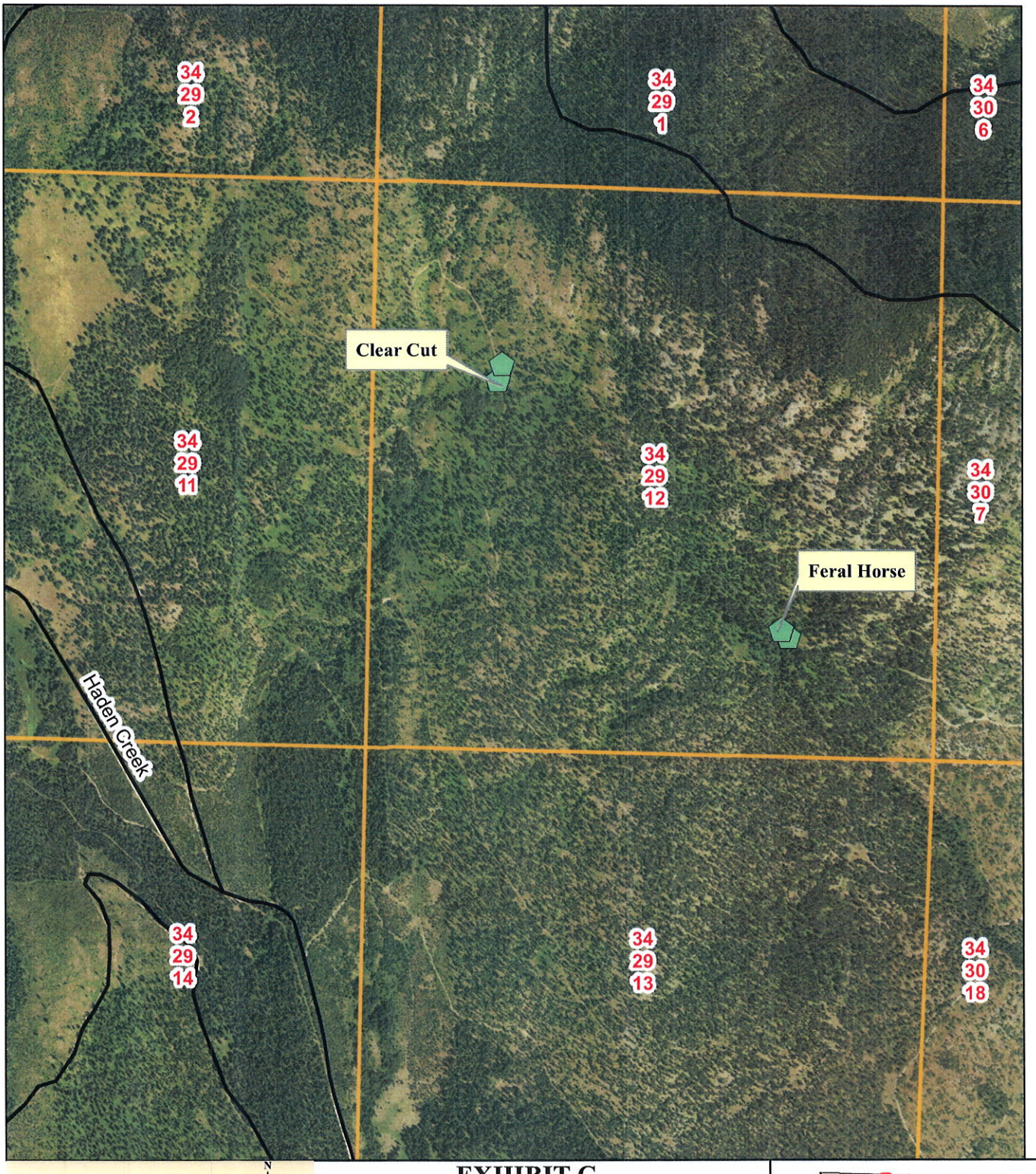
- Haden_Fence
- Haden_Springs

EXHIBIT C
Three Spring Developments
& 2,750ft of Fencing

0 0.25 0.5 1 Miles



Haden Creek Spring Developments and Fencing EQIP Contract



Legend

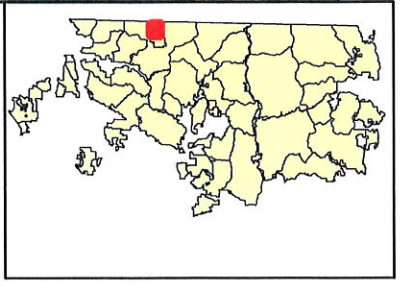
N W E S

Haden_Fence

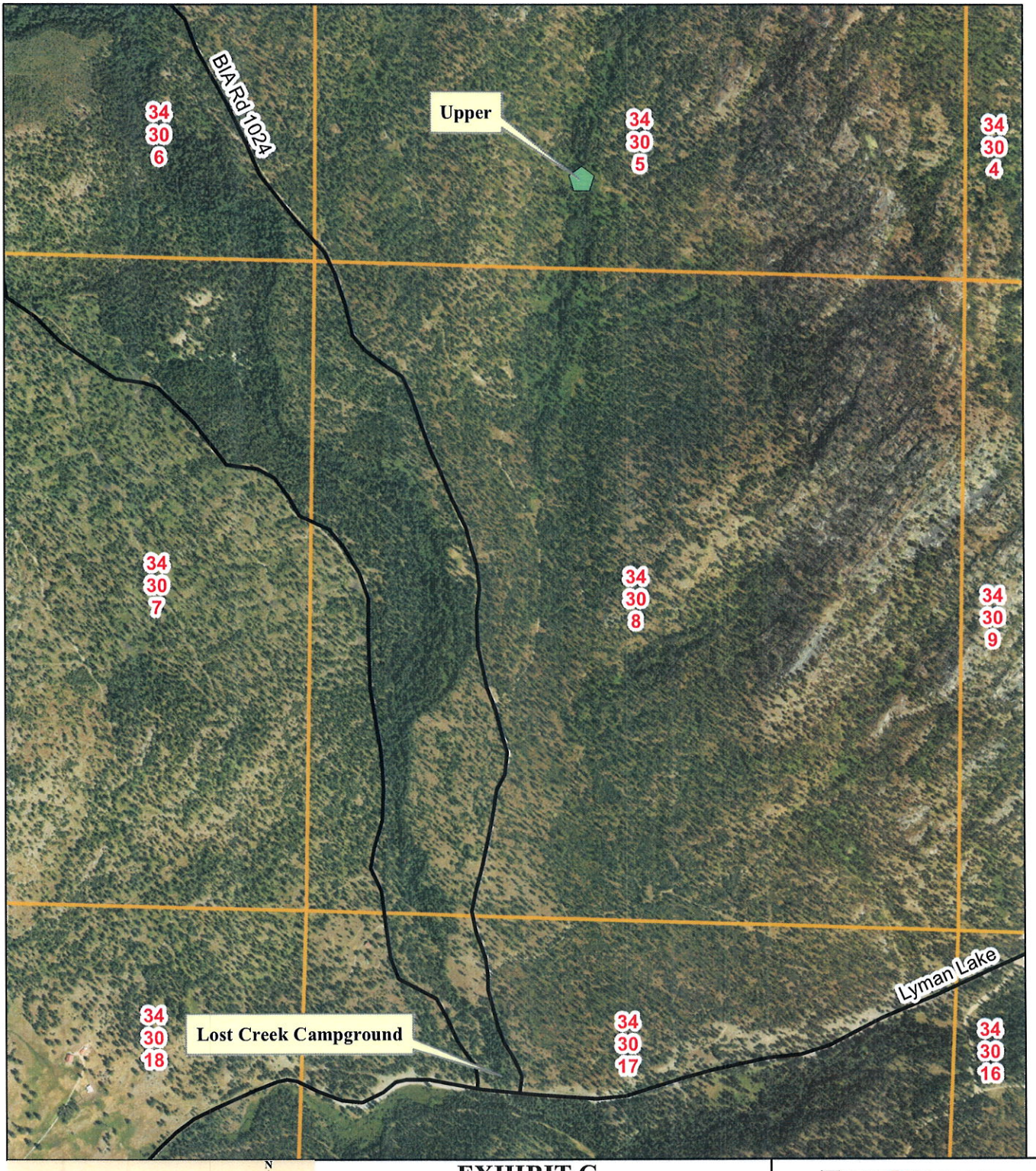
Haden_Springs

EXHIBIT C
Clear Cut and Feral Horse
Spring Developments
Tire Troughs

0 0.125 0.25 0.5 Miles



Haden Creek Spring Developments and Fencing EQIP Contract



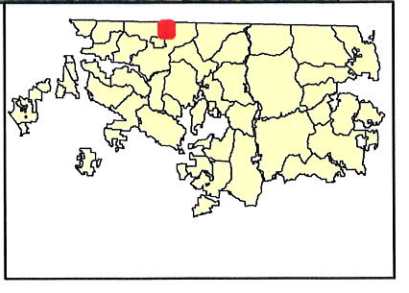
Legend

Haden_Fence

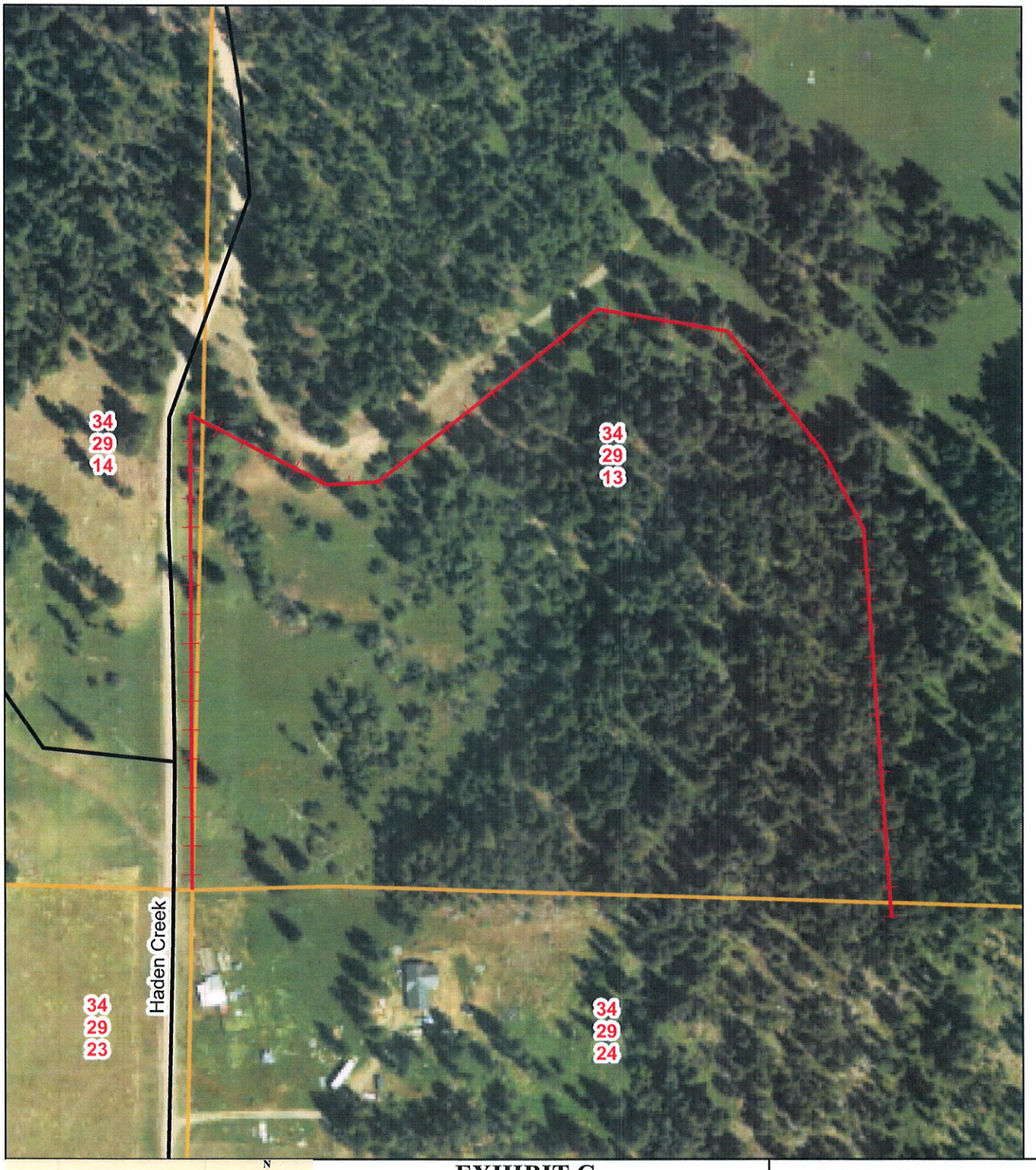
Haden_Springs

EXHIBIT C
Upper Spring Development
Aluminum Trough

0 0.125 0.25 0.5 Miles



Haden Creek Spring Developments and Fencing EQIP Contract



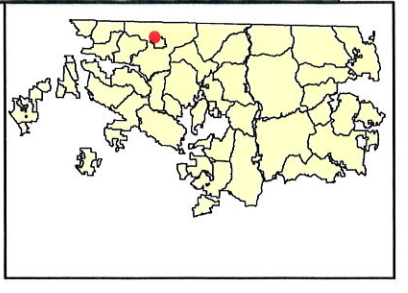
Legend

Haden_Fence

Haden_Springs

EXHIBIT C
Fencing will connect to existing fence and be approx. 2,750 ft.

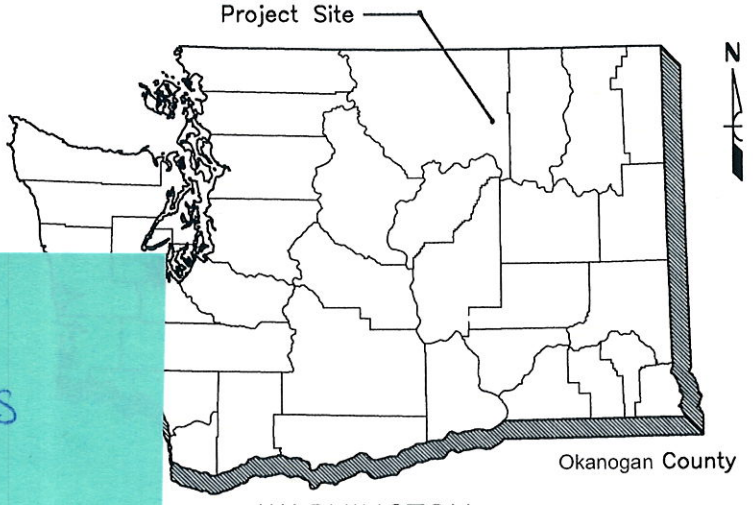
0 0.02 0.04 0.08 Miles



CONSTRUCTION PLANS
FOR
CCT Haden Creek Middle Third Spring 150NU

PREPARED BY

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

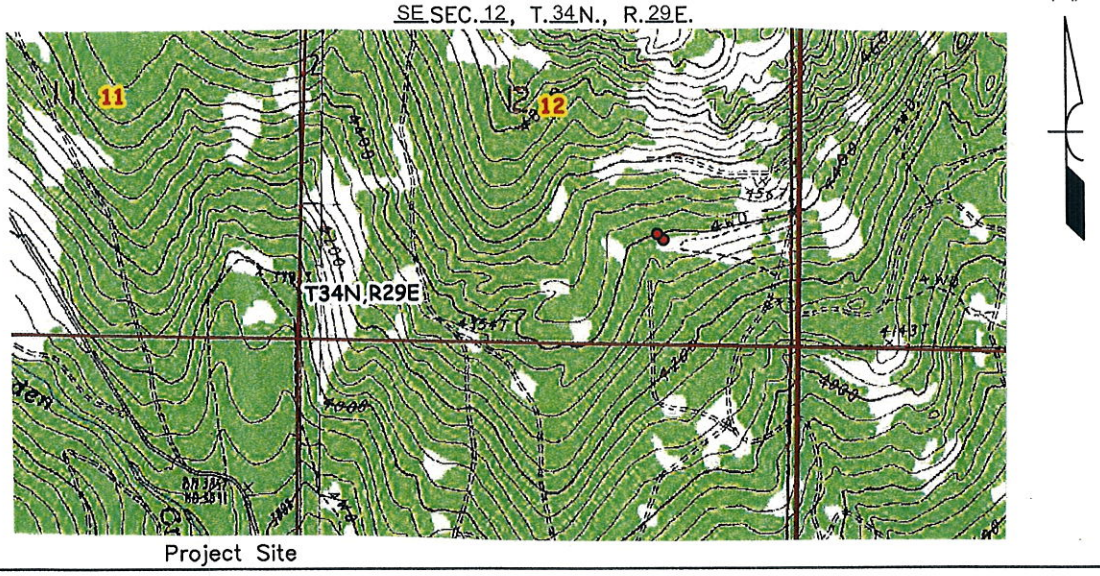


Feral Horses

WASHINGTON

LOCATION MAP

SE SEC. 12, T. 34 N., R. 29 E.



INDEX OF DRAWINGS

Sheet #	Title	Sheet #	Title
1.	Index of Drawing	7.	Air Valve Details
2.	General Notes	8.	In-Line Drain Details
3.	System Plan View	9.	Tire Trough Details
4.	Mainline Profile		
5.	Spring Box Details		
6.	Typical Trench Details		

PROJECT COMPLETION

To the best of my professional judgement and belief, this project is installed in accordance with the plans and specifications and meets all applicable NRCS standards.

APPROVED BY _____ DATE _____

TITLE _____

APPROVED BY Kaiza Kuiken TITLE Soil Con. Tech. 7/11/16 TITLE

DESIGNED Kaiza Kuiken DATE 7/2016

DRAWN Kaiza Kuiken DATE 7/2016

TRACED _____ DATE _____

CHECKED DEisenbraun DATE 7/11/16

INDEX OF DRAWINGS

CCT Haden Creek Middle Third Spring

EQIP 740546150NU

NRCS Practice Standards: 574, 516, 614, 561

ENG. Job Class: 2

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

REVISION NO.

DRAWING NO. COVER.DWG

SHEET 1 OF 9

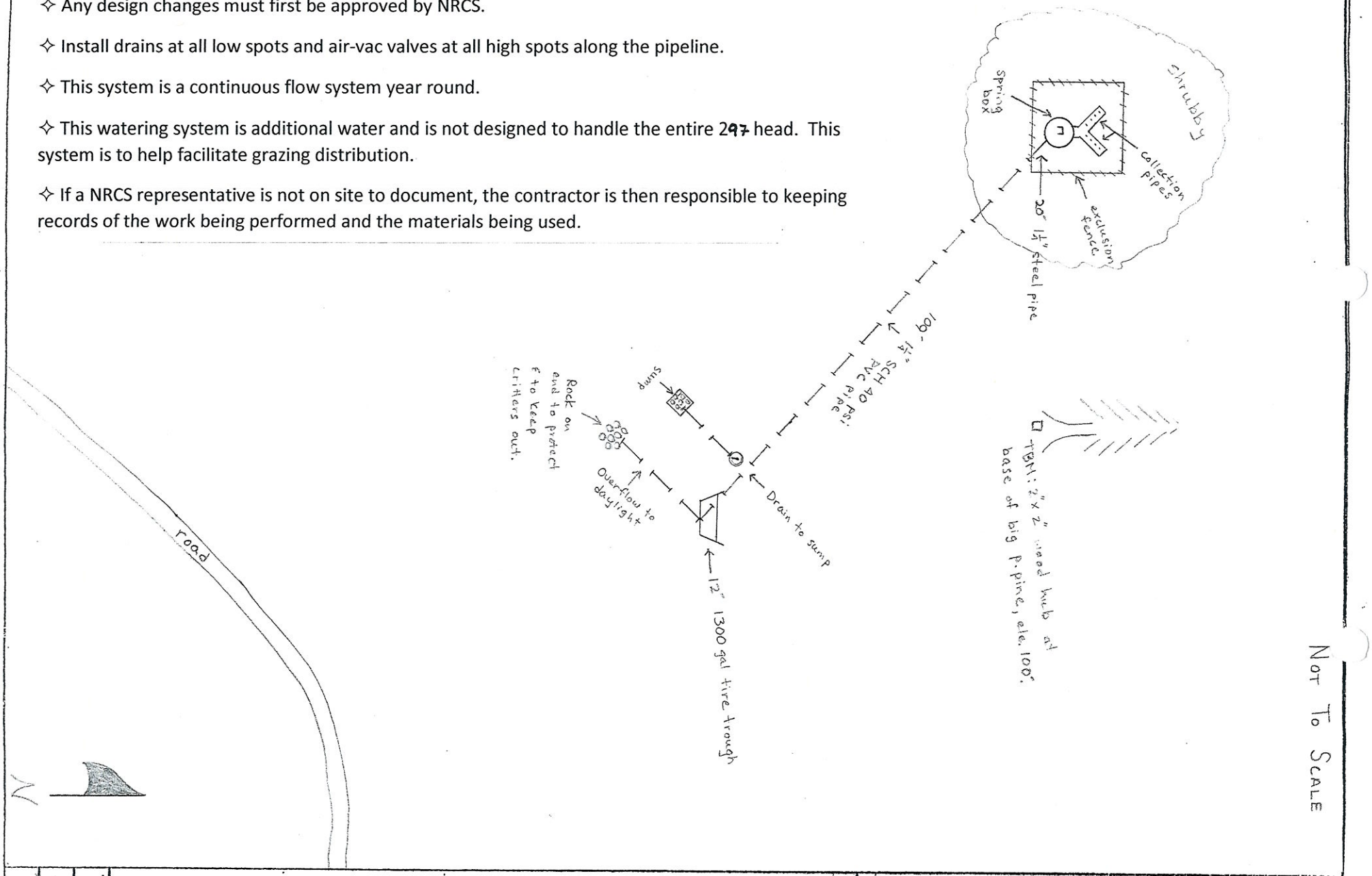
✧ Any design changes must first be approved by NRCS.

✧ Install drains at all low spots and air-vac valves at all high spots along the pipeline.

✧ This system is a continuous flow system year round.

✧ This watering system is additional water and is not designed to handle the entire 297 head. This system is to help facilitate grazing distribution.

✧ If a NRCS representative is not on site to document, the contractor is then responsible to keeping records of the work being performed and the materials being used.



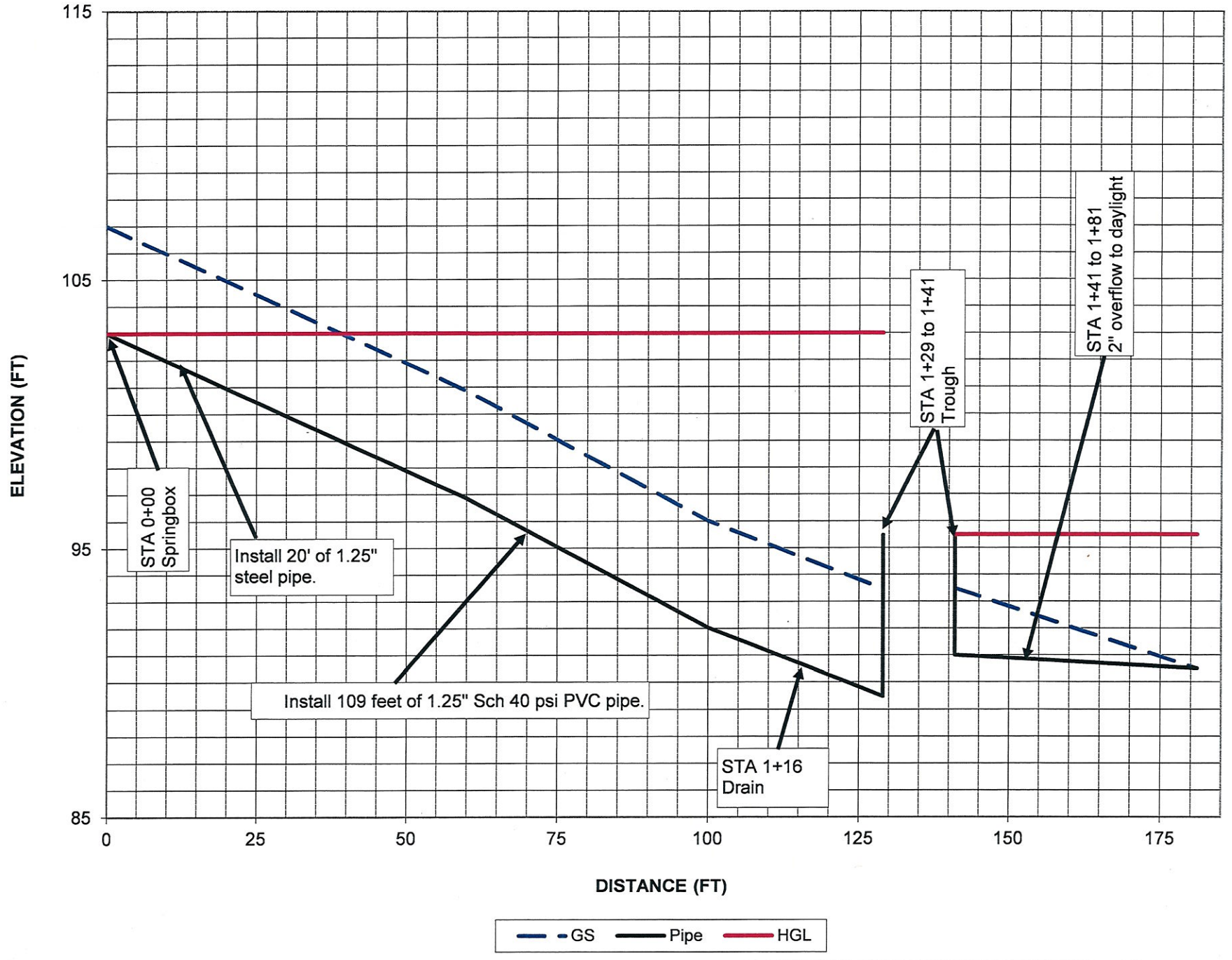
System Plan View
CCT Haden Creek Middle Third Spring
EQIP 740546150 NU

OKANOGAN COUNTY WASHINGTON

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

DESIGNED Kaiza Kuiken	DATE 7/16	APPROVED BY Kaiza Kuiken	
DRAWN Kaiza Kuiken	DATE 7/16	TITLE Soil Con. Tech.	
TRACED	DATE	7/11/16	
CHECKED DEisenbraun	DATE 7/11/16	TITLE	

SHEET 3 OF 9



PROFILE - GRAVITY MAINLINE

CCT-Range

Haden Creek-Middle Third

EQIP Contract # 740546150NL

		Date
Designed	KHK	7/8/2016
Drawn	KHK	7/8/2016
Checked	DEisenbraun	7/11/16
Approved	Kaia Kinder	7/11/16
Title	Snel Lon Tech.	

NRCS

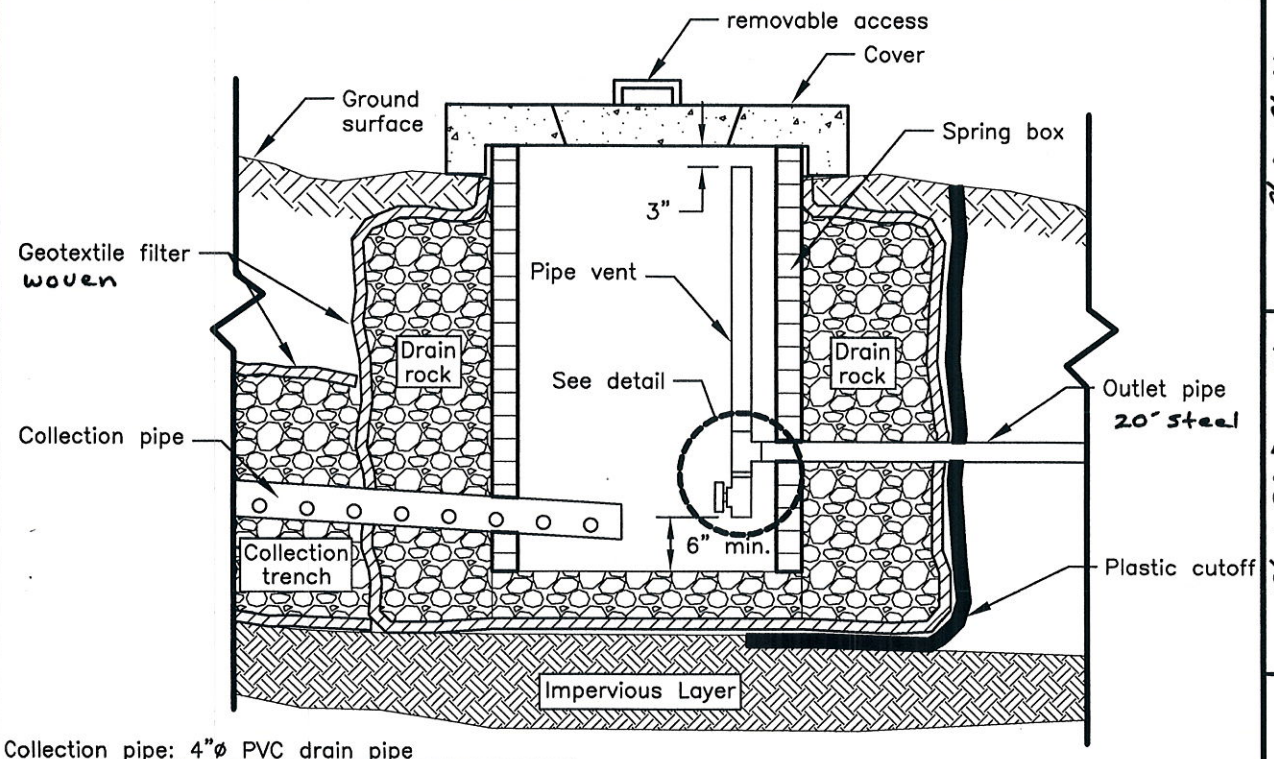
Natural Resources Conservation Se

United States Department of Agric

File Name
LWS gravity

Drawing No.
Profile

Sheet 4 of 9

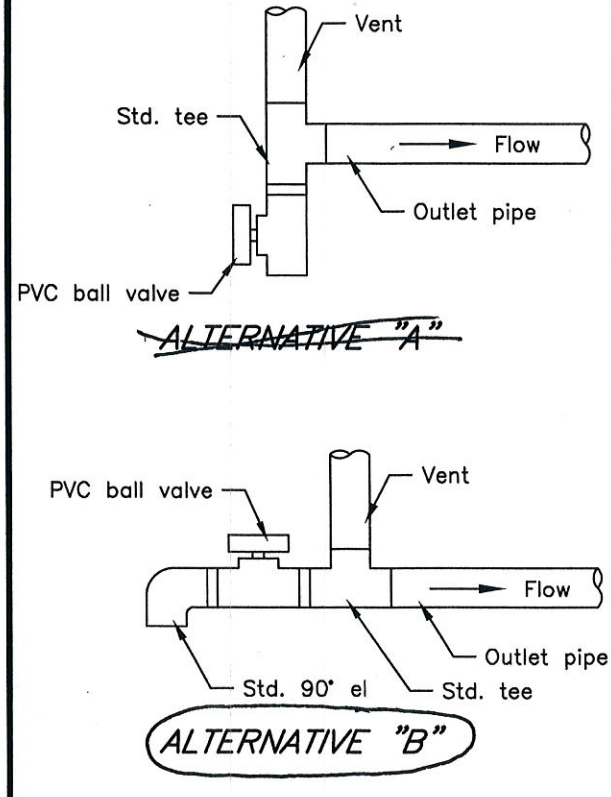


Collection pipe: 4"ø PVC drain pipe
Outlet pipe: 1.25"ø Steel

Note: The size of the valve & vent shall be equal to the size of the outlet pipe.

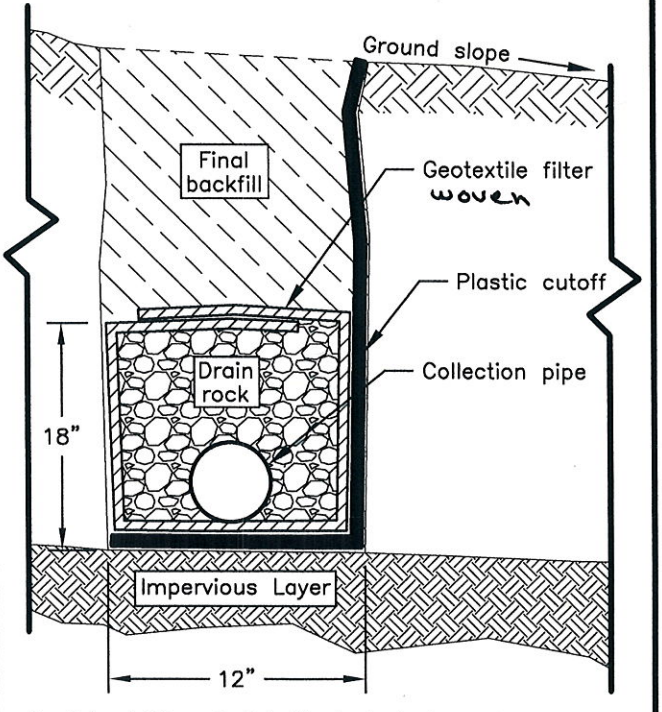
SPRING BOX DETAIL

(Not to Scale)



VALVE & VENT DETAIL

(Not to Scale)



Final backfill material: Washed drain rock

COLLECTION TRENCH DETAIL

(Not to Scale)

APPROVED BY Kaija Kinkun
TITLE Soil Con. Tech.
7/11/16
TITLE

DESIGNED Kaija Kinkun DATE 7/16
DRAWN DATE
TRACED DATE
CHECKED D Eisenbraun DATE 7/11/16

SPRING DEVELOPMENT DETAILS

CCT Haden Creek Middle Third Spring
EQIP 74054615ONU
Okanogan County WA

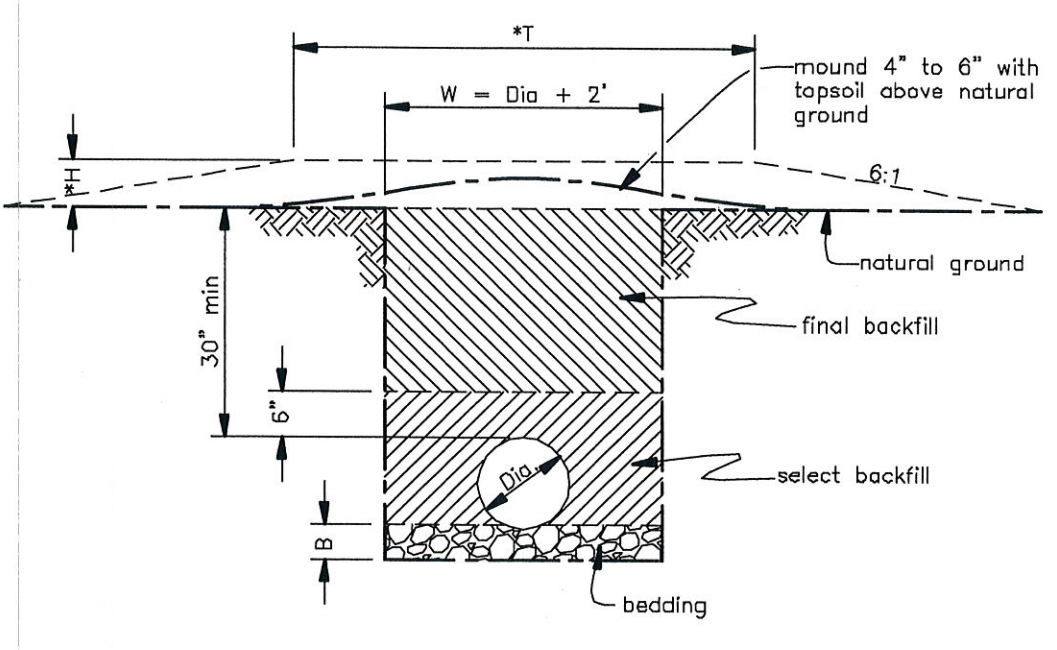
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

REVISION NO.

DRAWING NO.

SHEET 5 OF 9

WASHINGTON STANDARD DRAWING	PIPELINES **TYPICAL TRENCH DETAIL**	STANDARD DRAWING NO. **PLN–0001** APPROVED BY: LAJ DRAWN BY: KLY ISSUE DATE: 5/01



GENERAL NOTES

* Place fill over pipe as shown to provide minimum cover in places where natural ground is low.

Final backfill shall be free from material larger than 3 inches.

Select backfill shall consist of soil or granular material that is free from rocks greater than 1/2 inch in diameter.

Bedding shall be used on foundations containing material larger than 1/2 inch. Bedding may be either granular material conforming to ASTM C–33 gradation 7 or 8, or select backfill material.

DIMENSIONS

Dia. = 1.25 (in)

B = 6 (in)

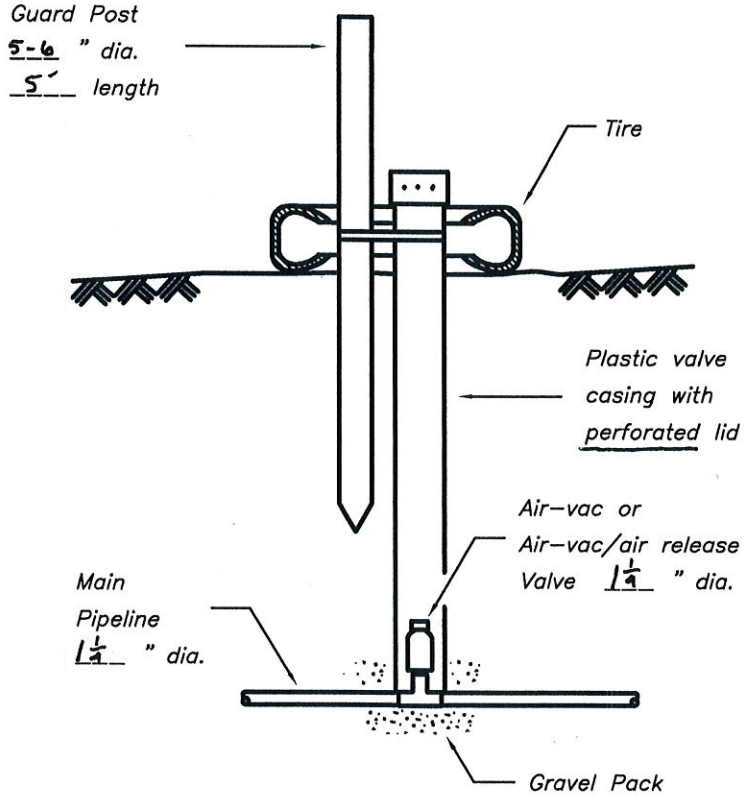
W = 2 (ft)

*H = 6 (in)

*T = 4 (ft)

Drawing not to scale. Standardized drawing must be adapted to the specific site.

Typical Trench Detail CCT Haden Creek Middle Third Spring EQIP 740546150NU	JOB CLASS 2 CAD FILE NO. PLN–0001.DWG SHEET 6 OF 9	Designed Kaija Kuiken 7/16 Drawn Checked DEisenbraun 7/11/16 Approved Kaija Kuiken 7/11/16
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE		



AIR VALVE DETAILS

APPROVED BY Keiza Kinken
TITLE Soil Con. Tech.
7/11/16
TITLE

DESIGNED Keiza Kinken DATE 7/16
DRAWN DATE
TRACED DATE
CHECKED D Eisenbraun DATE 7/11/16

AIR VALVE DETAILS
CCT Haden Creek Middle Third Spring
EQIP 7405A6150NU
Okanogan County WA

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

REVISION NO.

DRAWING NO.

SHEET 7 OF 9

WASHINGTON STANDARD DRAWING	PIPELINE **IN–LINE DRAIN VALVE**	STANDARD DRAWING NO. **PLN–0130** APPROVED BY: LAJ DRAWN BY: KLY ISSUE DATE: 5/01

DIMENSIONS

Type A

L1 = 1 (ft)

L2 = 10 (ft)

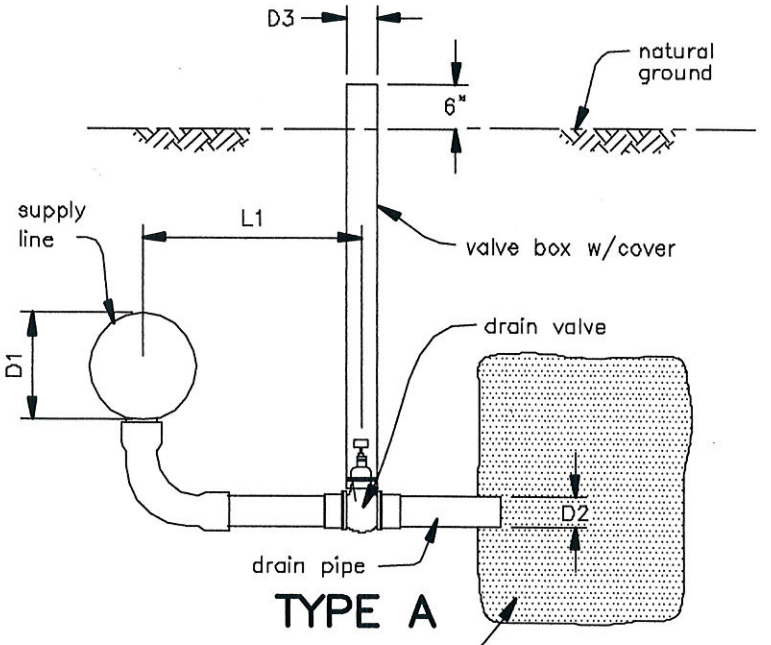
D1 = 1.25 (in)

D2 = 1.25 (in)

D3 = 6 (in)

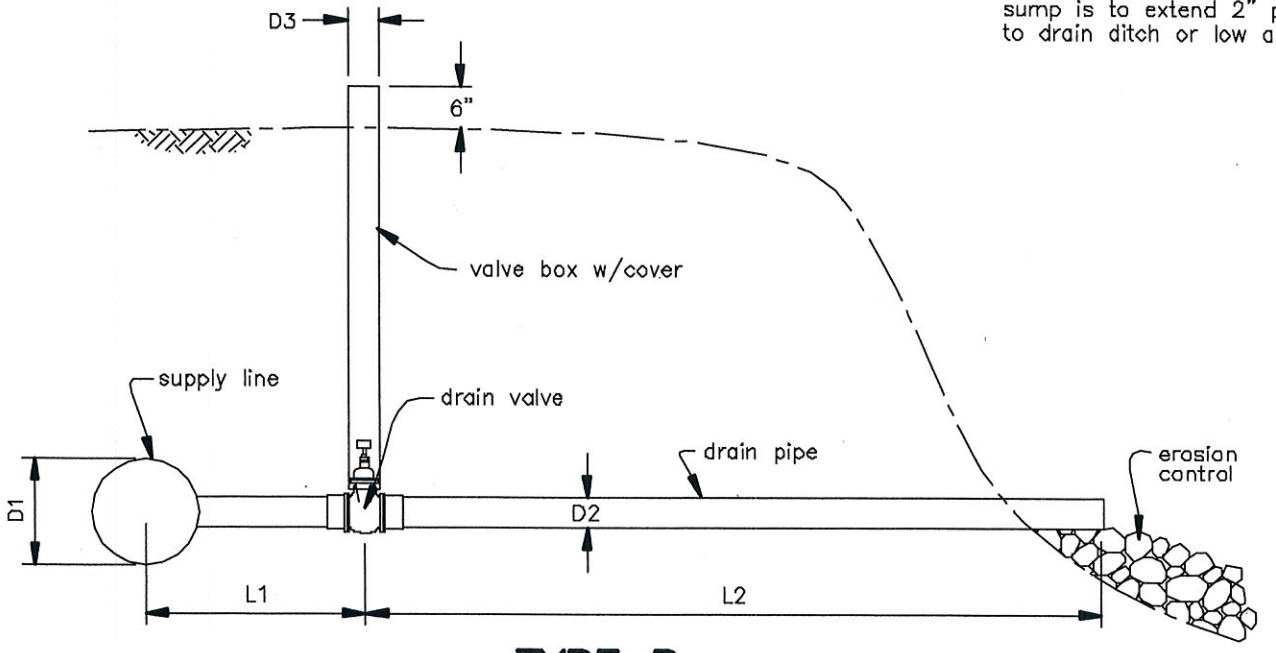
Valve dia. 1.25 (in)

Valve rating 5.8 (psi)



TYPE A

alternative to gravel filled sump is to extend 2" pipe to drain ditch or low area

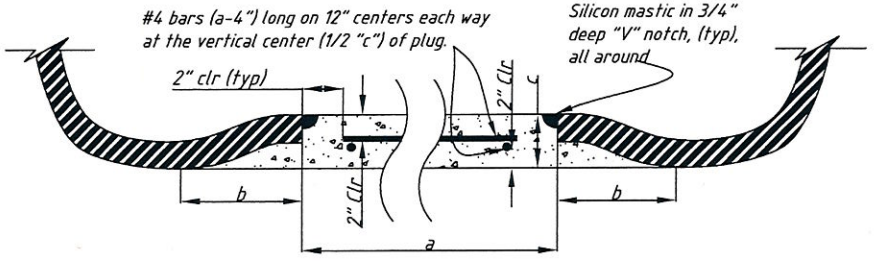


TYPE B

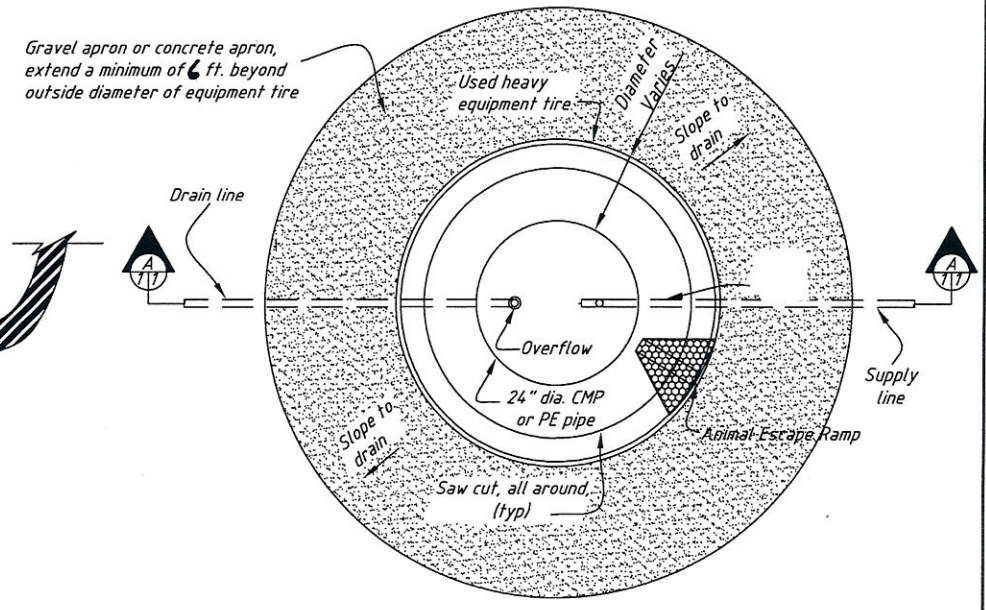
Drawing not to scale. Standardized drawing must be adapted to the specific site.

In-Line Drain Valve Details CCT Haden Creek Middle Third Spring EQIP 740546150NU	JOB CLASS 2 CAD FILE NO. PLN–0130.DWG SHEET 8 OF 9	Designed Kaija Kuikka 7/16 Drawn Checked PEisenbraun 7/11/16 Approved Kaija Kuikka 7/14/16
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE		

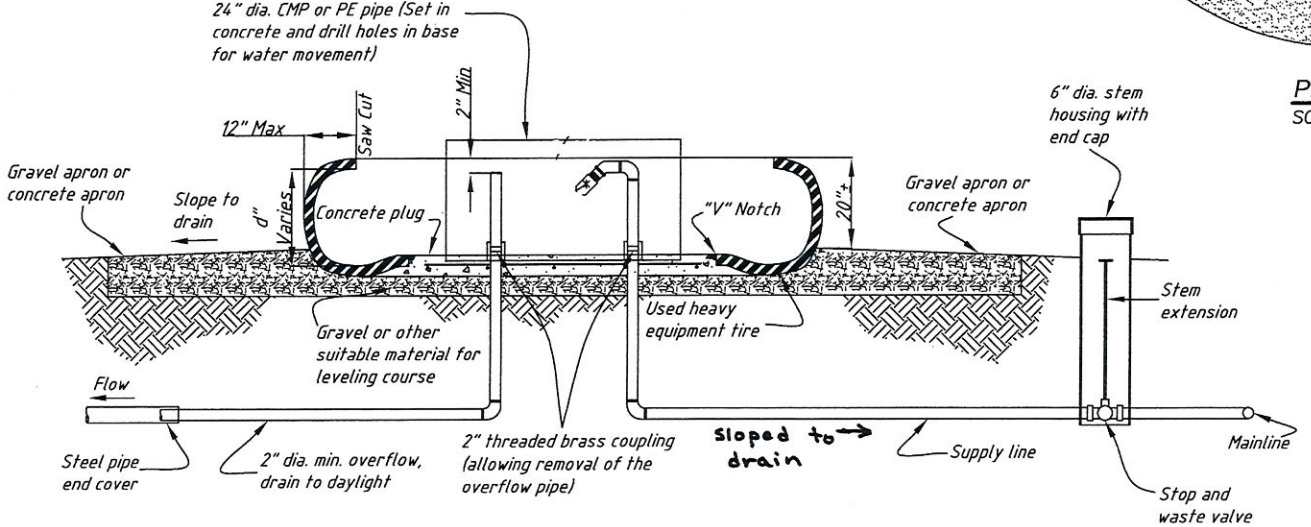
NOTES:
1. Supply pipeline shall be buried below frost line..
2. Use gravel or other suitable material to fill around pipes and to level tire.
3. Provide an escape device for small birds or animals that may become entrapped.
4. ×To reduce freezing, point the inflow in the direction that will cause the most water movement.



CONCRETE PLUG DETAIL
SCALE: NTS



PLAN
SCALE: NTS



A 1 1 SECTION
SCALE: NTS

Tire Details

*DIA. FT.	*VOLUME (GAL)	*a	*b	*c	*d
5	100	24"	9"	8"	14"
6	200	33"	14"	9"	18"
8	577	49"	17"	10"	24"
10	1035	51"	25"	17"	33"
12	1296	57"	36"	24"	40"

*Approximate

Designed RMT 7/11/16 Date 01/2013
Drawn RMT 01/2013
Checked DEisenbraun 7/11/16
Approved 7/11/16
Title ~~AREA ENGINEER~~ SCT

TIRE TROUGH W/O FROST FREE HYDRANT
STOCK WATER PIPELINE
CCT Haden Ck Middle Third Spring, EQIP 15ONU
NRCS PRACTICE STANDARDS: 574, 516, 614, 561 ENG. JOB CLASS: 2

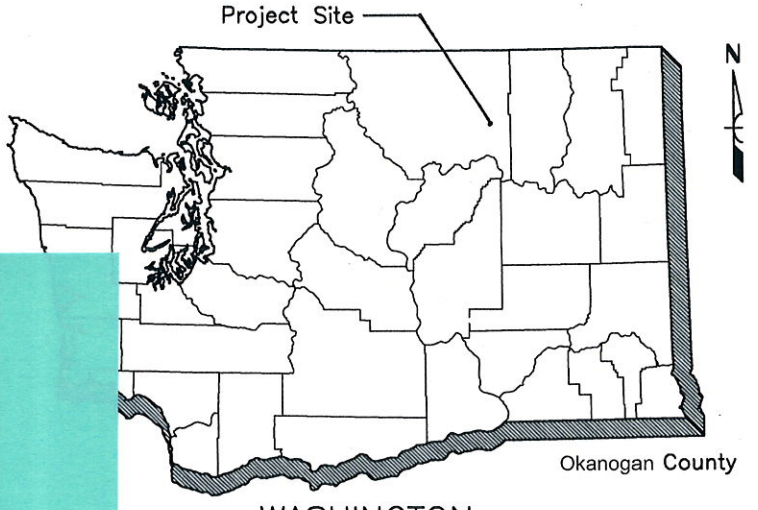
USDA NRCS Natural Resources Conservation Service

File Name 11x17cover.DWG
Drawing No. TROUGH 2
Sheet 9 of 9

CONSTRUCTION PLANS
FOR
CTCR Haden Creek Upper Third Spring 150NU

PREPARED BY

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

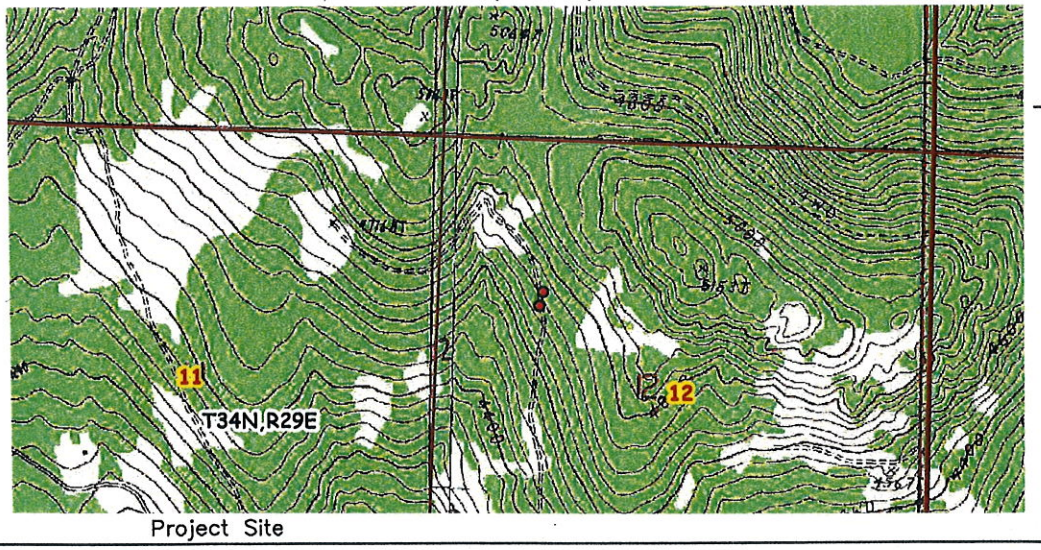


WASHINGTON

Clear Cut

LOCATION MAP

nw SEC. 12, T. 34 N., R. 29 E.



INDEX OF DRAWINGS

Sheet #	Title	Sheet #	Title
1.	Index of Drawing	7.	Air Valve Details
2.	General Notes	8.	In-Line Drain Details
3.	System Plan View	9.	Tire Trough Details
4.	Mainline Profile		
5.	Spring Box Details		
6.	Typical Trench Details		

PROJECT COMPLETION

To the best of my professional judgement and belief, this project is installed in accordance with the plans and specifications and meets all applicable NRCS standards.

APPROVED BY _____ DATE _____

TITLE _____

APPROVED BY Kaiza Kuiken TITLE Soil Con. Tech 10/5/16 TITLE Soil Conservationist

DESIGNED Kaiza Kuiken DATE 9/2016
DRAWN Kaiza Kuiken DATE 9/2016
TRACED _____ DATE _____
CHECKED [signature] DATE 10/5/16

INDEX OF DRAWINGS
CTCR Haden Creek Upper Third Spring
EQIP 740546150NU

NRCS Practice Standards: 574, 516, 614, 561

ENG. Job Class: 2

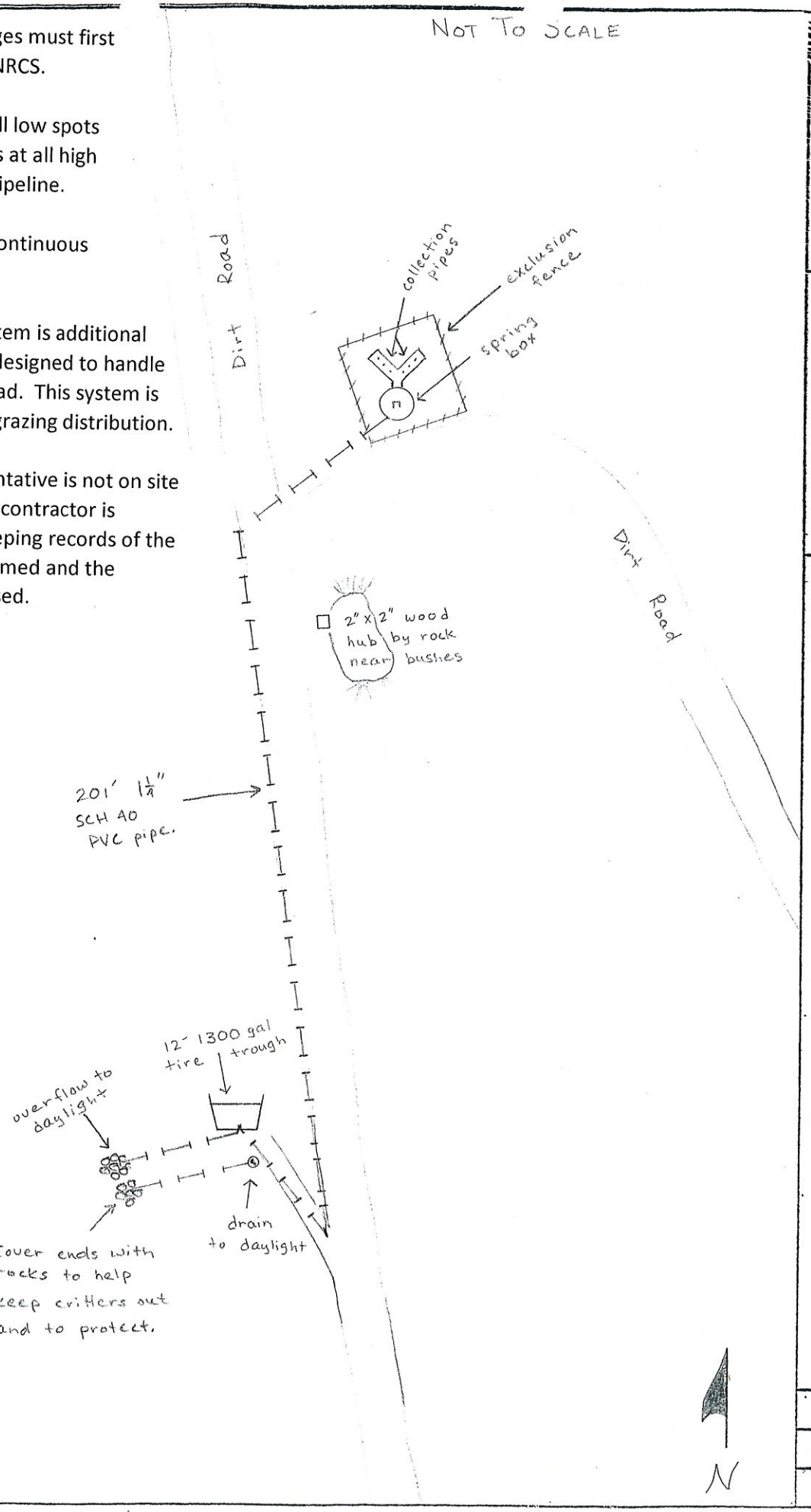
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

REVISION NO.

DRAWING NO. COVER.DWG

SHEET 1 OF 9

- Any design changes must first be approved by NRCS.
- Install drains at all low spots and air-vac valves at all high spots along the pipeline.
- This system is a continuous flow system.
- This watering system is additional water and is not designed to handle the entire 297 head. This system is to help facilitate grazing distribution.
- If a NRCS representative is not on site to document, the contractor is responsible to keeping records of the work being performed and the materials being used.



APPROVED BY Kaiza Kuiken TITLE Soil Con. Tech. 10/5/16 TITLE Soil Cons

DESIGNED Kaiza Kuiken DATE 9/16
DRAWN Kaiza Kuiken DATE 9/16
TRACED DATE
CHECKED [illegible] DATE 10/5/16

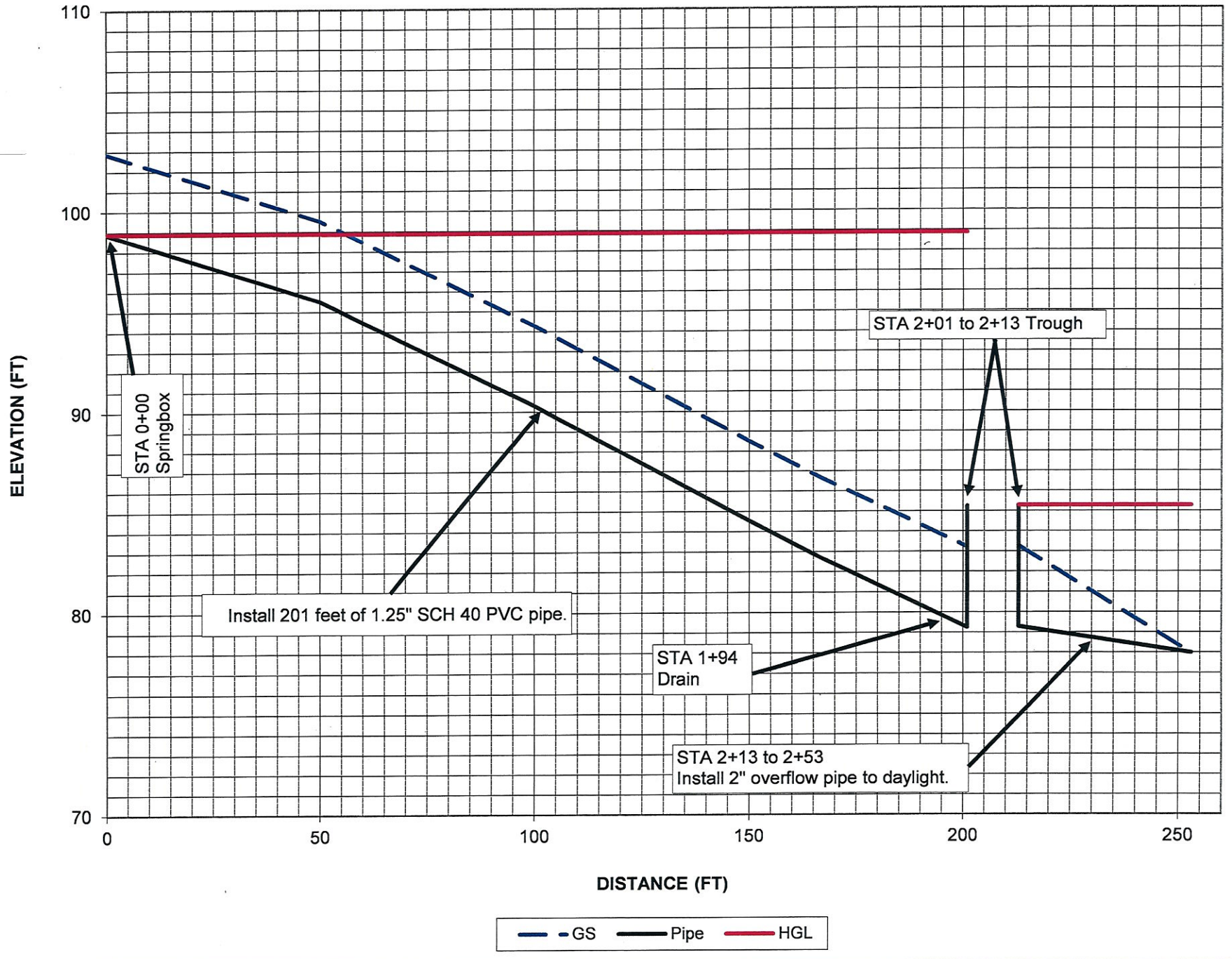
System Plan View
CTCR Haden Creek Upper Third Spring
EQIP 740546150NU

OKANOGAN COUNTY WASHINGTON

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

DRAWING NO.

SHEET 3 OF 9



PROFILE - GRAVITY MAINLINE

CTCR - Range

Haden Creek - Upper Third

EQIP Contract # 740546150NU

		Date
Designed	KHK	9/13/2016
Drawn	KHK	9/13/2016
Checked	[illegible]	10/5/16
Approved	[illegible]	10/5/16
Title	Soil Con. Tech.	

NRCS

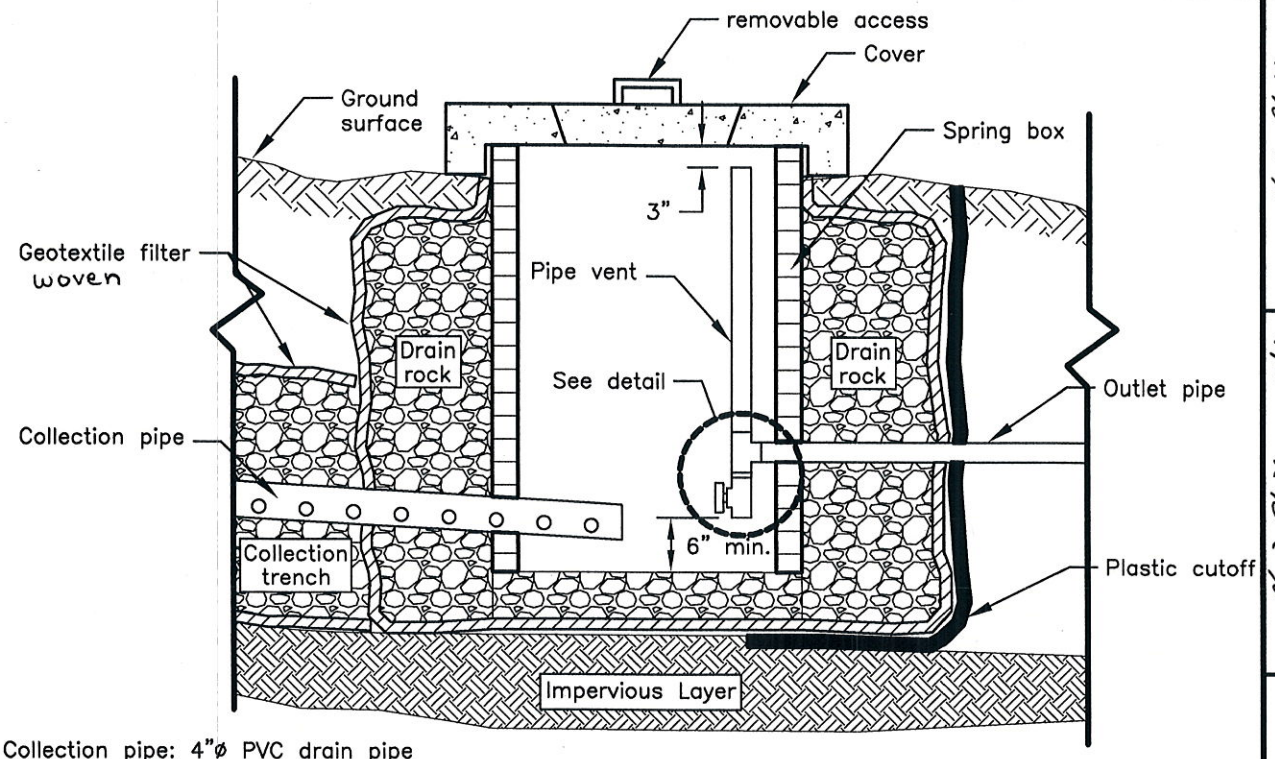
Natural Resources Conservation Servi

United States Department of Agricult

File Name: LWS gravity

Drawing No.: Profile

Sheet 4 of 9

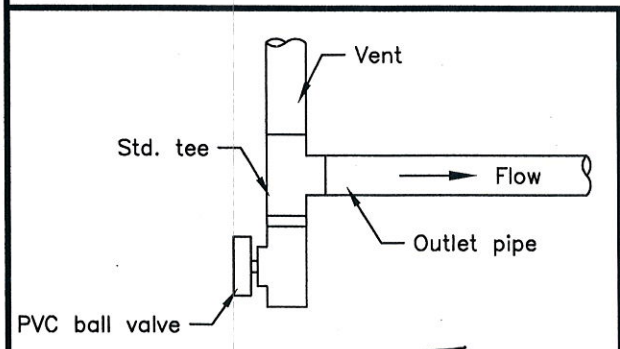


Collection pipe: 4"ø PVC drain pipe
Outlet pipe: 1.25"ø PVC

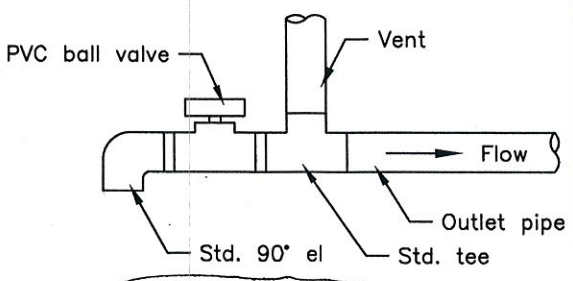
Note: The size of the valve & vent shall be equal to the size of the outlet pipe.

SPRING BOX DETAIL

(Not to Scale)



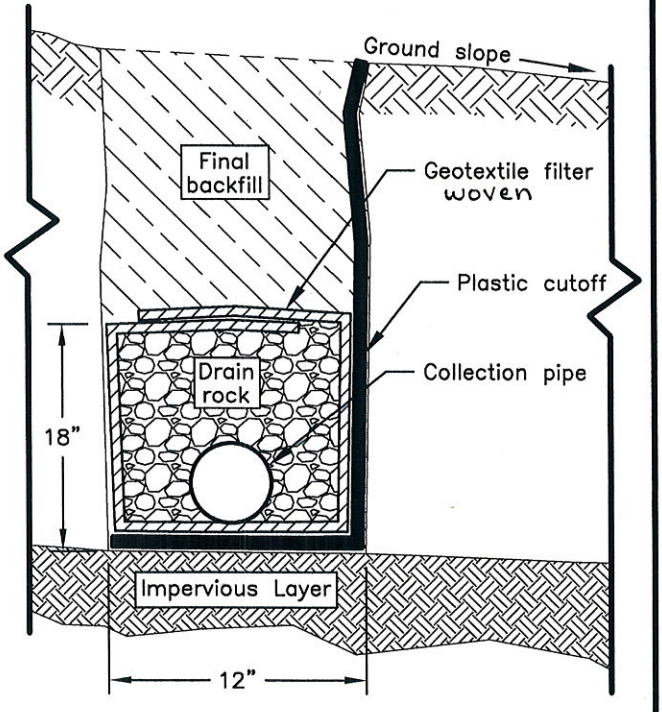
~~ALTERNATIVE "A"~~



ALTERNATIVE "B"

VALVE & VENT DETAIL

(Not to Scale)



Final backfill material: Washed drain rock

COLLECTION TRENCH DETAIL

(Not to Scale)

APPROVED BY Kaija Kinken
TITLE Soil Con. Tech.
10/5/16
TITLE Soil Cons.

DESIGNED Kaija Kinken DATE 9/16
DRAWN DATE
TRACED DATE
CHECKED [illegible] DATE 10/5/16

SPRING DEVELOPMENT DETAILS

CTCR Haden Creek Upper Third Spring
EQIP 74054615ONU

Okanogan County WA

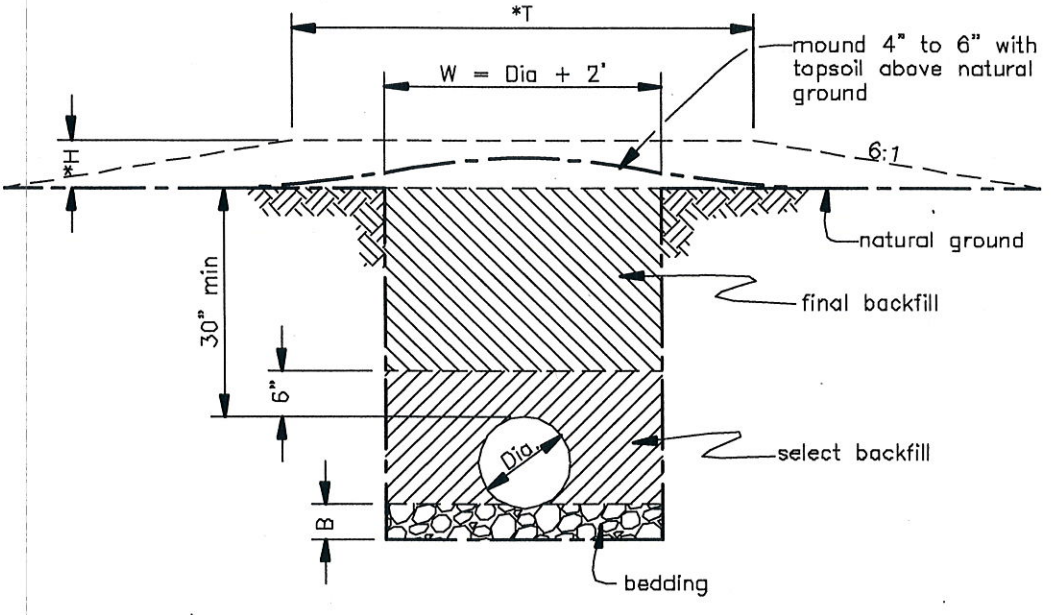
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

REVISION NO.

DRAWING NO.

SHEET 5 OF 9

WASHINGTON STANDARD DRAWING	PIPELINES **TYPICAL TRENCH DETAIL**	STANDARD DRAWING NO. **PLN-0001** APPROVED BY: LAJ DRAWN BY: KLY ISSUE DATE: 5/01



GENERAL NOTES

* Place fill over pipe as shown to provide minimum cover in places where natural ground is low.

Final backfill shall be free from material larger than 3 inches.

Select backfill shall consist of soil or granular material that is free from rocks greater than 1/2 inch in diameter.

Bedding shall be used on foundations containing material larger than 1/2 inch. Bedding may be either granular material conforming to ASTM C-33 gradation 7 or 8, or select backfill material.

DIMENSIONS

Dia. = 1.25 (in)

B = 6 (in)

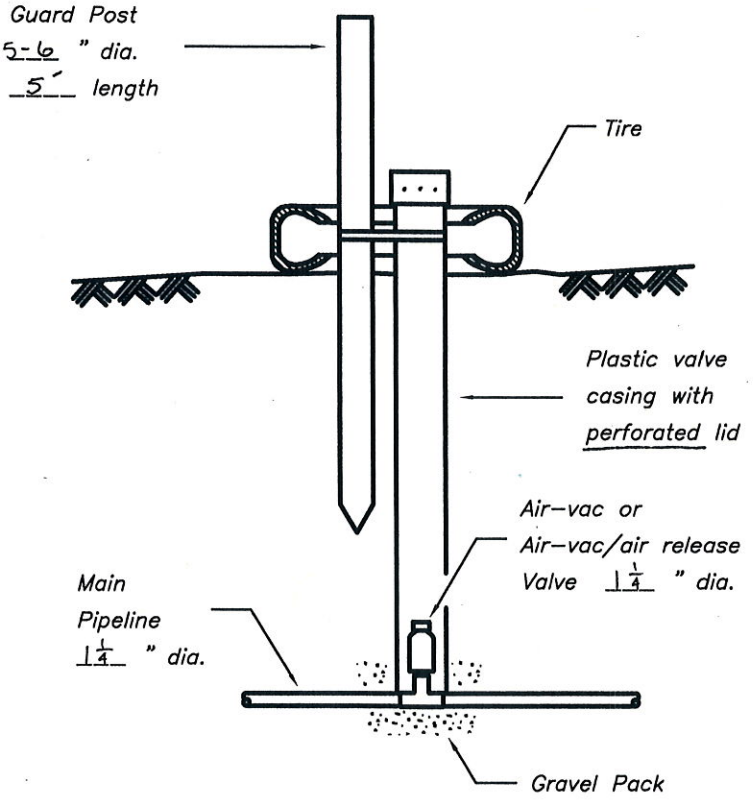
W = 2 (ft)

*H = 6 (in)

*T = 4 (ft)

Drawing not to scale. Standardized drawing must be adapted to the specific site.

Typical Trench Detail CTCR Haden Creek Upper Third Spring EQIP 740546150NU	JOB CLASS 2 CAD FILE NO. PLN-0001.DWG SHEET 6 OF 9	Designed Kaiza Kuiken 9/14 Drawn Checked [illegible] 10/5/16 Approved Kaiza Kuiken 10/5/16
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE		



AIR VALVE DETAILS

APPROVED BY Haiya Kinken
TITLE Soil Con. Tech.
10/5/16
TITLE Soil. Cons.

DESIGNED Haiya Kinken DATE 9/16
DRAWN DATE
TRACED DATE
CHECKED [illegible] DATE 10/5/16

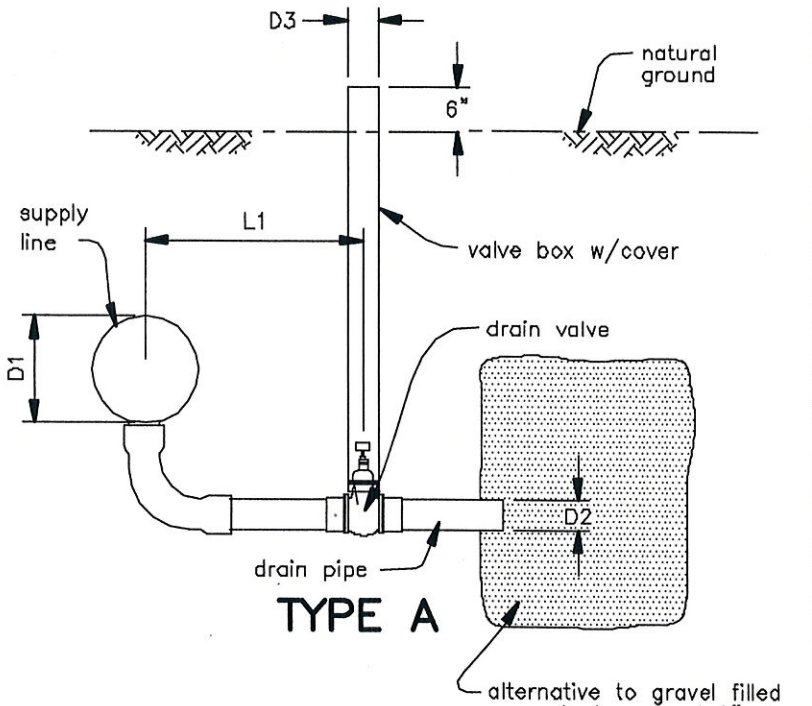
AIR VALVE DETAILS
CTCR Haden Creek Upper Third Spring
EQIP 740546150 NU
Okanogan County WA
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

REVISION NO.
DRAWING NO.
SHEET 7 OF 9

WASHINGTON STANDARD DRAWING	PIPELINE **IN–LINE DRAIN VALVE**	STANDARD DRAWING NO. **PLN–0130** APPROVED BY: LAJ DRAWN BY: KLY ISSUE DATE: 5/01

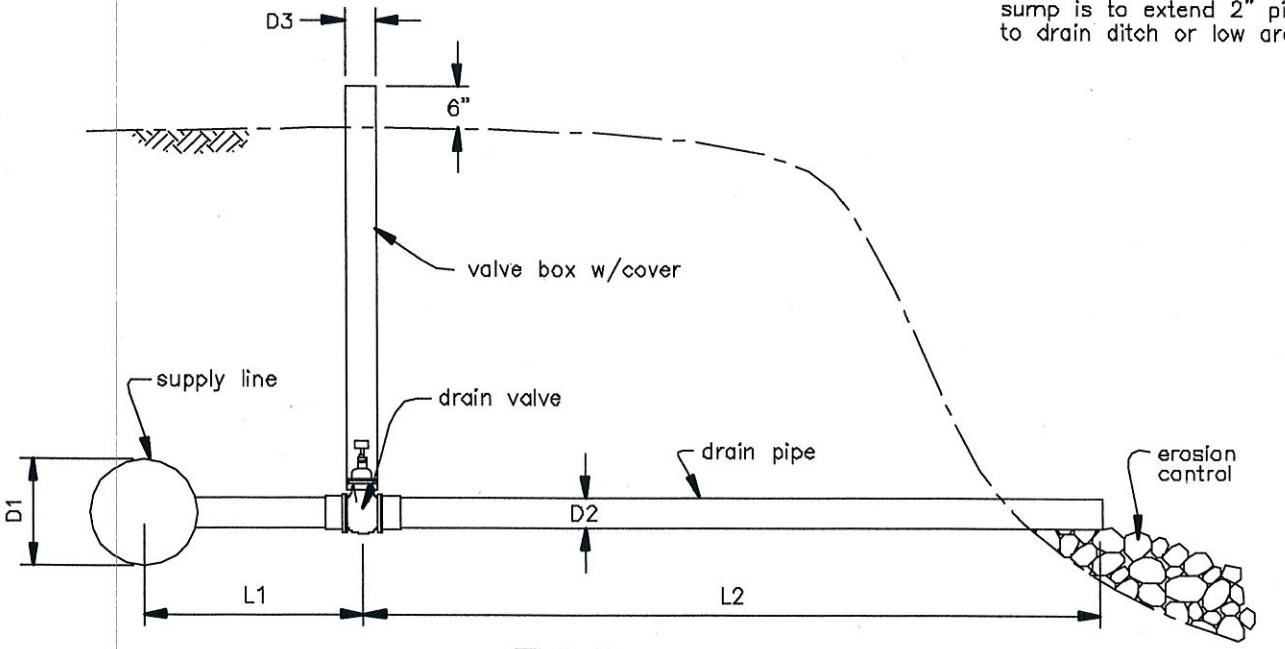
DIMENSIONS

Type	B	
L1 =	1	(ft)
L2 =	20	(ft)
D1 =	1.25	(in)
D2 =	1.25	(in)
D3 =	6	(in)
Valve dia.	1.25	(in)
Valve rating	8.5	(psi)



TYPE A

alternative to gravel filled sump is to extend 2" pipe to drain ditch or low area

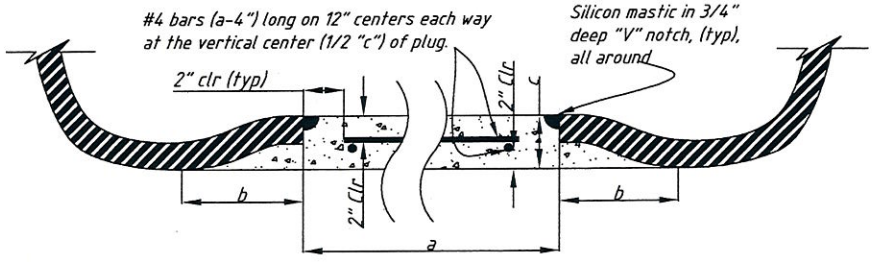


TYPE B

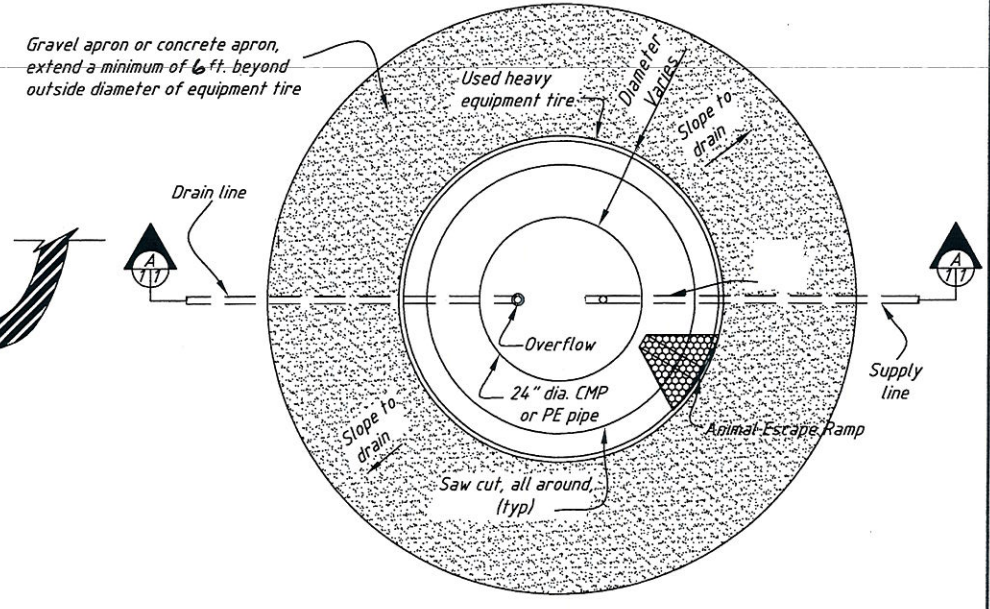
Drawing not to scale. Standardized drawing must be adapted to the specific site.

In-Line Drain Valve Details CTCR Haden Creek Upper Third Spring EQIP 740546150NU	JOB CLASS 2 CAD FILE NO. PLN–0130.DWG SHEET 8 OF 9	Designed Kaija Kuikka 9/16 Drawn Checked [illegible] 10/5/16 Approved Kaija Kuikka 10/5/16
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE		

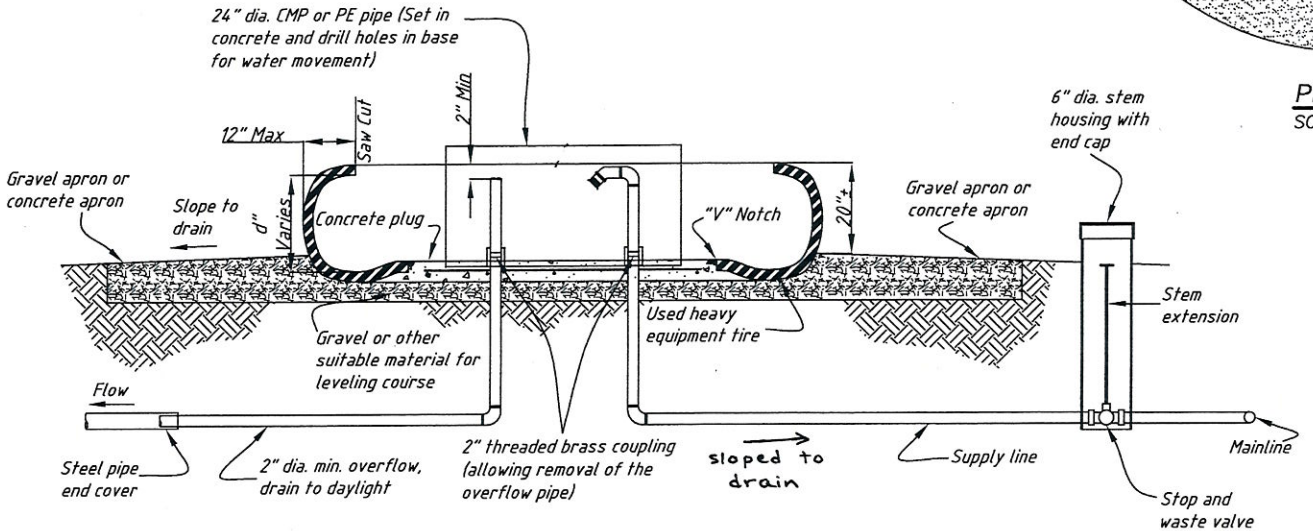
NOTES:
1. Supply pipeline shall be buried below frost line..
2. Use gravel or other suitable material to fill around pipes and to level tire.
3. Provide an escape device for small birds or animals that may become entrapped.
4. ×To reduce freezing, point the inflow in the direction that will cause the most water movement.



CONCRETE PLUG DETAIL
SCALE: NTS



PLAN
SCALE: NTS



A 1 1 SECTION
SCALE: NTS

Tire Details

*DIA. FT.	*VOLUME (GAL)	*a	*b	*c	*d
5	100	24"	9"	8"	14"
6	200	33"	14"	9"	18"
8	577	49"	17"	10"	24"
10	1035	51"	25"	17"	33"
12	1296	57"	36"	24"	40"

*Approximate

Designed RMT Date 01/2013
Drawn RMT 01/2013
Checked [signature] 10/5/16
Approved [signature] 10/5/16
Title ~~AREA ENGINEER~~ SCT

TIRE TROUGH W/O FROST FREE HYDRANT
STOCK WATER PIPELINE
CTCR Haden Ck Upper Third Spring, EQIP 150NU
NRCS PRACTICE STANDARDS: 574, 516, 614, 561 ENG. JOB CLASS: 2

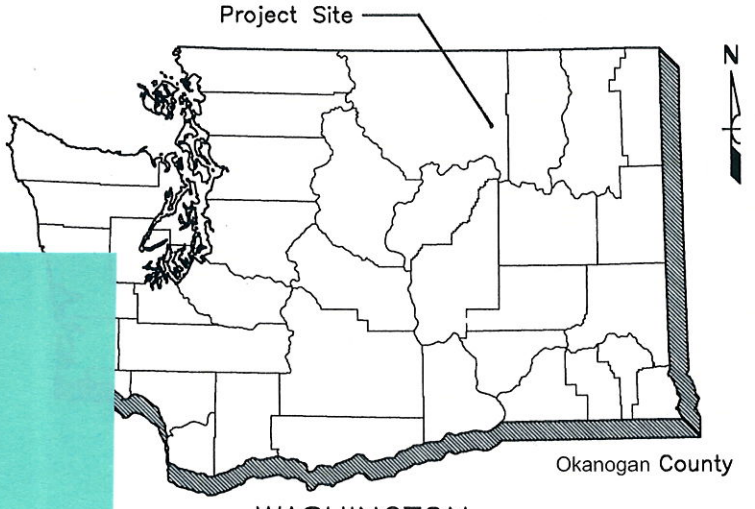
USDA NRCS Natural Resources Conservation Service

File Name 11x17cover.DWG
Drawing No. TROUGH 2
Sheet 9 of 9

CONSTRUCTION PLANS
FOR
CTCR Haden Creek Upper Second Spring LWS

PREPARED BY

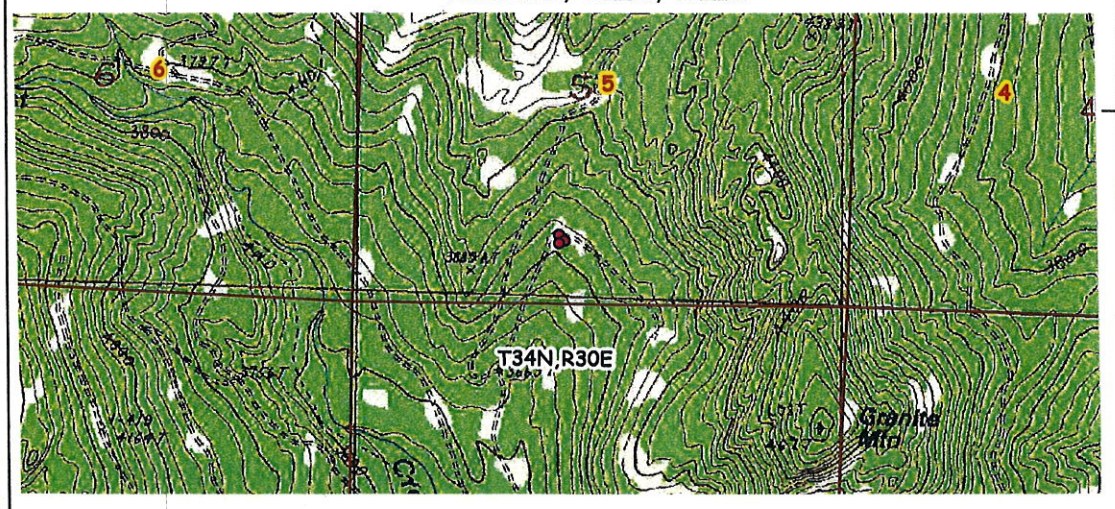
U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



upper

LOCATION MAP

SW SEC. 5, T. 34 N., R. 30 E.



Project Site

INDEX OF DRAWINGS

Sheet #	Title	Sheet #	Title
1.	Index of Drawing	7.	Air Valve Details
2.	General Notes	8.	In-Line Drain Details
3.	System Plan View	9.	Free-Flow Riser Details
4.	Mainline Profile	10.	Aluminum Trough Details
5.	Spring Box Details	11.	Overflow Details
6.	Typical Trench Details		

PROJECT COMPLETION

To the best of my professional judgement and belief, this project is installed in accordance with the plans and specifications and meets all applicable NRCS standards.

APPROVED BY _____ DATE _____

TITLE _____

APPROVED BY Kaiza Kuiken TITLE Soil Con Tech. 11/3/16

DESIGNED Kaiza Kuiken DATE 10/16

DRAWN Kaiza Kuiken DATE 10/16

TRACED _____ DATE _____

CHECKED _____ DATE 11/3/16

ENG. Job Class: II

INDEX OF DRAWINGS

CTCR Haden Creek Upper Second Spring

EQIP 74054615ONU

NRCS Practice Standards: 574, 614, 516, 561

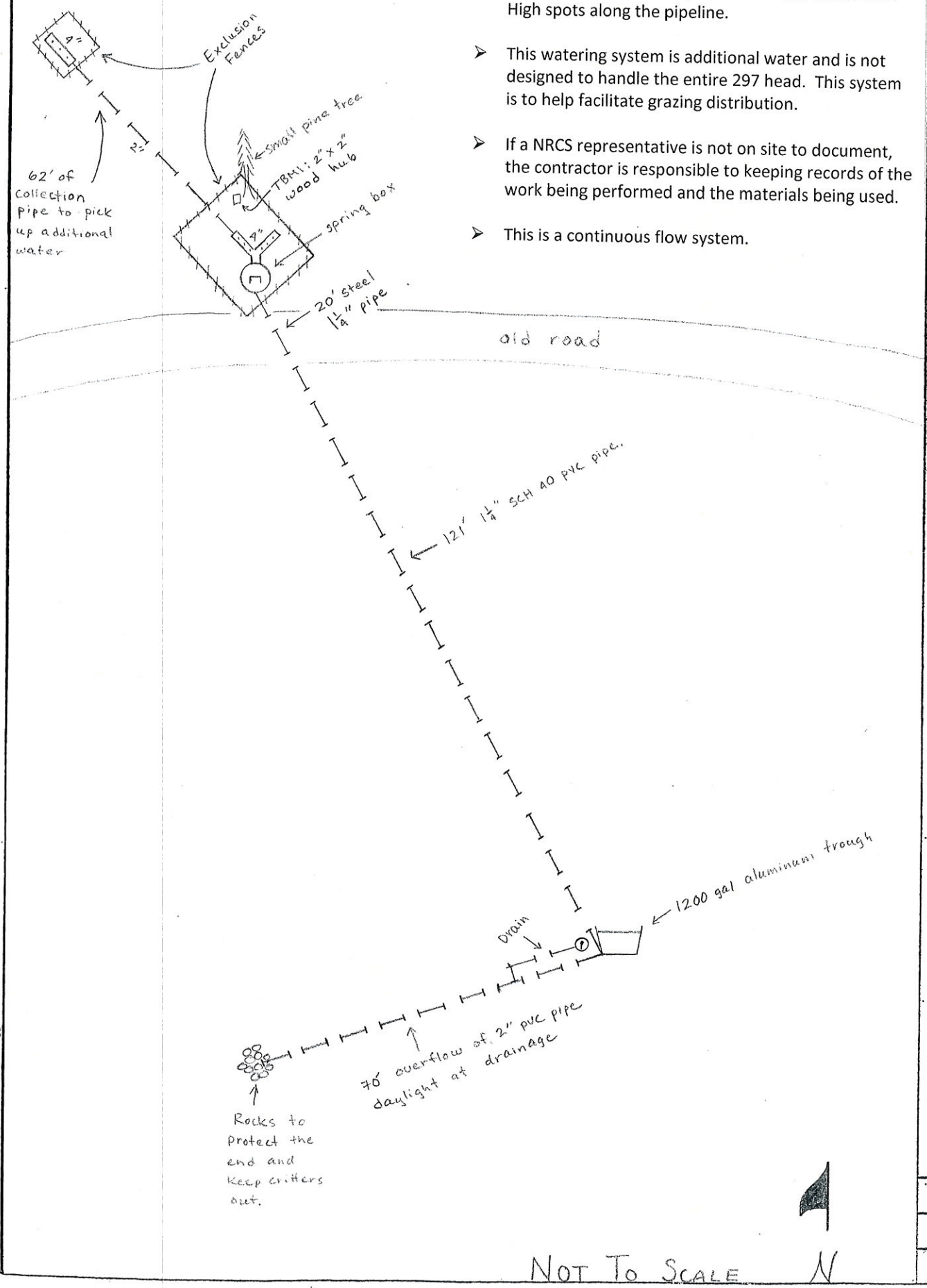
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

REVISION NO.

DRAWING NO. COVER.DWG

SHEET 1 OF 11

- Any design changes must first be approved by NRCS.
- Install drains at all low spots and air-vac valves at all High spots along the pipeline.
- This watering system is additional water and is not designed to handle the entire 297 head. This system is to help facilitate grazing distribution.
- If a NRCS representative is not on site to document, the contractor is responsible to keeping records of the work being performed and the materials being used.
- This is a continuous flow system.



APPROVED BY Kaiya Kuiken
TITLE Soil Con. Tech.
11/3/16
TITLE

DESIGNED Kaiya Kuiken DATE 10/16
DRAWN Kaiya Kuiken DATE 10/16
TRACED DATE
CHECKED [signature] DATE 11/3/16

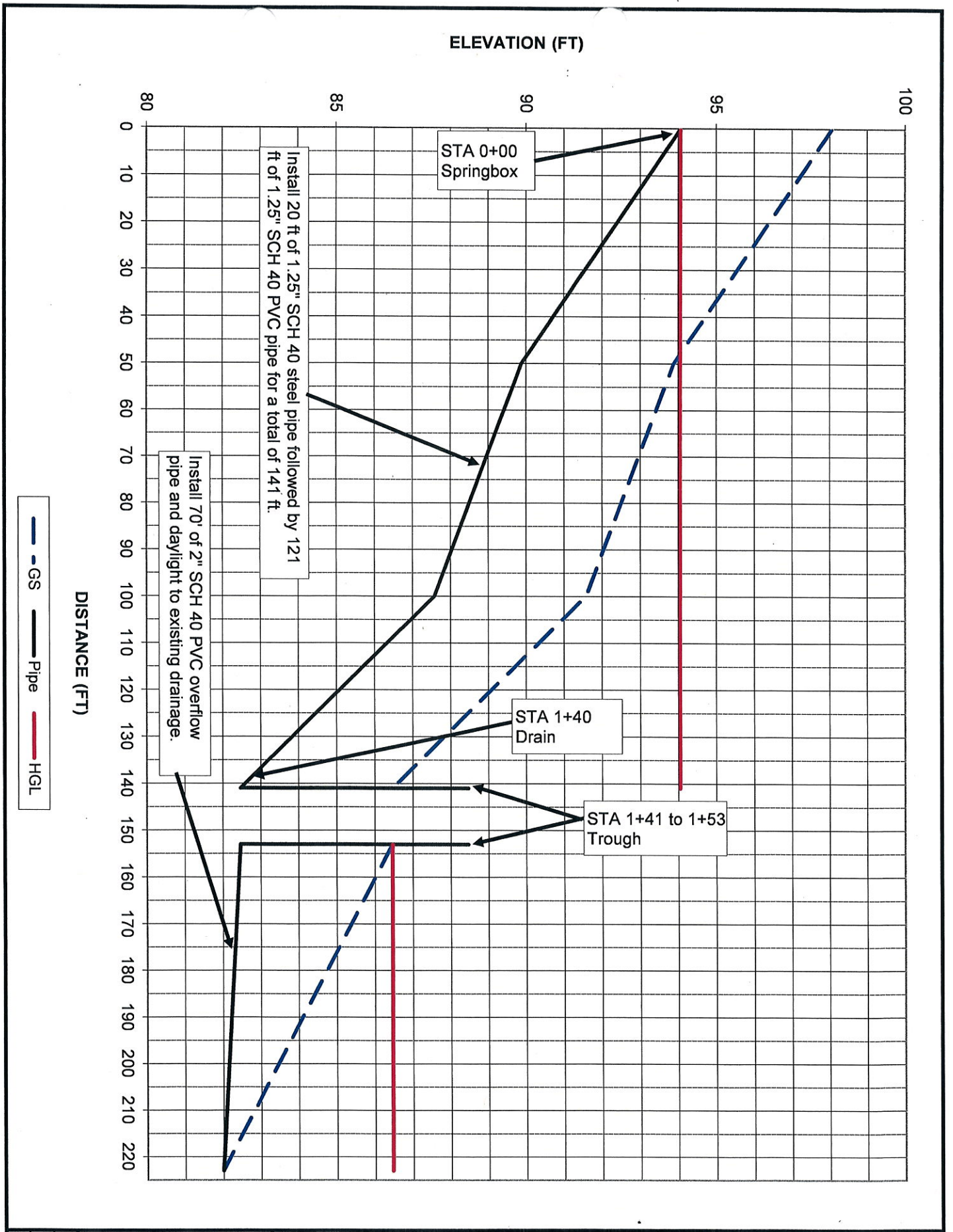
System Plan View
CTCR Haden Creek Upper Second Spring
EQIP 740546150NU

OKANOGAN COUNTY WASHINGTON

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

REVISION NO.
DRAWING NO.

SHEET 3 OF 11



Sheet 4 of 11	File Name LWS gravity Drawing No. Profile	NRCS Natural Resources Conservation Service United States Department of Agriculture	**PROFILE - GRAVITY MAINLINE** CTCR - Range Haden Creek - Upper Second EQIP Contract #740546150NU

		Date
Designed	KHK	11/3/2016
Drawn	KHK	11/3/2016
Checked	[signature]	11/3/16
Approved	Kayla Kuiken	11/3/16
Title	Soil Con. Tech.	