



WASHINGTON DEPARTMENT  
OF FISH AND WILDLIFE  
 KLICKITAT WLA – SIMCOE MOUNTAINS  
 BOUNDARY/INTERIOR FENCE  
 KT:R204:2021-1

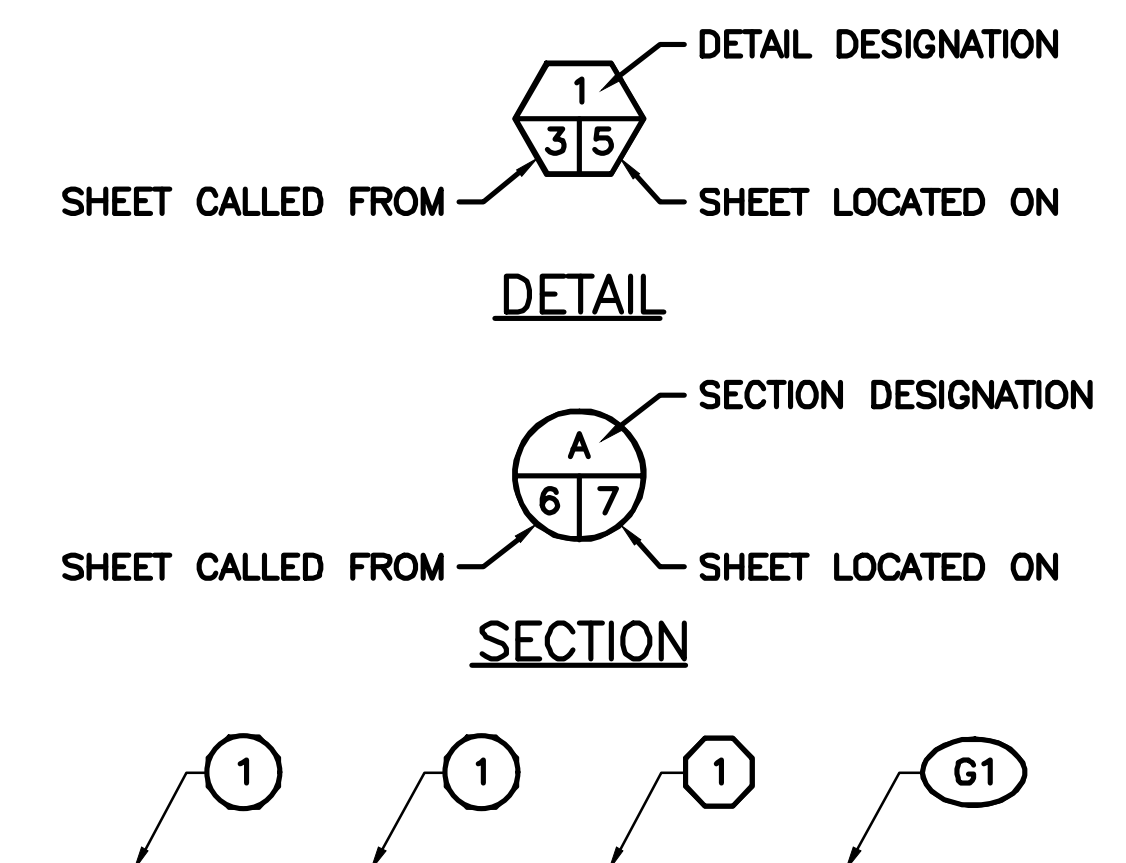
**SHEET INDEX**

- # SHEET TITLE
- 1 COVER SHEET
- 2 LOCAL, STATE AND VICINITY MAPS
- 3 OVERALL SITE PLAN
- 4 FENCE SITE PLAN
- 5 FENCE SITE PLAN
- 6 LINE FENCE, HOLD DOWN, & BRACE DETAILS
- 7 PROPERTY CORNER, GATE & STREAM CROSSING DETAILS
- 8 ALTERNATE FENCE DETAILS

**ABBREVIATIONS**

- ALUM - ALUMINUM
- L - ANGLE
- APPROX - APPROXIMATELY
- BM - BENCH MARK
- CL - CENTERLINE
- CMP - CORRUGATED METAL PIPE
- CLR - CLEARANCE
- CONC - CONCRETE
- CSBC - CRUSHED SURFACE BASE COURSE
- CSTC - CRUSHED SURFACE TOP COURSE
- DIA - DIAMETER
- ELEV - ELEVATION
- FB - FLAT BAR
- FTG - FOOTING
- GALV - GALVANIZED
- ID - INSIDE DIAMETER
- IE - INVERT ELEVATION
- MFG - MANUFACTURER'S
- MISC - MISCELLANEOUS
- OC - ON CENTER
- OD - OUTSIDE DIAMETER
- PL - PLATE
- REQ'D - REQUIRED
- SEC - SECTION
- SPEC'S - PROJECT SPECIFICATIONS
- SS - STAINLESS STEEL
- TYP - TYPICAL
- WS - WATER SURFACE

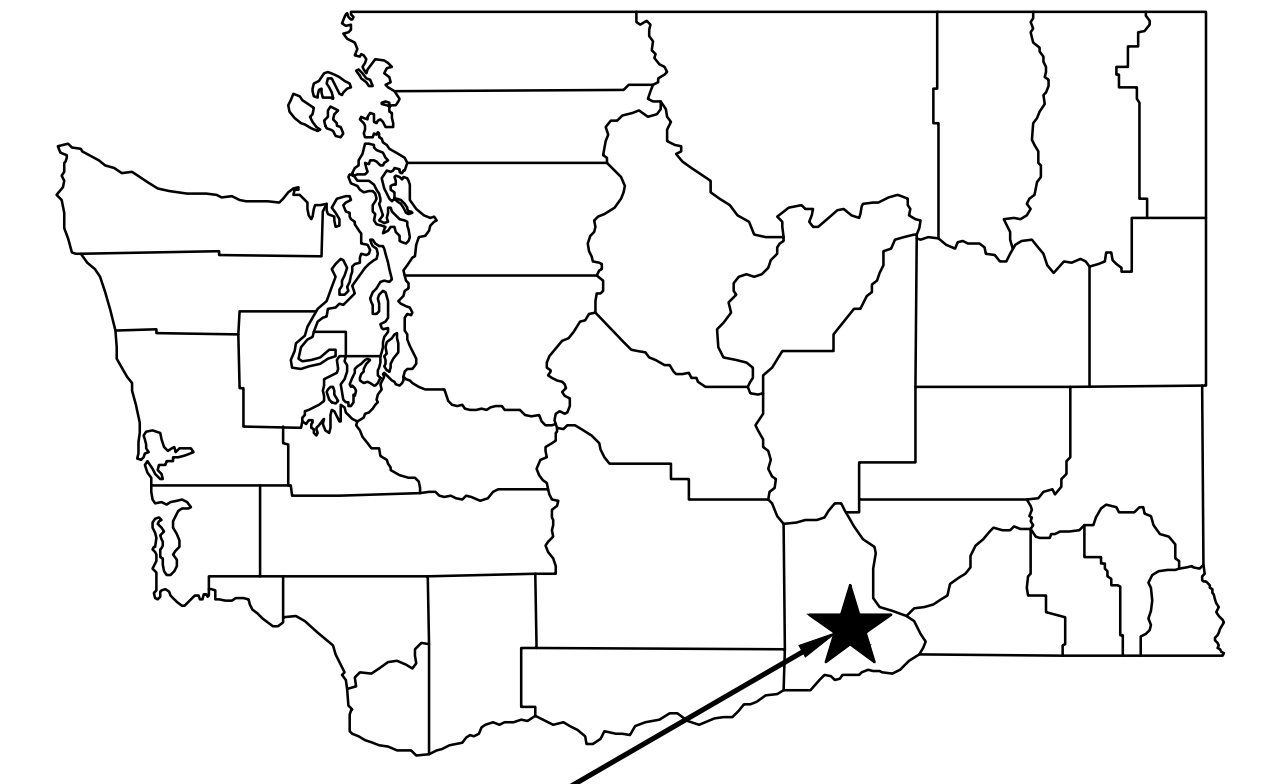
**SHEET SYMBOLS**



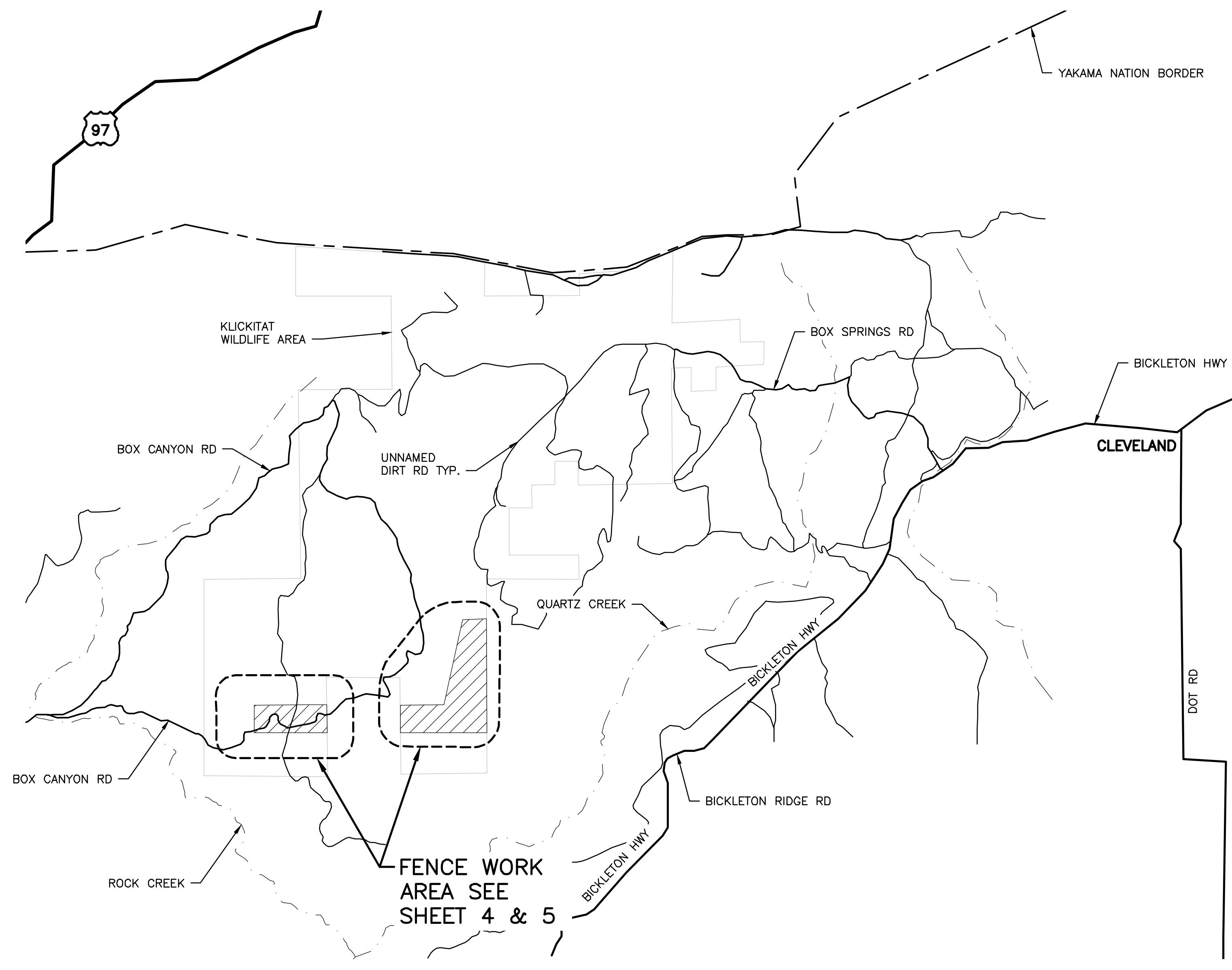
**NOTE REFERENCE**  
 REFERENCE DESIGNATION TO A  
 NOTE, A PART, OR MATERIAL IN A  
 SCHEDULE/TABLE

NOT APPROVED  
 FOR  
 CONSTRUCTION

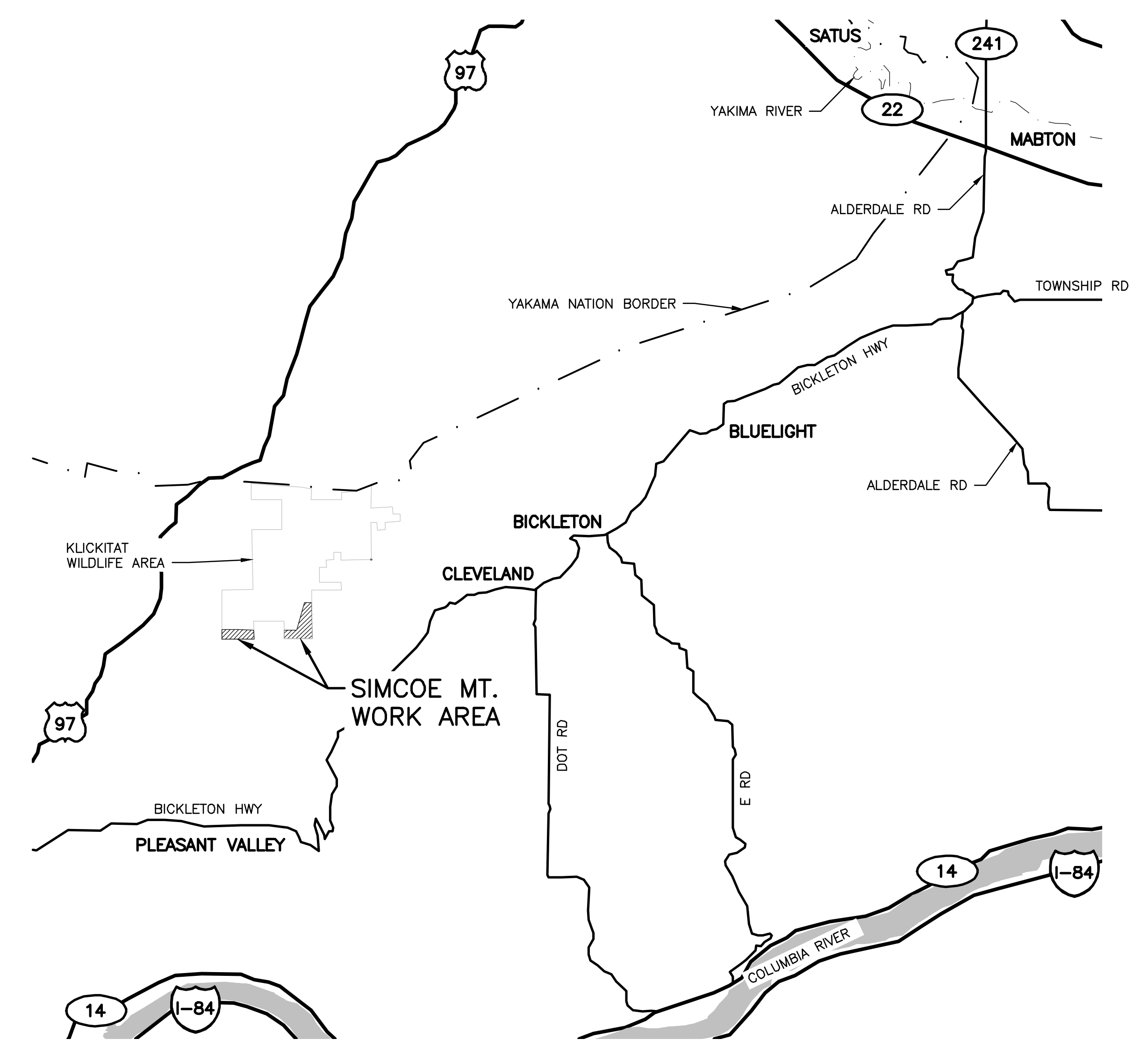
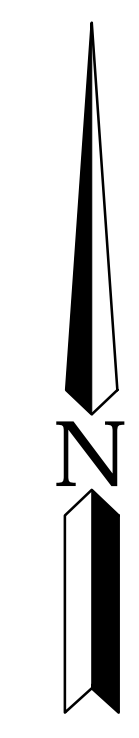
PROJECT NO. KT:R204:2021-1	
SHEET	OF
1	8



SIMCOE MT. WORK AREAS  
STATE MAP  
NOT TO SCALE



LOCAL MAP  
NOT TO SCALE



VICINITY MAP  
NOT TO SCALE

T. 5 N., R. 18 E., SECTIONS 17, 16, 15 & 10

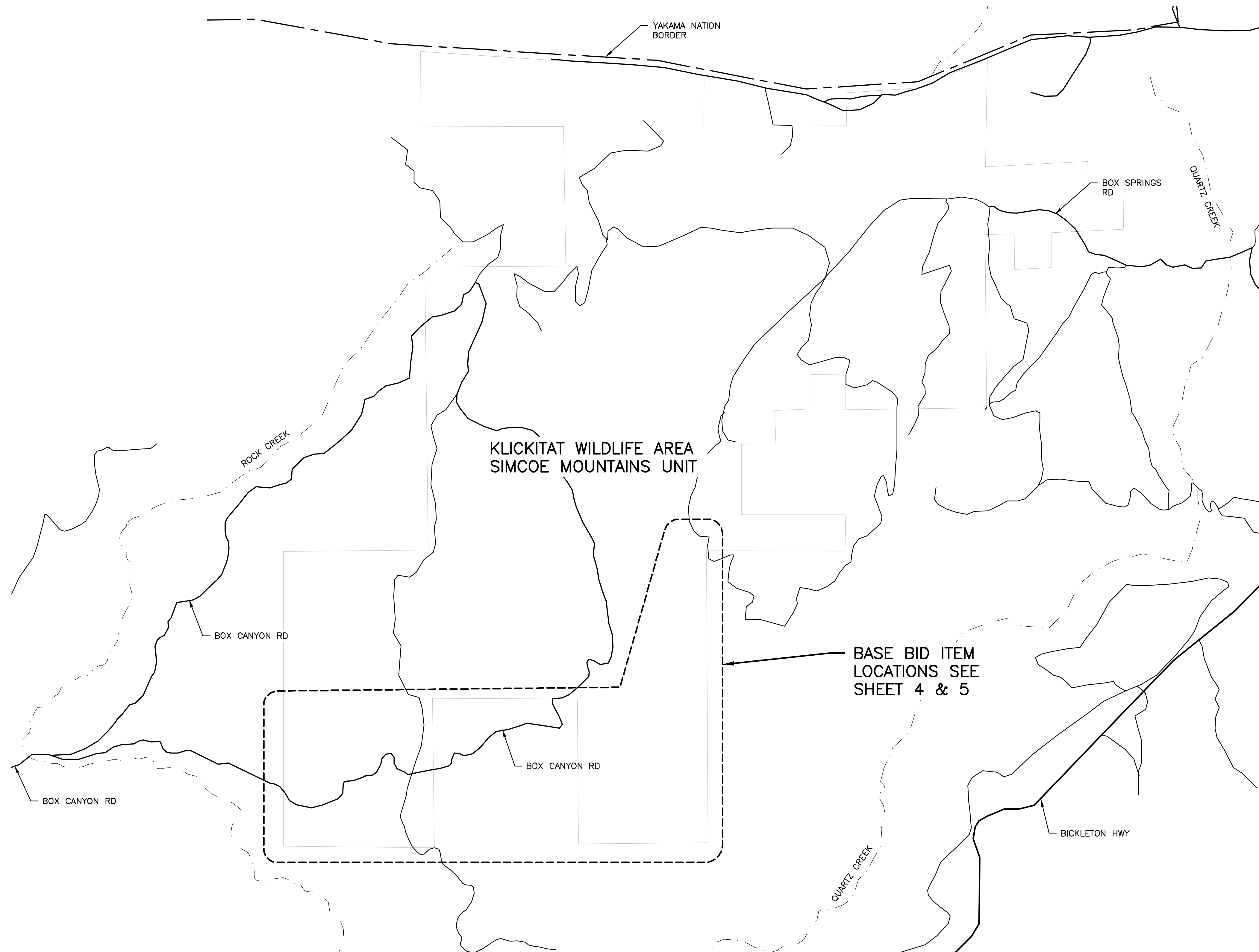
WASHINGTON DEPARTMENT OF  
**FISH & WILDLIFE**

**NOT APPROVED FOR CONSTRUCTION. REVIEW ONLY**

DESIGNED BY	R. MOSBERGER
CHECKED BY	----
DRAWN BY	S. ASHLER
DATE	04/11/2022

KLICKITAT – WLA SIMCOE MOUNTAINS UNIT  
BOUNDARY FENCE  
LOCAL, STATE AND VICINITY MAPS

PROJECT NO. KT:R204:2021-1	
SHEET	OF
2	8



**NOTES:**

- ALL FENCES TOTAL APPROXIMATELY 1.84 MILES:  
 4 - STREAM CROSSINGS  
 5 - ACCESS GATES  
 19 - END OR CORNER BRACE

**OVERALL SITE PLAN**  
NOT TO SCALE

**LEGEND**

- NAMED DIRT ROAD \_\_\_\_\_
- UNNAMED DIRT ROAD \_\_\_\_\_
- COUNTY PAVED ROAD \_\_\_\_\_
- CREEK/STREAM - - - - -
- YAKAMA NATION BORDER - - - - -
- WILDLIFE BOUNDARY \_\_\_\_\_

WASHINGTON DEPARTMENT OF  
**FISH & WILDLIFE**

**NOT APPROVED FOR CONSTRUCTION. REVIEW ONLY**

NO.	DATE	REVISION DESCRIPTION	BY

APPROVED AND RELEASED FOR CONSTRUCTION

DESIGNED BY R. MOSBERGER  
 CHECKED BY \_\_\_\_\_  
 DRAWN BY S. ASHLER  
 DATE 04/11/2022

KLICKITAT - WLA SIMCOE MOUNTAINS UNIT

BOUNDARY FENCE  
OVERALL SITE PLAN

PROJECT NO.  
KT:R204:2021-1

SHEET	OF
3	8

**NOTE:**  
 1. FENCES TOTAL APPROXIMATELY ± 1,869 FEET COMBINED:  
 1 - STREAM CROSSINGS  
 2 - ACCESS GATES  
 11 - END OR CORNER BRACE












**FENCE SEGMENTS**

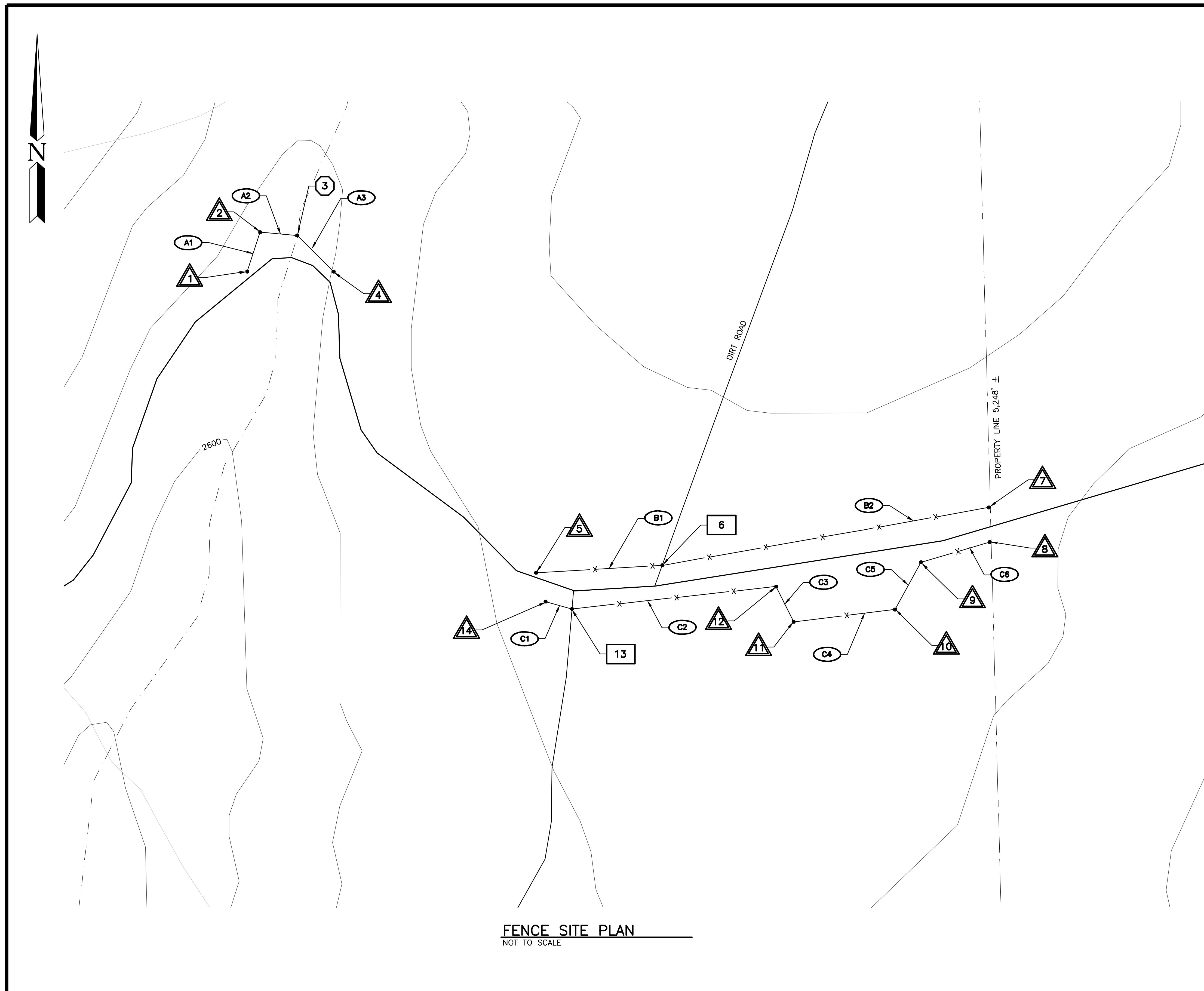
SEGMENT	DISTANCES
A1	71 ± LF
A2	64 ± LF
A3	85 ± LF
B1	218 ± LF
B2	570 ± LF
C1	47 ± LF
C2	354 ± LF
C3	68 ± LF
C4	176 ± LF
C5	93 ± LF
C6	123 ± LF

**FENCES GPS LOCATIONS**

POINT	REMARKS	LATITUDE	LONGITUDE
1	END BRACE	N45.91897°	W-120.57825°
2	CORNER BRACE	N45.91923°	W-120.57815°
3	STREAM CROSSING	N45.91923°	W-120.57783°
4	END BRACE	N45.91898°	W-120.57751°
5	END BRACE	N45.91698°	W-120.57574°
6	SET END BRACES BOTH SIDES OF EX. GATE	N45.91691°	W-120.57471°
7	END BRACE	N45.91746°	W-120.57105°
8	END BRACE	N45.91736°	W-120.57101°
9	CORNER BRACE	N45.91704°	W-120.57263°
10	CORNER BRACE	N45.91678°	W-120.57280°
11	CORNER BRACE	N45.91670°	W-120.57362°
12	CORNER BRACE	N45.91687°	W-120.57394°
13	DROP GATE 16' WIDE	N45.91674°	W-120.57549°
14	END BRACE	N45.91680°	W-120.57566°

**LEGEND**

- MINOR CONTOUR 
- MAJOR CONTOUR 
- DIRT ROAD 
- CREEK/STREAM 
- YAKAMA NATION BORDER 
- BIDDED FENCE 
- ALT. FENCE 
- DENOTES GATE ON PLAN 
- END OR CORNER 
- STREAM CROSSING 
- LINE SEGMENT 



FENCE SITE PLAN  
 NOT TO SCALE

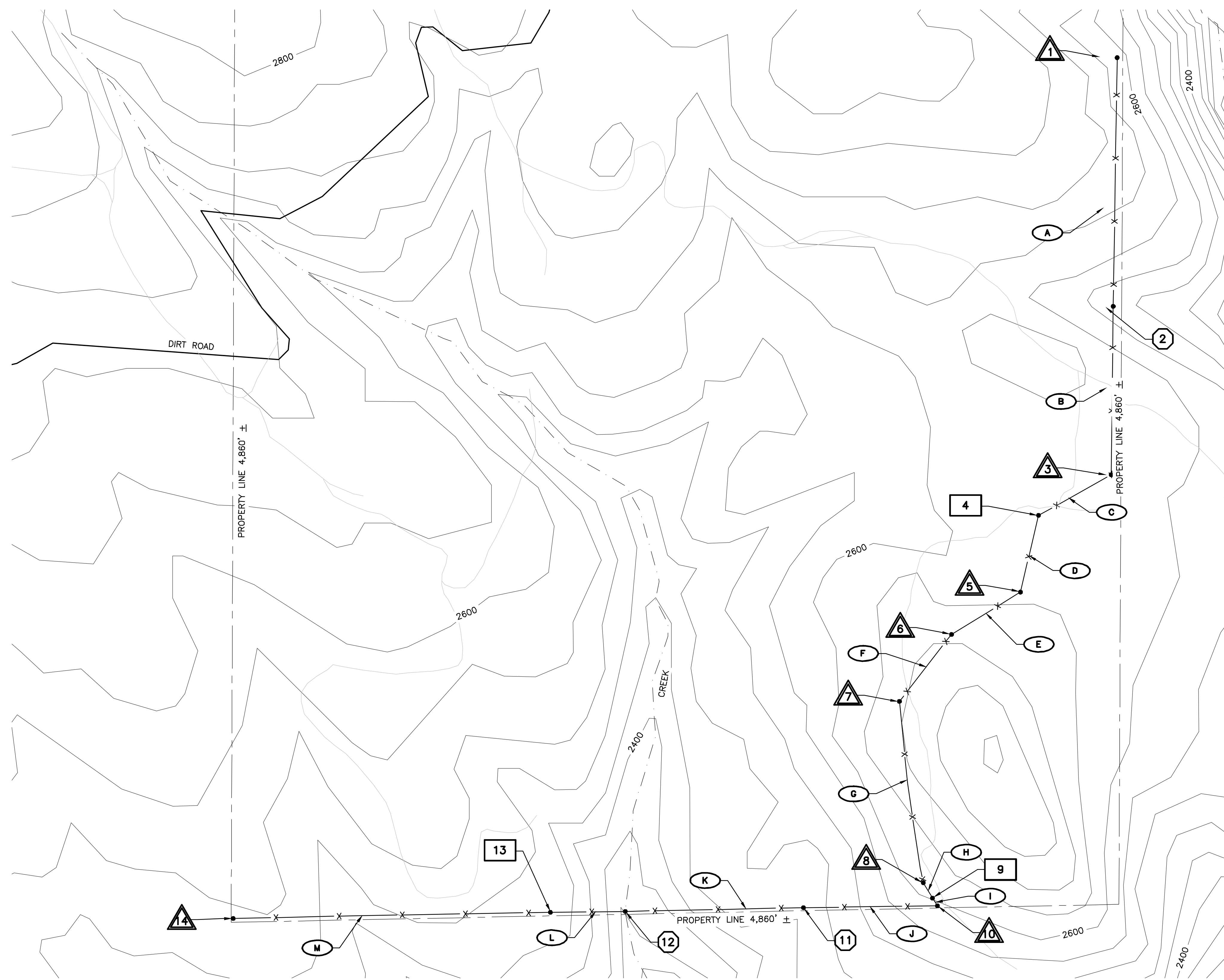
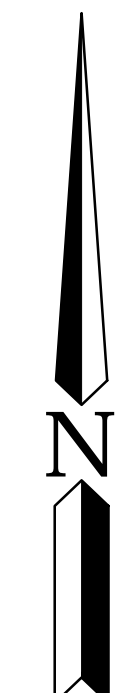
WASHINGTON DEPARTMENT OF  
**FISH & WILDLIFE**

**NOT APPROVED FOR CONSTRUCTION. REVIEW ONLY**

KLICKITAT – WLA SIMCOE MOUNTAINS UNIT  
 BOUNDARY FENCE  
 FENCE SITE PLAN

PROJECT NO.  
 KT:R204:2021-1  
 SHEET 4 OF 8

DESIGNED BY R. MOSBERGER  
 CHECKED BY ----  
 DRAWN BY S. ASHLER  
 DATE 04/11/2022



FENCE SITE PLAN  
NOT TO SCALE

**NOTE:**  
 1. FENCE IS APPROXIMATELY ± 1.72 MILES:  
 3 - STREAM CROSSINGS  
 3 - ACCESS GATES  
 8 - END OR CORNER BRACE

**FENCE SEGMENTS**

SEGMENT	DISTANCES
A	1,404 ± LF
B	874 ± LF
C	437 ± LF
D	432 ± LF
E	444 ± LF
F	465 ± LF
G	1,001 ± LF
H	99 ± LF
I	50 ± LF
J	734 ± LF
K	971 ± LF
L	420 ± LF
M	1,737 ± LF

**FENCE GPS LOCATIONS**

POINT	REMARKS	LATITUDE	LONGITUDE
1	END BRACE AT EXISTING FENCE	N45.92805°	W-120.53048°
2	STREAM CROSSING	N45.92278°	W-120.53019°
3	CORNER BRACE	N45.91951°	W-120.53127°
4	DROP GATE 16' WIDE	N45.91868°	W-120.53216°
5	CORNER BRACE	N45.91710°	W-120.53285°
6	CORNER BRACE	N45.91487°	W-120.53594°
7	CORNER BRACE	N45.91313°	W-120.53551°
8	CORNER BRACE	N45.91143°	W-120.53537°
9	DROP GATE 16' WIDE	N45.91100°	W-120.53517°
10	CORNER BRACE	N45.91066°	W-120.53489°
11	HOLD DOWN ONLY	N45.91063°	W-120.53854°
12	STREAM CROSSING	N45.91058°	W-120.54334°
13	DROP GATE 16' WIDE	N45.91076°	W-120.54544°
14	END BRACE	N45.91030°	W-120.55469°

**LEGEND**

- DIRT PATH/TRAIL
- MINOR CONTOUR
- MAJOR CONTOUR
- DIRT ROAD
- CREEK/STREAM
- YAKAMA NATION BORDER
- BIDDED FENCE
- ALT. FENCE
- DENOTES GATE ON PLAN
- END OR CORNER
- STREAM CROSSING
- LINE SEGMENT

WASHINGTON DEPARTMENT OF  
**FISH & WILDLIFE**

**NOT APPROVED FOR CONSTRUCTION. REVIEW ONLY**

KLICKITAT - WLA SIMCOE MOUNTAINS UNIT

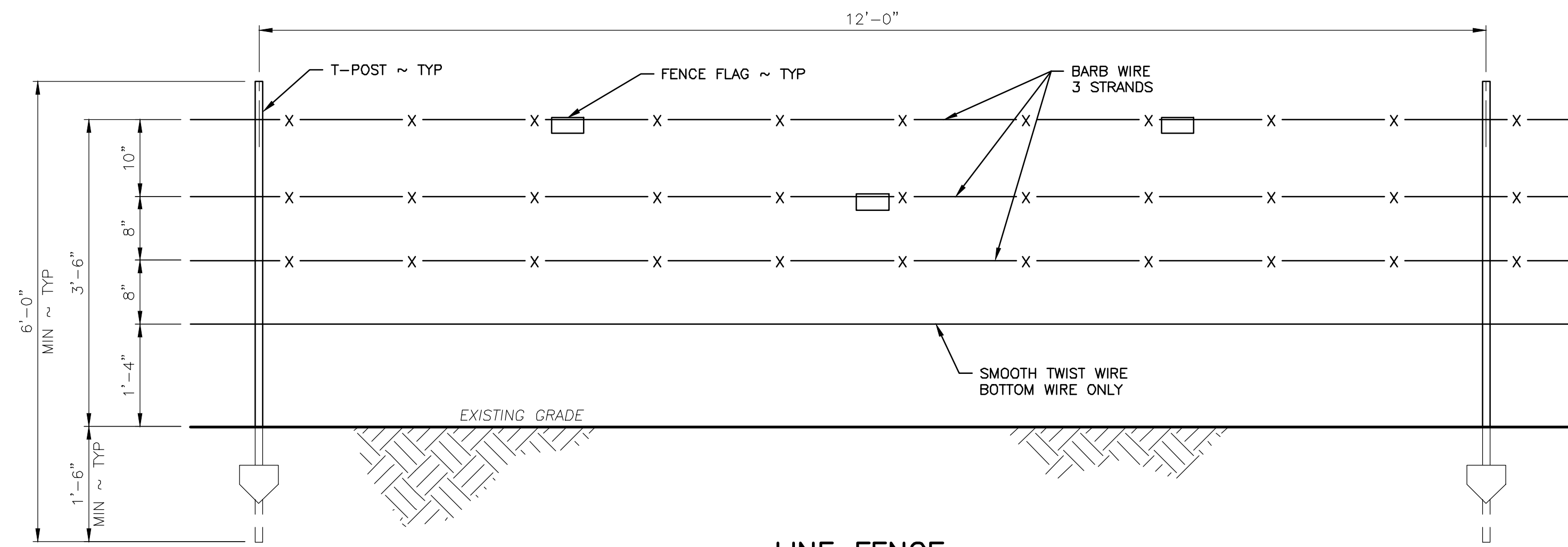
BOUNDARY FENCE  
FENCE SITE PLAN

PROJECT NO.  
KT:R204:2021-1

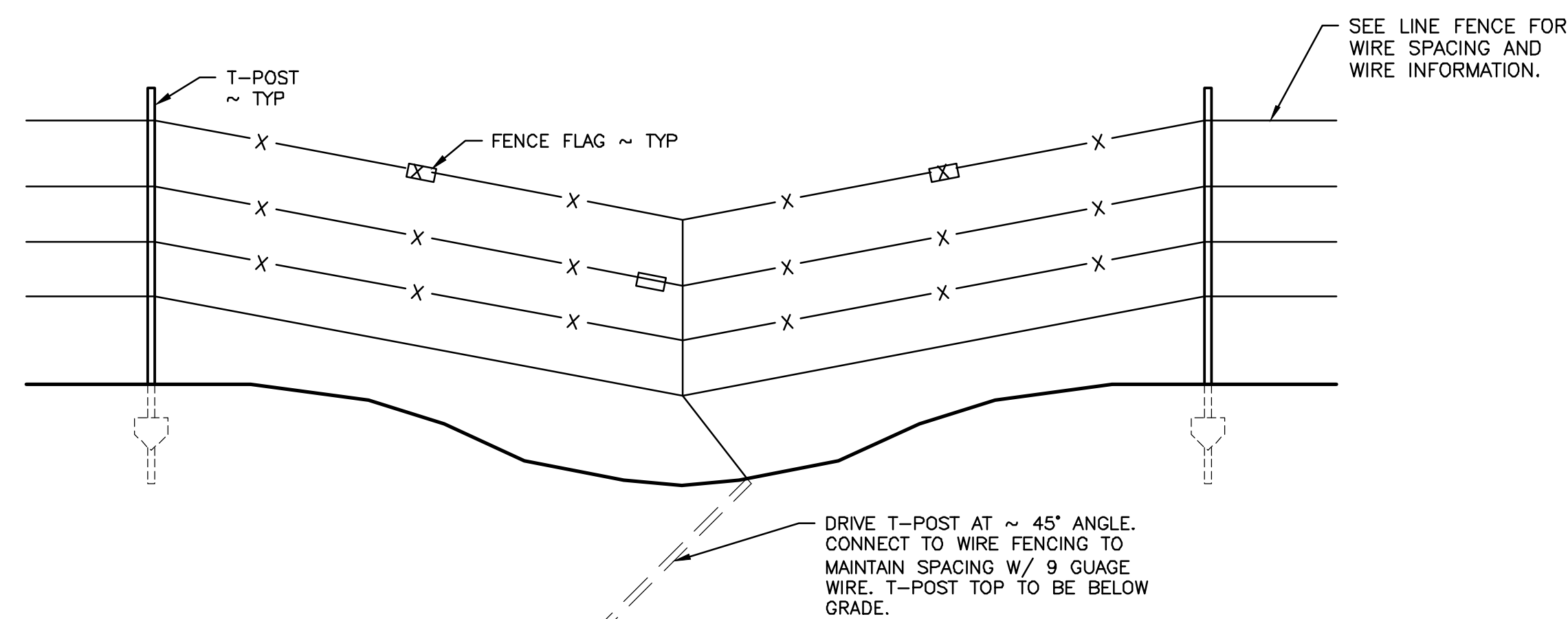
SHEET 5 OF 8

DESIGNED BY R. MOSBERGER  
 CHECKED BY ---  
 DRAWN BY S. ASHLER  
 DATE 04/11/2022

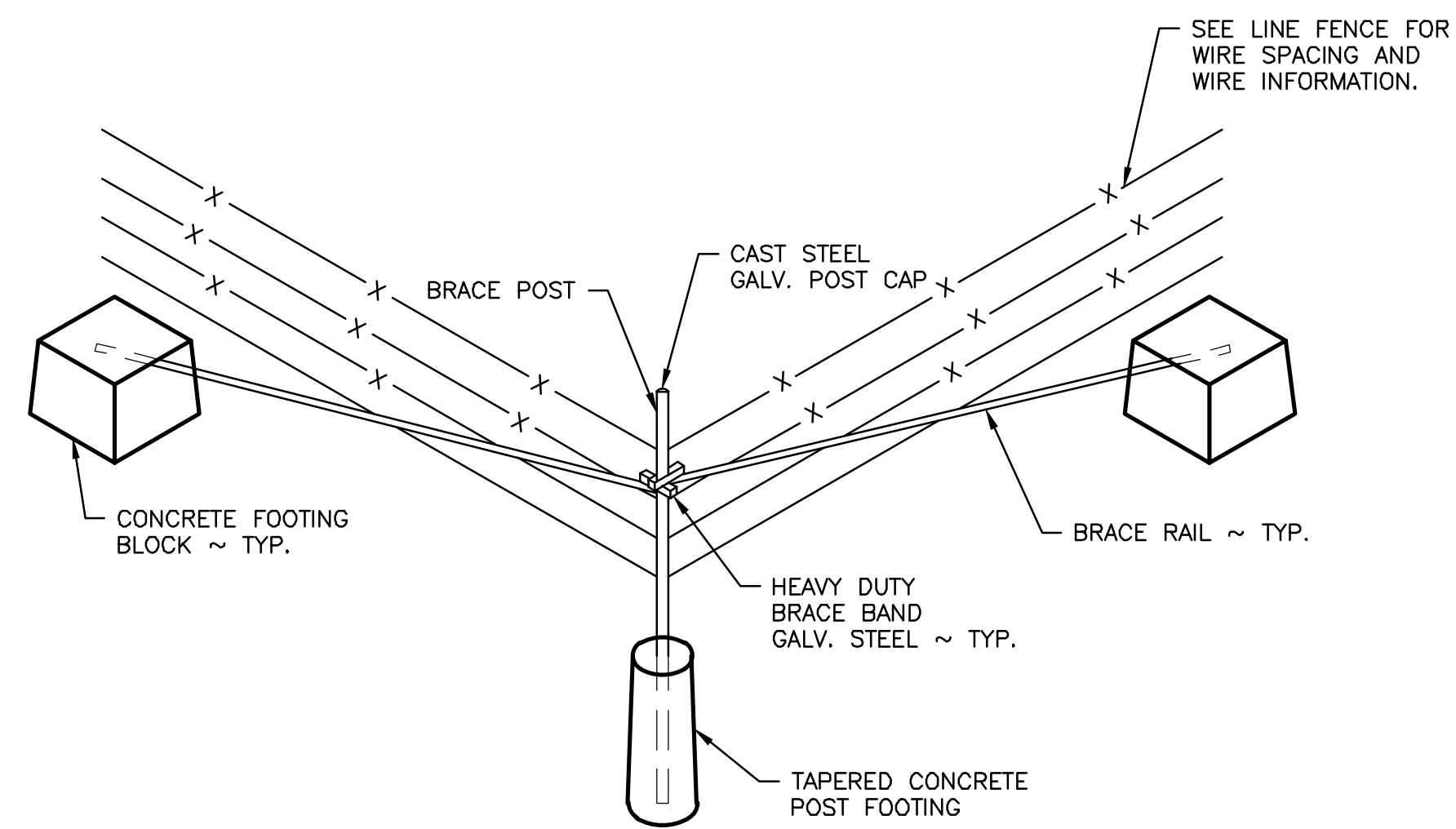




**LINE FENCE**  
SCALE: 3/4" = 1'-0"

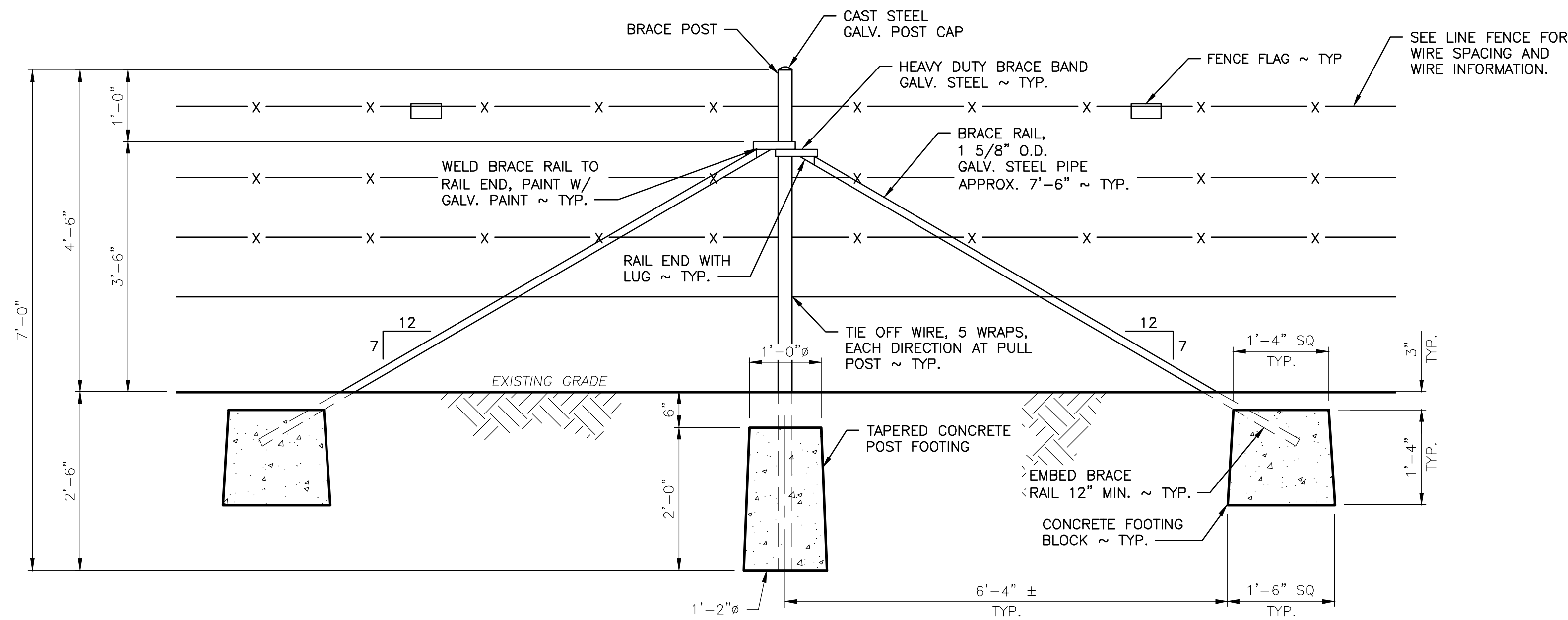


**HOLD DOWN**  
NOT TO SCALE

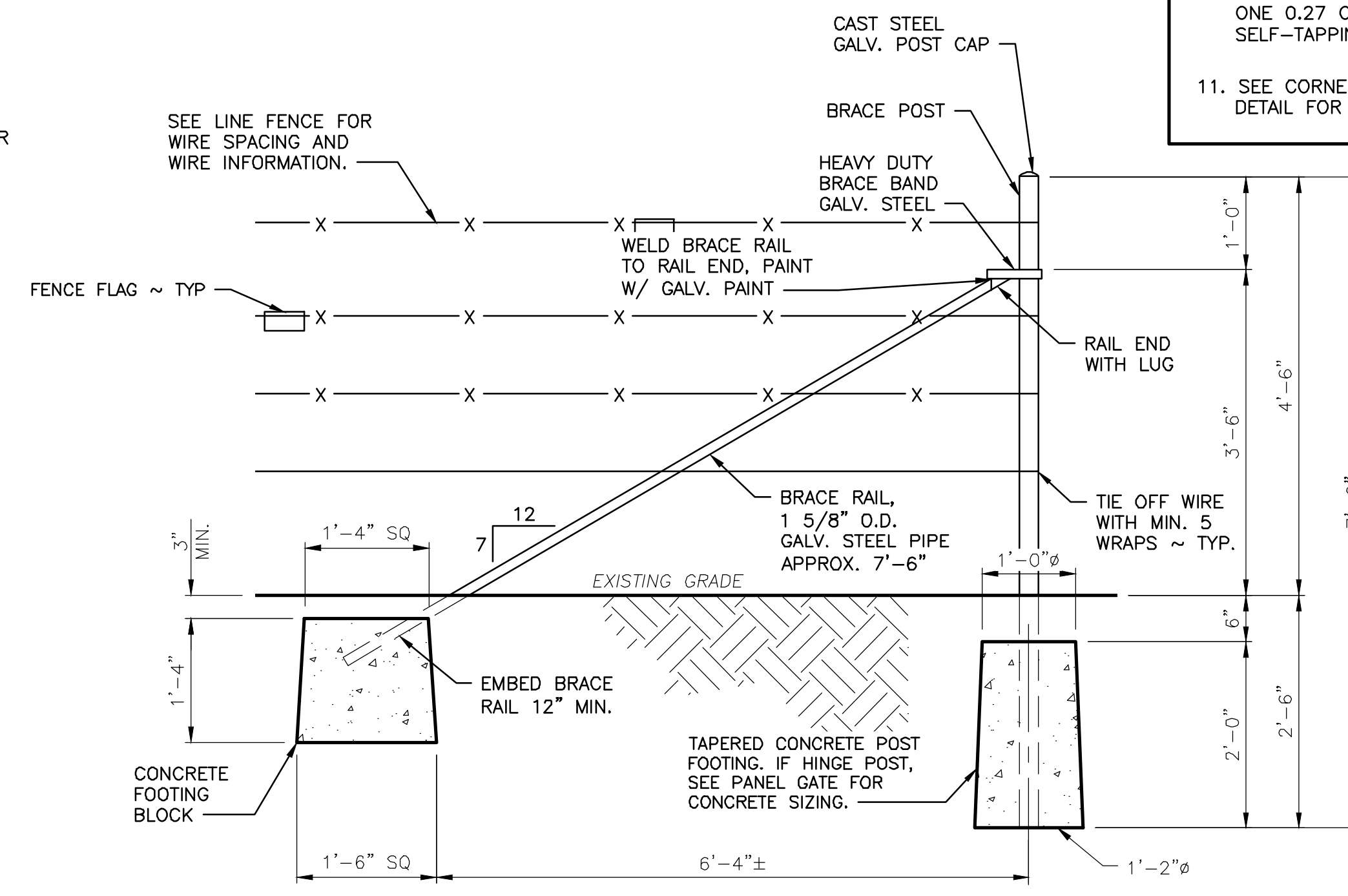


**CORNER BRACE**  
NOT TO SCALE

- GENERAL NOTES:**
- A. SMOOTH TWIST WIRE SHALL BE 12 1/2 GAUGE, BARBLESS, WITH CLASS 3 GALVANIZING.
  - B. BARBED WIRE SHALL BE 12 1/2 GAUGE WITH 4 POINT BARBS SPACED AT 5 INCHES WITH CLASS 3 GALVANIZING.
  - C. ALL VERTICAL STEEL BRACE AND HINGE POSTS SHALL HAVE A GALVANIZED METAL POST CAP.
  - D. IF DEPTH CANNOT BE REACHED DUE TO GROUND CONDITION USE ALTERNATE METHOD APPROVED BY ENGINEER.
- LINE FENCE:**
1. ALL T-POSTS SHALL NOT EXCEED 12 FEET OF SPACING.
  2. STEEL T-POSTS SHALL BE HEAVY DUTY WEIGHT (1.33#), CERTIFIED ASTM-A702, GREEN WITH WHITE TOP, AND MINIMUM OF 6 FEET IN LENGTH. ALL POSTS SHALL BE DRIVEN TO A MINIMUM DEPTH OF 18 INCHES.
  3. WIRE CLAMPS TO ATTACH BARBED WIRE TO STEEL POSTS SHALL BE 11 GA. GALVANIZED WIRE.
- HOLD DOWN:**
4. INSTALL HOLD DOWNS AS NECESSARY TO MAINTAIN WIRE TO GROUND SPACING PER LINE FENCE DETAIL.
- CORNER OR STRETCH BRACE:**
5. BRACE POSTS SHALL BE AT LEAST 7 FEET 3 INCHES LONG X 2 3/8 INCHES IN DIAMETER, POSTS SHALL BE BURIED A MINIMUM DEPTH OF 33 INCHES.
  6. HEAVY DUTY BRACE BAND SHALL BE FIXED IN PLACE WITH ONE 0.27 CALIBER POWER ACTUATED NAIL OR 1/4 INCH SELF-TAPPING SCREW.
  7. THE DISTANCE BETWEEN STRETCH BRACES SHALL NOT EXCEED 1,320 FEET (1/4 MILE).
  8. INSTALL STRETCH BRACES AT CHANGES OF GRADE OF 10 DEGREES (1.75 FEET OF RISE OR DROP ON 10 FEET OF RUN) OR MORE.
  9. CHANGES IN ALIGNMENT OF 10 DEGREES OR MORE (1.75 FEET OF DIRECTION CHANGE IN 10 FEET OF RUN) SHALL BE CONSIDERED AS CORNERS, AND A CORNER BRACE STRUCTURE SHALL BE INSTALLED.
- END OR GATE BRACE:**
10. POSITION OF WIRE ON END POST SHALL BE FIXED IN PLACE WITH ONE 0.27 CALIBER POWER ACTUATED NAIL OR 1/4 INCH SELF-TAPPING SCREW.
  11. SEE CORNER OR STRETCH BRACE NOTES AND PANEL GATE DETAIL FOR MORE INFORMATION.



**CORNER OR STRETCH BRACE**  
SCALE: 3/4" = 1'-0"



**END OR GATE BRACE**  
SCALE: 3/4" = 1'-0"

WASHINGTON DEPARTMENT OF  
**FISH & WILDLIFE**

**NOT APPROVED FOR CONSTRUCTION. REVIEW ONLY**

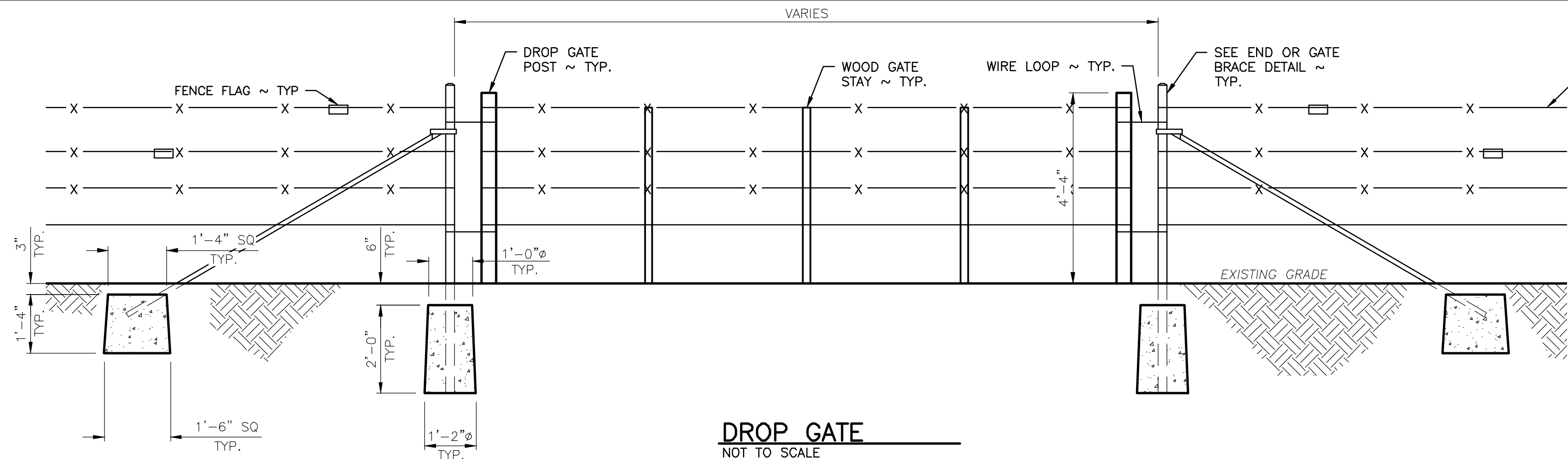
KLICKITAT – WLA SIMCOE MOUNTAINS UNIT

BOUNDARY FENCE  
LINE FENCE, HOLD DOWN,  
& BRACE DETAILS

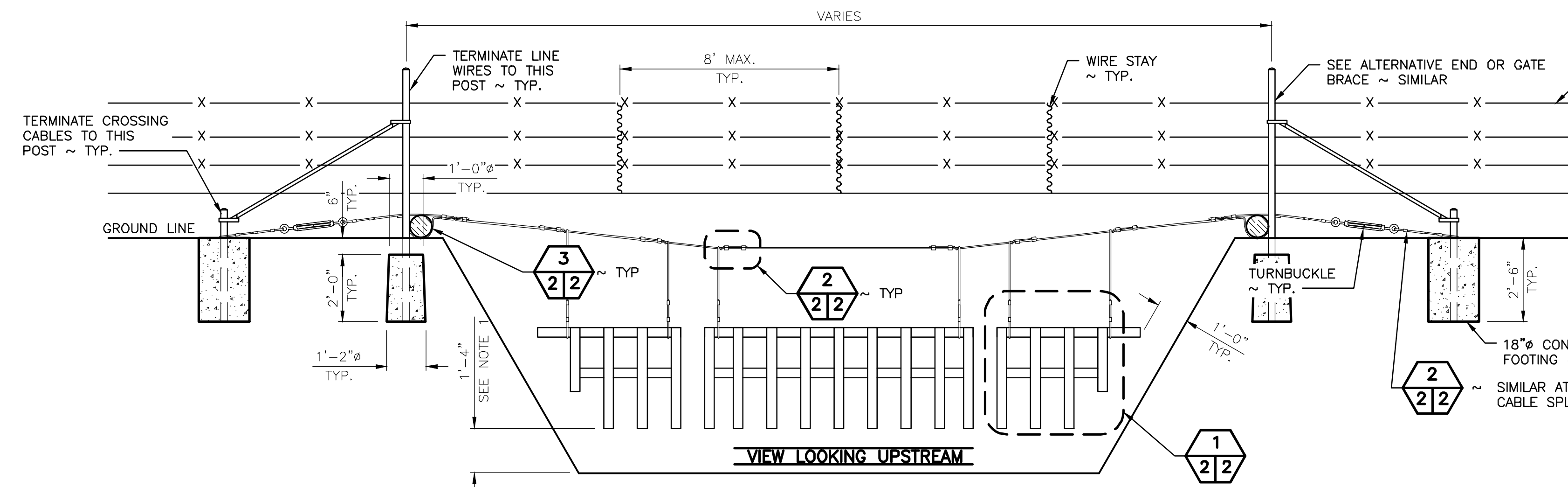
PROJECT NO.  
KT:R204:2021-1

SHEET OF  
**6 8**

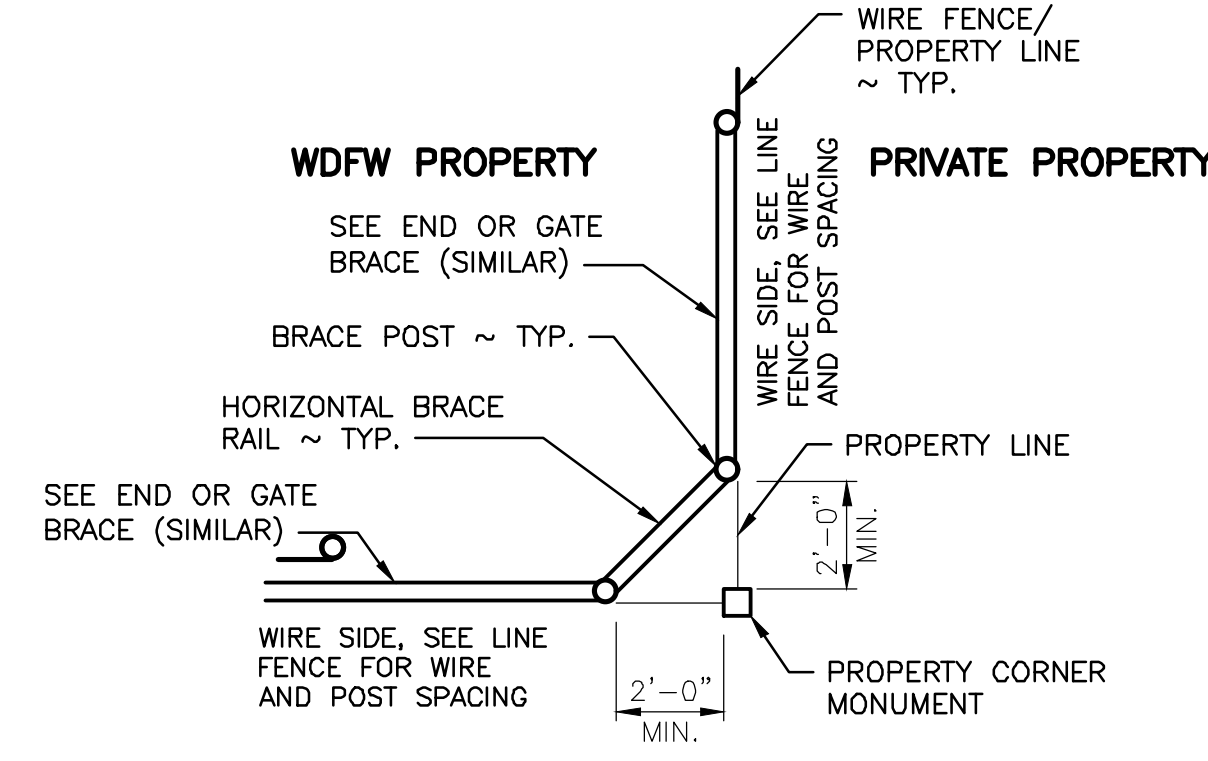
DESIGNED BY R. MOSBERGER  
CHECKED BY S. ASHLER  
DRAWN BY S. ASHLER  
DATE 04/11/2022



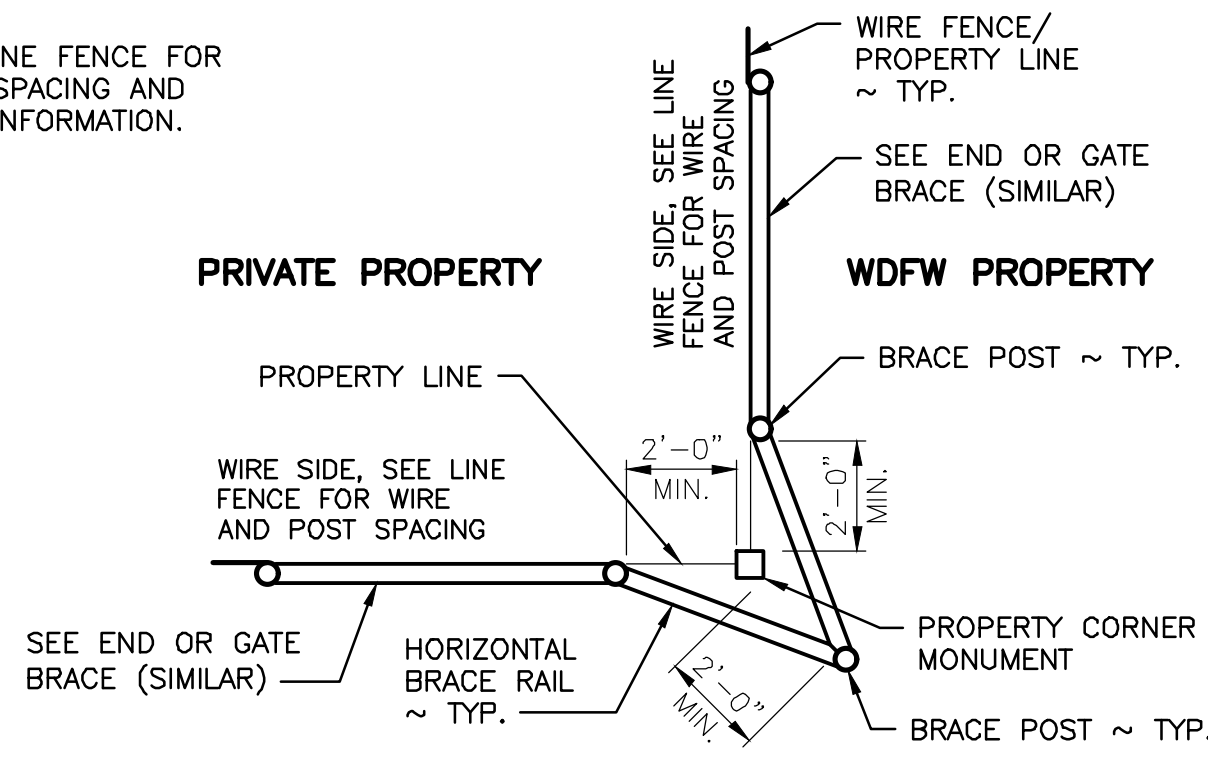
**DROP GATE**  
NOT TO SCALE



**STREAM CROSSING**  
NOT TO SCALE

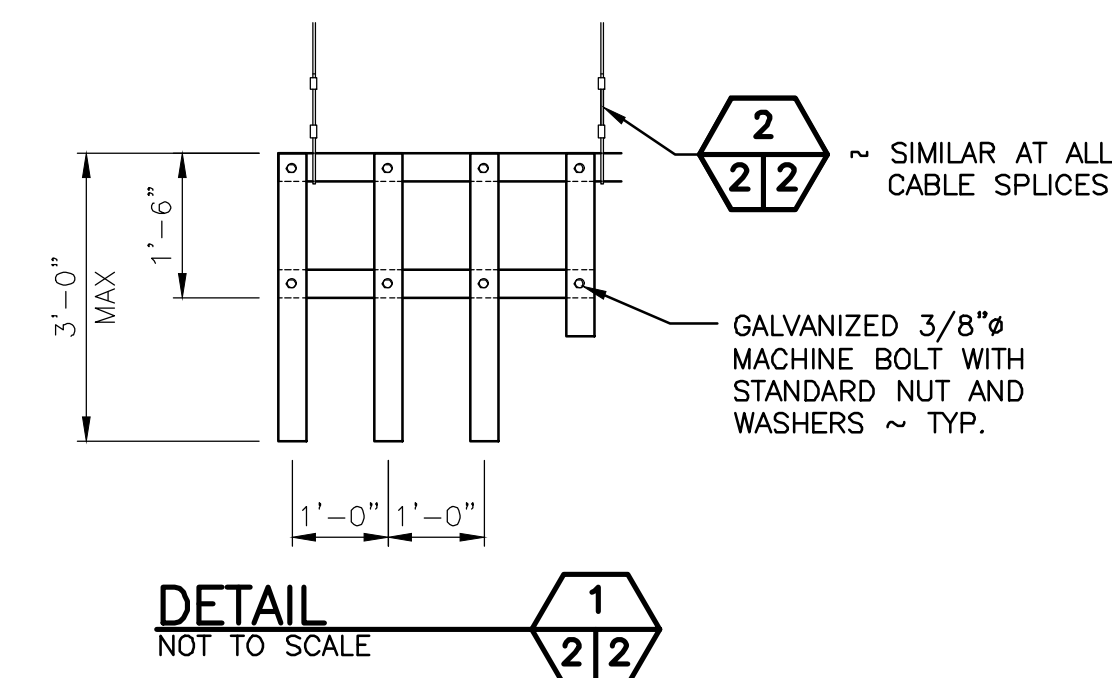


**CORNER OUTSIDE**

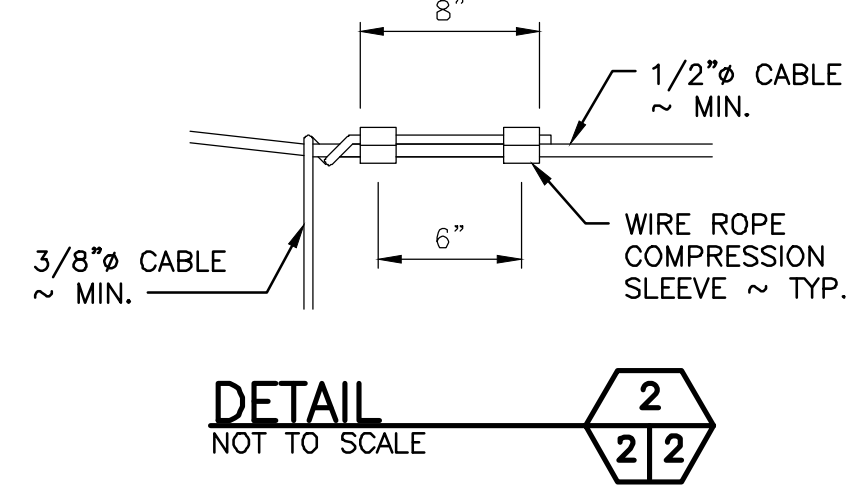


**CORNER INSIDE**

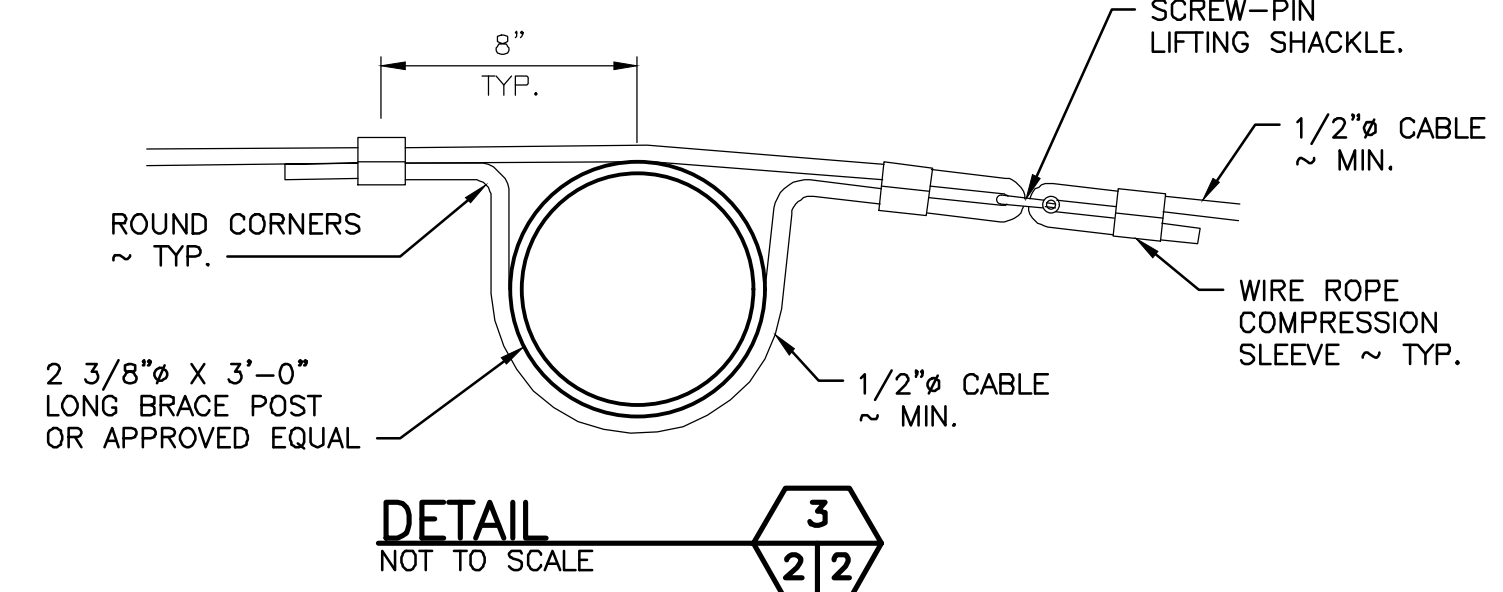
**PROPERTY CORNER**  
NOT TO SCALE



**DETAIL 1**  
NOT TO SCALE



**DETAIL 2**  
NOT TO SCALE



**DETAIL 3**  
NOT TO SCALE

**NOTES:**

**DRAINAGE/STREAM CROSSING:**

- 1 X 4 PICKETS SHALL BE UNTREATED LUMBER AND CONSTRUCTED AS SHOWN IN THE DRAWINGS. PICKETS SHALL BE INSTALLED 1 FOOT 4 INCHES ABOVE GRADE OR 1 FOOT ABOVE ORDINARY HIGH WATER.
- ALL CABLES SHALL BE FIBER CORE GALVANIZED CABLE OR APPROVED EQUAL.
- CROSSING CABLE SHALL BE PLACED ON THE UPSTREAM SIDE OF POSTS.
- CABLE COMPRESSION SLEEVE SHALL BE FOR GALVANIZED CABLE OR APPROVED EQUAL.
- TURNBUCKLES SHALL BE 7200 LB RATED WITH 1 FOOT ADJUSTMENT.
- SCREW-PIN LIFTING SHACKLES SHALL HAVE A 600 POUND CAPACITY FOR CROSSING SPANS UP TO 10 FEET IN LENGTH. FOR CROSSING SPANS GREATER THEN 10 FEET IN LENGTH, THE LIFTING SHACKLES SHALL HAVE A 1,100 POUND CAPACITY.

**DROP GATE:**

- GATE SHALL HAVE THREE VERTICAL WOOD 48 X 2 X 2 PRESSURE TREATED STAYS AT 1/4 POINTS ALONG GATE. THE DROP POSTS LOCATED AT EACH END SHALL BE 3 TO 4 INCHES IN DIAMETER WOOD POSTS CUT TO A LENGTH OF 4 FEET 4 INCHES. LOOP HINGES AND LOOP CLOSURES CONSTRUCTED OF BRACE WIRE AND LOOPED AROUND END BRACE POSTS TO FACILITATE CLOSURE OF THE GATE.
- SPACING OF THE LONGITUDINAL WIRES SHALL BE THE SAME AS THE LINE FENCE.

**PANEL GATE:**

- HINGE POSTS SHALL BE AT LEAST 7 FEET 3 INCHES LONG X 4 INCHES DIAMETER AND BURIED TO A MINIMUM DEPTH OF 33 INCHES.
- PANEL GATE MANUFACTURER, TYPE, AND SIZE AS SPECIFIED IN SPECIFICATION. INSTALLED PER MANUFACTURES SPECIFICATION.

**PROPERTY CORNER:**

- PROPERTY CORNER STRUCTURE CONSTRUCTION METHODS SIMILAR TO CORNER OR STRETCH BRACE.
- DURING INSTALLATION OF POSTS, INSURE THAT THE PROPERTY CORNER MONUMENT IS NOT DAMAGED, MOVED, OR DISTURBED IN ANY WAY.

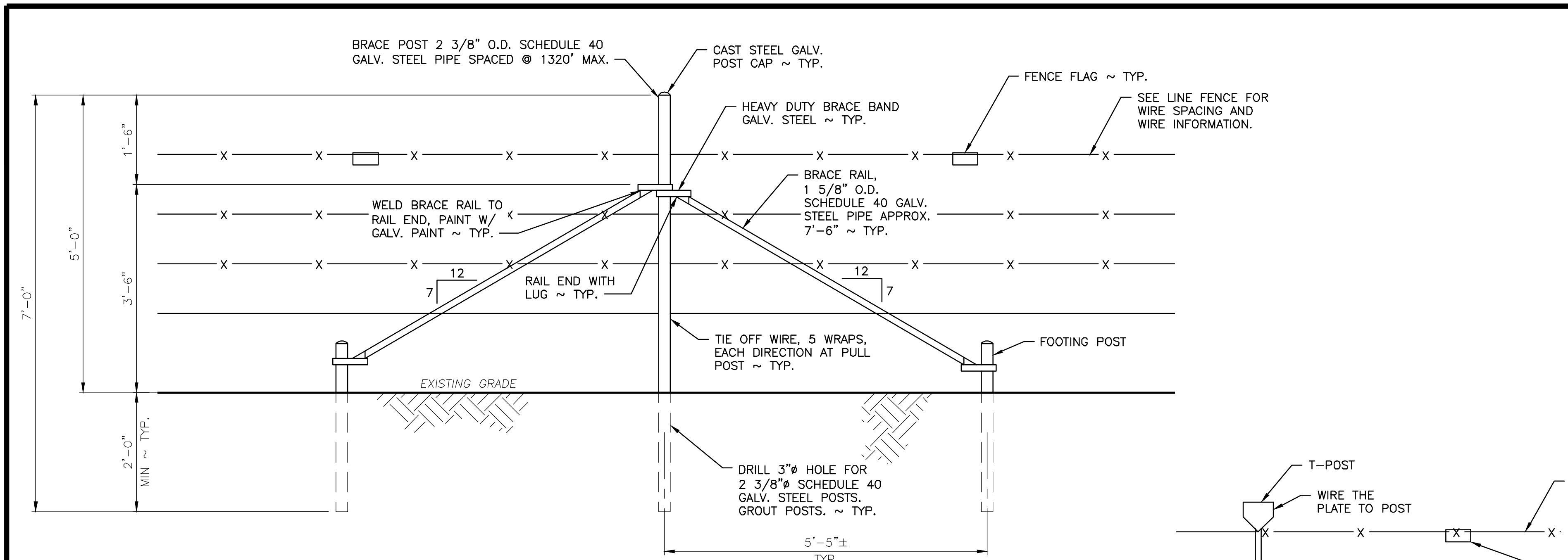
WASHINGTON DEPARTMENT OF  
FISH & WILDLIFE

**NOT APPROVED FOR CONSTRUCTION. REVIEW ONLY**

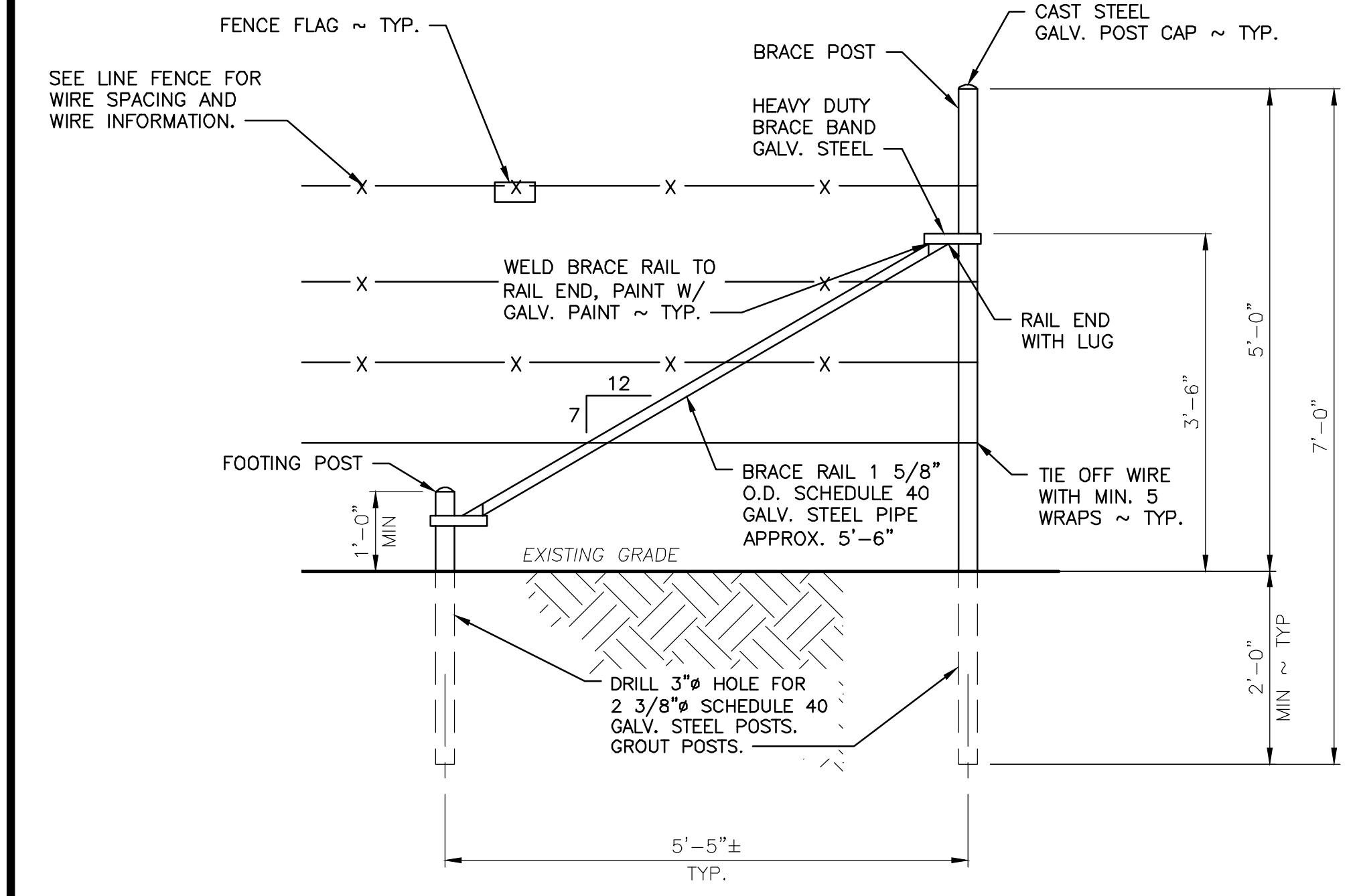
DESIGNED BY R. MOSBERGER  
CHECKED BY ----  
DRAWN BY S. ASHLER  
DATE 04/11/2022

KLICKITAT – WLA SIMCOE MOUNTAINS UNIT  
BOUNDARY FENCE  
PROPERTY CORNER, GATE &  
STREAM CROSSING DETAILS

PROJECT NO.  
KT:R204:2021-1  
SHEET 7 OF 8



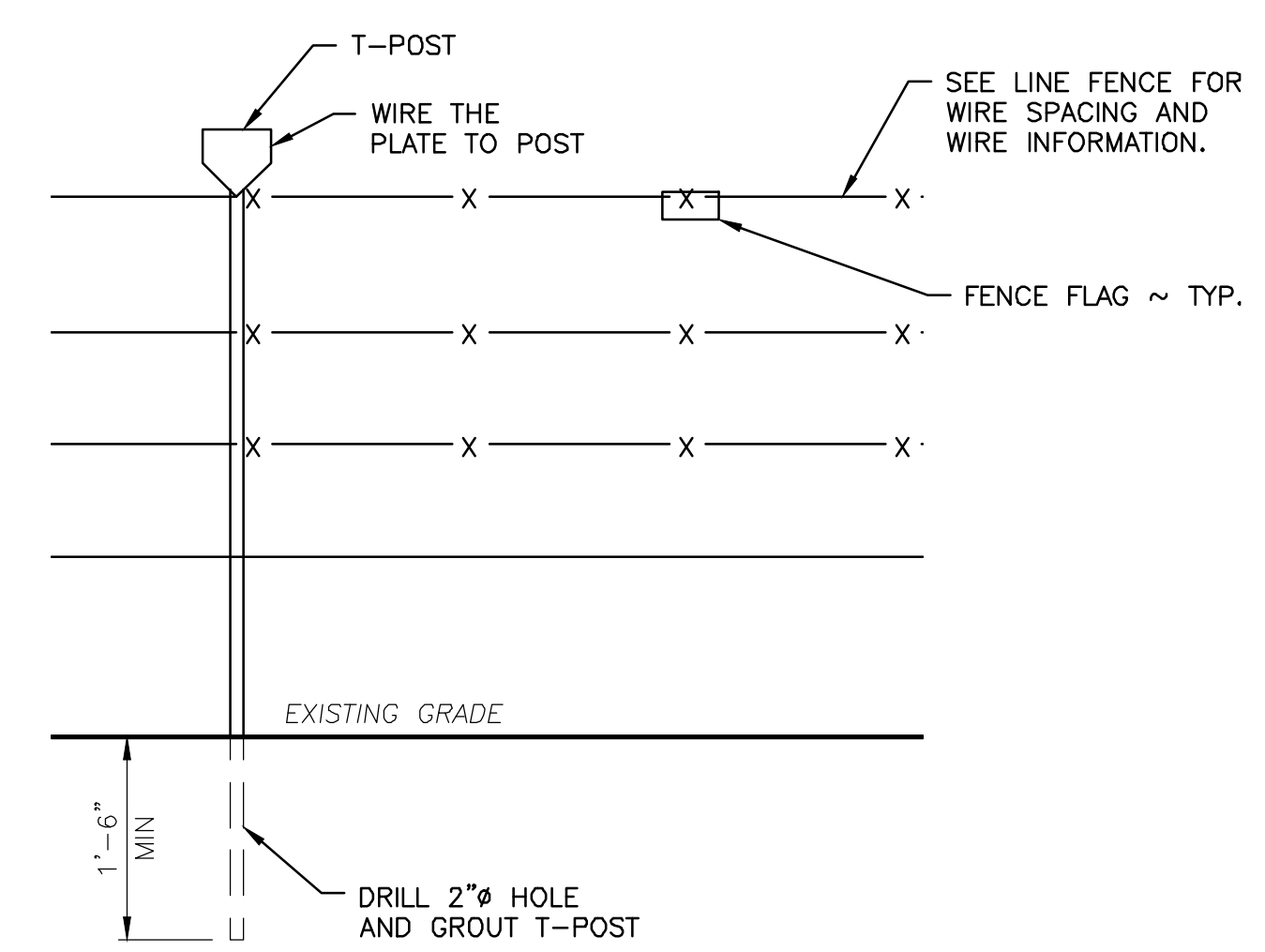
**ALTERNATE CORNER OR STRETCH BRACE**  
SCALE: 3/4" = 1'-0"



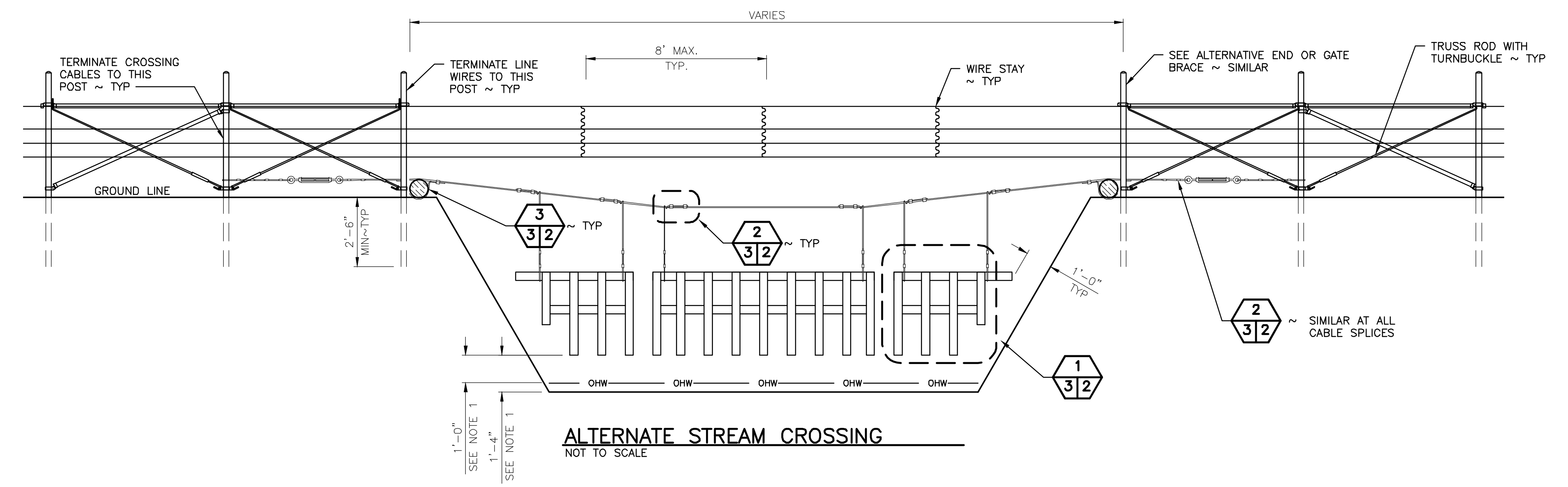
**ALTERNATE END OR GATE BRACE**  
SCALE: 3/4" = 1'-0"

- NOTES FOR ALTERNATE METHODS:**
- DRAINAGE/STREAM CROSSING:**
- 1 X 4 PICKETS SHALL BE UNTREATED LUMBER AND CONSTRUCTED AS SHOWN IN THE DRAWINGS. PICKETS SHALL BE INSTALLED 1 FOOT 4 INCHES ABOVE GRADE OR 1 FOOT ABOVE ORDINARY HIGH WATER.
  - ALL CABLES SHALL BE FIBER CORE GALVANIZED CABLE OR APPROVED EQUAL.
  - CROSSING CABLE SHALL BE PLACED ON THE UPSTREAM SIDE OF POSTS.
  - CABLE COMPRESSION SLEEVE SHALL BE FOR GALVANIZED CABLE OR APPROVED EQUAL.
  - TURNBUCKLES SHALL BE 7200 LB RATED WITH 1 FOOT ADJUSTMENT.
  - SCREW-PIN LIFTING SHACKLES SHALL HAVE A 600 POUND CAPACITY FOR CROSSING SPANS UP TO 10 FEET IN LENGTH. FOR CROSSING SPANS GREATER THEN 10 FEET IN LENGTH, THE LIFTING SHACKLES SHALL HAVE A 1,100 POUND CAPACITY.

- NOTES FOR ALTERNATE METHODS:**
- ALTERNATE METHODS MAY BE USED WITH ENGINEERS APPROVAL.
  - IF THE POST HOLE CANNOT BE DUG CONVENTIONALLY DUE TO BEDROCK, A 3 INCHES DIAMETER HOLE FOR THE BRACE POST SHALL BE DRILLED TO A DEPTH OF AT LEAST 24 INCHES INTO THE ROCK AND THE POST BE GROUTED WITH A THIN FLOWABLE GROUT (OR LARGER TO ACCOMMODATE HINGE POST). AN IDENTICAL HOLE FOR A FOOTING POST TO RECEIVE THE LOWER END OF THE BRACE RAIL SHALL ALSO BE DRILLED, AND 2 3/8 INCHES DIAMETER POST GROUTED IN. ALL VERTICAL METAL POSTS (BRACE AND FOOTING) SHALL HAVE A GALVANIZED METAL POST CAP.
- ALTERNATE T-POST INSTALLATION:**
- IF THE LINE POST DESIGN DEPTH CANNOT BE OBTAINED BY CONVENTIONAL DRIVING DUE TO EXISTING SOIL/ROCK CONDITIONS, THE POST HOLE SHALL BE DRILLED AND GROUTED WITH A THIN FLOWABLE GROUT.
- ALTERNATE CORNER OR STRETCH BRACE:**
- BRACE POSTS SHALL BE AT LEAST 7 FEET 3 INCHES LONG X 2 3/8 INCHES IN DIAMETER, POSTS SHALL BE BURIED A MINIMUM DEPTH OF 33 INCHES.
  - HEAVY DUTY BRACE BAND SHALL BE FIXED IN PLACE WITH ONE 0.27 CALIBER POWER ACTUATED NAIL OR 1/4 INCH SELF-TAPPING SCREW.
  - THE DISTANCE BETWEEN STRETCH BRACES SHALL NOT EXCEED 1,320 FEET (1/4 MILE).
  - INSTALL STRETCH BRACES AT CHANGES OF GRADE OF 10 DEGREES (1.75 FEET OF RISE OR DROP ON 10 FEET OF RUN) OR MORE.
  - CHANGES IN ALIGNMENT OF 10 DEGREES OR MORE (1.75 FEET OF DIRECTION CHANGE IN 10 FEET OF RUN) SHALL BE CONSIDERED AS CORNERS, AND A CORNER BRACE STRUCTURE SHALL BE INSTALLED.
- ALTERNATE END OR GATE BRACE:**
- POSITION OF WIRE ON END POST SHALL BE FIXED IN PLACE WITH ONE 0.27 CALIBER POWER ACTUATED NAIL OR 1/4 INCH SELF-TAPPING SCREW.
  - SEE ALTERNATIVE CORNER OR STRETCH BRACE NOTES AND PANEL GATE DETAIL FOR MORE INFORMATION.
  - GATE HINGE POST SHALL BE 4 INCH DIAMETER SCHEDULE 40 GALVANIZED STEEL PIPE.



**ALTERNATE T-POST INSTALLATION**  
SCALE: 3/4" = 1'-0"



**ALTERNATE STREAM CROSSING**  
NOT TO SCALE

WASHINGTON DEPARTMENT OF  
**FISH & WILDLIFE**

**NOT APPROVED FOR CONSTRUCTION. REVIEW ONLY**

DESIGNED BY R. MOSBERGER  
CHECKED BY ---  
DRAWN BY S. ASHLER  
DATE 04/11/2022

KLICKITAT – WLA SIMCOE MOUNTAINS UNIT  
**BOUNDARY FENCE**  
ALTERNATE FENCE DETAILS

PROJECT NO.  
KT:R204:2021-1  
SHEET 8 OF 8