

# WASHINGTON DEPARTMENT OF FISH AND WILDLIFE KLICKITAT WLA - SIMCOE MOUNTAINS UNIT

BOUNDARY/INTERIOR FENCE KT:R204:2021-1

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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

# SHEET SYMBOLS

SHEET CALLED FROM SHEET LOCATED ON

DETAIL

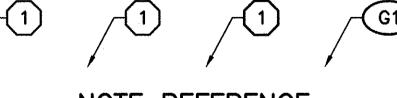
SECTION DESIGNATION

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NOTE REFERENCE

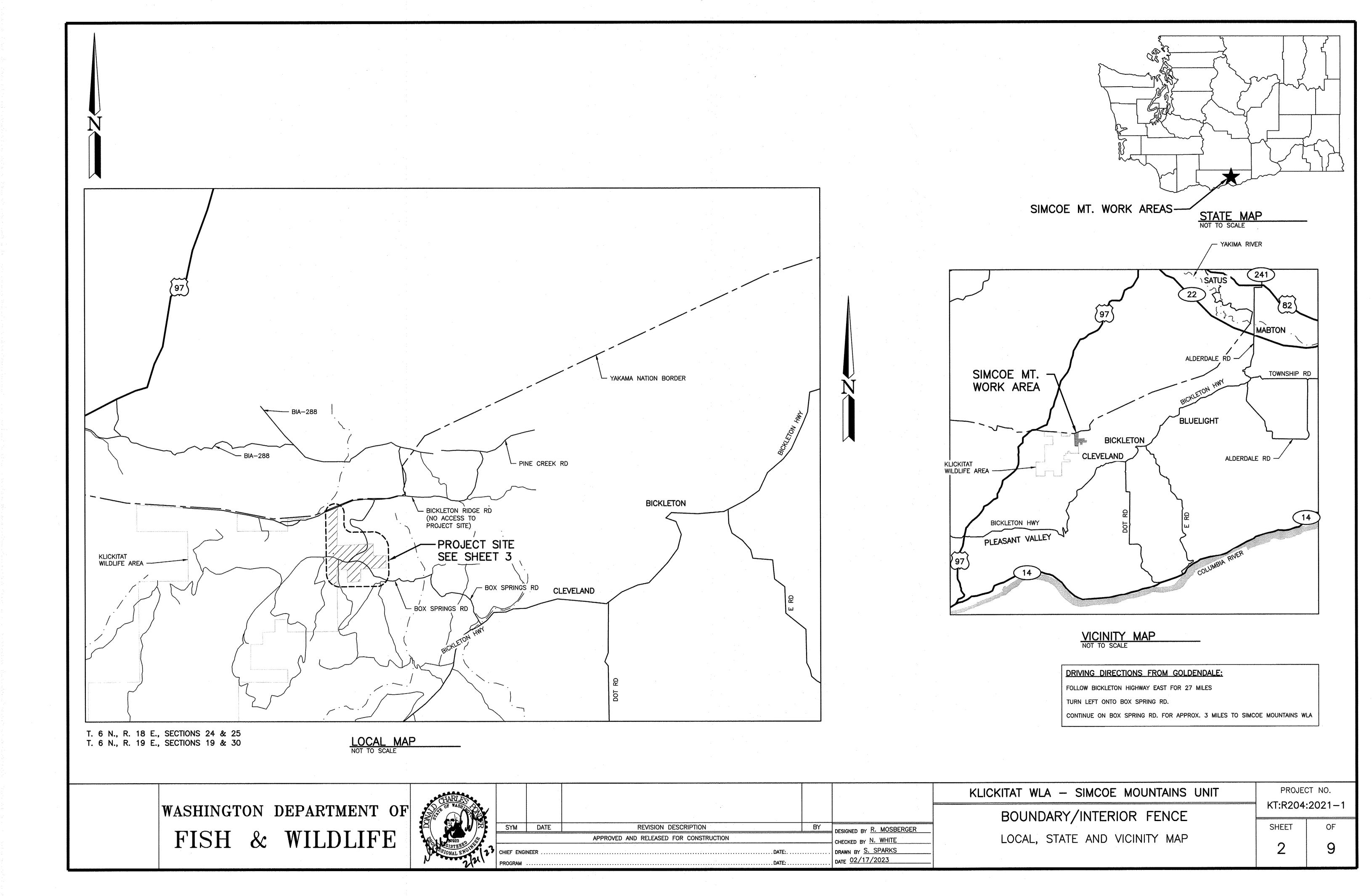
REFERENCE DESIGNATION TO A
NOTE, A PART, OR MATERIAL IN A
SCHEDULE/TABLE

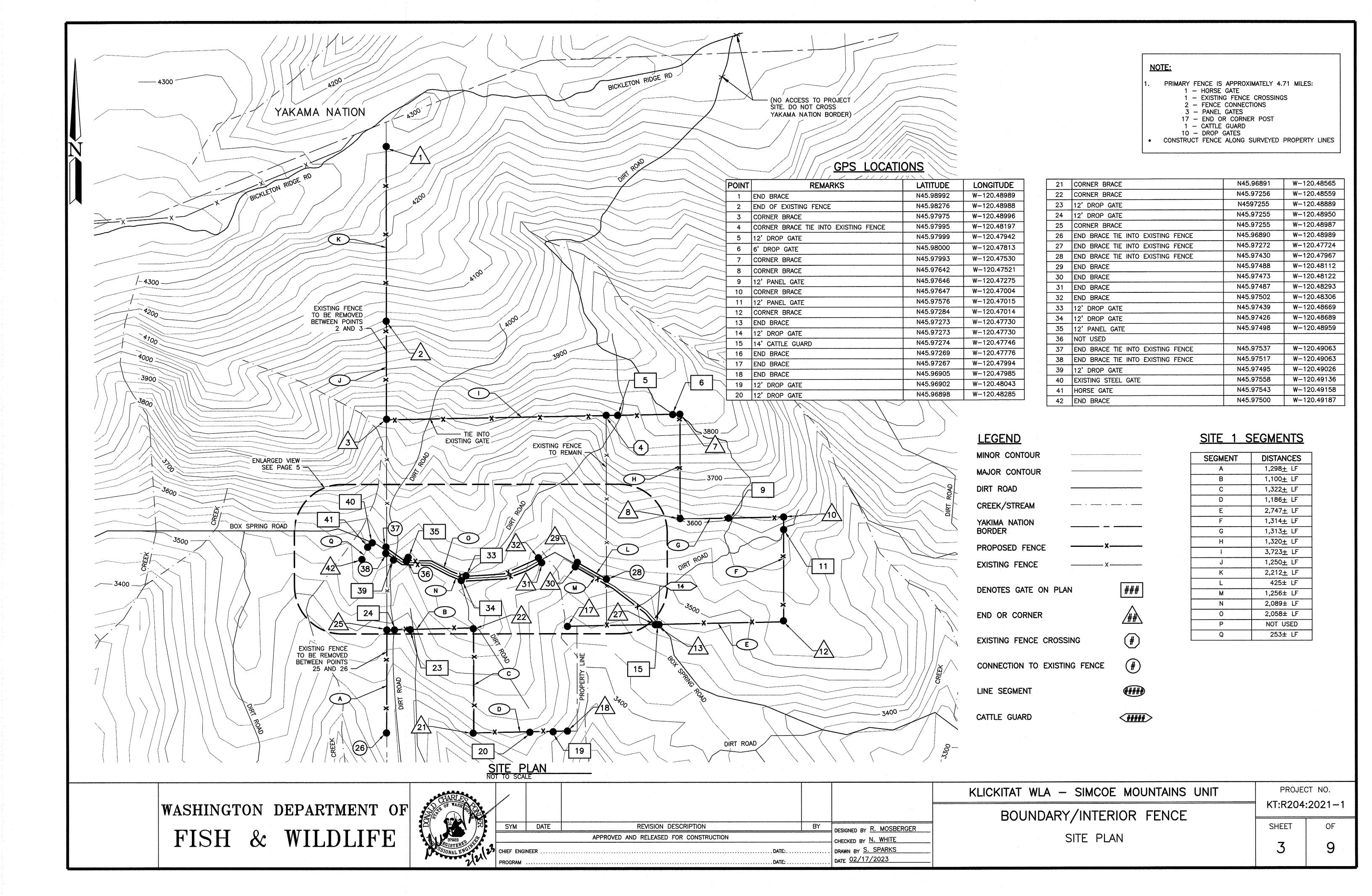
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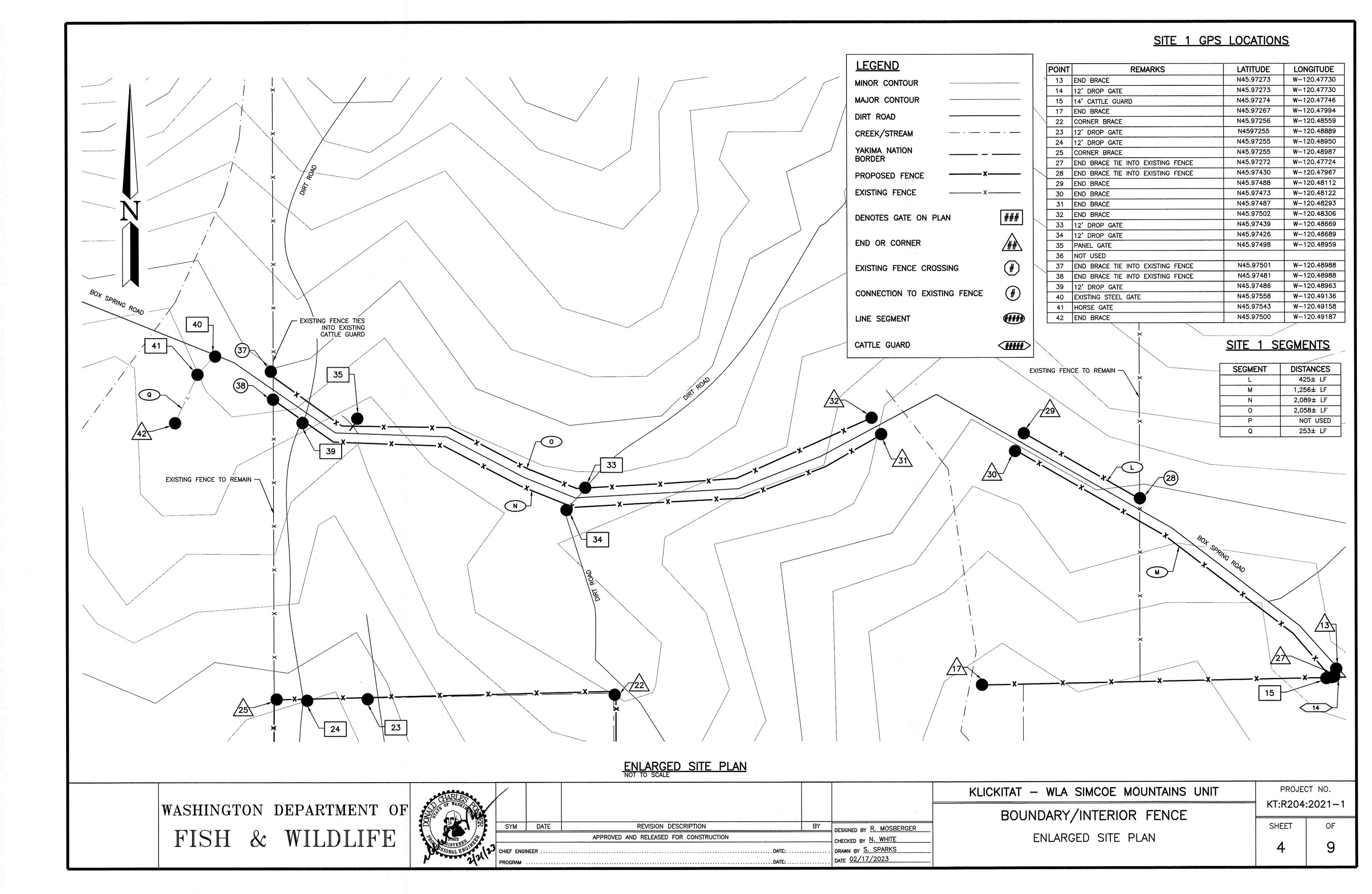
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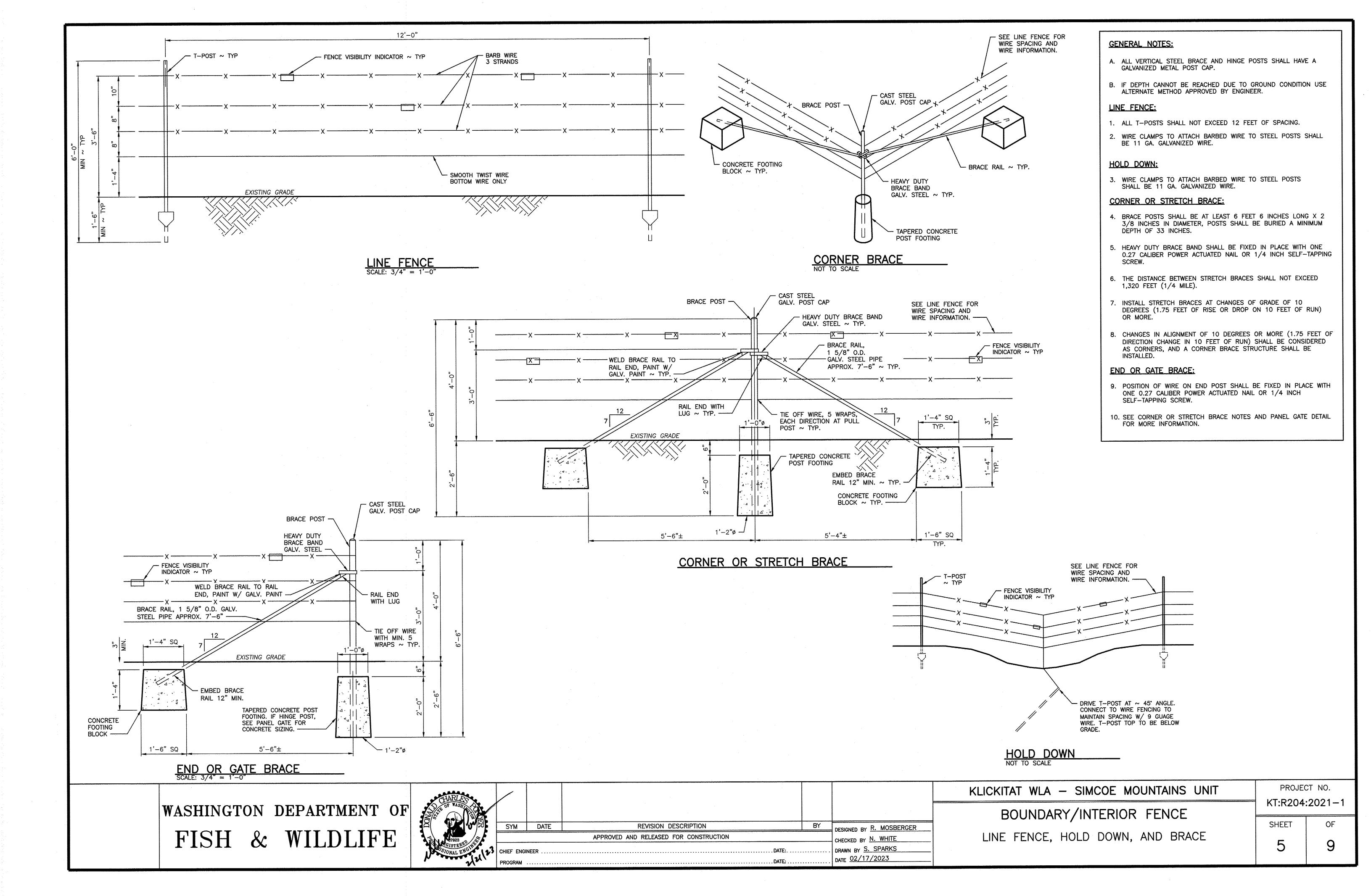
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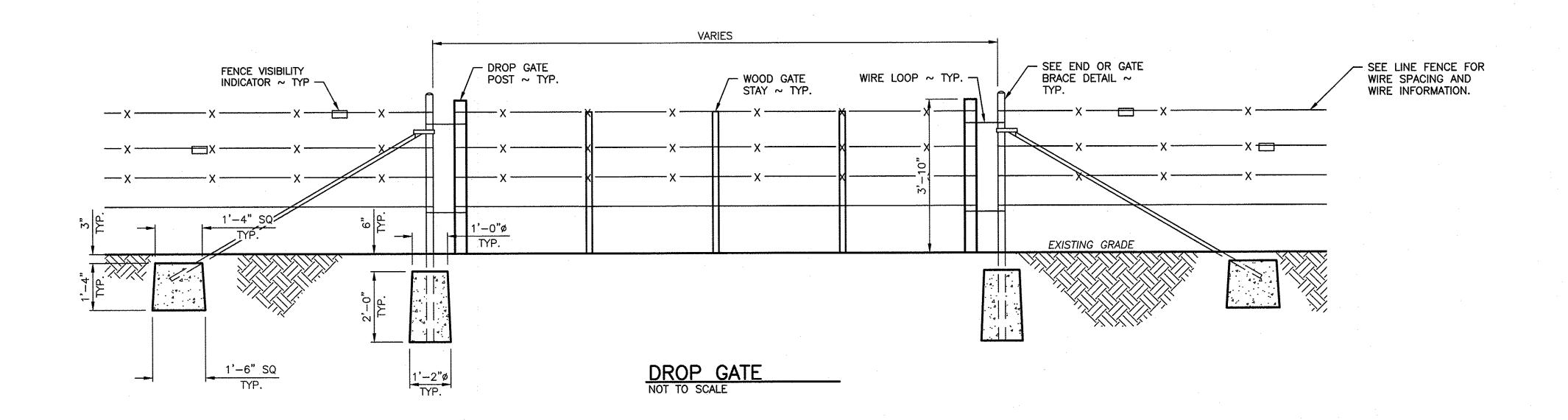
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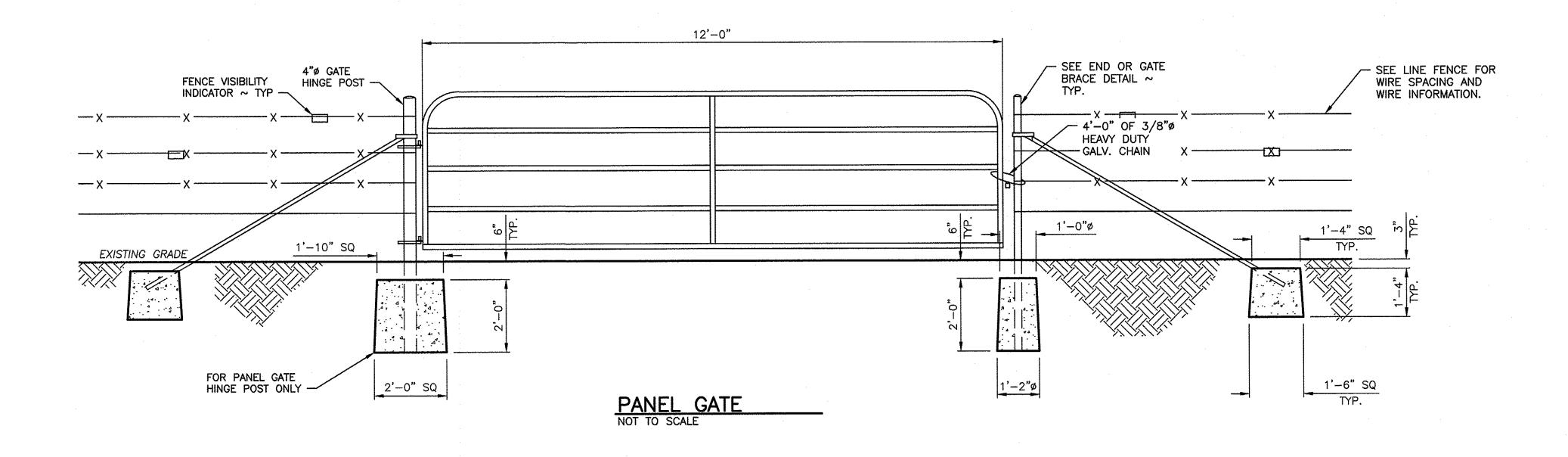












# NOTES:

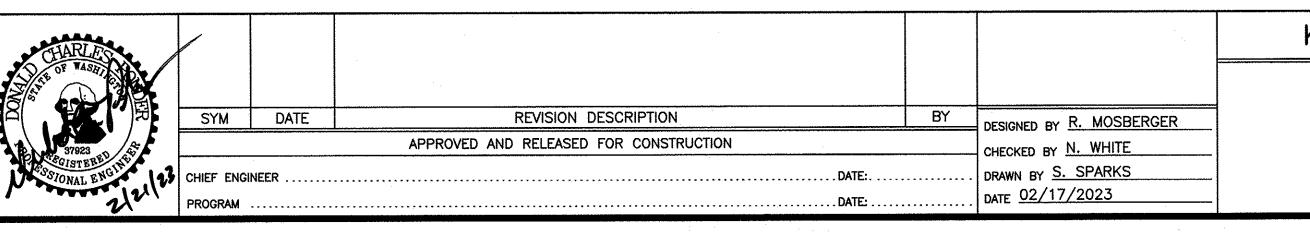
# DROP GATE:

- 1. 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.
- 2. SPACING OF THE LONGITUDINAL WIRES SHALL BE THE SAME AS THE LINE FENCE.

### PANEL GATE:

- 3. HINGE POSTS SHALL BE AT LEAST 6 FEET 6 INCHES LONG X 4 INCHES DIAMETER AND BURIED TO A MINIMUM DEPTH OF 33 INCHES
- 4. PANEL GATE MANUFACTURER, TYPE, AND SIZE AS SPECIFIED IN SPECIFICATION. INSTALLED PER MANUFACTURES SPECIFICATION.

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KLICKITAT WLA - SIMCOE MOUNTAINS UNIT

BOUNDARY/INTERIOR FENCE

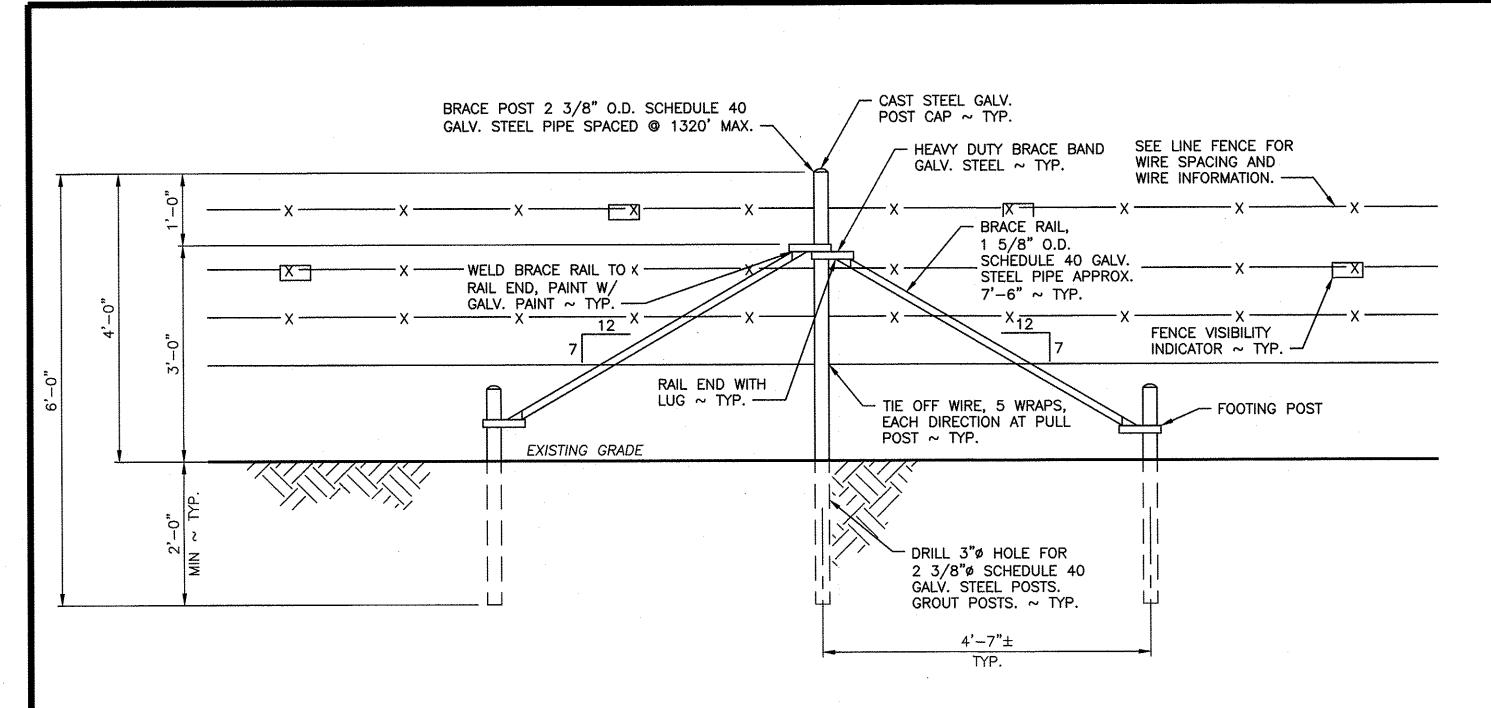
GATE DETAILS

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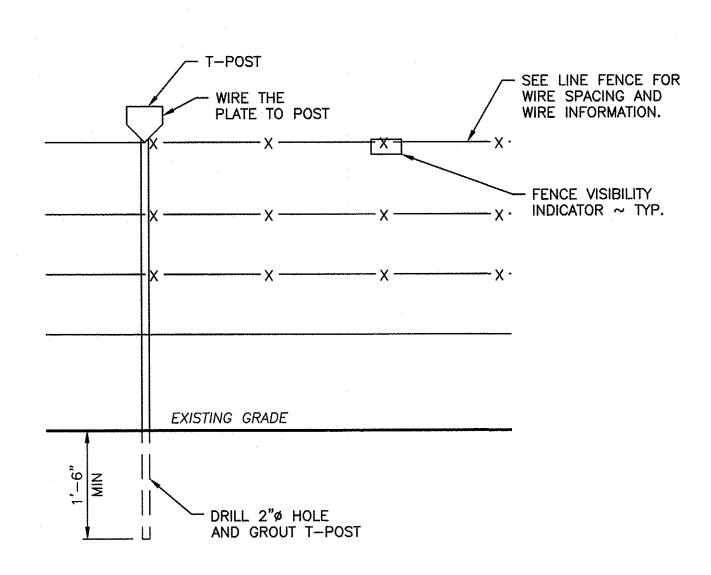
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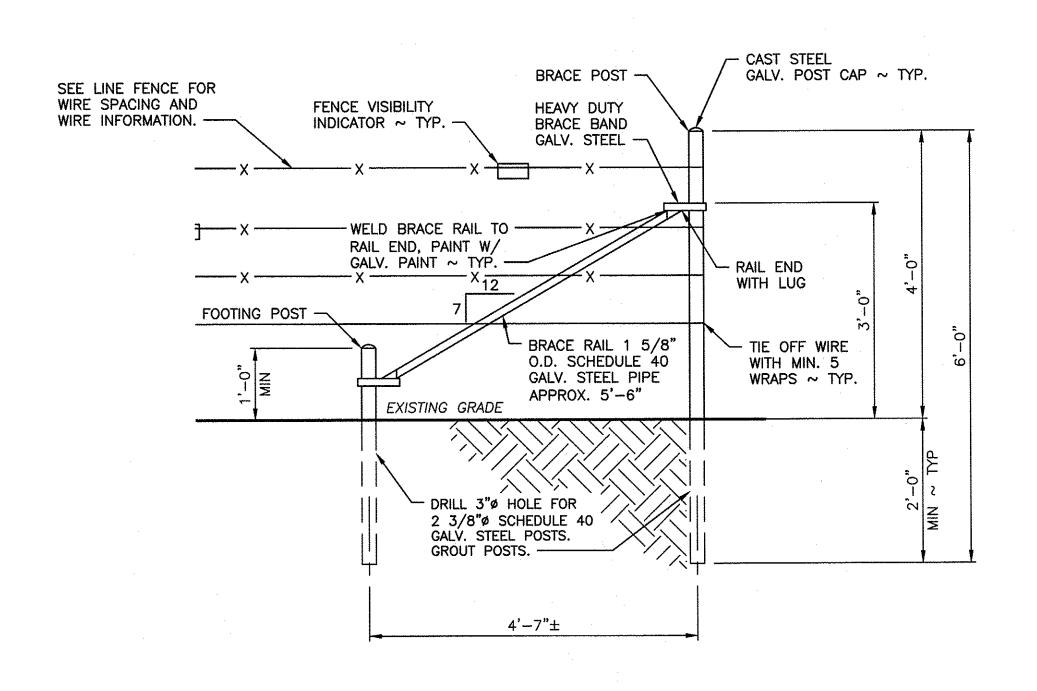


ALTERNATIVE CORNER OR STRETCH BRACE
SCALE: 3/4" = 1'-0"



ALTERNATE T-POST INSTALLATION

SCALE: 3/4" = 1'-0"

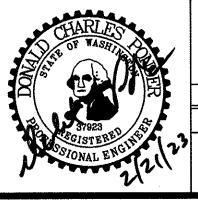


ALTERNATE END OR GATE BRACE
SCALE: 3/4" = 1'-0"

KLICKITAT WLA - SIMCOE MOUNTAINS UNIT BOUNDARY/INTERIOR FENCE

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		APPROVED AND RELEASED FOR CONSTRUCTION			CHECKED BY N. WHITE	-
CHIEF ENGINEER					DRAWN BY S. SPARKS	
PROGRAMDATE:					DATE 02/17/2023	}

### NOTES FOR ALTERNATE METHODS:

- A. ALTERNATE METHODS MAY BE USED WITH ENGINEERS APPROVAL.
- B. 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 CORNER OR STRETCH BRACE:

- 1. BRACE POSTS SHALL BE AT LEAST 6 FEET LONG X 2 3/8 INCHES IN DIAMETER, POSTS SHALL BE BURIED A MINIMUM DEPTH OF 33
- 2. HEAVY DUTY BRACE BAND SHALL BE FIXED IN PLACE WITH ONE 0.27 CALIBER POWER ACTUATED NAIL OR 1/4 INCH SELF-TAPPING
- 3. THE DISTANCE BETWEEN STRETCH BRACES SHALL NOT EXCEED 1,320 FEET (1/4 MILE).
- 4. INSTALL STRETCH BRACES AT CHANGES OF GRADE OF 10 DEGREES (1.75 FEET OF RISE OR DROP ON 10 FEET OF RUN) OR MORE.
- 5. 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 T-POST INSTALLATION:

6. 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.

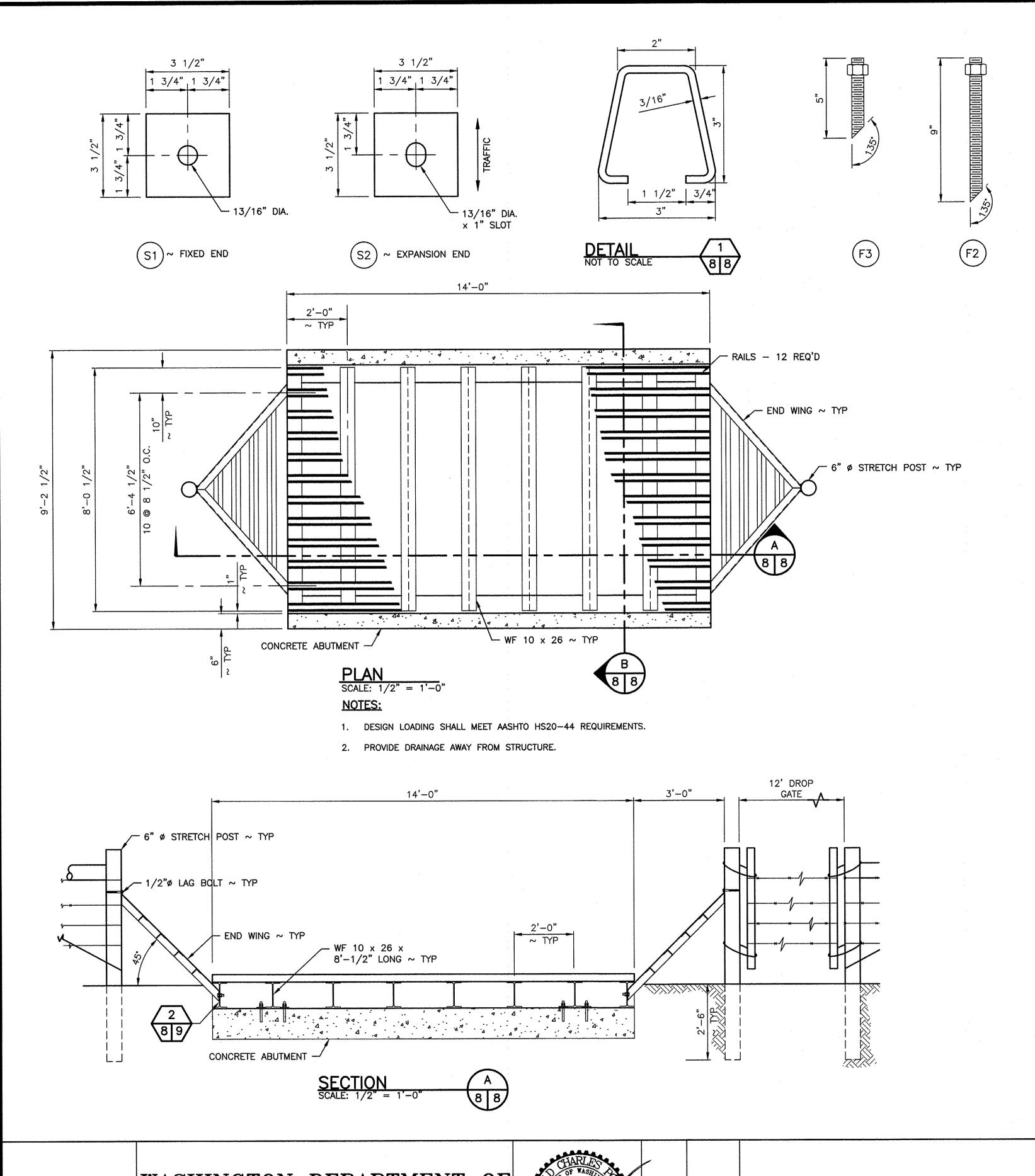
### ALTERNATE END OR GATE BRACE:

ALTERNATE FENCE DETAILS

- 7. 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.
- 8. SEE ALTERNATIVE CORNER OR STRETCH BRACE NOTES AND PANEL GATE DETAIL FOR MORE INFORMATION.
- 9. GATE HINGE POST SHALL BE 4 INCH DIAMETER SCHEDULE 40 GALVANIZED STEEL PIPE.

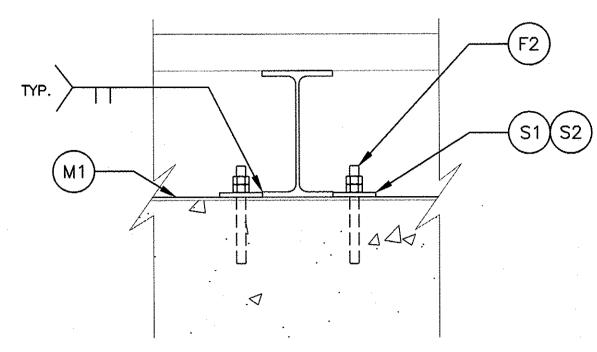
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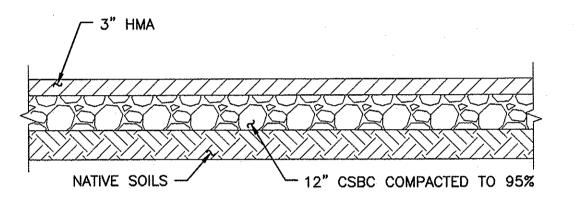


# NOTES:

- MATERIALS AND QUANTITIES LISTED FOR SINGLE ABUTMENT ONLY, ADDITIONAL MATERIALS REQUIRED.
- 2. ALL WELD ELECTRODES TO BE E70XX
- 3. ALL STEEL TO BE GALVANIZED AFTER FABRICATION





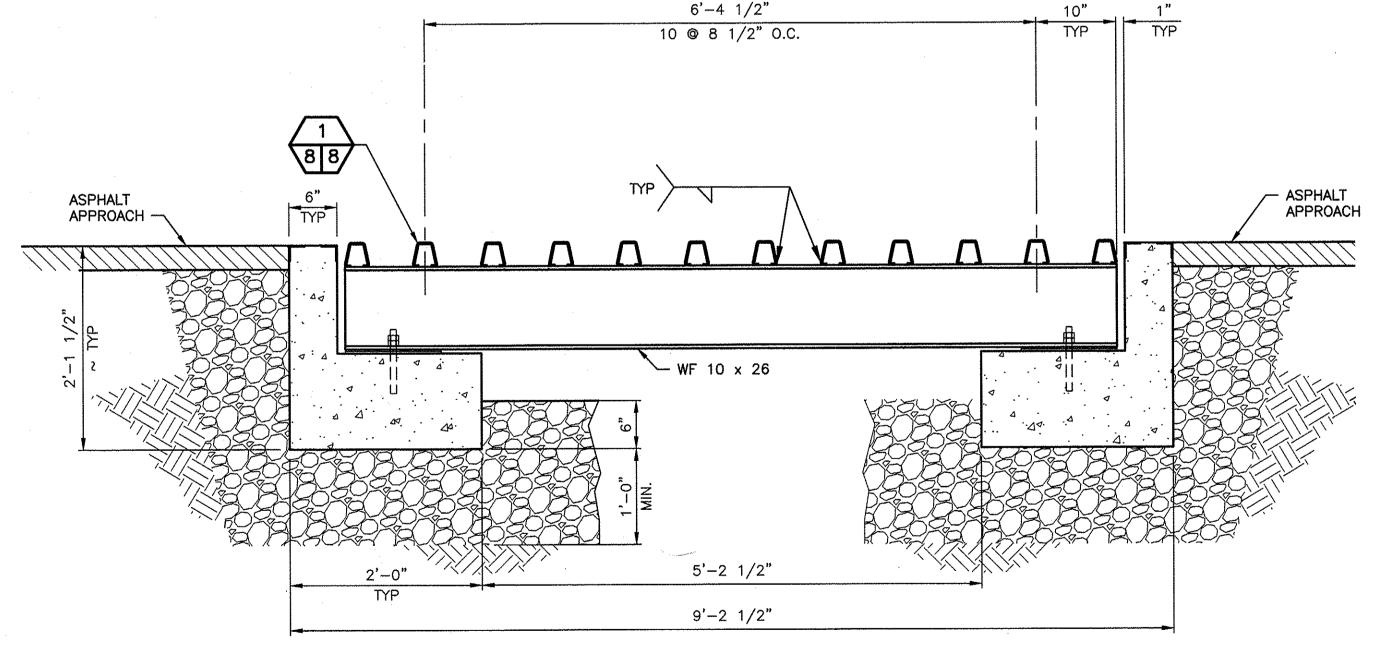


# TYPICAL ASPHALT DETAIL

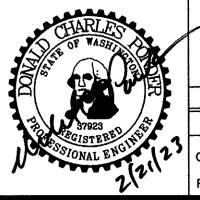
# NOTES:

- 1. CATTLE GUARD TO BE BUILT TO HS20 SPECIFICATIONS. PRIOR TO CONSTRUCTION THE APPLICANT SHALL SUBMIT A CATALOG CUT OF THE MANUFACTURED GRATE MEETING HS20 SPECIFICATIONS TO KLICKITAT COUNTY PUBLIC WORKS FOR APPROVAL.
- 2. FOOTINGS AND WALLS SHALL BE CLASS 3000 CONCRETE AND INSPECTED BY THE COUNTY BEFORE POURING.
- 3. 50' APPROACH APRONS SHALL CONSIST OF 3 INCHES OF HOT MIX ASPHALT. BASE SHALL BE 12" OF CRUSHED SURFACING BASE COURSE COMPACTED TO MEET 95% DENSITY.
- 4. THE CATTLE GUARD SHALL BE INSTALLED TO THE LINE AND GRADE OF THE EXISTING ROADWAY AND SHALL CAUSE NO INTERRUPTION OF, OR INTERFERENCE WITH, ROADWAY DRAINAGE AND THE GRILL SHALL BE INSTALLED PERPENDICULAR TO THE TRAVELED WAY.

MATERIALS					
YMBOL	DESCRIPTION	QUANTITY			
F2	ASTM A36 3/4 INCH DIAMETER THREADED ANCHOR ROD WITH NUT AND WASHER 9 INCHES LONG (6 INCH EMBEDMENT) WITH 135 DEGREE BEVELED END. EMBED WITH HILTI ADHESIVE SYSTEM HVU ADHESIVE CAPSULES.	16			
F3	ASTM A36 3/4 INCH DIAMETER THREADED ANCHOR ROD WITH NUT AND WASHER 5 INCHES LONG (3 INCH EMBEDMENT) WITH 135 DEGREE BEVELED END. EMBED WITH HILTI ADHESIVE SYSTEM HVU ADHESIVE CAPSULES. PLACE BETWEEN STRINGERS FOR BEARING PAD RESTRAINT.	16			
S1	PLATE 7/16 INCH BY 3 1/2 INCH WIDE BY 3 1/2 INCH LONG ASTM A36 STEEL WITH 13/16 DIAMETER HOLE A FIXED END.	8			
S2	PLATE 7/16 INCH BY 3 1/2 INCH WIDE BY 3 1/2 INCH LONG ASTM A36 STEEL WITH 13/16 DIAMETER BY 1 INCH SLOTTED HOLE AT EXPANSION END.	8			
М1	BEARING PAD ~ 1/4 INCH THICK BY 12 INCH WIDE BY 12 FEET LONG AASHTO GRADE NEOPRENE DUROMETER 60.	4			



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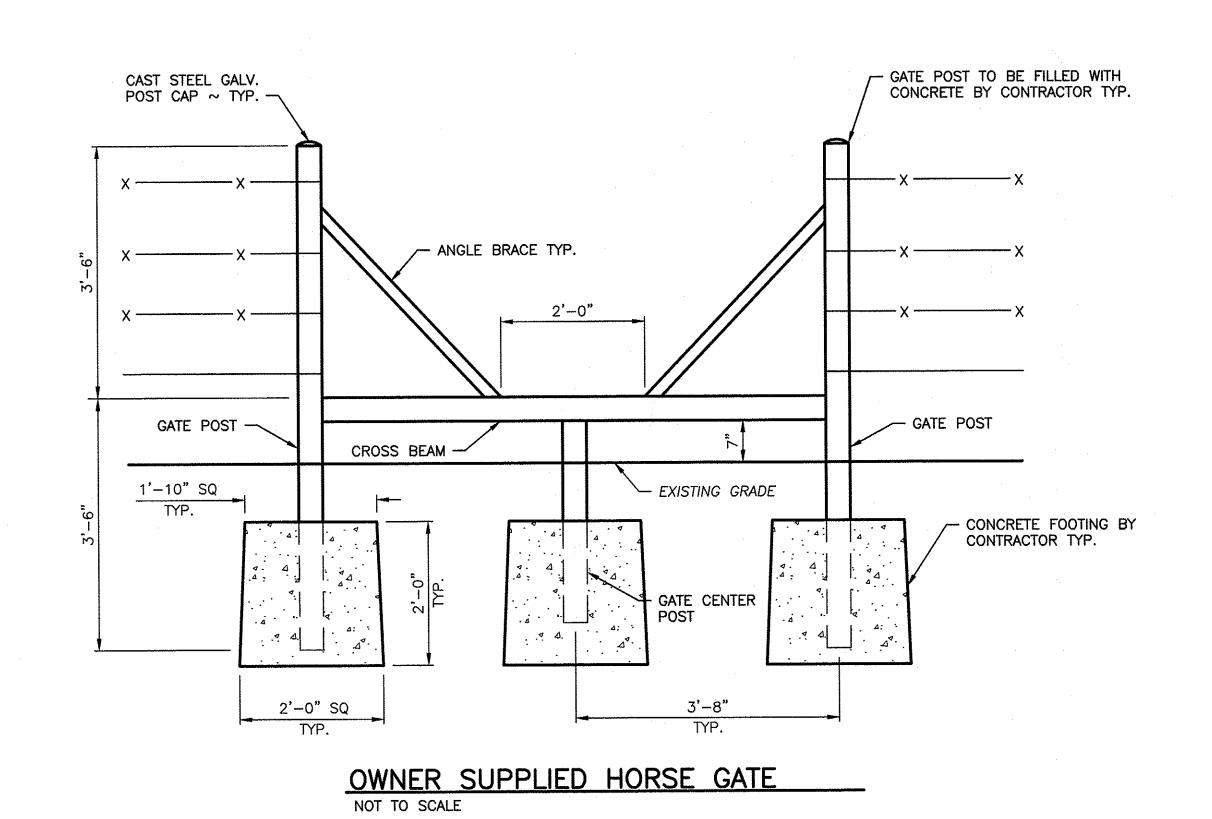


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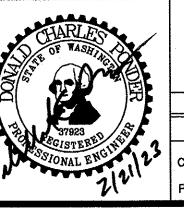
KLICKITAT WLA - SIMCOE MOUNTAINS UNIT BOUNDARY/INTERIOR FENCE CATTLE GUARD

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KLICKITAT WLA - SIMCOE MOUNTAINS UNIT

BOUNDARY/INTERIOR FENCE

HORSE GATE

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