

WIRE SPACING TABLE

COMBINATION WOVEN WIRE & BARBED WIRE FENCE			BARBED WIRE FENCE			
48" [1200] FENCE HEIGHT		51" [1280] FENCE HEIGHT	48" [1200] FENCE HEIGHT			
32" [813] WW-2 BW *	32" [813] WW-3 BW *	39" [990] WW-2 BW *	3 BW	4 BW	5 BW	6 BW
TYPE F2-32WW [813WW]	TYPE F3-32WW [813WW]	TYPE F2-39WW [990WW]	TYPE F3	TYPE F4	TYPE F5	TYPE F6
<p>APPROXIMATE WEIGHT OF 32" [813] WOVEN WIRE FABRIC (832-6-12 1/2) PER 20 ROD [100 m] ROLL IS 150 LB. [68 kg] !10 LB. [5 kg] (NOTE: 12 1/2 GAUGE) ○ DENOTES STAPLE AND/OR TIE LOCATIONS</p>			<p>APPROXIMATE WEIGHT OF 39" [990] WOVEN WIRE FABRIC (939-6-12 1/2) PER 20 ROD [100 m] ROLL IS 170 LB. [77 kg] !10 LB. [5 kg] (NOTE: 12 1/2 GAUGE)</p>			

* OTHER WOVEN WIRE HEIGHTS AND NUMBER OF BARBED WIRE COMBINATIONS ARE AVAILABLE.

STAYS

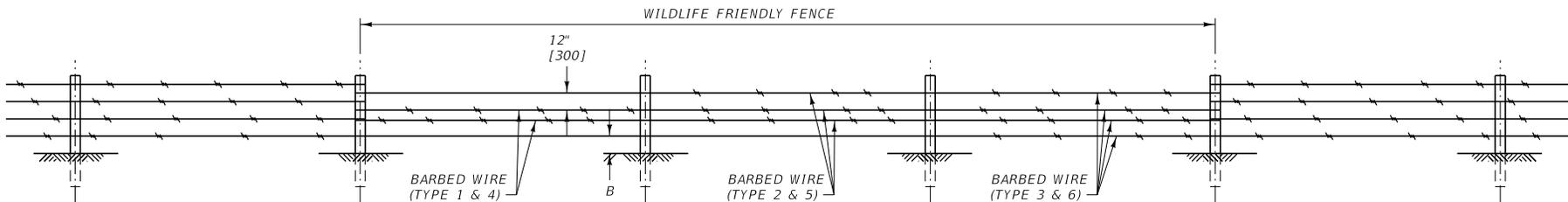
1. USE WIRE STAYS ON ALL FENCES UNLESS WOOD STAYS ARE SPECIFIED.
2. LOCATE STAYS HALFWAY BETWEEN LINE POSTS.
3. WIRE STAYS FOR BARBED WIRE FENCING ARE 2" [50] LONGER THAN THE DISTANCE BETWEEN THE TOP AND BOTTOM WIRES.
4. FOR WOVEN WIRE FENCING WITH BARBED WIRE ON TOP, EXTEND WIRE STAYS 6" [150] MINIMUM BELOW THE TOP OF THE WOVEN WIRE.
5. WHEN WOOD STAYS ARE SPECIFIED, USE EITHER 2" [50] ROUND, A ROUGH DIMENSION 2" x 2" [50 x 50], OR A 1 1/2" x 3 1/2" [37.5 x 87.5] (NOMINAL 2" x 4" [50 x 100]). THE STAY MUST BE OF SUFFICIENT LENGTH TO BE PLACED ON THE GROUND WITH THE TOP OF THE STAY EXTENDING 2" [50] ABOVE THE TOP WIRE. ATTACH EACH WIRE TO THE WOOD STAYS USING 1 3/4" [44] x 9 GAUGE STAPLES. WOOD STAYS DO NOT NEED TO BE TREATED.

NOTES:

- ① STAPLE THE BOTTOM, TOP, CENTER AND ALTERNATE WIRES OF WOVEN WIRE TO WOOD LINE POSTS.
- ② TIE THE BOTTOM, TOP, CENTER AND ALTERNATE WIRES OF WOVEN WIRE TO STEEL LINE POSTS.
- ③ STAPLE ALL WIRES OF WOVEN WIRE TO WOOD CORNER POSTS OR POSTS USED TO TIE-OFF WIRE.
- ④ "M" DENOTES METAL POSTS, IE. TYPE F3M.
"W" DENOTES WOOD POSTS, IE. TYPE F4W.
- ⑤ SEE DTL. DWG. NO. 607-05, 607-10, AND 607-15 FOR ADDITIONAL FENCING DETAILS.

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-00
FARM FENCE	
EFFECTIVE: SEPTEMBER 2014	
MONTANA DEPARTMENT OF TRANSPORTATION	

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.



WIRE SPACING TABLE		
WILDLIFE-FRIENDLY FARM FENCE TYPE 1 & 4	WILDLIFE-FRIENDLY FARM FENCE TYPE 2 & 5	WILDLIFE-FRIENDLY FARM FENCE TYPE 3 & 6
42" [1050] FENCE HEIGHT	42" [1050] FENCE HEIGHT	42" [1050] FENCE HEIGHT
WF-2 BW/2 SW-16 & WF-2 BW/2 SW-12	WF-3 BW/1 SW-16 & WF-3 BW/1 SW-12	WF-4 BW-16 & WF-4 BW-12
TYPE WF4-SBBS-16 & TYPE WF4-SBBS-12	TYPE WF4-3BS-16 & TYPE WF4-3BS-12	TYPE WF4-4B-16 & TYPE WF4-4B-12

○ DENOTES STAPLE AND/OR TIE LOCATIONS

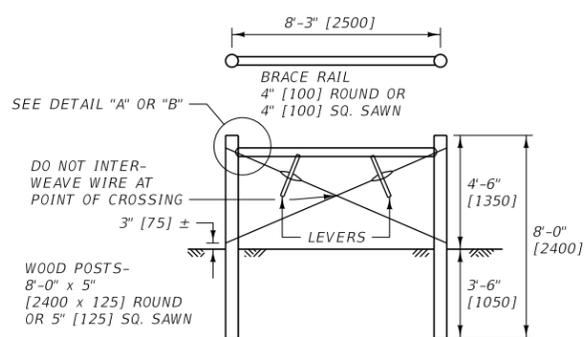
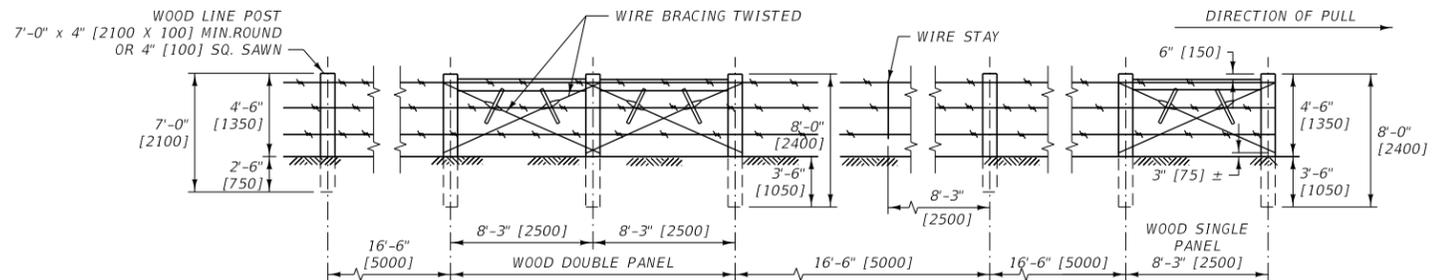
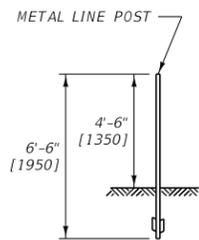
BOTTOM WIRE HEIGHT						
WIRE SPACING						
TYPE	1	2	3	4	5	6
A	7" [175]	7" [175]	7" [175]	9" [225]	9" [225]	9" [225]
B	16" [400]	16" [400]	16" [400]	12" [300]	12" [300]	12" [300]

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-01
WILDLIFE FRIENDLY FENCE	
EFFECTIVE: SEPTEMBER 2014	
MONTANA DEPARTMENT OF TRANSPORTATION	

NOTES:

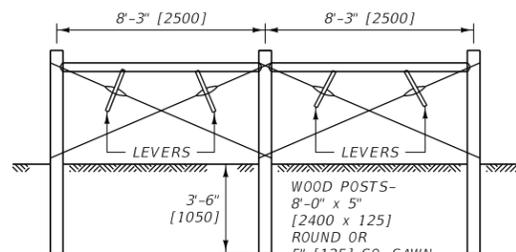
- ① "M" DENOTES METAL POSTS, IE. TYPE WF4M.
"W" DENOTES WOOD POSTS, IE. TYPE WF4W.
- ② SEE DTL. DWG. NO. 607-05, 607-10, AND 607-15 FOR ADDITIONAL FENCING DETAILS.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.



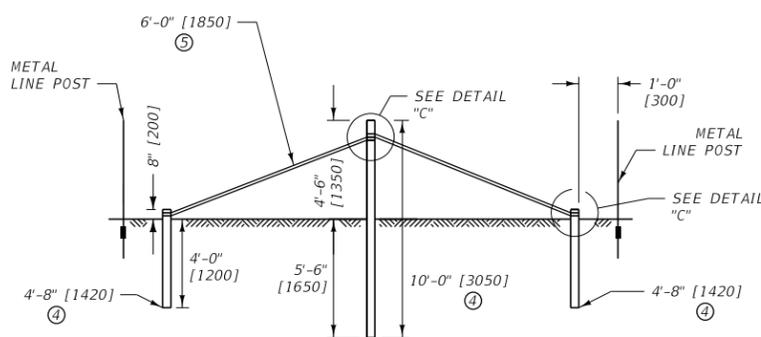
SINGLE WOOD PANEL

FOR PULLING, STRETCHING, CHANGES IN VERTICAL ALIGNMENT OR PANELS ON A RUN OF LESS THAN 330' [100 m].

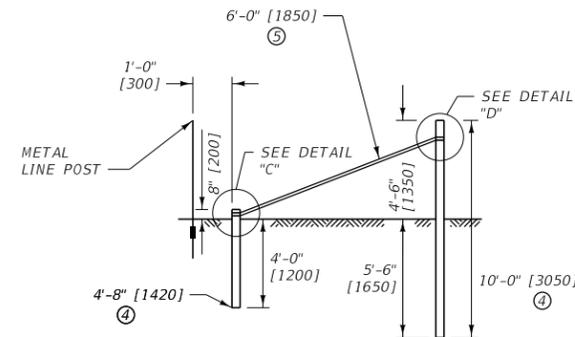


DOUBLE WOOD PANEL

FOR CORNERS, PULLING, STRETCHING, AND CHANGES IN HORIZONTAL ALIGNMENT.

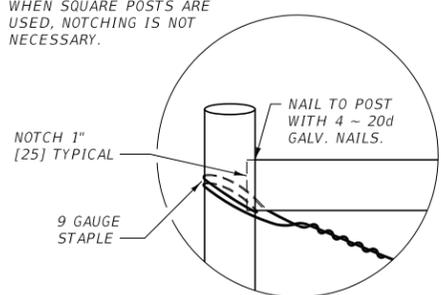


DOUBLE STEEL PANEL



SINGLE STEEL PANEL

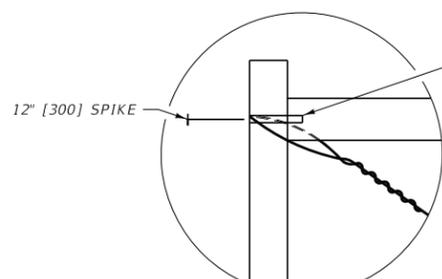
WHEN SQUARE POSTS ARE USED, NOTCHING IS NOT NECESSARY.



DETAIL "A"

BRACE WIRES - PROVIDE MINIMUM 12 1/2 GAUGE SMOOTH WIRE DOUBLED TO FORM A FOUR WIRE BRACE. ATTACH BRACE WIRES TO POSTS BY WRAPPING AROUND THE POST AT LEAST TWO TIMES AND THEN WRAPPING AROUND ITSELF FIVE TIMES.

LEVERS - 1 1/2" x 2" x 12" [37.5 x 50 x 300] MINIMUM SIZE. LEAVE IN PLACE AFTER TWISTING

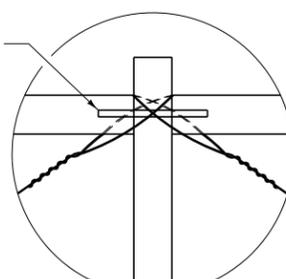


DETAIL "B"

ALTERNATE PANEL BRACING

DRIVE 12" x 3/8" [300 x 9.5] DIA. SPIKE THROUGH POST AND 4" [100] INTO BRACE POST.

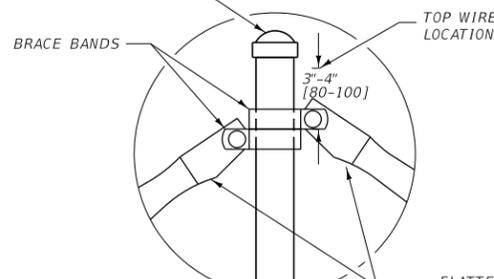
7" [175] PILOT HOLE
4" [100] PILOT HOLE
POSTS ARE NOT NOTCHED. PILOT HOLE DIAMETER IS 5/16" [7.9].
FURNISH AND INSTALL BRACE WIRES AND LEVERS IN ACCORDANCE WITH NOTES ON DETAIL "A".



DETAIL "C"

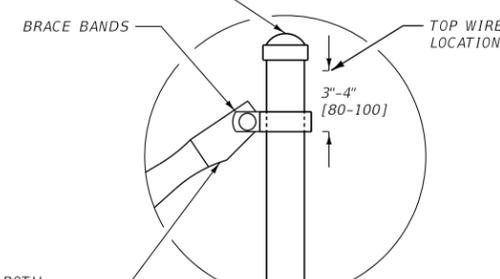
STEEL POST DOUBLE PANEL BRACING

CAP OR PLUG AS APPROVED BY PROJECT MANAGER



FLATTEN APPROXIMATELY 1 1/2" OF BOTH ENDS OF THE BRACE RAILS AND DRILL/PUNCH A HOLE IN THE FLATTENED PART FOR THE 3/8" BOLT

CAP OR PLUG AS APPROVED BY PROJECT MANAGER



DETAIL "D"

STEEL POST SINGLE PANEL BRACING

NOTES:

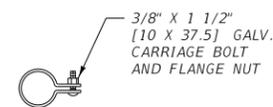
① SEE THE SPECIFICATIONS FOR POST AND WIRE REQUIREMENTS.

② LINE POST SPACING IS 16'-6" [5000] CENTER TO CENTER. LINE POST SPACING FROM BRACE OR PANEL POST IS 16'-6" [5000] CENTER TO CENTER.

③ SEE DTL. DWG. NO. 607-00, 607-10 AND 607-15 FOR ADDITIONAL FENCING DETAILS.

④ 2 1/2" [65] DIA. NOMINAL STEEL PIPE-SCHEDULE 40 OR BETTER

⑤ 1 1/2" [40] DIA. NOMINAL STEEL PIPE-SCHEDULE 40 OR BETTER



BRACE BAND DETAIL
FOR STEEL PANELS
(SEE SUBSECTION 712.01.5.)

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

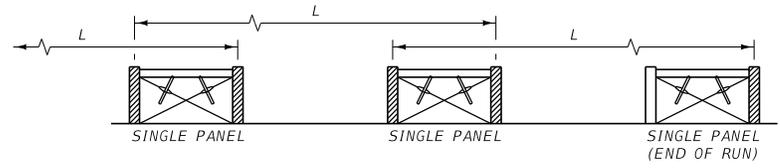
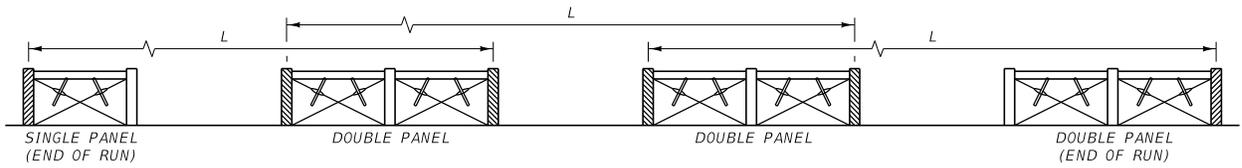
DETAILED DRAWING

REFERENCE DWG. NO.
STANDARD SPEC. 607-05
SECTION 607

FENCE DETAILS

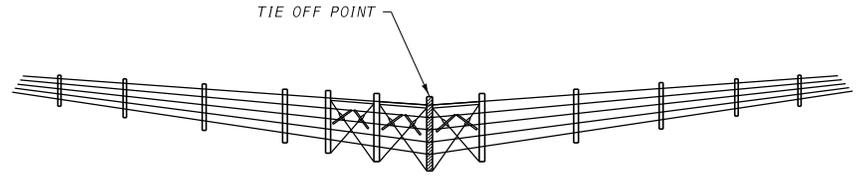
--REVISED--
JANUARY 2018

EFFECTIVE: SEPTEMBER 2014



FENCE TYPE	RUN = L	PANELS REQUIRED
COMBINATION WOVEN/BARBED	LESS THAN 33'	NONE
	33' - 330'	SINGLE
	OVER 330' TO 660' MAX.	DOUBLE
BARBED	LESS THAN 66'	NONE
	66'-660'	SINGLE
	OVER 660' TO 990' MAX.	DOUBLE

FENCE TYPE	RUN = L (m)	PANELS REQUIRED
COMBINATION WOVEN/BARBED	LESS THAN 10	NONE
	10 - 100	SINGLE
	OVER 100 TO 200 MAX.	DOUBLE
BARBED	LESS THAN 20	NONE
	20 - 200	SINGLE
	OVER 200 TO 300 MAX.	DOUBLE



SELECT PANEL TYPE AT FENCE CORNER OR ANGLE BREAK BASED ON FENCE RUN LENGTH.

FENCE PANEL TYPES

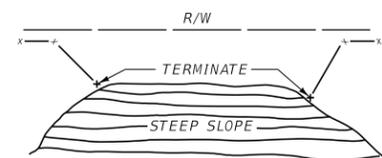
- ① LIMIT RUN LENGTHS IN POOR SOIL CONDITIONS TO REDUCE RESULTING TENSION AT CORNER OR ANGLE BREAK PANELS.
- ② TIE OFF ON ALL CROSS HATCHED OR SHADED POSTS.

NOTES:

- ① ATTACH BARBED WIRES TO POSTS BY WRAPPING AROUND THE POST AT LEAST TWO TIMES, THEN WRAPPING AROUND ITSELF FIVE TIMES.
- ② TO ATTACH WOVEN WIRE TO AN END POST, REMOVE TWO OR THREE VERTICAL STAY WIRES FROM THE END OF THE FENCE. PLACE THE FIRST COMPLETE VERTICAL STAY WIRE AGAINST THE POST. START AT THE MIDDLE OF THE HORIZONTAL LINE WIRES, WRAPPING AROUND THE END POST AT LEAST TWO TIMES AND THEN WRAPPING AROUND ITSELF FIVE TIMES.
- ③ PLACE ALL FENCE WIRE ON PASTURE SIDE OF POST, EXCEPT ON CURVES. THEN, PLACE THE WIRE ON THE OUTSIDE OF THE CURVE.
- ④ IN AREAS SUBJECT TO HIGH VELOCITY WINDS AND MOVING DEBRIS, WIRES MAY BE PLACED ON WINDWARD SIDE OF POSTS, EXCEPT ON CURVES.
- ⑤ POST SPACING IS GENERALLY MEASURED PARALLEL TO GROUND.
- ⑥ PLACE WIRE STAYS PER DTL. DWG. NO. 607-00 HALFWAY BETWEEN POSTS. DO NOT PLACE STAYS ON PANELS.
- ⑦ WOOD FENCE HAS ONE METAL POST IN PLACE OF A WOODEN LINE POST IN EACH 500' [150 m] RUN FOR LIGHTNING PROTECTION.

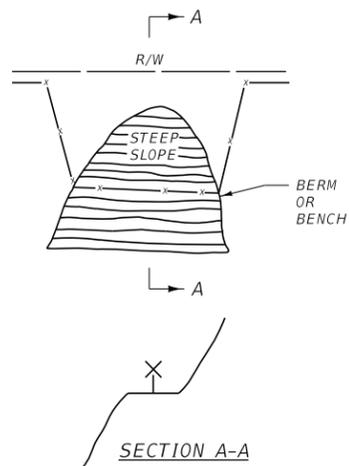
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DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-10
FENCE DETAILS	
EFFECTIVE: SEPTEMBER 2014	
MONTANA DEPARTMENT OF TRANSPORTATION	

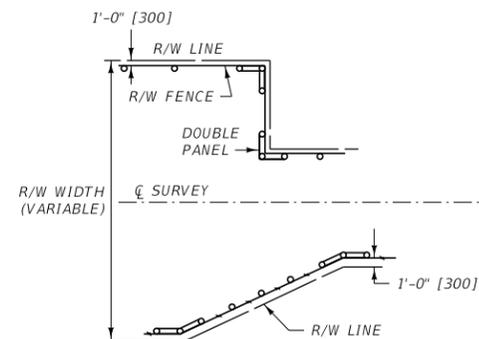


SLOPE MUST BE STEEP ENOUGH TO DETER PASSAGE OF TRESPASSERS.

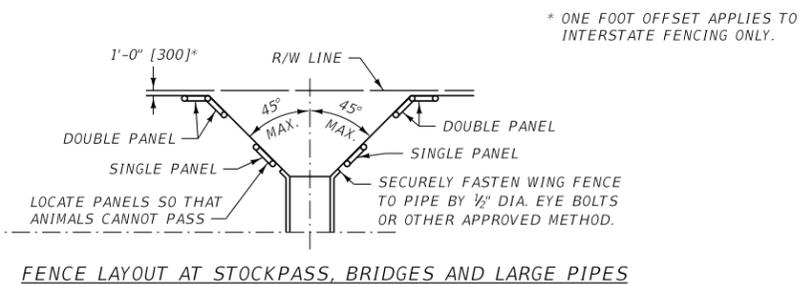
FENCE LAYOUT ON STEEP SLOPES



SECTION A-A

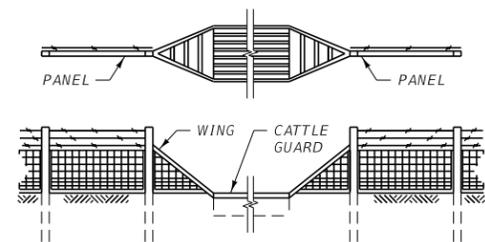


FENCE LAYOUT AT CHANGE IN R/W WIDTH ON INTERSTATE



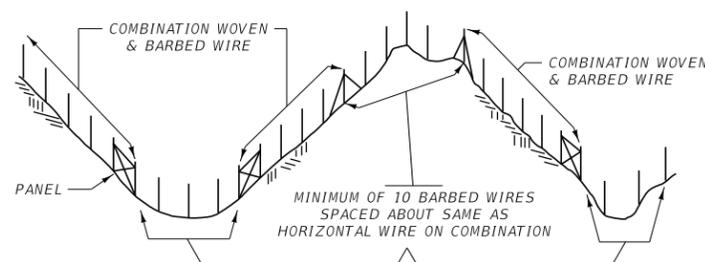
FENCE LAYOUT AT STOCKPASS, BRIDGES AND LARGE PIPES

* ONE FOOT OFFSET APPLIES TO INTERSTATE FENCING ONLY.

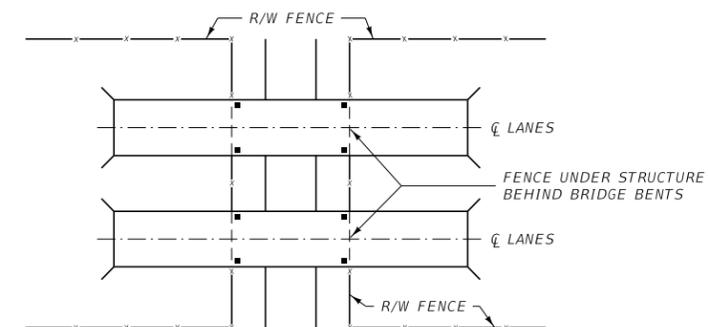


FENCE CONNECTION TO CATTLE GUARD

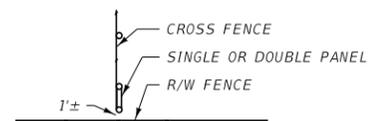
- ① PLACE SINGLE OR DOUBLE PANELS AT EACH END OF ALL CATTLE GUARDS.
- ② SECURELY FASTEN FENCE WIRE TO THE WINGS AND ARRANGE SO THAT ANIMALS CANNOT PASS.



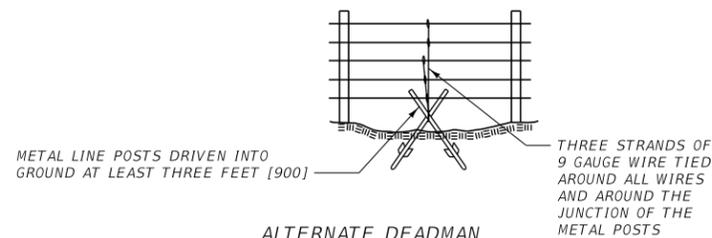
FENCE LAYOUT ON SHARP VERTICAL CURVES TO AVOID TRYING TO CONFORM WOVEN WIRE TO UNEVEN TERRAIN



FENCE LAYOUT AT LOCAL ROAD UNDER INTERSTATE



FENCE LAYOUT AT CROSS-FENCE CONNECTION



ALTERNATE DEADMAN

WHEN APPROVED BY THE PROJECT MANAGER THE ABOVE DEADMAN MAY BE USED.

A DEADMAN MAY BE A PRECAST CONCRETE BLOCK, A CAST IN PLACE CONCRETE BLOCK, A ROCK OR OTHER APPROVED OBJECT WEIGHING AT LEAST 150 LB. BURY THE DEADMAN IN THE GROUND WITH AT LEAST 2'-0" OF COVER. ATTACH THE DEADMAN TO THE FENCE WITH 3 STRANDS OF 9 GAUGE WIRE OR 6 STRANDS OF 12 1/2 GAUGE WIRE.

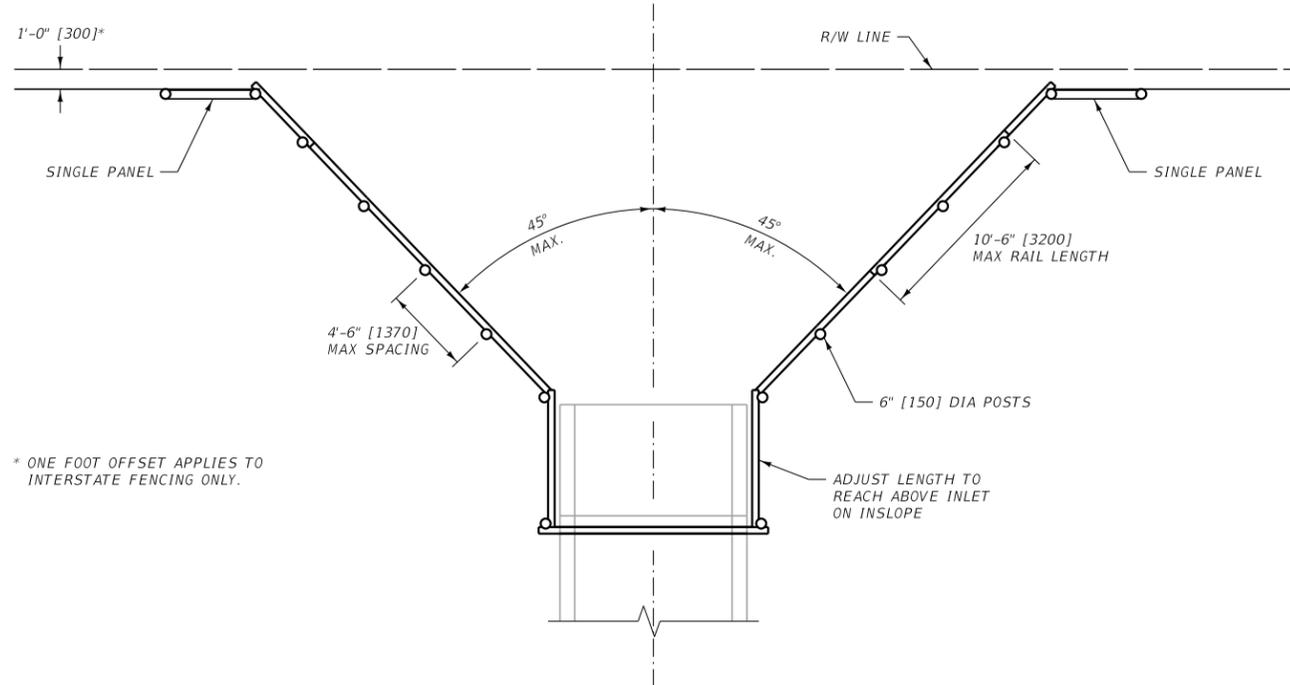
UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-15

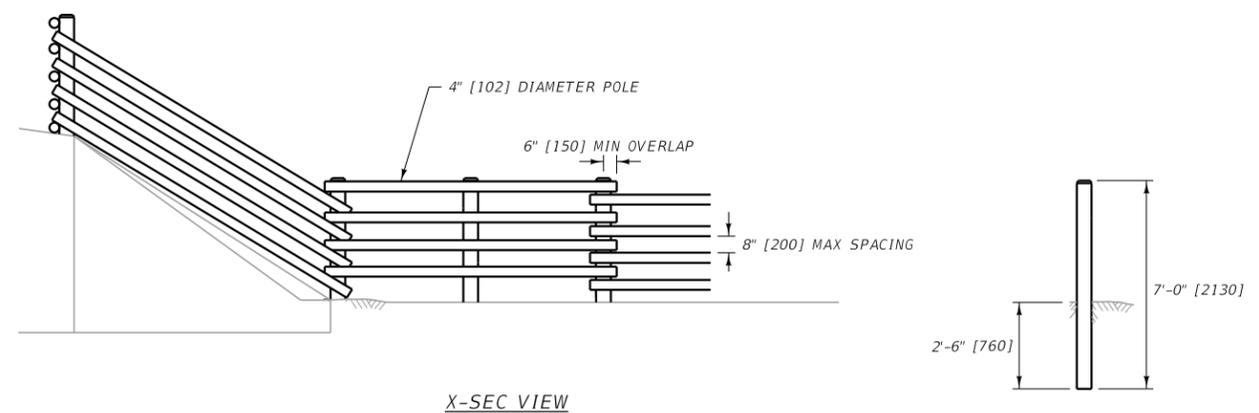
FENCE DETAILS

EFFECTIVE: SEPTEMBER 2014

UPSLOPE FENCE LAYOUT AT CORRUGATED STEEL PIPE (CSP) STOCKPASS

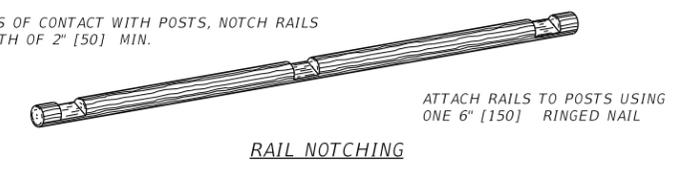


* ONE FOOT OFFSET APPLIES TO INTERSTATE FENCING ONLY.



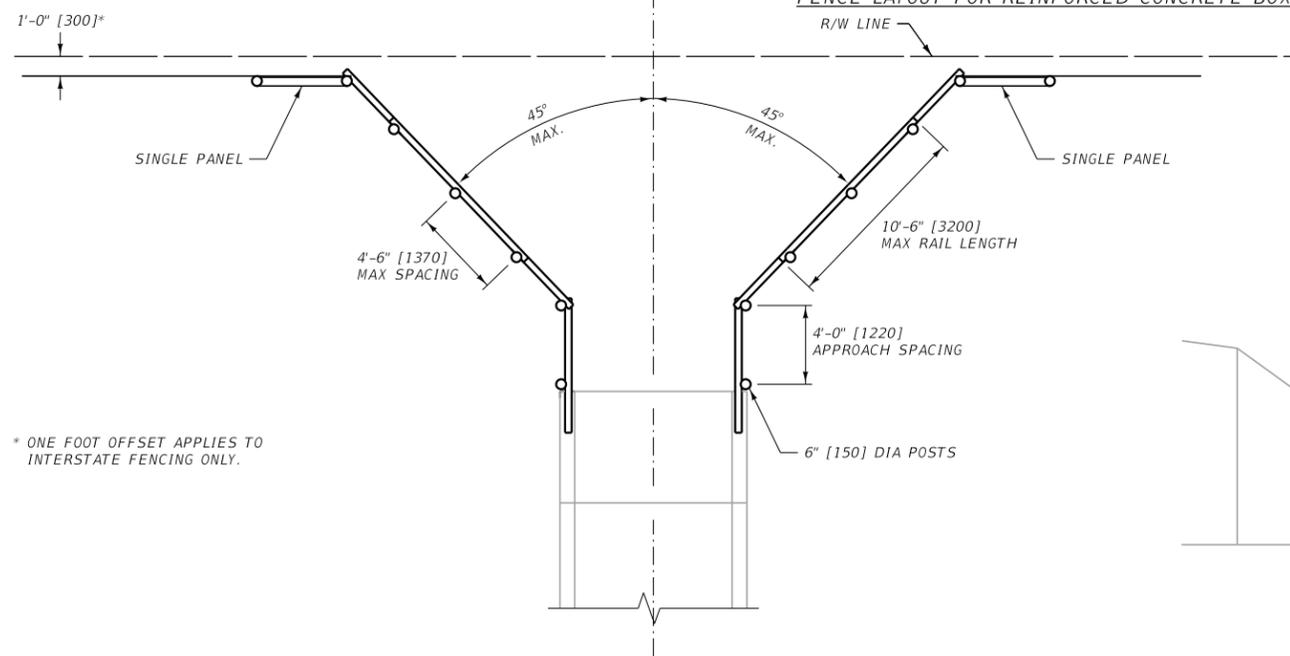
X-SEC VIEW

NOTE: ALL POLES, POSTS, RAILS, OR WOOD ITEMS WILL BE TREATED

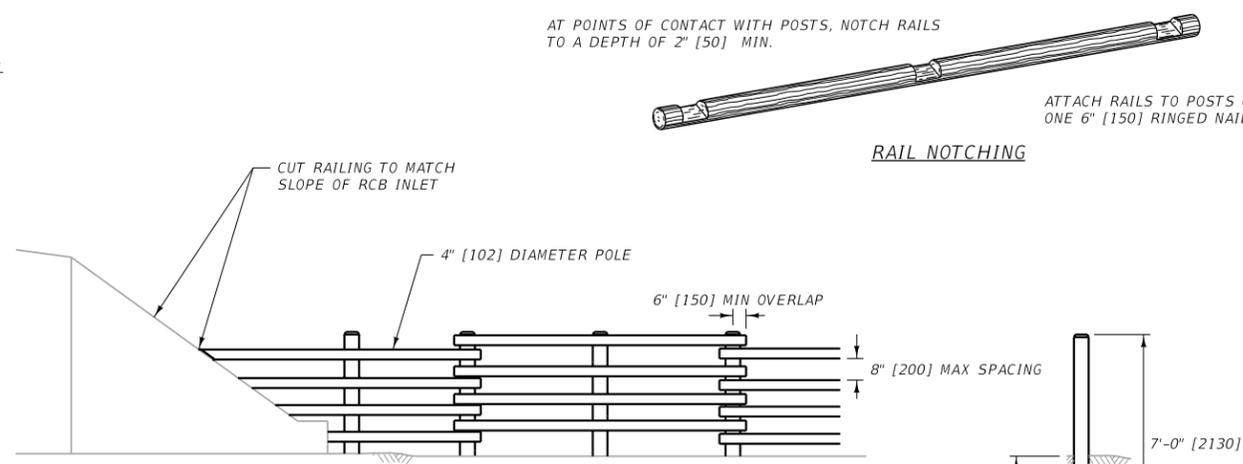


RAIL NOTCHING

FENCE LAYOUT FOR REINFORCED CONCRETE BOX (RCB) STOCKPASS

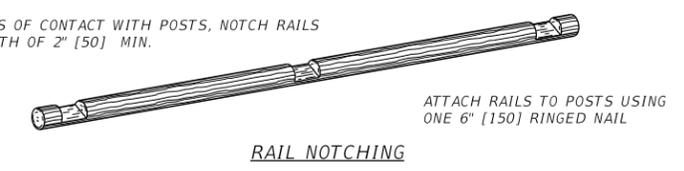


* ONE FOOT OFFSET APPLIES TO INTERSTATE FENCING ONLY.



X-SEC VIEW

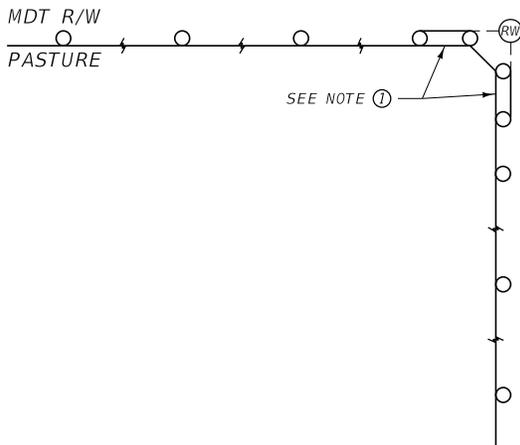
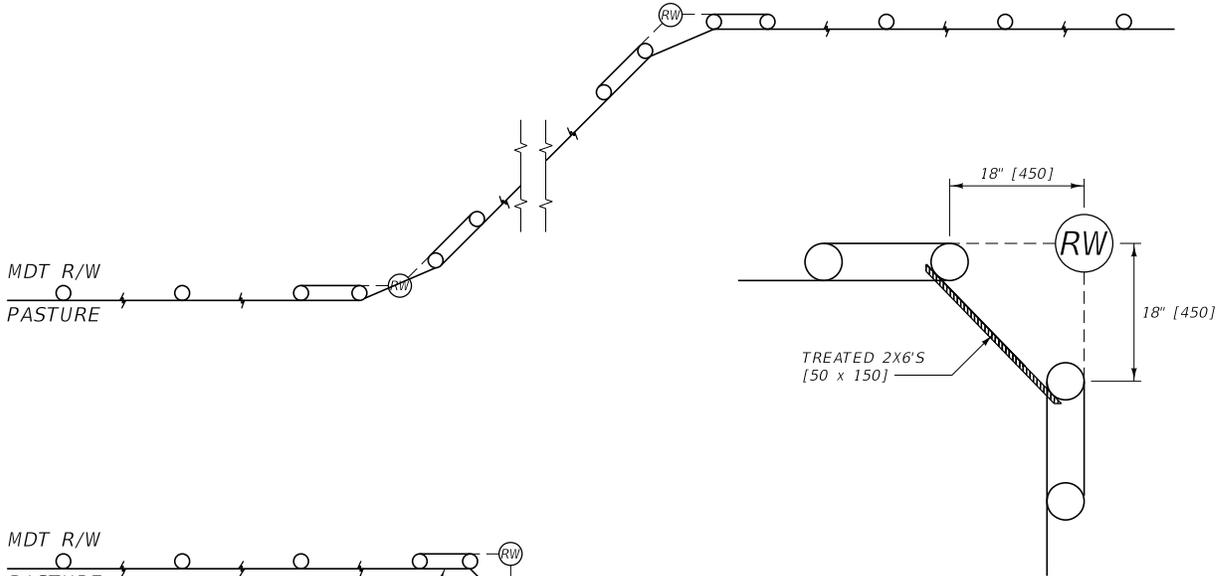
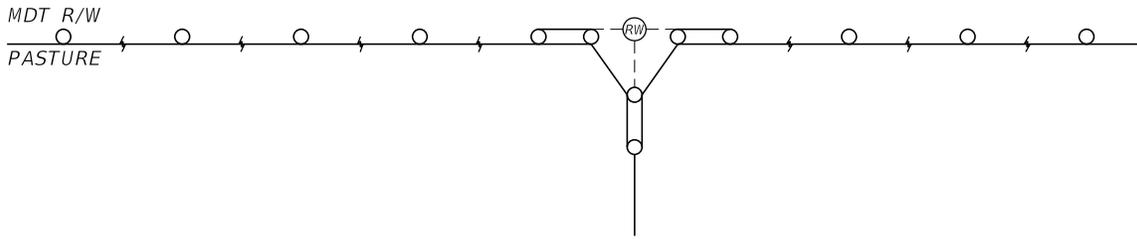
NOTE: ALL POLES, POSTS, RAILS, OR WOOD ITEMS WILL BE TREATED



RAIL NOTCHING

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-17
FENCE DETAILS	
EFFECTIVE: JANUARY 2018	
 MONTANA DEPARTMENT OF TRANSPORTATION	



SPAN TREATED 2X6'S [50 x 150] ACROSS GAP ON PASTURE SIDE OF POSTS. ATTACH TO PANEL POSTS WITH TWO 3" EXTERIOR GRADE SCREWS ON EACH END AND TRIM EDGES AT 45 DEGREE ANGLES.

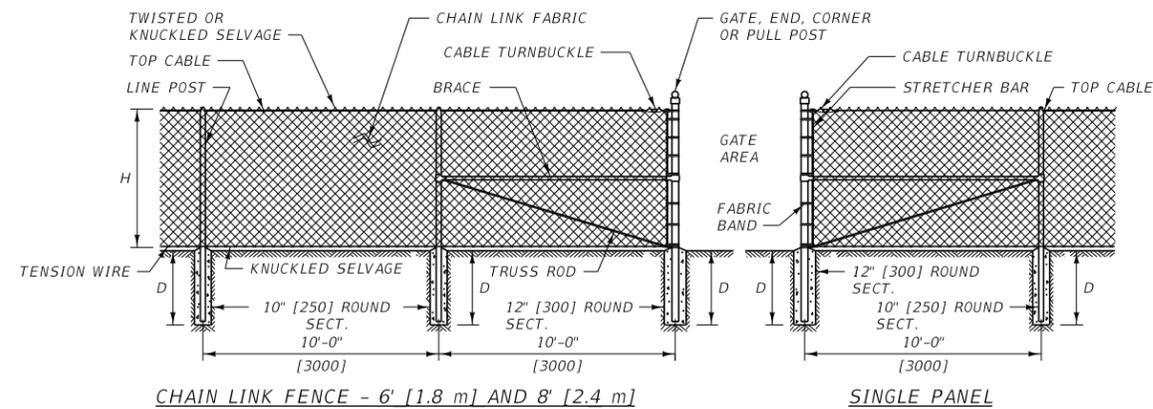
NOTES:

- ① INSTALL PANELS ACCORDING TO DETAIL DRAWING 607-05.
- ② INSTALL NON-INTERSTATE FENCE ON THE RIGHT-OF-WAY LINE AS SHOWN.
- ③ OFFSET PANEL POSTS 18" [450mm] FROM STAKED R/W BREAKS AND R/W MONUMENTS AS SHOWN IN DETAIL.
- ④ DO NOT DISTURB SURVEY MONUMENTS.
- ⑤ INCLUDE COST OF 2 x 6 [50 x 150] CROSS RAILS IN THE COST OF ADJACENT PANELS.

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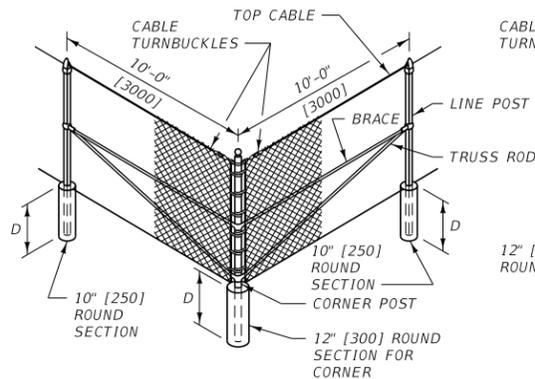
DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-20
FENCING AT RIGHT OF WAY BREAKS	
EFFECTIVE: SEPTEMBER 2014	
MDT MONTANA DEPARTMENT OF TRANSPORTATION	

--REVISED--
JULY 2016



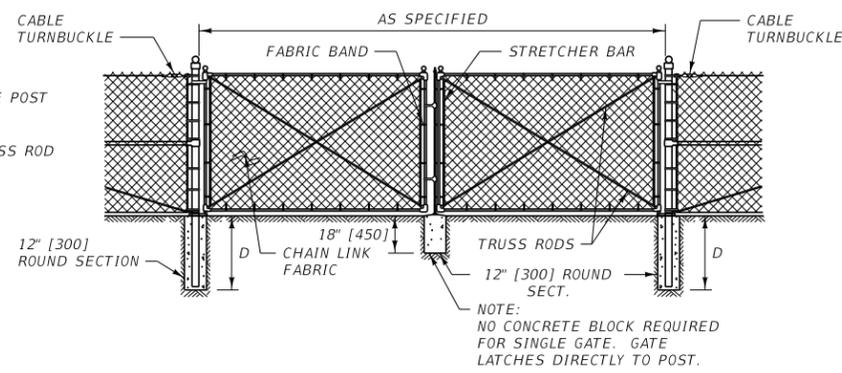
CHAIN LINK FENCE - 6' [1.8 m] AND 8' [2.4 m]

SINGLE PANEL

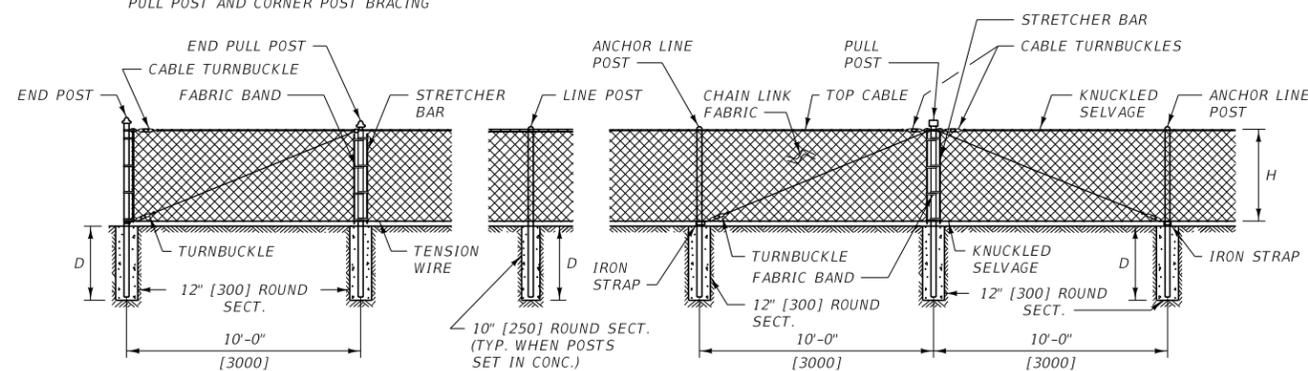


DOUBLE PANEL

PULL POST AND CORNER POST BRACING



GATES

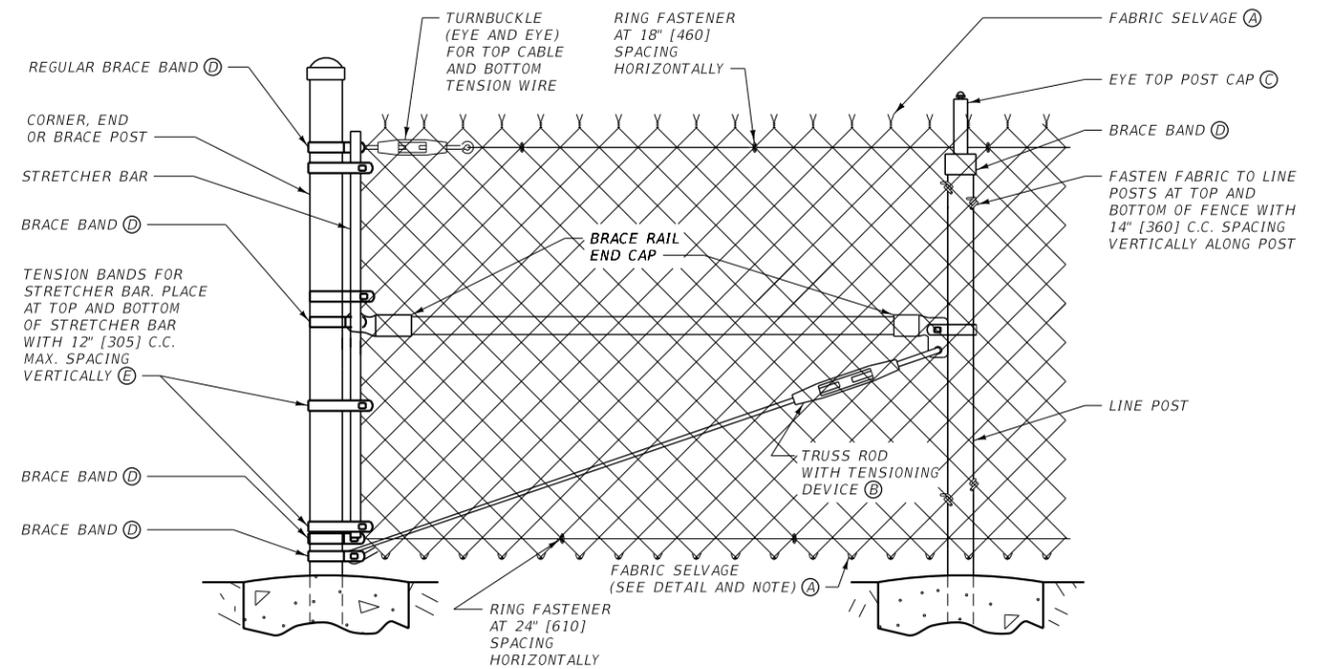


CHAIN LINK FENCE - 3' [0.9 m], 4' [1.2 m] AND 5' [1.5 m]

NOTES:

- ① DO NOT INSTALL DOUBLE PANELS MORE THAN 300' [90 m] APART ON TANGENTS OR MORE THAN 250' [75 m] APART ON ANY CURVE. FOR CURVES WITH RADIi SHARPER THAN 1150' [350 m], INSTALL A DOUBLE PANEL ON EACH CURVE END, PLUS ONE ADDITIONAL PANEL FOR EACH 10' OF DEFLECTION, EVENLY SPACED, BETWEEN THE CURVE ENDS.
- ② PULL POST BRACING ON 6' [1.8 m] AND 8' [2.4 m] FENCE IS THE SAME AS CORNER BRACING.
- ③ A DROP BAR LOCKING DEVICE IS REQUIRED FOR ALL DOUBLE GATE INSTALLATIONS. THE DROP BAR MUST BE ABLE TO BE INSERTED INTO THE CONCRETE BLOCK AT LEAST SIX INCHES [150].
- ④ ALL CONCRETE IS LEAN OR BETTER.
- ⑤ INSTALL A 3/8" [10] DIAMETER GALVANIZED STEEL TOP CABLE ALONG ALL FENCE. TERMINATE TOP CABLE WITH GALVANIZED CABLE TURNBUCKLES FASTENED VIA THE FABRIC BAND AT THE POST.

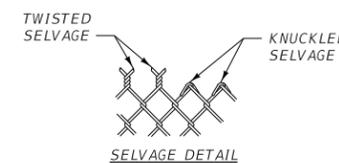
HEIGHT OF FABRIC, H	WIRE FABRIC ABOVE GROUND	DEPTH OF CONCRETE, D	DEPTH OF POST IN CONC. (MIN.)
8' [2440]	1"-2" [25-50]	42" [1050]	38" [950]
6' [1830]	1"-2" [25-50]	36" [900]	32" [800]
5' [1525]	1"-2" [25-50]	36" [900]	32" [800]
4' [1220]	1"-2" [25-50]	30" [750]	26" [650]
3' [915]	1"-2" [25-50]	30" [750]	26" [650]



CONNECTION DETAILS

GENERAL NOTES

- PROVIDE CHAIN LINK FENCE MATERIALS PER SECTION 712.
- ① POST CAPS: PROVIDE EYE-TOP CAPS FOR ALL POSTS CARRYING A TOP CABLE THROUGH THE POST. PROVIDE ROUNDED TOPS FOR ALL OTHER ROUND POSTS. FIT POST CAPS TIGHTLY TO PREVENT REMOVAL.
- ② BRACE BANDS: SEE SECTION 712.01.5.
- ③ TENSION BANDS: SEE SECTION 712.01.5.
- ④ FABRIC SELVAGE: FENCE HEIGHT UNDER 6' [1.8 m]: TOP AND BOTTOM KNUCKLED SELVAGE. FENCE HEIGHT 6' [1.8 m] AND OVER: TOP - TWISTED OR KNUCKLED SELVAGE BOTTOM - KNUCKLED SELVAGE



SELVAGE DETAIL

- ⑤ TRUSS RODS: SEE SECTION 712.01.4



INDUSTRIAL TRUSS TIGHTENER

TURNBUCKLE



BRACE BAND DETAIL



TENSION BAND DETAIL

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

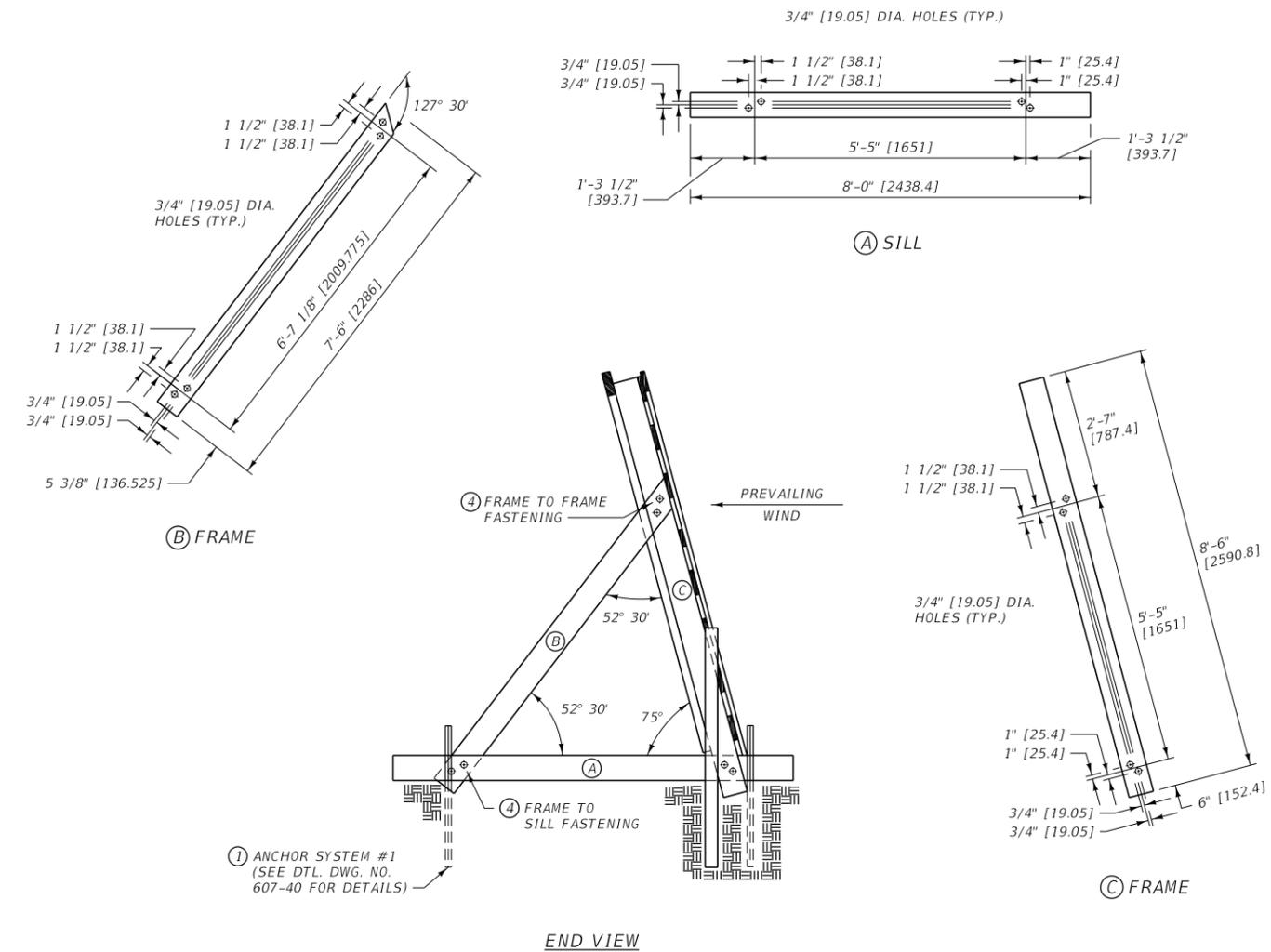
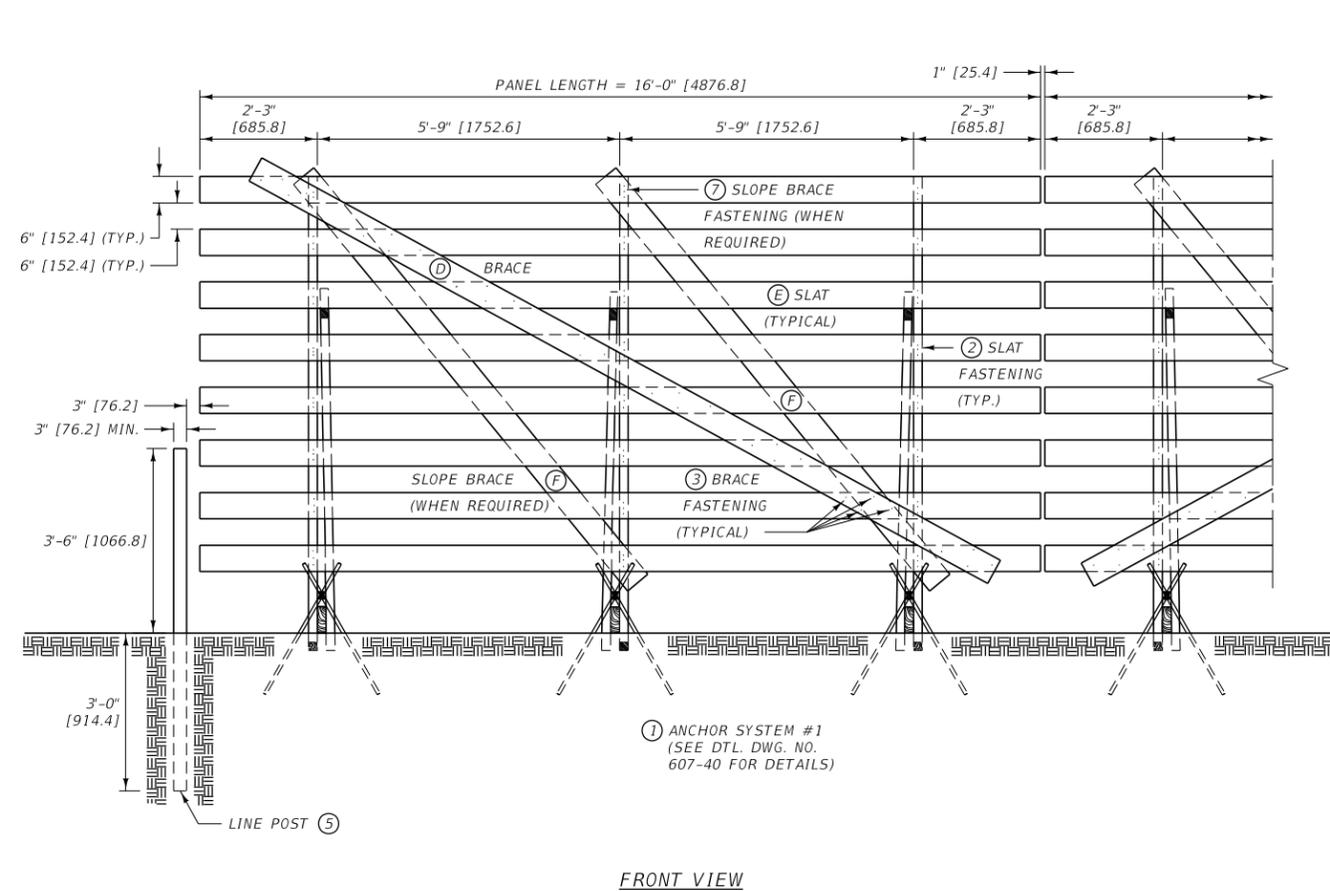
DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-25

CHAIN LINK FENCE

--REVISED--
JULY 2016

EFFECTIVE: SEPTEMBER 2014





GENERAL NOTES

- ① ANCHOR SYSTEM DETAIL
USE ANCHOR SYSTEM #1 UNLESS SOIL AND MOISTURE CONDITIONS NECESSITATE THE USE OF AN ALTERNATE SYSTEM, OR AS DIRECTED BY THE PROJECT MANAGER. CONSULT DETAILED DRAWING NUMBERS 607-40 AND 607-45 FOR ANCHOR SYSTEMS #3 (ROCKY CONDITIONS) AND #2 (SWAMPY CONDITIONS).
- ② SLAT FASTENING
FASTEN SLATS TO THE FRAME WITH 3 - 12d COMMON BARBED SHANK NAILS AT EACH LOCATION.
- ③ BRACE FASTENING
FASTEN BRACES TO THE FRAME WITH 4 - 8d COMMON NAILS AT EACH LOCATION AND CLINCH.
- ④ FRAME TO SILL AND FRAME TO FRAME FASTENING
FASTEN THE SILL AND FRAME MEMBERS TO THE FRAME AT EACH LOCATION WITH 2 - 5/8" DIA. x 5" [M16 x 127] STANDARD MACHINE BOLTS, EACH WITH HEX NUT AND TWO FLAT WASHERS. SEE NOTE (X) AT RIGHT.
- ⑤ LINE POSTS
PLACE LINE POSTS AT EACH END OF EACH LINE OF SNOW FENCE AS SHOWN. POSTS ARE 6'-6" [1981.2] LONG WITH A MINIMUM DIAMETER OF 3" [76.2] AND A MAXIMUM DIAMETER OF 6" [152.4]. BUTT TREAT 3" [914.4] MINIMUM.
- ⑥ WIRE TIE
USE 12 GAUGE OR HEAVIER GALVANIZED WIRE TO FORM THE WIRE TIES.
- ⑦ SLOPE BRACE FASTENING
FASTEN SLOPE BRACES WITH 3 - 16d COMMON BARBED SHANK NAILS AT EACH LOCATION.

LUMBER - 8' [2.4 m] SNOW FENCE W/ ANCHOR SYSTEM #1			
BILL OF MATERIALS FOR ONE PANEL			
ITEM NO.	NO. OF PIECES	LUMBER SIZE	DESCRIPTION
(A)*	3	2" x 6" x 8'-0" [50 x 150 x 2438.4]	FRAME (SILL)
(B)*	3	2" x 6" x 7'-6" [50 x 150 x 2286.0]	FRAME
(C)*	3	2" x 6" x 8'-6" [50 x 150 x 2590.8]	FRAME
* NOTE: PRESSURE TREAT ALL 2" x 6" [50 x 150] MEMBERS (ENTIRE FRAME)			
(D)	1	1" x 6" x 16'-0" [25 x 150 x 4876.8]	BRACE
(E)	8	1" x 6" x 16'-0" [25 x 150 x 4876.8]	SLAT
(F)**	2	2" x 6" x 10'-0" [50 x 150 x 3048.0]	SLOPE BRACE
** NOTE: USE ONLY WHEN SLOPE IS 5:1 OR STEEPER			

HARDWARE - 8' [2.4 m] SNOW FENCE W/ ANCHOR SYSTEM #1		
BILL OF MATERIALS FOR ONE PANEL		
QUANTITY	DESCRIPTION	
④ 18	5/8" DIA. x 5" [M16 x 127] HEX BOLT (THREADED FULL LENGTH) AND NUT	
④ 36	FLAT WASHER FOR 5/8" DIA. [M16] BOLT	
② 1 LB. [0.45 kg]	12d COMMON BARBED SHANK NAIL	
① 12	#6 REBAR x 5'-0" [#19 x 1524]	
⑥ 6 PIECES	12 GAUGE TIE WIRE x 5'-0" [1524.0] ±	
③ 1/3 LB. [0.15 kg]	8d COMMON NAILS	
⑦ 1/4 LB. [0.11 kg]	16d COMMON BARBED SHANK NAILS	

(X) NOTE:
AFTER 5/8" DIA. [M16] BOLTS HAVE BEEN TIGHTENED, BURR THE THREAD DIRECTLY BEHIND THE NUT TO PREVENT EVENTUAL LOOSENING OF THE NUTS.

ALL NAILS MAY BE EITHER HAND DRIVEN OR DRIVEN WITH A PNEUMATIC NAILER.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

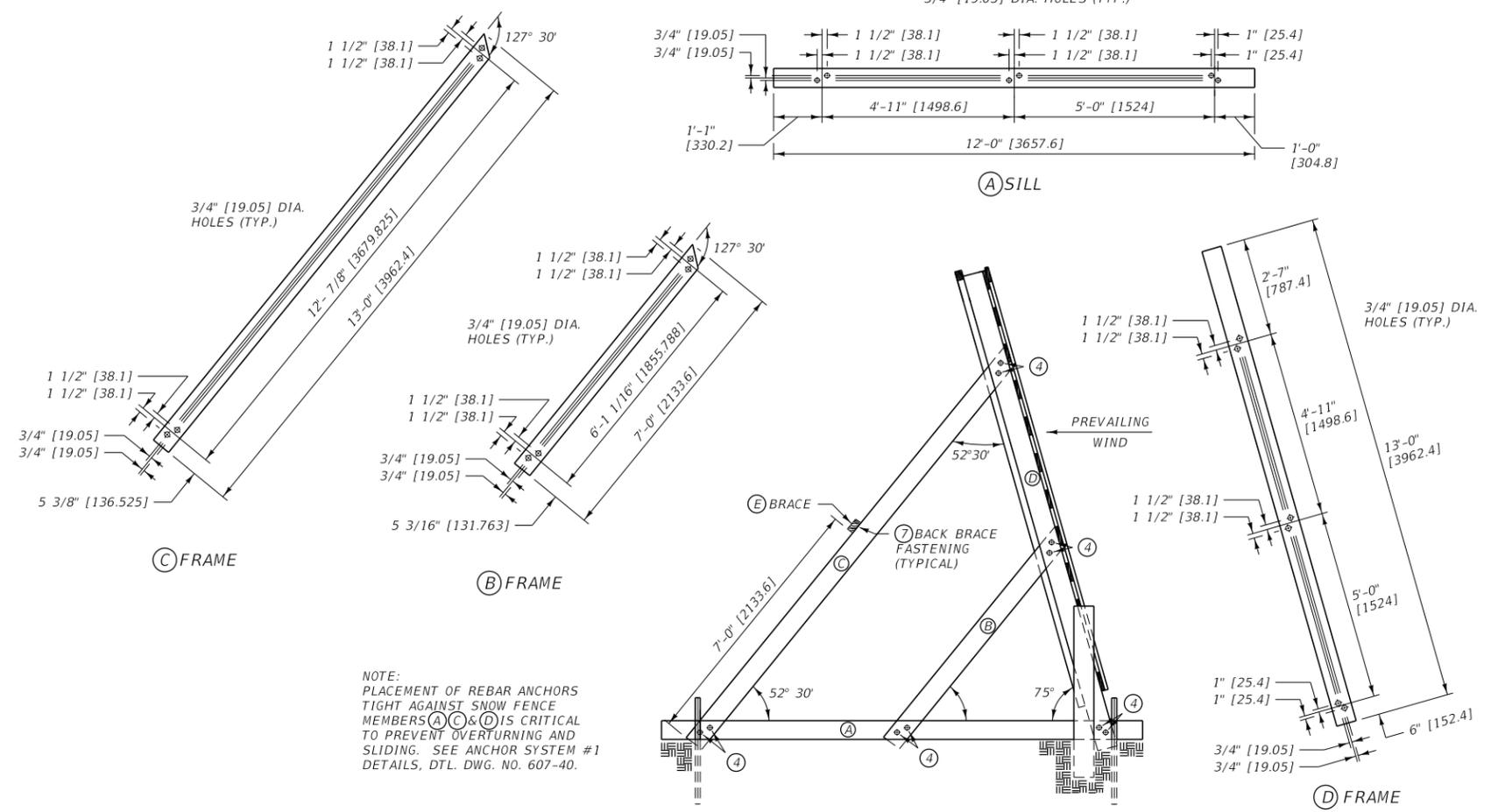
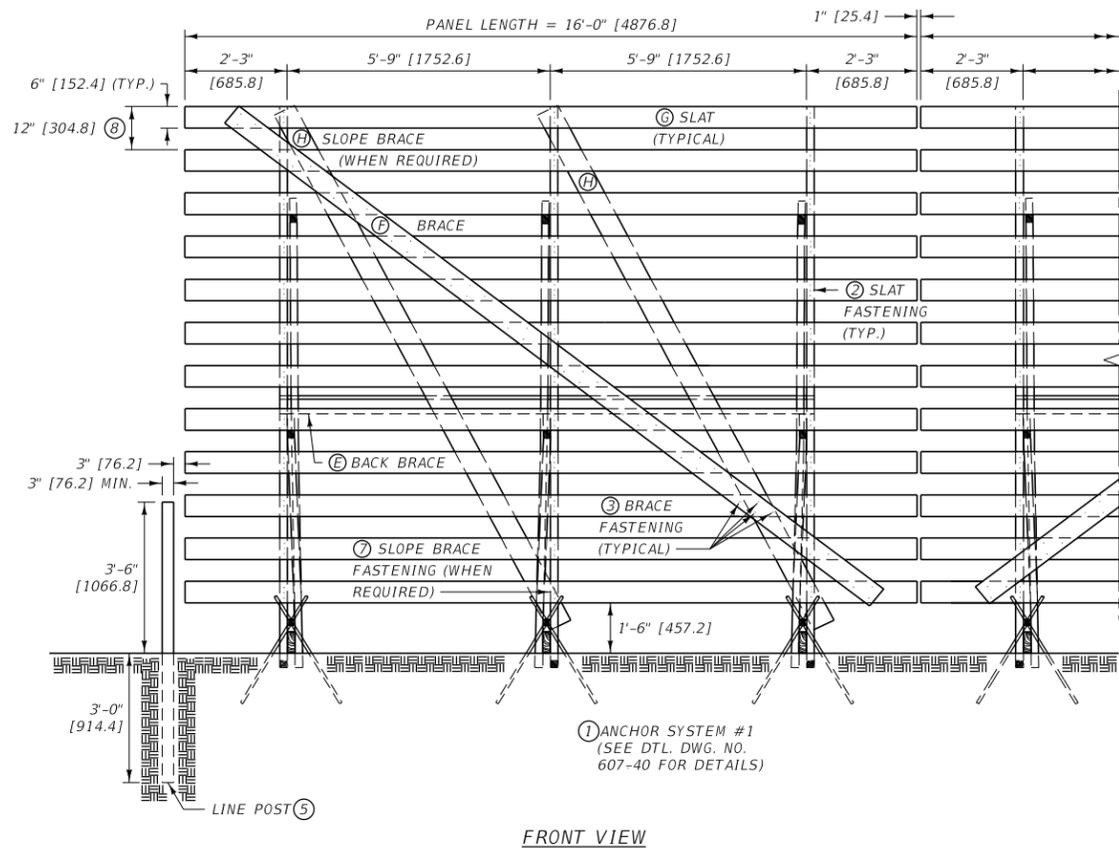
DETAILED DRAWING

REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-30
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8' [2.4 m] WOOD SNOW FENCE W/ ANCHOR SYSTEM #1

EFFECTIVE: SEPTEMBER 2014

MDTA MONTANA DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

- ① ANCHOR SYSTEM DETAIL
USE ANCHOR SYSTEM #1 UNLESS SOIL AND MOISTURE CONDITIONS NECESSITATE THE USE OF AN ALTERNATE SYSTEM, OR AS DIRECTED BY THE PROJECT MANAGER. CONSULT DETAILED DRAWING NUMBERS 607-40 AND 607-45 FOR ANCHOR SYSTEMS #3 (ROCKY CONDITIONS) AND #2 (SWAMPY CONDITIONS).
- ② SLAT FASTENING
FASTEN SLATS TO THE FRAME WITH 3 - 12d COMMON BARBED SHANK NAILS AT EACH LOCATION.
- ③ BRACE FASTENING
FASTEN BRACES TO THE FRAME WITH 4 - 8d COMMON NAILS AT EACH LOCATION AND CLINCH.
- ④ FRAME TO SILL AND FRAME TO FRAME FASTENING
FASTEN THE SILL AND FRAME MEMBERS TO THE FRAME AT EACH LOCATION WITH 2 - 5/8" DIA. x 5" [M16 x 127] STANDARD MACHINE BOLTS, EACH WITH HEX NUT AND TWO FLAT WASHERS. SEE NOTE (X) AT RIGHT.
- ⑤ LINE POSTS
PLACE LINE POSTS AT EACH END OF EACH LINE OF SNOW FENCE AS SHOWN. POSTS ARE 6'-6" [1981.2] LONG WITH A MINIMUM DIAMETER OF 3" [76.2] AND A MAXIMUM DIAMETER OF 6" [152.4]. BUTT TREAT 3' [914.4] MINIMUM.
- ⑥ WIRE TIE
USE 12 GAUGE OR HEAVIER GALVANIZED WIRE TO FORM THE WIRE TIES.
- ⑦ BACK & SLOPE BRACE FASTENING
FASTEN BACK BRACES TO THE FRAME WITH 2 - 16d NAILS, AND FASTEN THE SLOPE BRACES WITH 3 - 16d BARBED SHANK NAILS AT EACH LOCATION.
- ⑧ 12" [304.8] INCREMENT SPACING FROM TOPS OF EACH SLAT
(IE. 12" [304.8], 24" [609.6], 36" [914.4]).

LUMBER - 12' [3.6 m] SNOW FENCE W/ ANCHOR SYSTEM #1			
BILL OF MATERIALS FOR ONE PANEL			
ITEM NO.	NO. OF PIECES	LUMBER SIZE	DESCRIPTION
(A)*	3	2" x 6" x 12'-0" [50 x 150 x 3657.6]	SILL
(B)*	3	2" x 6" x 7'-0" [50 x 150 x 2133.6]	FRAME
(C)*	3	2" x 6" x 13'-0" [50 x 150 x 3962.4]	FRAME
(D)*	3	2" x 6" x 13'-0" [50 x 150 x 3962.4]	FRAME
* NOTE: PRESSURE TREAT ALL 2" x 6" [50 x 150] MEMBERS (ENTIRE FRAME)			
(E)	1	2" x 4" x 12'-0" [50 x 100 x 3657.6]	BACK BRACE
(F)	1	1" x 6" x 18'-0" [25 x 150 x 5486.4]	BRACE
(G)	12	1" x 6" x 16'-0" [25 x 150 x 4876.8]	SLAT
(H)**	2	2" x 6" x 13'-0" [50 x 150 x 3962.4]	SLOPE BRACE
** NOTE: USE ONLY WHEN SLOPE IS 5:1 OR STEEPER			

HARDWARE - 12' [3.6 m] SNOW FENCE W/ ANCHOR SYSTEM #1		
BILL OF MATERIALS FOR ONE PANEL		
QUANTITY	DESCRIPTION	
④	30	5/8" DIA. x 5" [M16 x 127] HEX BOLT (THREADED FULL LENGTH) AND NUT
④	60	FLAT WASHER FOR 5/8" DIA. [M16] BOLT
③	1/2 LB. [0.23 kg]	8d COMMON NAILS
②	1 2/3 LB. [0.76 kg]	12d COMMON BARBED SHANK NAILS
⑦	1/2 LB. [0.23 kg]	16d COMMON BARBED SHANK NAILS
①	12	#6 REBAR x 5'-0" [#19 x 1524]
⑥	6 PIECES	12 GAUGE TIE WIRE x 5'-0" [1524.0] ±

(X) NOTE:
AFTER 5/8" [M16] DIA. BOLTS HAVE BEEN TIGHTENED, BURR THE THREAD DIRECTLY BEHIND THE NUT TO PREVENT EVENTUAL LOOSENING OF THE NUTS.

ALL NAILS MAY BE EITHER HAND DRIVEN OR DRIVEN WITH A PNEUMATIC NAILER.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWING

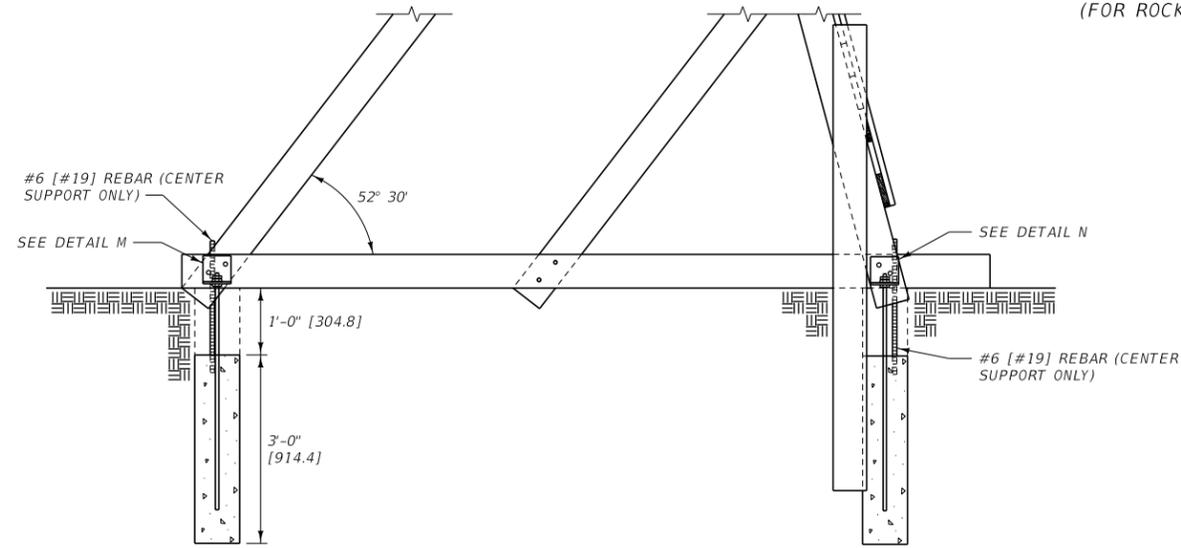
REFERENCE DWG. NO.
STANDARD SPEC. 607-35
SECTION 607

12' [3.6 m] WOOD SNOW FENCE W/ ANCHOR SYSTEM #1

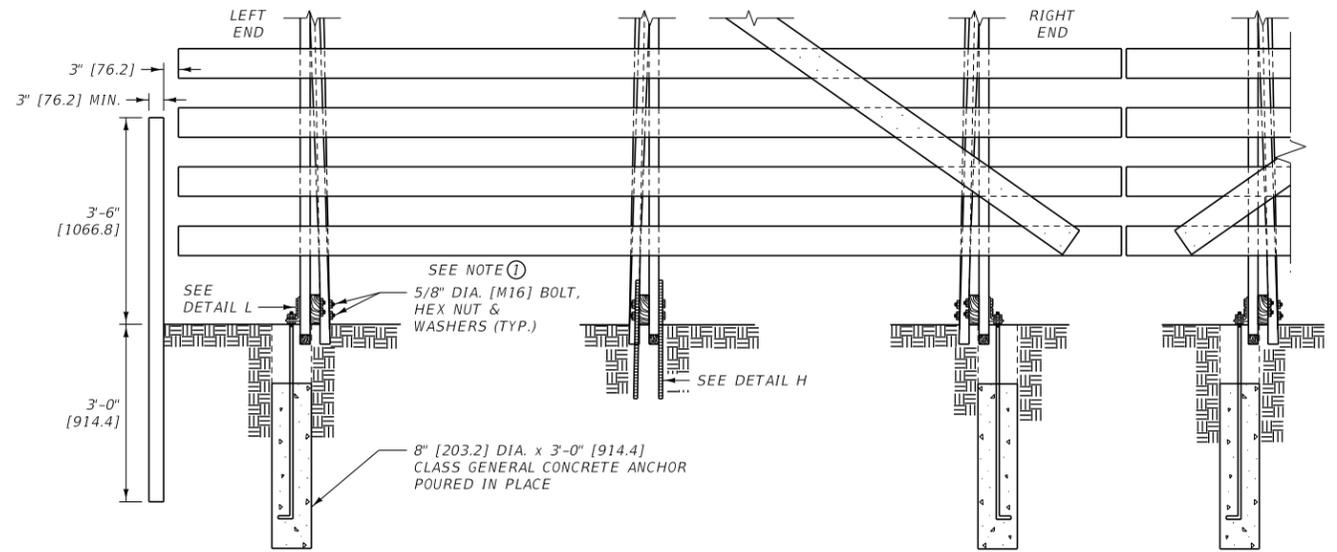
EFFECTIVE: SEPTEMBER 2014

MDTA MONTANA DEPARTMENT OF TRANSPORTATION

ANCHOR SYSTEM #3
(FOR ROCKY CONDITIONS)



LEFT END VIEW



FRONT VIEW

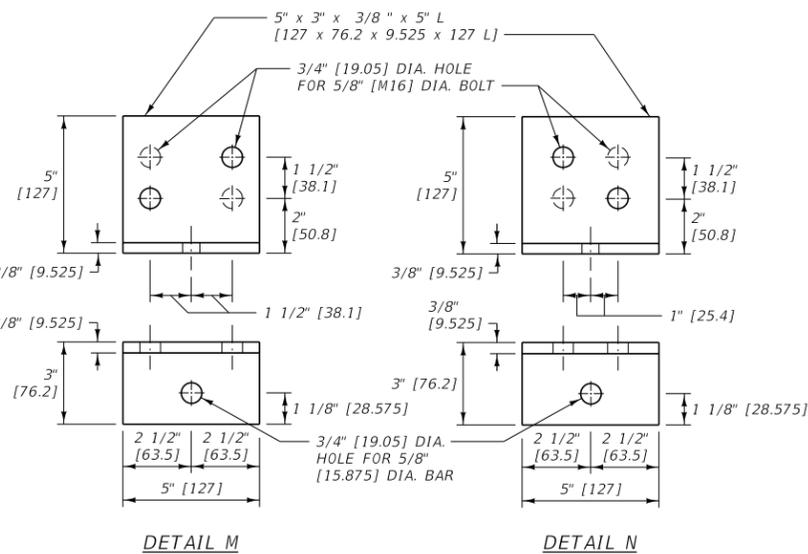
NOTE:
HOLES SHOWN IN DETAILS BELOW ARE FOR LEFT END OF FENCE.
HOLES SHOWN HIDDEN ARE FOR RIGHT END OF FENCE.

LUMBER - SNOW FENCE W/ ANCHOR SYSTEM #3	
BILL OF MATERIALS FOR ONE PANEL	
SAME AS FOR SNOW FENCE W/ ANCHOR SYSTEM #1	

HARDWARE - SNOW FENCE W/ ANCHOR SYSTEM #3	
BILL OF MATERIALS FOR ONE PANEL	
QUANTITY	DESCRIPTION
4	5" x 3" x 3/8" x 5" L [127 x 76.2 x 9.525 x 127.0 L]
4	5/8" DIA. x 4'-0" [M16 x 1219.2] BAR W/ 3 HEX NUTS
4	FLAT WASHERS FOR 5/8" [16] DIA. BAR
0.16 C.Y. [0.122 m ³]	CLASS GENERAL CONCRETE
4	#6 [#19] REBAR x 2'-0" [609.6] (3/4" [19.05] DIA.)
4 PIECES	12 GAUGE TIE WIRE x 2'-0" [609.6] ±
30	5/8" DIA. x 5" [M16 x 127] HEX BOLT (THREADED FULL LENGTH) AND NUT
60	FLAT WASHERS FOR 5/8" [M16] DIA. BOLT
NOTE: NAILS REQUIRED ARE SAME AS SHOWN ON HARDWARE SUMMARY FOR SNOW FENCE W/ ANCHOR SYSTEM #1	

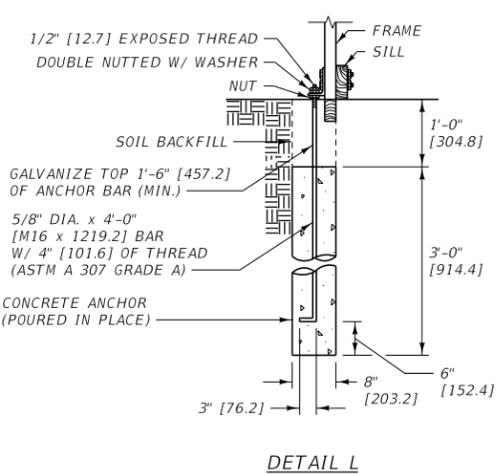
SEE NOTE ① BELOW

NOTE:
① AFTER 5/8" [M16] DIA. BOLTS HAVE BEEN TIGHTENED, BURR THE THREAD DIRECTLY BEHIND THE NUT TO PREVENT EVENTUAL LOOSENING OF THE NUTS.

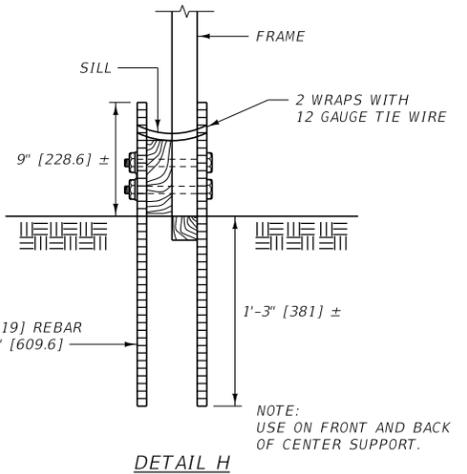


DETAIL M

DETAIL N



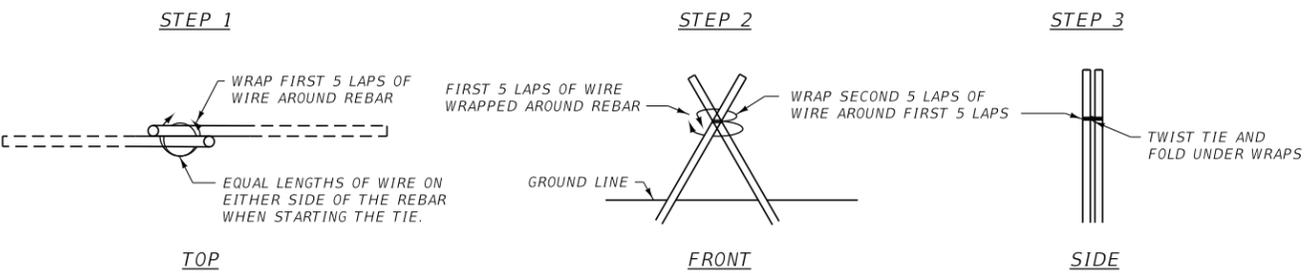
DETAIL L



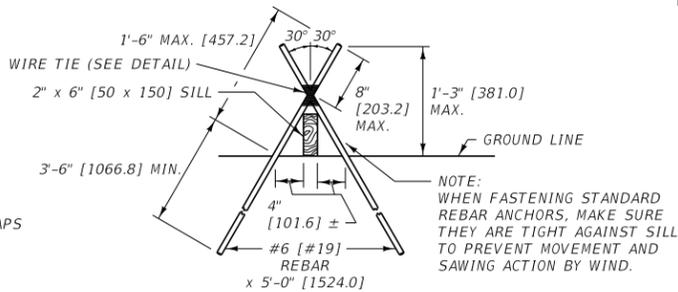
DETAIL H

NOTE:
USE ON FRONT AND BACK OF CENTER SUPPORT.

ANCHOR SYSTEM #1
(STANDARD)



WIRE TIE DETAIL
USE 12 GAUGE OR HEAVIER GALVANIZED WIRE TO FORM THE WIRE TIES.



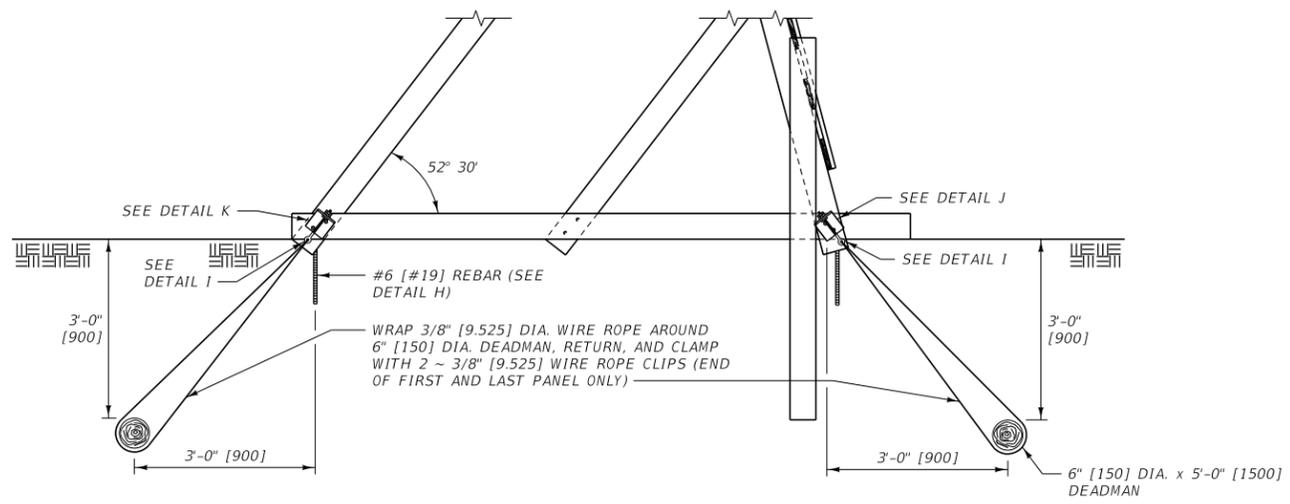
STANDARD ANCHOR DETAIL

USE TWO #6 [#19] REINFORCING BARS FOR EACH END OF EACH SILL MEMBER. DRIVE THE BARS UP TIGHT TO THE FRAME TO PREVENT SLIDING. TIE THE REINFORCING BARS AS SHOWN IN THE WIRE TIE DETAIL. THE PLACEMENT OF THE ANCHORS IS CRITICAL IN PREVENTING OVERTURNING AND SLIDING OF THE FENCE. REFERENCE DETAIL DRAWING 607-35 FOR MORE DETAILS.

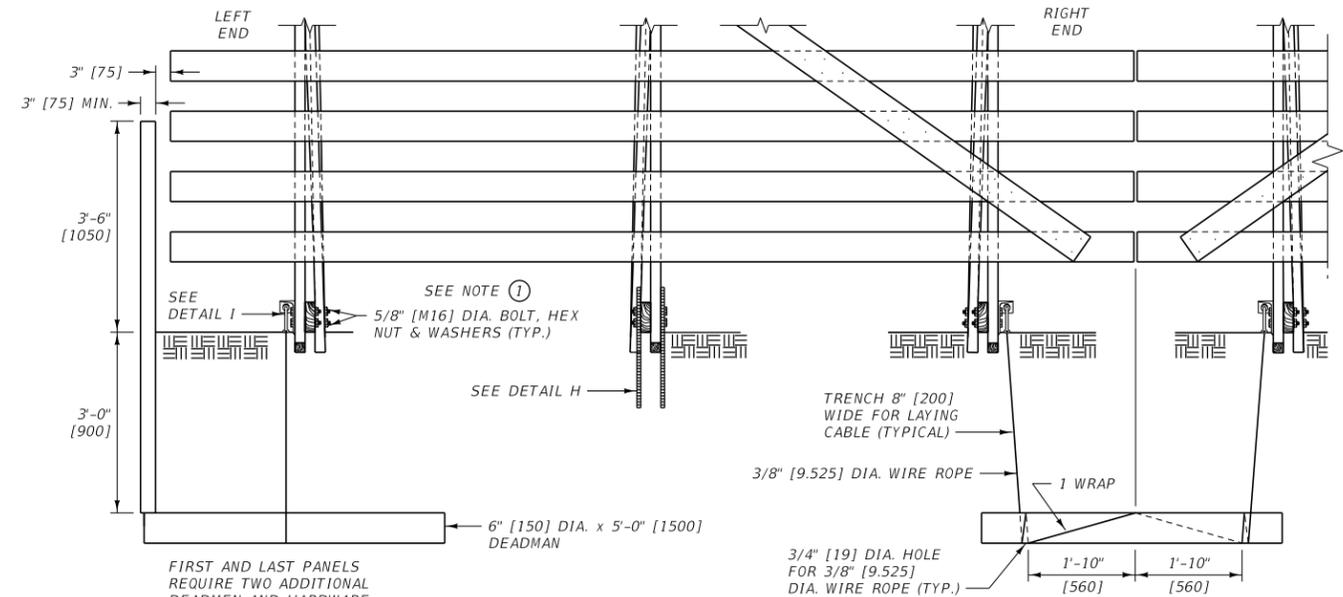
DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-40
WOOD SNOW FENCE ANCHOR SYSTEM #3 AND #1 DETAILS	
EFFECTIVE: SEPTEMBER 2014	
MONTANA DEPARTMENT OF TRANSPORTATION	

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

ANCHOR SYSTEM #2
(FOR SWAMPY CONDITIONS)

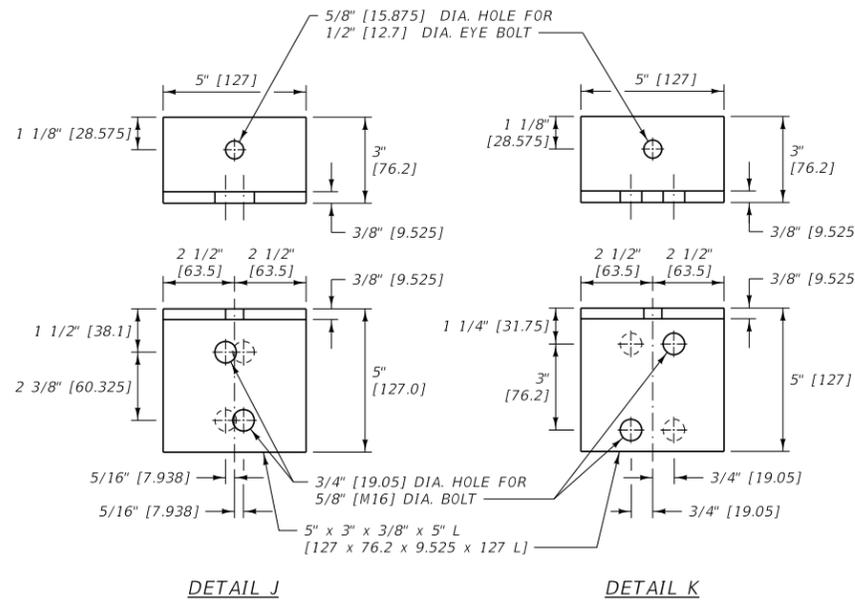


LEFT END VIEW

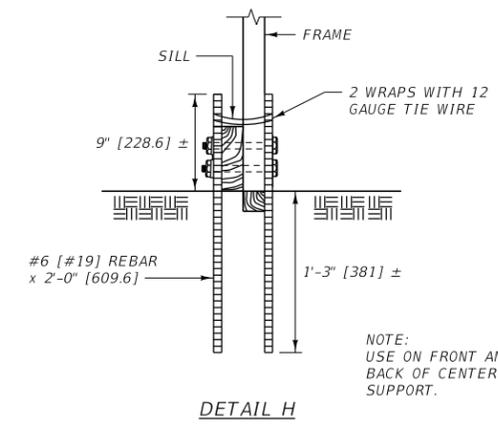


FRONT VIEW

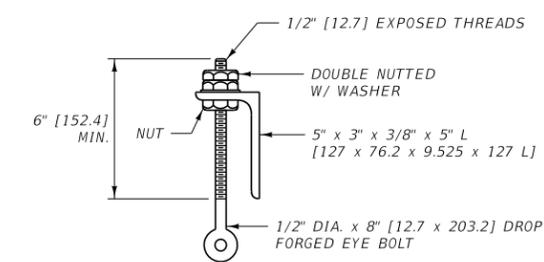
NOTE:
HOLES SHOWN IN DETAILS BELOW ARE FOR LEFT END OF FENCE.
HOLES SHOWN HIDDEN ARE FOR RIGHT END OF FENCE.



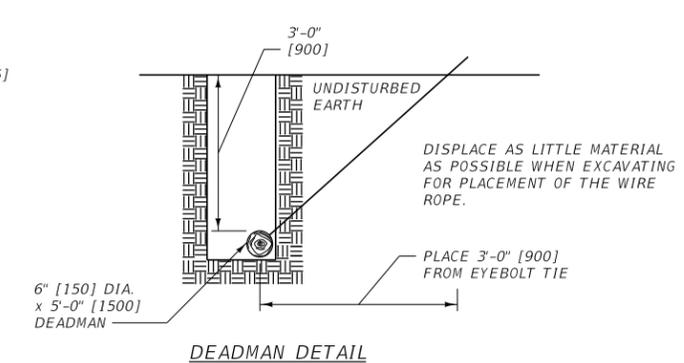
NOTE:
AFTER 5/8" [M16] DIA. BOLTS
HAVE BEEN TIGHTENED, BURR
THE THREAD DIRECTLY BEHIND
THE NUT TO PREVENT EVENTUAL
LOOSENING OF THE NUTS.



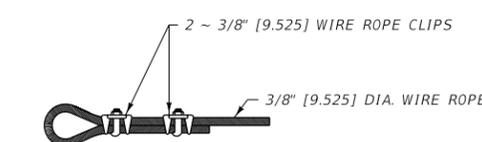
DETAIL H



DETAIL I



DEADMAN DETAIL



WIRE ROPE CONNECTION

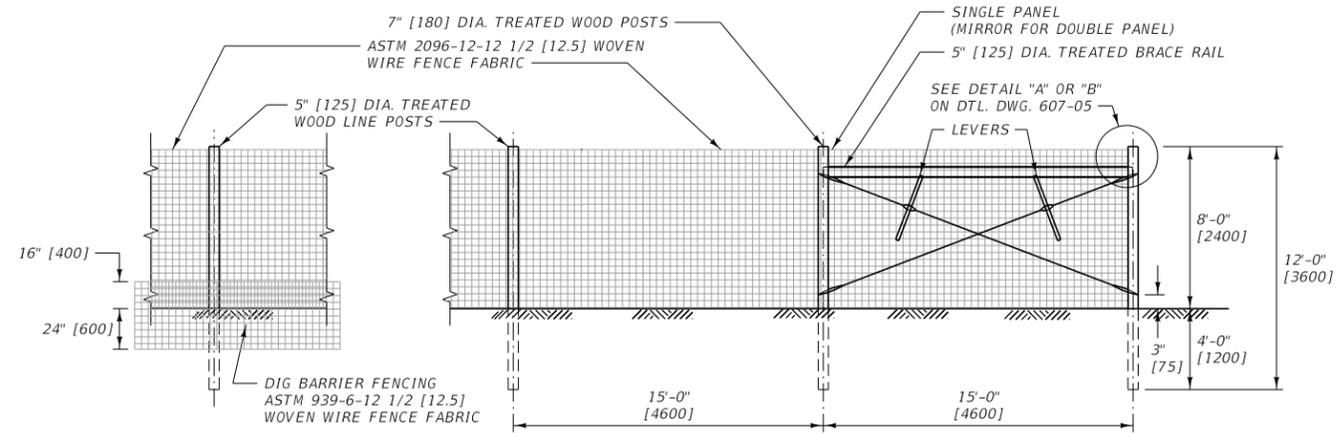
LUMBER - SNOW FENCE W/ ANCHOR SYSTEM #2	
BILL OF MATERIALS FOR ONE PANEL	
SAME AS FOR SNOW FENCE W/ ANCHOR SYSTEM #1	

HARDWARE - SNOW FENCE W/ ANCHOR SYSTEM #2	
BILL OF MATERIALS FOR ONE 12' [3.6m] PANEL	
QUANTITY	DESCRIPTION
4	5" x 3" x 3/8" x 5" L [127 x 76.2 x 9.525 x 127 L]
8	3/8" [9.525] WIRE CLIPS
4	1/2" [12.7] DIA. DROP FORGED EYEBOLTS W/ 3 HEX NUTS
4	FLAT WASHERS FOR 1/2" [12.7] DIA. EYEBOLTS
4	#6 [#19] REBAR x 2'-0" [609.6] (3/4" [19.05] DIA.)
4 PIECES	12 GAUGE TIE WIRE x 2'-0" [609.6]±
30 FT. [8839.2]	3/8" [9.525] DIA. WIRE ROPE
2	6" [150] DIA. x 5'-0" [1500] POST DEADMEN
30	5/8" DIA. x 5" [M16 x 127] HEX BOLT (THREADED FULL LENGTH) AND NUT
60	FLAT WASHERS FOR 5/8" [M16] BOLT

NOTE: NAILS REQUIRED ARE SAME AS SHOWN ON HARDWARE SUMMARY FOR SNOW FENCE W/ ANCHOR SYSTEM #1

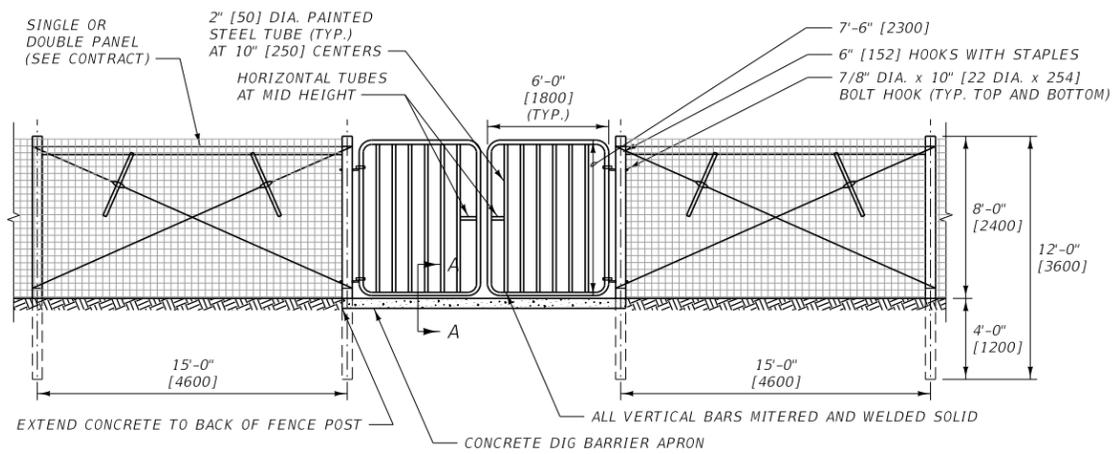
UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-45
WOOD SNOW FENCE ANCHOR SYSTEM #2 DETAILS	
EFFECTIVE: SEPTEMBER 2014	
MDTA	MONTANA DEPARTMENT OF TRANSPORTATION

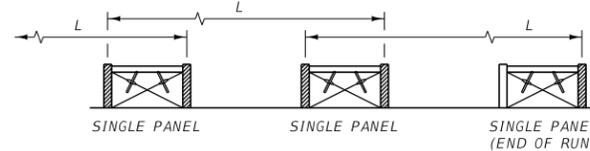


WILDLIFE FENCE W/ DIG BARRIER
PANELS NOT SHOWN

WILDLIFE FENCE

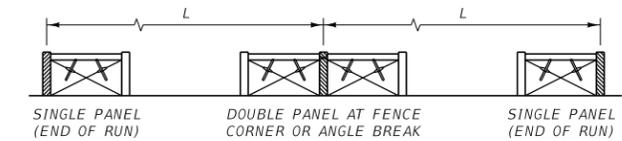


METAL MAINTENANCE ACCESS GATE
CHAIN AND LOCK TO BE SUPPLIED BY MDT FORCES



FENCE TYPE	RUN = L	PANELS REQUIRED
WILDLIFE	LESS THAN 30' [9.2 m]	NONE
	30'-330' [9.2 m - 101.2 m]	SINGLE

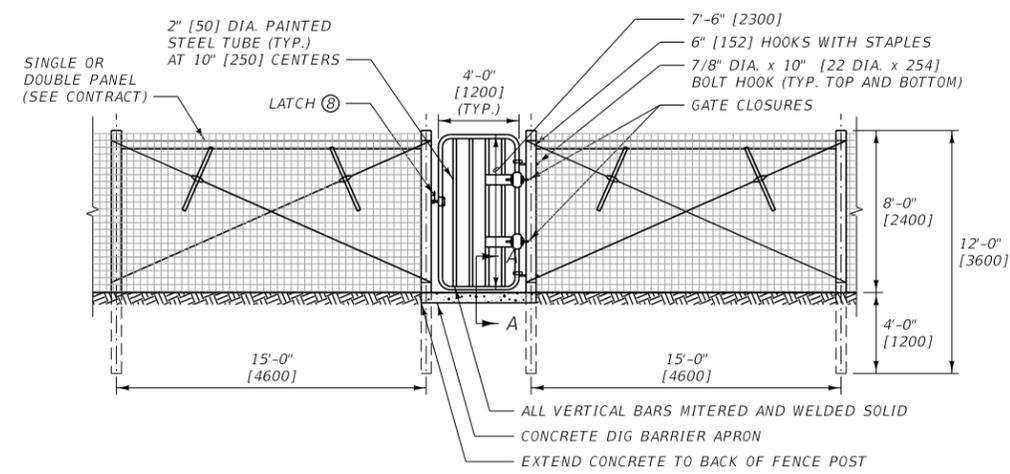
NOTE:
TIE OFF ON ALL CROSS HATCHED OR SHADED POSTS.



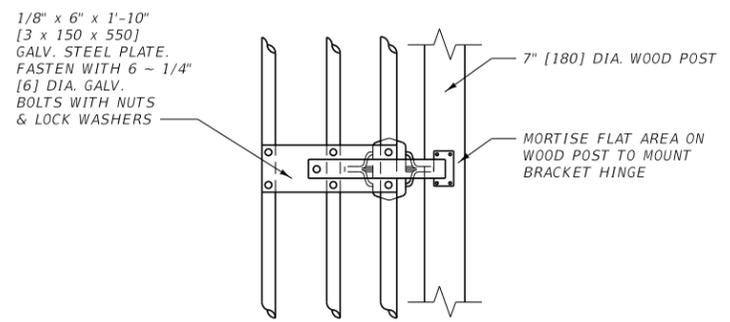
FENCE PANEL TYPES



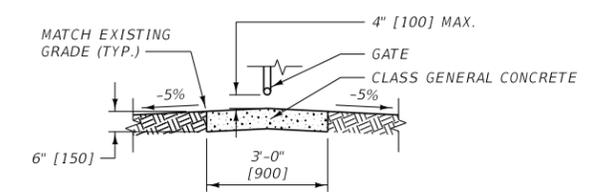
- NOTES:
- PLACE ALL FENCE WIRE ON PASTURE SIDE OF POST, EXCEPT ON CURVES. THEN, PLACE THE WIRE ON THE OUTSIDE OF THE CURVE.
 - POST SPACING IS GENERALLY MEASURED PARALLEL TO GROUND.
 - LINE POST SPACING IS 15'-0" [4600] CENTER TO CENTER. LINE POST SPACING FROM BRACE OR PANEL POST IS 15'-0" [4600] CENTER TO CENTER.
 - TO ATTACH WOVEN WIRE TO AN END POST, REMOVE TWO OR THREE VERTICAL STAY WIRES FROM THE END OF THE FENCE. PLACE THE FIRST COMPLETE VERTICAL STAY WIRE AGAINST THE POST. START AT THE MIDDLE OF THE HORIZONTAL LINE WIRES, WRAPPING AROUND THE END POST AT LEAST TWO TIMES AND THEN WRAPPING AROUND ITSELF FIVE TIMES.
 - A DEADMAN MAY BE A PRECAST CONCRETE BLOCK, A CAST IN PLACE CONCRETE BLOCK, A ROCK OR OTHER APPROVED OBJECT WEIGHING AT LEAST 260 LB. [120 kg] BURY THE DEADMAN IN THE GROUND WITH AT LEAST 2'-0" [600] OF COVER. ATTACH THE DEADMAN TO THE FENCE WITH 3 STRANDS OF 9 GAUGE WIRE OR 6 STRANDS OF 12 1/2 [12.5] GAUGE WIRE. SEE DTL. DWG. NO. 607-10 FOR ALTERNATE DEADMAN.
 - STAPLE THE BOTTOM, TOP, CENTER AND ALTERNATE WIRES OF WOVEN WIRE TO WOOD LINE POSTS.
 - STAPLE ALL WIRES OF WOVEN WIRE TO WOOD CORNER POSTS OR POST USED TO TIE-OFF WIRE.
 - PROVIDE LATCH THAT ALLOWS FOR ONE HANDED OPERATION. RELEASES TO ALLOW GATE TO SWING IN EITHER DIRECTION AND CAN BE LOCKED.



METAL EQUINE GATE



TIE BAR MOUNTING DETAIL FOR GATE CLOSERS



SECTION A-A
CENTER CONCRETE DIG BARRIER APRON UNDER CLOSED GATE

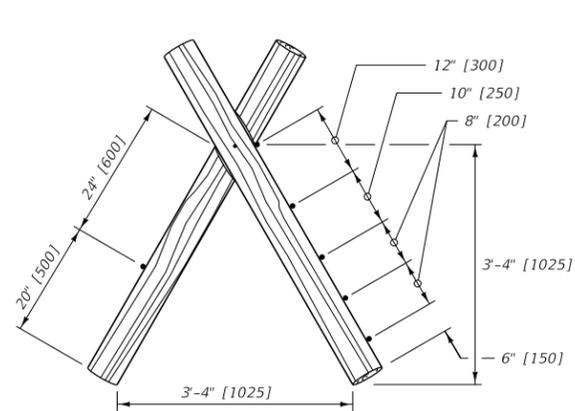
UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-50

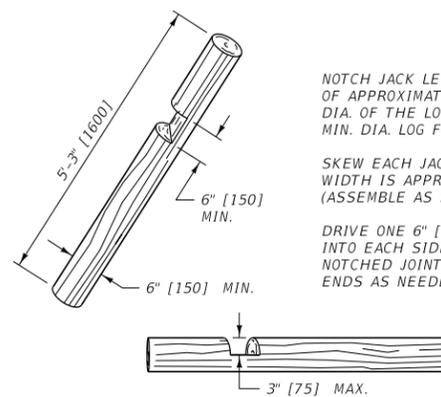
WILDLIFE FENCE

EFFECTIVE: SEPTEMBER 2014





JACK AND WIRE ASSEMBLY

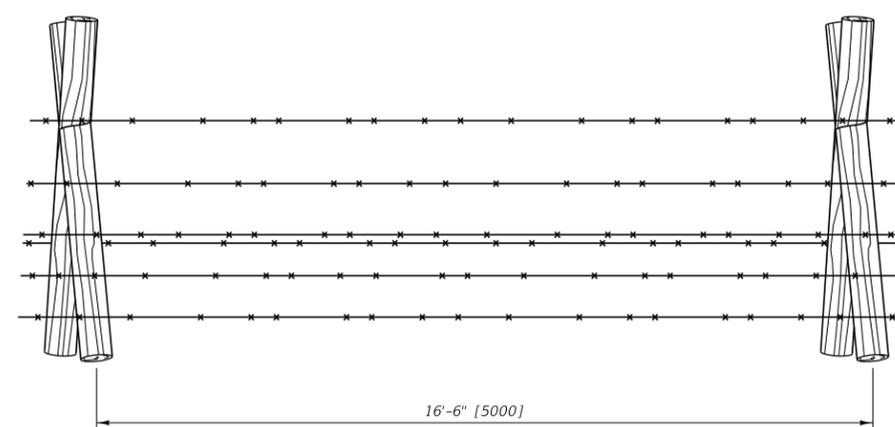


JACK LEG NOTCHING

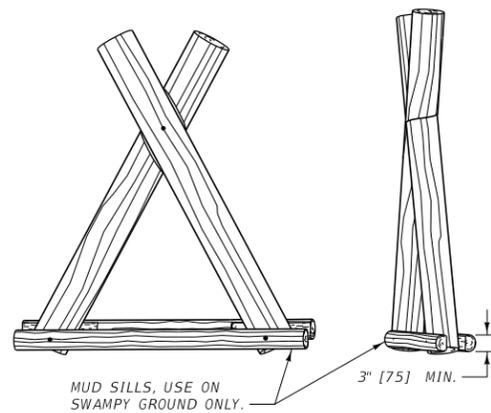
NOTCH JACK LEGS TO A DEPTH OF APPROXIMATELY ONE-HALF THE DIA. OF THE LOG. PROVIDE 6" [150] MIN. DIA. LOG FOR JACK LEG.

SKEW EACH JACK NOTCH AND ENSURE WIDTH IS APPROX. EQUAL TO LOG DIA. (ASSEMBLE AS SHOWN)

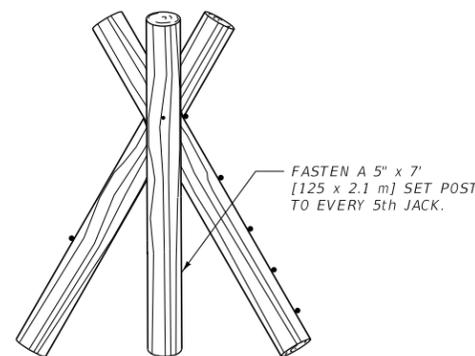
DRIVE ONE 6" [150] RINGED NAIL INTO EACH SIDE OF THE JACK THROUGH NOTCHED JOINT. CLINCH PROTRUDING NAIL ENDS AS NEEDED.



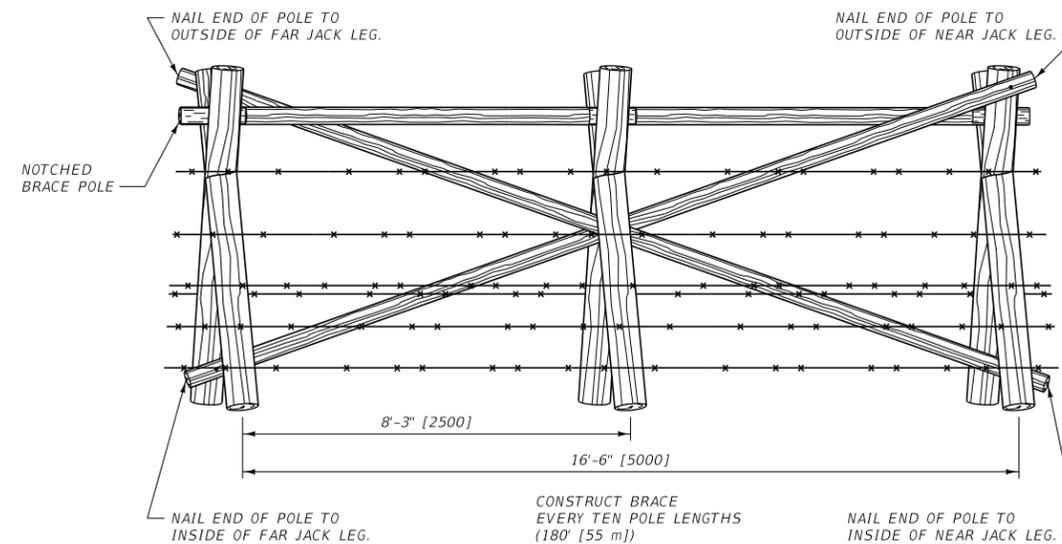
LINE JACK SPACING



MUD SILL

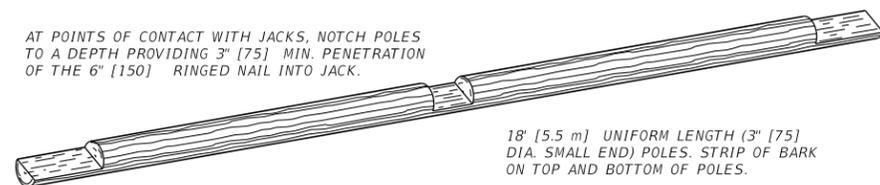


SET POST BRACE



BRACED PANEL

AT POINTS OF CONTACT WITH JACKS, NOTCH POLES TO A DEPTH PROVIDING 3" [75] MIN. PENETRATION OF THE 6" [150] RINGED NAIL INTO JACK.

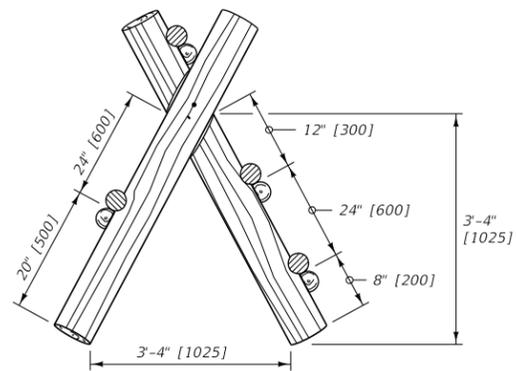


BRACE POLE NOTCHING

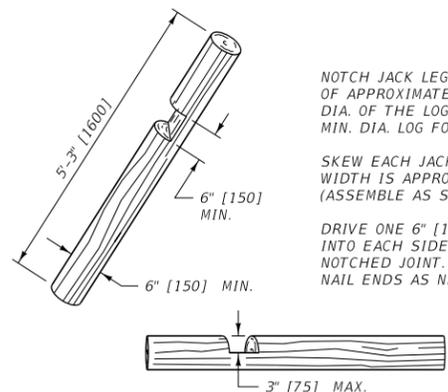
NOTE: ALL POLES, POSTS, RAILS, OR WOOD ITEMS WILL BE TREATED.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-55
JACKLEG WIRE FENCE	
EFFECTIVE: SEPTEMBER 2014	
MONTANA DEPARTMENT OF TRANSPORTATION	



JACK AND POLE ASSEMBLY

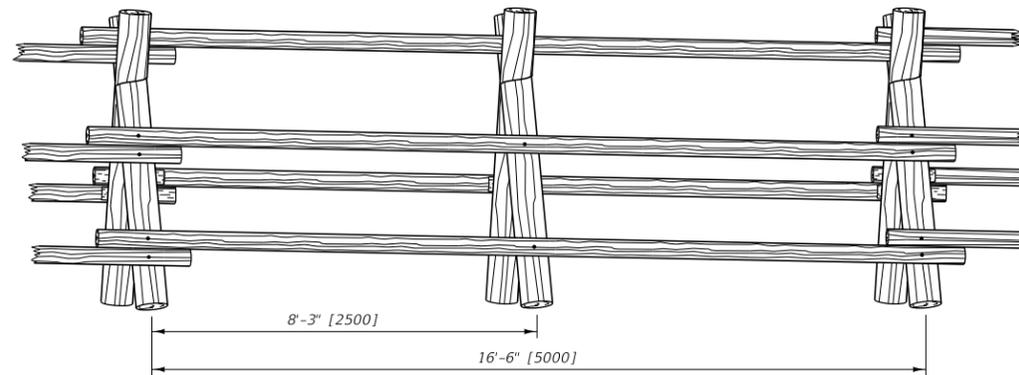


JACK LEG NOTCHING

NOTCH JACK LEGS TO A DEPTH OF APPROXIMATELY ONE-HALF THE DIA. OF THE LOG. PROVIDE 6" [150] MIN. DIA. LOG FOR JACK LEG.

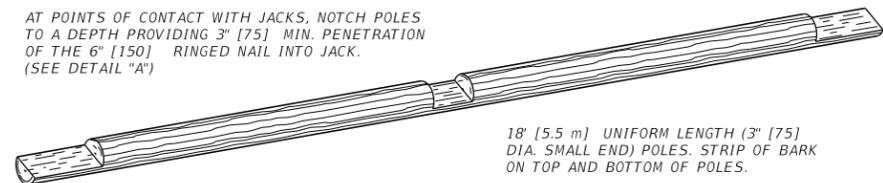
SKEW EACH JACK NOTCH AND ENSURE WIDTH IS APPROX. EQUAL TO LOG DIA. (ASSEMBLE AS SHOWN)

DRIVE ONE 6" [150] RINGED NAIL INTO EACH SIDE OF THE JACK THROUGH NOTCHED JOINT. CLINCH PROTRUDING NAIL ENDS AS NEEDED.



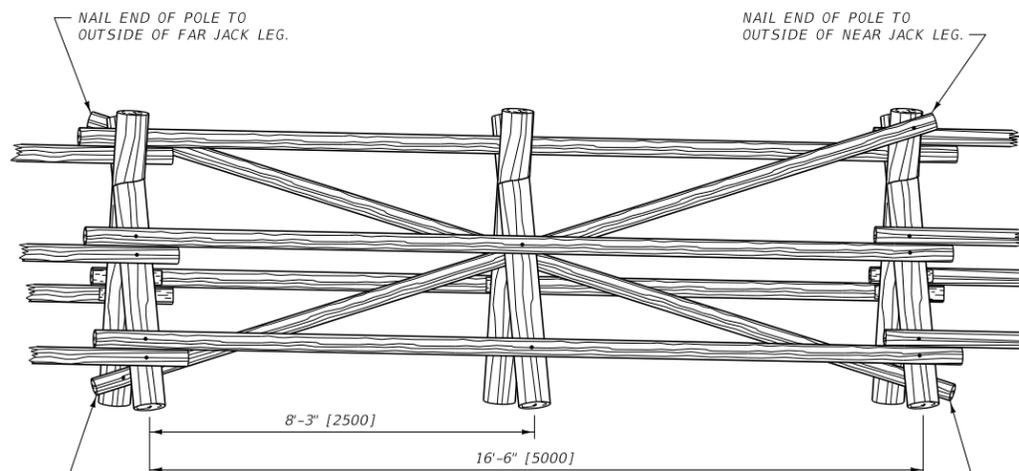
LINE JACK SPACING

AT POINTS OF CONTACT WITH JACKS, NOTCH POLES TO A DEPTH PROVIDING 3" [75] MIN. PENETRATION OF THE 6" [150] RINGED NAIL INTO JACK. (SEE DETAIL "A")



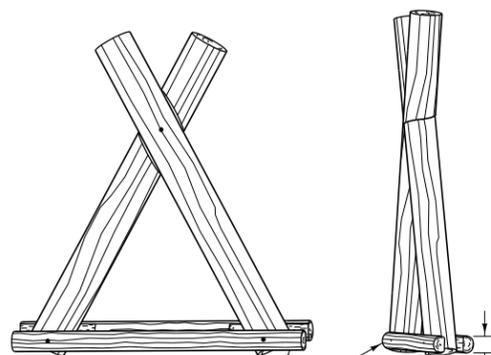
POLE NOTCHING

18' [5.5 m] UNIFORM LENGTH (3" [75] DIA. SMALL END) POLES. STRIP OF BARK ON TOP AND BOTTOM OF POLES.



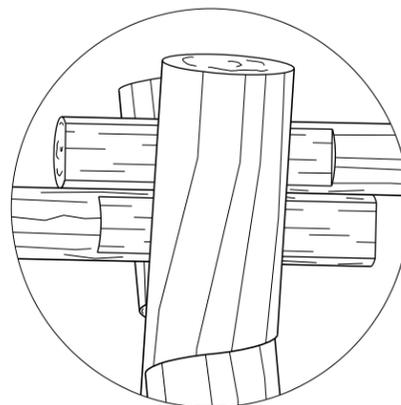
BRACED PANEL

CONSTRUCT BRACE EVERY TEN POLE LENGTHS (180' [55 m])



MUD SILLS, USE ON SWAMPY GROUND ONLY.

MUD SILL



TYPICAL POLE NOTCHING AT JACK

DETAIL "A"

NOTE: ALL POLES, POSTS, RAILS, OR WOOD ITEMS WILL BE TREATED.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWING	
REFERENCE STANDARD SPEC. SECTION 607	DWG. NO. 607-60

JACKLEG POLE FENCE

EFFECTIVE: SEPTEMBER 2014

