

ISOMETRIC VIEW  
NOT TO SCALE

CONSTRUCTION INSPECTION ITEMS FOR THIS DESIGN ARE CONTAINED IN "GUIDE FOR DESIGN AND CONSTRUCTION OF CONSERVATION PRACTICES"

FASTENERS	- BOLTS, LAGS	$f_u=45,000$ PSI MIN. (ANSI/ASME B18.2.1) ASTM A307 GRADE A OR SAE J429 GRADE 4
	- RING SHANK NAILS	$f_u=115,000$ PSI MIN. ASTM F1667-05 FOR ENGINEERED CONSTRUCTION
	-COMMON NAILS	$f_u=90,000$ PSI MIN. ASTM F1667-05 FOR ENGINEERED CONSTRUCTION

ALL NAILS SHALL BE HOT DIP GALVANIZED - MEETING ASTM A153-09 CLASS D  
ALL BOLTS, LAGS, NUTS & WASHERS - MEETING ASTM A153-09 CLASS C (OR ASTM F2329-05)

### ESTIMATED FASTENER QUANTITIES

DESCRIPTION	LENGTH	TREATMENT	TOTAL QTY
1) 0.177" (7 ga.) RING SHANK NAIL OR STRUCTURAL SCREW	4" MIN.	HOT DIP GALV.	1210

### ESTIMATED CONCRETE QUANTITIES

DESCRIPTION	CONCRETE QTY PER POST	NUMBER	TOTAL QUANTITY
CONCRETE-MAIN POST	1.0 CY	22	22 CY
CONCRETE-INTERMEDIATE	0.3 CY	30	9 CY

### Forces @ Top of 8' High Post

	Horizontal (kips)	Vertical (kips)	Moment (in-kips)
<b>Windward Side</b>			
Dead	0.2	-0.46	-8.4
Collateral	0.02	-0.05	-0.72
Roof Live Load	1.09	-2.47	-46.84
Balanced Snow Load	2.62	-4.68	-108.42
Unbalanced Snow	-1.71	-4.75	106.26
Wind Perp +CP +IP(3)	-1.79	3.25	60.14
Wind Perp -CP +IP(3)	-1.79	3.25	60.14
Wind Perp +CP -IP(3)	-2.29	-0.14	97.24
Wind Perp -CP -IP(3)	-2.29	-0.14	97.24
Wind Par +IP(3)	0.5	3.85	-46.3
Wind Par -IP(3)	-0.02	0.48	-0.48
End Wall Wind Post			
<b>Leeward Side</b>			
Dead	-0.2	-0.46	8.4
Collateral	-0.02	-0.05	0.72
Roof Live Load	-1.09	-2.47	46.84
Balanced Snow Load	-2.62	-4.67	108.42
Unbalanced Snow	-1.71	-4.75	106.26
Wind Perp +CP +IP(3)	-0.31	3.42	8.46
Wind Perp -CP +IP(3)	-0.31	3.42	8.46
Wind Perp +CP -IP(3)	-0.49	0.06	28.94
Wind Perp -CP -IP(3)	-0.49	0.06	28.94
Wind Par +IP(3)	0.02	3.85	-3.62
Wind Par -IP(3)	0.02	0.48	0.48
End Wall Wind Post			

### DESIGN ASSUMPTIONS

GROUND SNOW LOAD: 60 PSF  
 IMPORTANCE FACTOR: 0.8  
 EXPOSURE CATEGORY: 0.9 FULLY EXPOSED

BASIC WIND SPEED: 90 MPH  
 BUILDING TYPE: ENCLOSED  
 IMPORTANCE FACTOR: 0.87  
 EXPOSURE CATEGORY: "C" (OPEN TERRAIN W/ SCATTERED OBSTRUCTIONS)

BEDDED PACK MANURE: 60 PCF EFP (MAX. 48" HIGH)

MIN. REQUIRED SOIL BEARING: 3000 PSF (SILTY SAND SOILS)  
 MIN. LATERAL SOIL PRESSURE: 200 PSF (SILTY SAND SOILS)

### CONSTRUCTION NOTES

- VERIFY ALL DIMENSIONS WITH HOOP STRUCTURE SUPPLIER. HOOP STRUCTURE AND ATTACHMENT TO THE POST SHALL BE THE RESPONSIBILITY OF THE HOOP STRUCTURE SUPPLIER.
- GLULAM POSTS SHALL HAVE EITHER AN AITC OR APA CERTIFICATION STAMP AND SHALL HAVE AN AWP A PRESSURE TREATMENT CERTIFICATION STAMP.
- POST FOUNDATIONS SHALL EITHER BE CAST AGAINST ORIGINAL GROUND OR SHALL BE BACKFILLED WITH CLEAN STONE, >5 %, OR CLSM (FLOWABLE FILL. SEE SHEET 2 AND 3).
- MAIN POSTS SHALL BE PRESSURE TREATED TO THE TOP OF THE BEDDED PACK PLANKS AS A MINIMUM.
- ALL CONCRETE FORMWORK & REINFORCEMENT SHALL BE INSPECTED BY A REPRESENTATIVE OF THE NRCS PRIOR TO THE PLACEMENT OF CONCRETE. A MINIMUM OF 1 DAYS NOTICE IS REQUIRED.
- ALL CONCRETE & REINFORCING SHALL BE INSTALLED ACCORDING TO NRCS CONSTRUCTION SPECIFICATION #31, "CONCRETE & STEEL REINFORCEMENT". CONCRETE SHALL BE DELIVERED BY READY MIX METHODS, MEETING ASTM C94.
- ALL REINFORCING STEEL SHALL BE GRADE 60.
- ALL REINFORCING SHALL BE IN PLACE PRIOR TO CONCRETE PLACEMENT. (NO PLUNKING)
- ALL REINFORCING SHALL HAVE THE MINIMUM CLEAR COVER AS SHOWN ON THE DRAWINGS.
- ALL CONCRETE SHALL BE AN NRCS APPROVED MIX, WITH 5 TO 7 PERCENT AIR CONTENT AND PLACED AT A SLUMP BETWEEN 3 TO 5 INCHES. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE 28 DAY STRENGTH OF 3000 PSI. CONCRETE MIX DESIGN SHALL BE THE RESPONSIBILITY OF THE SUPPLIER IN ACCORDANCE WITH ASTM C94 SECTION 6.5 OPTION C.
- CONCRETE SHALL BE DISCHARGED WITHIN 90 MINUTES OF THE CEMENT BEING ADDED TO THE MIX. OTHERWISE A SET RETARDING ADMIXTURE SHALL BE USED. DRY MIXING WILL NOT BE ALLOWED.
- ALL BACKFILLING SHALL BE IN ACCORDANCE WITH VT NRCS CONSTRUCTION SPECIFICATION #11, "EARTHWORK".
- ASSEMBLY OF THE HOOP STRUCTURE TO THE THE POSTS SHALL NOT COMMENCE UNTIL 3 DAYS AFTER LAST POST CONCRETE FOUNDATION PLACEMENT.
- BEDDED PACK PLANKS MUST SPAN TWO POSTS OR TWICE THE CLEAR SPAN LISTED IN THE TABLE BELOW.

### WOOD TREATMENT SPECIFICATION

- ALL PRESSURE TREATED POSTS SHALL BE TREATED WITH A MIN. OF 0.60 PCF OF CCA OR 0.13 PCF OF CuN (COPPER NAPHTHENATE) MEETING AWP A U1 STANDARD FOR USE CATEGORY UC4C. OTHER PRESERVATIVES MEETING AWP A STANDARD U1, USE CATEGORY UC4C ARE ACCEPTABLE.
- ALL PRESSURE TREATED LUMBER, NOT IN DIRECT GROUND CONTACT, SHALL BE TREATED WITH A MIN. OF 0.40 PCF OF CCA OR 0.06 PCF OF CuN (COPPER NAPHTHENATE) MEETING AWP A U1 STANDARD FOR USE CATEGORY UC4A. OTHER PRESERVATIVES MEETING AWP A STANDARD U1, USE CATEGORY UC4A ARE ACCEPTABLE.

### MEMBER LIST

DESCRIPTION	TREATMENT	MEMBER	LENGTH	TOTAL QTY	LENGTH	SPECIES AND GRADE
MAIN ROOF POST	PARTIAL PT	6 3/4" x 9 5/8"	14'	22	308'	GLULAM 26F-V4 SP/SP, 7 PLY
BEDDED PACK POST	PT	6x6	10'	30	300'	SOUTHERN YELLOW PINE (SYP) #2 OR BETTER
BEDDED PACK PLANK	-	SEE TABLE	-	-	1392'	SEE TABLE BELOW
STEEL GATE	-	-	16'	2	32'	-

### BEDDED PACK PLANKS

CLEAR SPAN	DIMENSION	SPECIES	GRADE
4'	2x8FS	EASTERN HEMLOCK	CLEAR
4'	3x8	SOUTHERN PINE	#2 OR BETTER
8'	3.5x8FS	EASTERN HEMLOCK	CLEAR
8'	4x8	SOUTHERN PINE	#2 OR BETTER

\*\*NOTE - PLANKS MUST SPAN AT LEAST TWO POSTS (TWICE CLEAR SPAN LISTED ABOVE)

### OPTIONAL MAIN POST SIZES

ACTUAL DIMENSION	SPECIES	COMMERCIAL GRADE
6 3/4" x 9 5/8"	SOUTHERN PINE	30F-E2 SP/SP, 7 PLY
6 3/4" x 11"	SOUTHERN PINE	50 N1D14, 8 PLY

NO.	DATE	DESCRIPTION	BY
1	8-7-15	INITIAL DESIGN	TKJ
2	8-11-15	CORRECTIONS, PLANKS	TKJ
3	8-13-15	CORRECT REBAR LABELS	TKJ



Dig Safe System, Inc.  
 331 Montvale Avenue  
 Woburn, MA 01801  
 Phone: (781) 721-1191  
 1-888-DIG-SAFE  
 (888-344-7233)  
 digsafe.com

Date: 8-3-15  
 Designed: TATE, JEFFREY  
 Drawn: TATE, JEFFREY  
 Checked: ROB ALLEN  
 Approved by: [Signature]

United States Department of Agriculture  
 Natural Resources Conservation Service



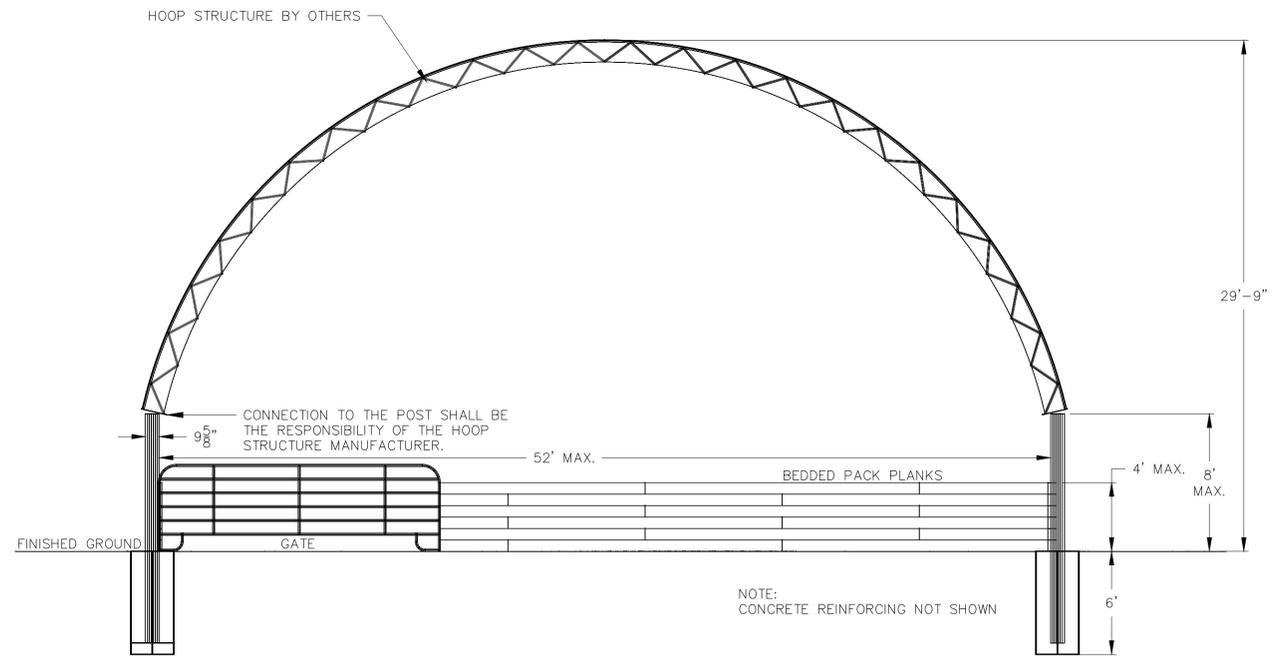
HAZARD CLASS LOW  
 JOB CLASS VI

VERMONT STANDARD DRAWING  
 52' HOOP ROOF STRUCTURE FOUNDATION  
 COVER SHEET

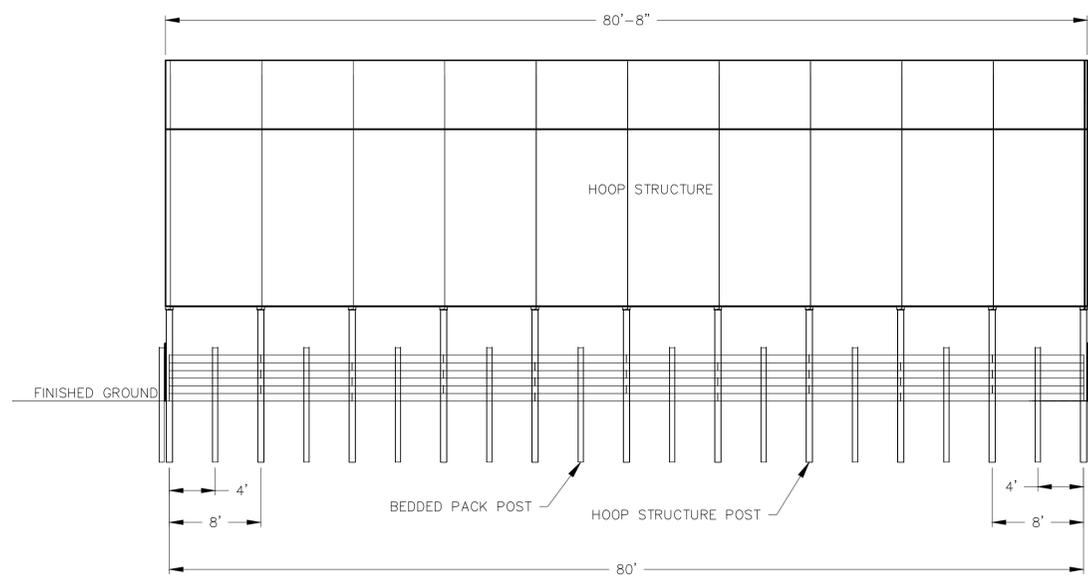
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Drawing Name  
 VT085260B-C HOOP

ROOF TRUSSES  
DESIGNED BY OTHERS



**BUILDING SECTION**  
SCALE 3/8" = 1'-0"

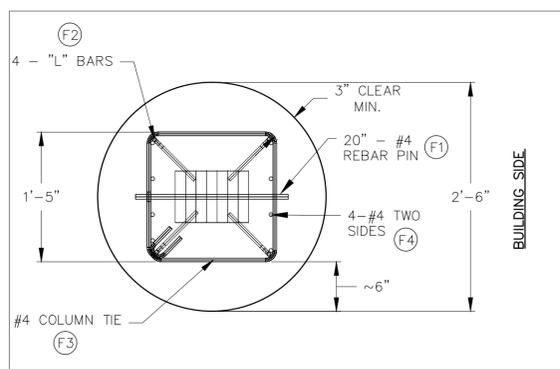


**POST LAYOUT DETAILS**  
SCALE 1/8" = 1'-0"

**FOUNDATION CONSTRUCTION NOTES**

1. POST FOUNDATIONS CAN BE AUGERED OR EXCAVATED. OVER EXCAVATED AREA SHALL BE BACKFILLED SOLELY WITH CLEAN STONE, < 5% FINES, MAX. AGGREGATE 1 1/2" OR CLSM
2. THERE SHALL BE NO MORE THAN 1" OF STANDING WATER IN THE AREA EXCAVATED FOR POSTS AT THE TIME OF CONCRETE PLACEMENT.
3. CONCRETE SHALL BE SUPPLIED BY A READY MIX SUPPLIER. DRY CONCRETE MIX (SELF HYDRATING) SHALL NOT BE USED.
4. CONCRETE FOOTING AND COLLAR SHALL CURE A MIN. OF 24 HRS BEFORE BACKFILLING BEGINS OR REMOVAL OF TEMPORARY BRACING.
5. CONSTRUCTION OF THE HOOP STRUCTURE TO THE POST SHALL NOT COMMENCE UNTIL A MIN. OF THREE DAYS SINCE LAST POST FOUNDATION CONCRETE PLACEMENT.
6. CLEAN STONE BACKFILL AROUND POSTS SHALL BE CAPPED WITH A MIN. OF 4" OF TOPSOIL.

**TOP VIEW**  
SCALE 1" = 1'-0"

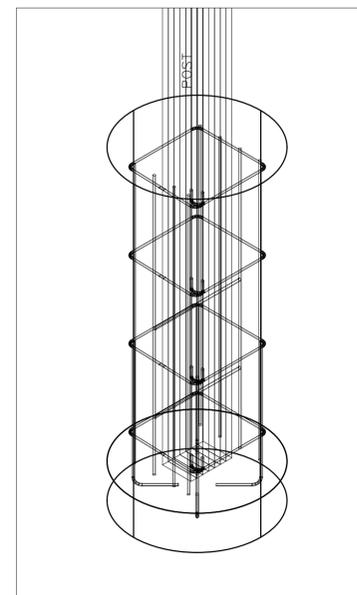


**REBAR SCHEDULE – SEPARATE FOOTING**

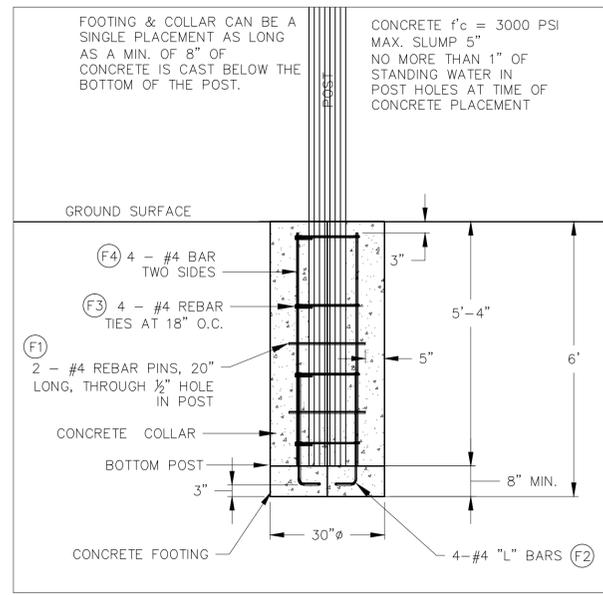
LOCATION	BAR SIZE	SPACING	LENGTH FT-IN	QUANTITY	TOTAL LENGTH FT-IN	TYPE
F1	#4	-	20"	44	74'	STR.
F2	#4	-	3'	88	264'	②
F3	#4	18"	6'-7"	88	580'	①
F4	#4	~4"	5'	176	880'	STR.
F5	#4	-	5'	60	300'	STR.

**REBAR SCHEDULE – SINGLE CONCRETE PLACEMENT**

LOCATION	BAR SIZE	SPACING	LENGTH FT-IN	QUANTITY	TOTAL LENGTH FT-IN	TYPE
F1	#4	-	20"	44	74'	STR.
F3	#4	18"	6'-7"	110	725'	①
F4	#4	VARIES	5'-6"	176	968'	STR.
F5	#4	-	5'	60	300'	STR.

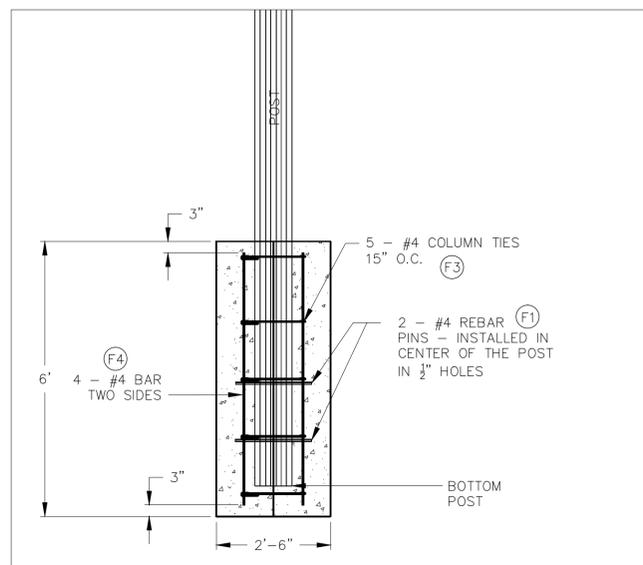


**ISOMETRIC VIEW**  
NTS

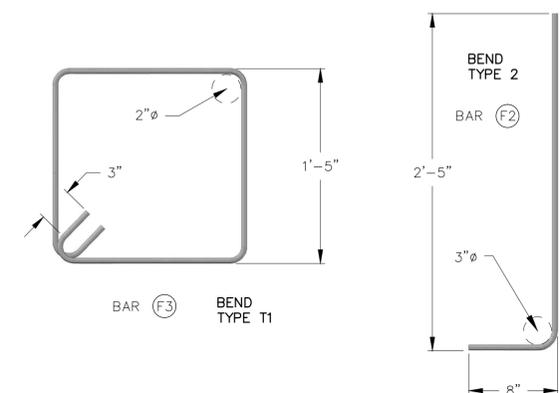


**SIDE VIEW – DIMENSIONS**  
SCALE 1/2" = 1'-0"

**POST FOUNDATION DETAILS**



**SIDE VIEW – SINGLE CONCRETE PLACEMENT**  
SCALE 1/2" = 1'-0"



**BAR BEND DETAILS**  
SCALE 3/4" = 1'-0"

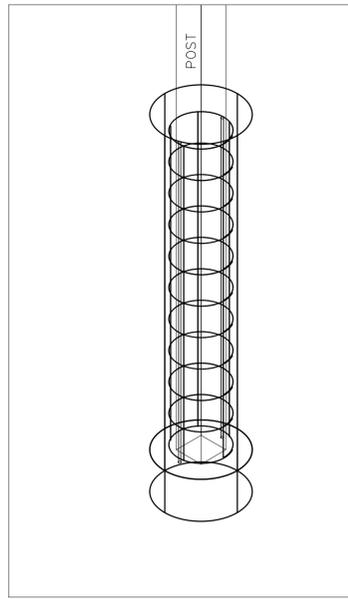
Date 8-3-15  
Designed TATE JEFFREY  
Drawn TATE JEFFREY  
Checked ROB ALLEN  
Approved by [Signature]

United States Department of Agriculture  
Natural Resources Conservation Service  
USDA

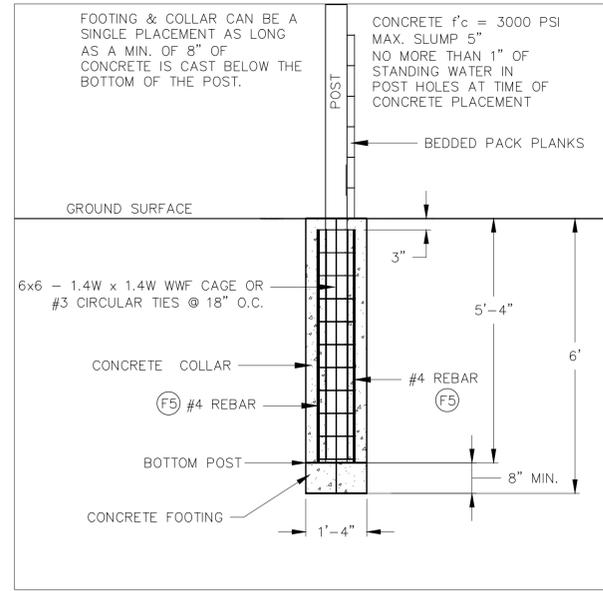
HAZARD CLASS LOW  
JOB CLASS VI

VERMONT  
VERMONT STANDARD DRAWING  
52' HOOP ROOF STRUCTURE FOUNDATION  
FOUNDATION

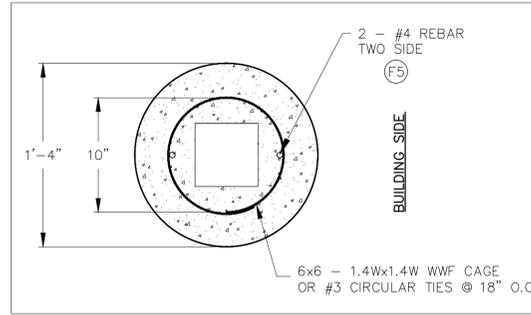
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Drawing Name VT085260B-C HOOP  
Sheet 2 of 3



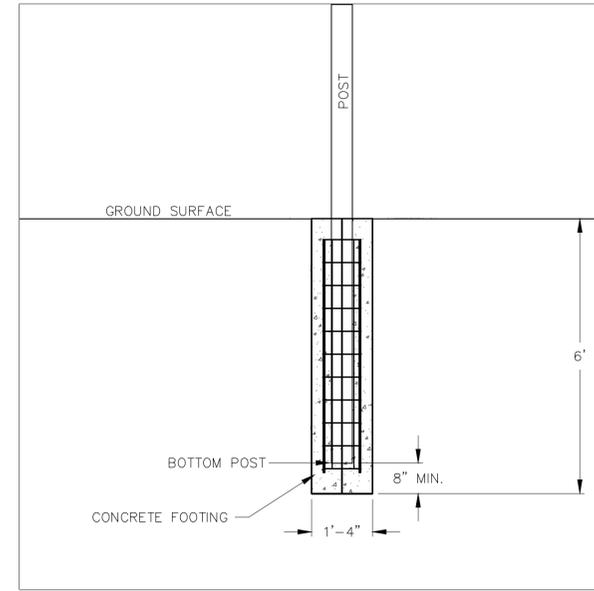
ISOMETRIC VIEW  
NTS



SIDE VIEW — DIMENSIONS  
SCALE 1/2" = 1'-0"

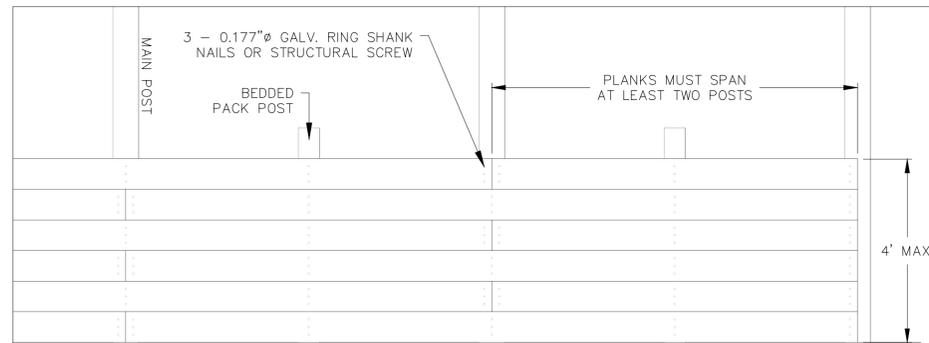


TOP VIEW  
SCALE 1" = 1'-0"

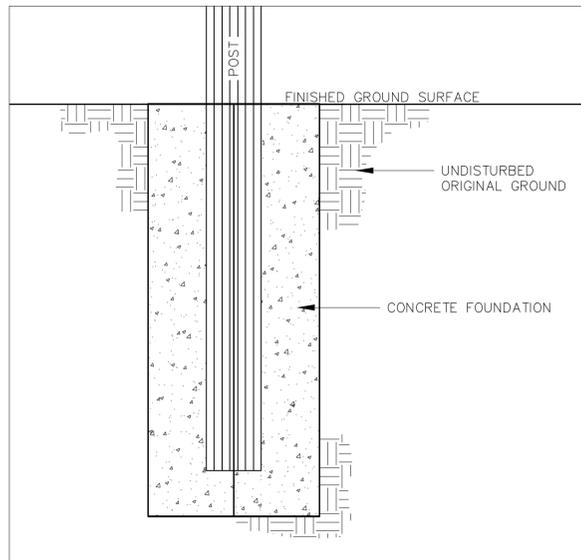


SIDE VIEW — SINGLE CONCRETE PLACEMENT  
SCALE 1/2" = 1'-0"

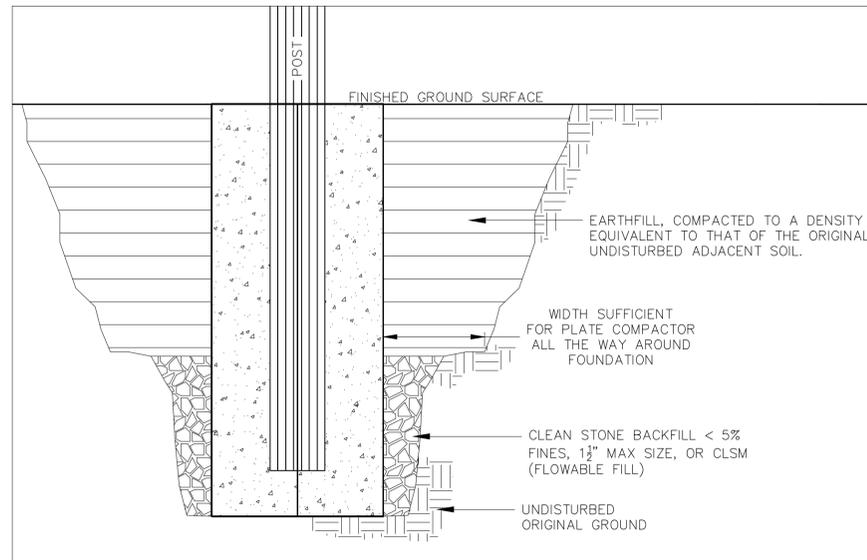
**BEDDED PACK POST FOUNDATION DETAILS**



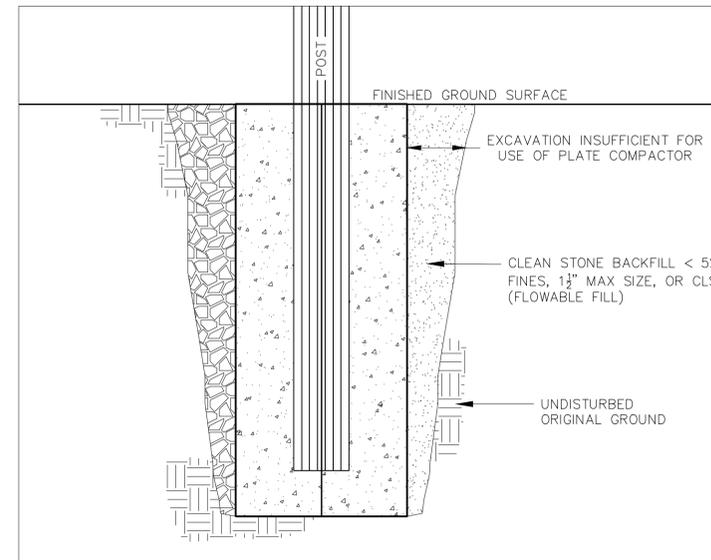
SIDE VIEW — BEDDED PACK PLANKS  
SCALE 1/2" = 1'-0"



AUGERED HOLE  
SIDE VIEW — NTS



EXCAVATED HOLE  
SIDE VIEW — NTS



EXCAVATED HOLE  
SIDE VIEW — NTS

**POST BACKFILL OPTIONS — ALL POSTS**  
NO REINFORCING SHOWN

EARTHFILL

SIEVE SIZE	% PASSING
2"	90-100
#4	45-75
#100	0-12
#200	0-5

STONE BACKFILL

SIEVE SIZE	% PASSING
1 1/2"	100
#60 (0.01 IN)	< 30
#200 (.003 IN)	< 5

Date 8-3-15  
Designed TATE JEFFREY  
Drawn TATE JEFFREY  
Checked ROB ALLEN  
Approved by *Rob Allen*

United States Department of Agriculture  
Natural Resources Conservation Service



HAZARD CLASS LOW  
JOB CLASS VI

VERMONT STANDARD DRAWING  
52' HOOP ROOF STRUCTURE FOUNDATION  
FOUNDATION (2)  
VERMONT

File Name

Drawing Name  
VT085260B-C HOOP

Sheet 3 of 3