

\* It is recommended that drawdown elevation be used for the intake elevation. Drawdown elevations may be obtained from well testing logs.

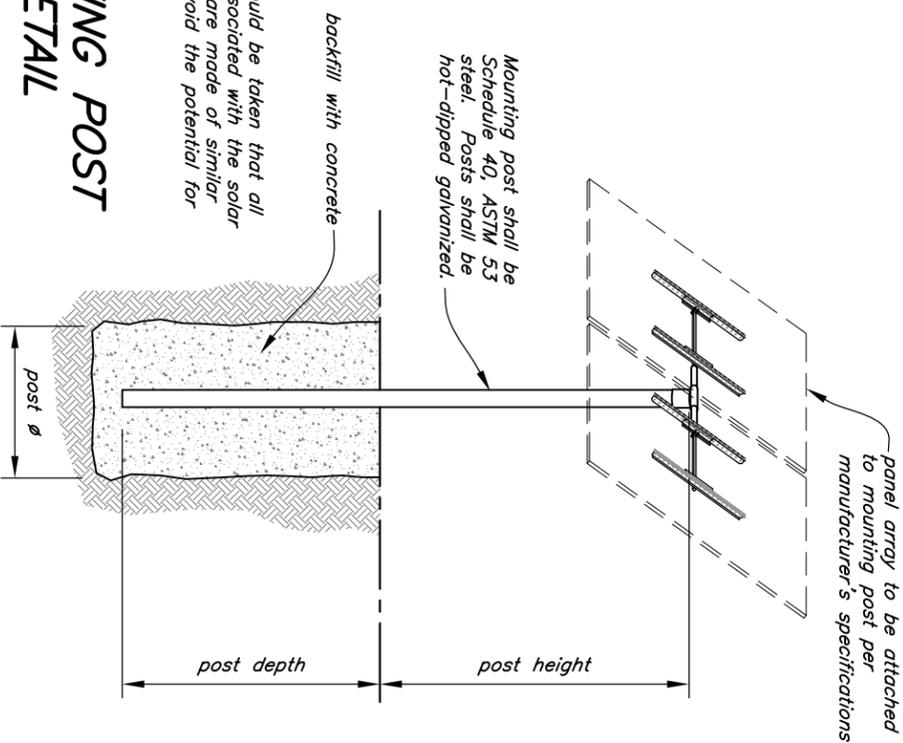
### MOUNTING POST SELECTION TABLE

(Producer shall install mounting configuration circled below)

POST HEIGHT (FT)	PANELS	MIN. POST DIA. (IN)	POST HOLE DIA. (IN)	MIN. EMBEDMENT DEPTH (IN)	CONCRETE VOLUME (CY)
4 FT	Single Panel (A = 13.9 ft <sup>2</sup> )	4	24	38	0.46
	Double Panel (A = 27.8 ft <sup>2</sup> )	4	24	48	0.55
	Triple Panel (A = 41.7 ft <sup>2</sup> )	4	30	54	0.96
	Quad Panel (A = 55.6 ft <sup>2</sup> )	4	36	56	1.42
6 FT	Single Panel (A = 13.9 ft <sup>2</sup> )	4	24	36	0.44
	Double Panel (A = 27.8 ft <sup>2</sup> )	4	30	50	0.90
	Triple Panel (A = 41.7 ft <sup>2</sup> )	4	36	54	1.38
	Quad Panel (A = 55.6 ft <sup>2</sup> )	6	36	60	1.49
8 FT	Single Panel (A = 13.9 ft <sup>2</sup> )	4	30	38	0.72
	Double Panel (A = 27.8 ft <sup>2</sup> )	4	30	50	0.90
	Triple Panel (A = 41.7 ft <sup>2</sup> )	6	36	54	1.36
	Quad Panel (A = 55.6 ft <sup>2</sup> )	6	36	60	1.49
10 FT	Single Panel (A = 13.9 ft <sup>2</sup> )	4	24	44	0.51
	Double Panel (A = 27.8 ft <sup>2</sup> )	6	30	52	0.91
	Triple Panel (A = 41.7 ft <sup>2</sup> )	6	36	58	1.45
	Quad Panel (A = 55.6 ft <sup>2</sup> )	8	36	64	1.58

NOTE: Minimum post diameter, post hole diameter and post depth values have been designed for a wind speed of 95 mph and a 1 inch thick ice load. Sites where wind and ice loads exceed these values will need to be examined by a qualified engineer.

### MOUNTING POST DETAIL

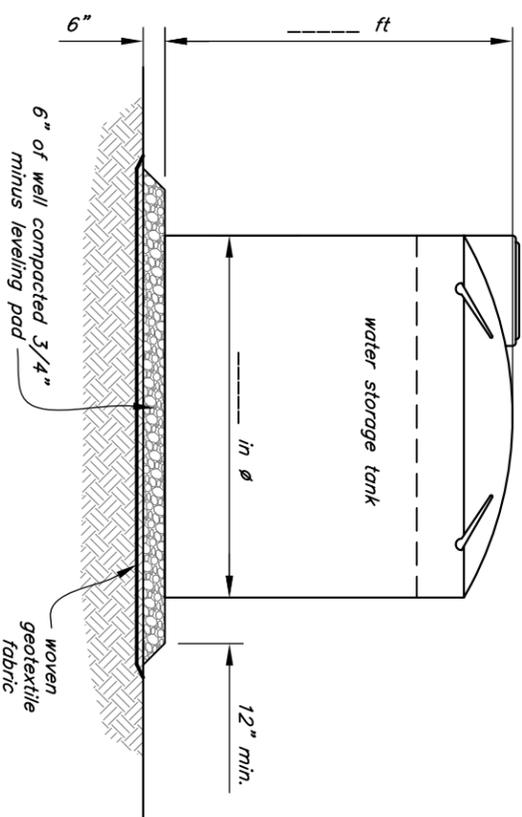


Note: Care should be taken that all connections associated with the solar power system are made of similar materials to avoid the potential for corrosion

PUMP <sup>1</sup>	_____ watts	_____ design gpm
	_____ amps	_____ manufacturer (or approved equal)
	_____ volts	
PANEL ARRAY	_____ minimum watts needed (pump size*1.25)	
	_____ summer tilt angle	_____ amps
	_____ winter tilt angle	_____ volts
PANEL CONFIGURATION <sup>2</sup>	_____ series	_____ parallel
TANK VOLUME	_____ gallons	
FLOAT SWITCH	_____ yes	_____ no
WATER TROUGHS	_____ # of troughs	_____ size of trough
FLOAT	_____ #1	_____ #3
	_____ #2	min. pressure head to open valves
FISH SCREEN REQUIRED <sup>3</sup> (at intake)	_____ yes	_____ no

- 1 Pump controller, valves, switch box to be specified by manufacturer's recommendation
- 2 Contractor to provide landowner/NRCS as-built to include panel array configuration and wiring details
- 3 See Oregon Department of Fish and Wildlife Screening Criteria

### PV SYSTEM INFORMATION



COMPACTED FILL:  
 cubic yardage =  $\left[ \frac{\pi}{4} (D + 2)^2 (0.5' \text{ gravel}) \right] \frac{1}{27} = \text{_____ cu yd}$

### TANK AND FOUNDATION DETAIL

DETAILS ARE NOT TO SCALE

**WATER QUALITY AT SOURCE**

\_\_\_\_\_ Very Good Water contains no abrasive particles, and/or TDS < 50 ppm  
 \_\_\_\_\_ Good Water may contain small amounts of silt, and/or TDS < 100 ppm  
 \_\_\_\_\_ Fair Water may contain small amounts of silt, sand, or rust, and/or TDS < 200 ppm  
 \_\_\_\_\_ Poor Water may contain moderate amounts of silt, sand, or rust, and/or TDS = 200-800 ppm  
 \_\_\_\_\_ Very Poor Water regularly contains silt, sand, or rust, and/or TDS > 800  
 COMMENTS: \_\_\_\_\_

**WATER STORAGE DATA**

Volume Required = Maximum Daily Requirement \_\_\_\_\_ (gal/day) x \_\_\_\_\_ days = \_\_\_\_\_ gallons.  
 Open Tank Pres. Tank In Line Other Total  
 Volume Available (gallons): \_\_\_\_\_  
 New or Existing: \_\_\_\_\_

**WATER PUMPING DATA**

Static Water Depth: \_\_\_\_\_ ft. (Distance from ground to water surface when not pumping).  
 Drawdown Level: \_\_\_\_\_ ft., at \_\_\_\_\_ GPM. (Depth water drops when pumping).  
 Discharge Head: \_\_\_\_\_ ft. (Dist. from ground surface to highest water surface in discharge line)  
 (Use either Discharge Level or Pressure Head, but not both)  
 Pressure Head: \_\_\_\_\_ ft. (Tank pressure in psi: x 2.31)  
 Losses: \_\_\_\_\_ ft. (Minor and friction losses in discharge line from pump to tank)  
 Total Dynamic Head: \_\_\_\_\_ ft. (Sum of values above).

**WATER SOLAR POWER DATA**

Solar Station

**SOLAR ISOLATION VALUES**

Average kWh/m <sup>2</sup> /day or full sun hours	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	Month Hours
Latitude													

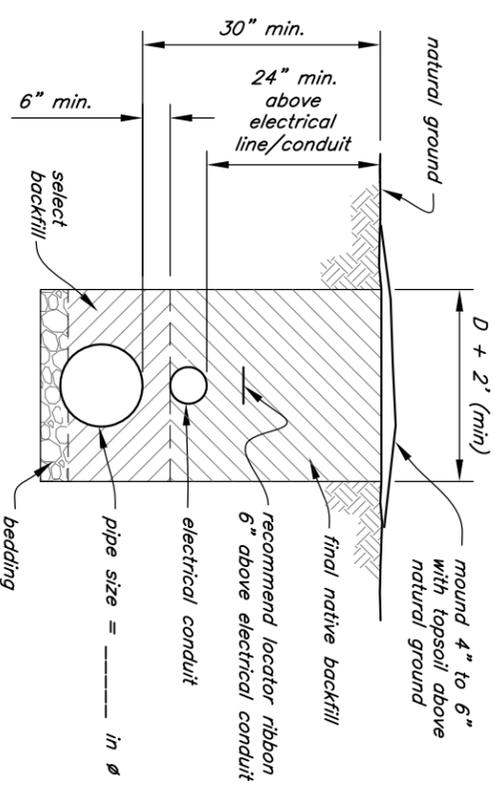
Design Solar Radiation Hours = \_\_\_\_\_ hours  
 Design Flow Rate (gpm) = \_\_\_\_\_ gals (Volume Required) / \_\_\_\_\_ Solar Radiation Hours ( 1 hour/60 minutes)

**WATER SOURCE INFORMATION**

SUBSURFACE		SURFACE		
WELL	SPRING	STREAM	CANAL	POND
Depth (ft)	Yield (gpm)	Flow Rate (gpm)		
Max. Yield (gpm)	COLLECTION BOX DATA	Seasonal or Perennial		
Casing I.D. (in)	Depth (ft)	Min. Water Elev. (ft)		
Well Test (Y or N)	Volume (gal)			
Date of Test	Covered (Y or N)			

**WATER USE INFORMATION**

Type of Use	Seasonal Water Requirement (gal/day)				Comments (# or type of animals, type of irrigation, etc.)
	Summer	Fall	Winter	Spring	
Livestock					
Wildlife					
Irrigation					
Domestic/Potable					
Other					
Total Requirement					



**TYPICAL TRENCH DETAIL**

Date \_\_\_\_\_  
 Designed \_\_\_\_\_  
 Drawn \_\_\_\_\_  
 Checked \_\_\_\_\_  
 Approved \_\_\_\_\_  
 Title \_\_\_\_\_

**SOLAR POWERED WATERING SYSTEM GENERAL INFORMATION**

