

# Mono County Community Development Department

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## Building Division

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## POLE GROUND MOUNT PRESCRIPTIVE REQUIREMENTS 5.2

### POLE SUPPORT FOR SOLAR ARRAY

#### NOTES TO SUBMITTER

THESE PRESCRIPTIVE DESIGNS ARE INTENDED TO APPLY TO THE MOST COMMON SITUATIONS ENCOUNTERED IN MONO COUNTY. HOWEVER, UNIQUE SITE CONDITIONS OR SUBSTANTIAL DEVIATIONS FROM THESE DESIGNS AS DETERMINED BY THE BUILDING OFFICIAL MAY WARRANT ADDITIONAL DESIGN REQUIREMENTS.

THESE PLANS ARE PRIMARILY FOR THE STRUCTURAL REQUIREMENTS OF POLE TYPE SOLAR ARRAY SUPPORTS. THE SUBMITTER IS RESPONSIBLE FOR PREPARING A SITE PLAN AND ANY OTHER DOCUMENTATION TO INDICATE THE HEIGHTS OF POLES, SIZES OF ARRAYS, ANY ELECTRICAL CONDUITS AND OTHER NON-STRUCTURAL REQUIREMENTS

ADDITIONALLY, THESE PLANS DO NOT ADDRESS THE ATTACHMENT OR THE STRUCTURAL STRENGTH OF THE ARRAYS. MOST ARRAY COMPANIES HAVE PROPRIETARY DESIGNS FOR THE STRUCTURAL COMPONENTS OF THEIR ARRAYS. THE SUBMITTER MUST SUBMIT CUT-SHEETS BY THE ARRAY MANUFACTURER, AND THE MANUFACTURER OF THE HARDWARE TO ATTACH THE ARRAY TO THE POST THAT DEMONSTRATES THE INSTALLATION MEETS MONO COUNTY STRUCTURAL REQUIREMENTS.

THIS DESIGN ASSUMES THAT THE ARRAY IS SUPPORTED ROUGHLY AT THE CENTER, AND THE ATTACHMENT TO THE POLE IS MADE BY A PROPRIETARY BRACKET AT THIS CENTER POINT.

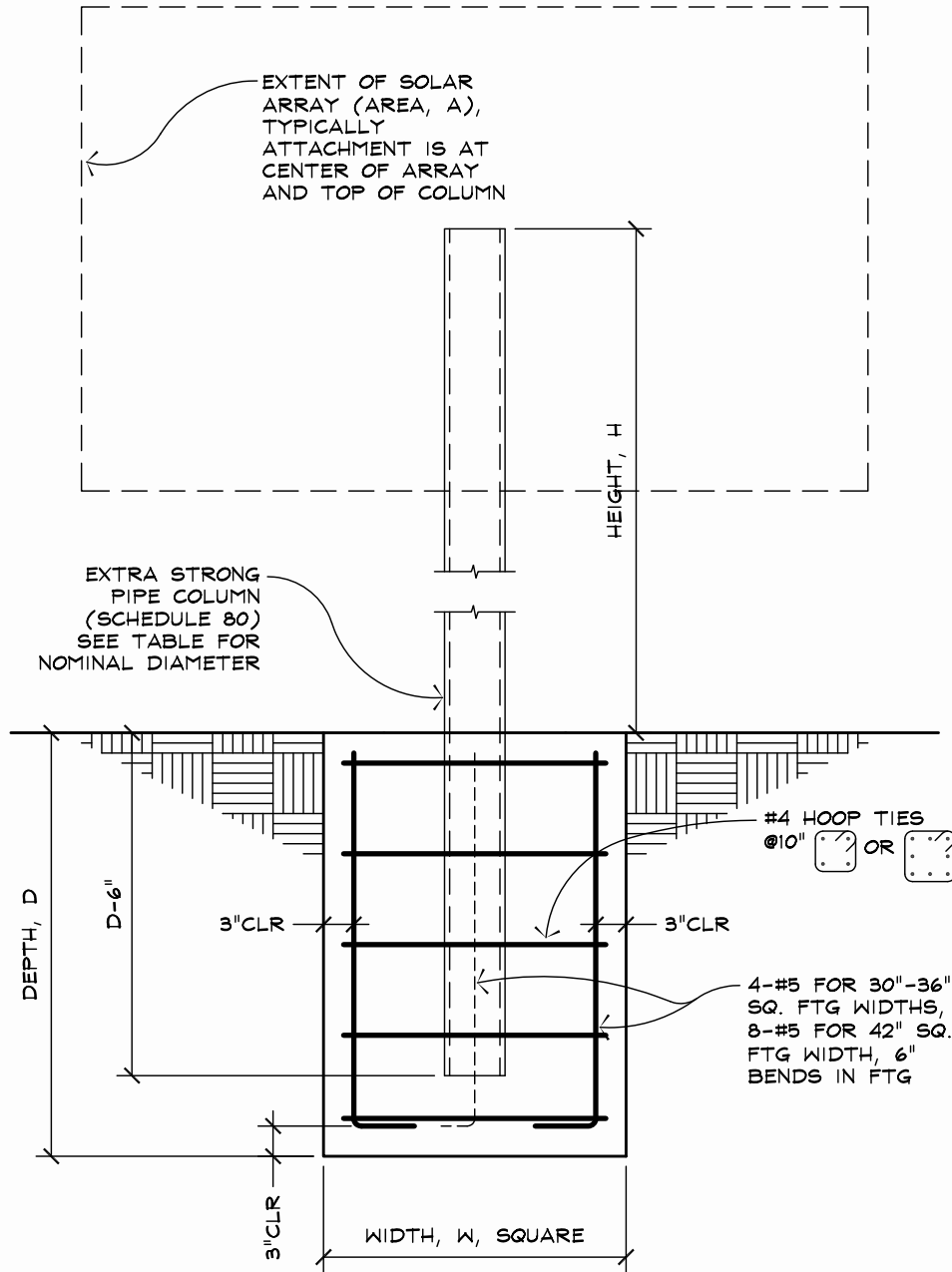
MONO COUNTY PROVIDES THESE PLANS TO THE PUBLIC AS A COURTESY AND WITHOUT ANY WARRANTIES, EXPRESS OR IMPLIED, REGARDING THEIR FITNESS FOR ANY PARTICULAR APPLICATION. AMONG OTHER THINGS, MONO COUNTY DOES NOT REPRESENT OR WARRANT THAT THE DESIGNS WITHIN SAID PLANS ARE FREE FROM FLAWS OR DEFECTS. ANYONE UTILIZING THESE PLANS DOES SO AT THEIR OWN RISK AND WAIVES ANY CLAIMS AGAINST MONO COUNTY ARISING FROM SUCH USE.

JOB \_\_\_\_\_

CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_

REVISION 1 \_\_\_\_\_ REVISION 2 \_\_\_\_\_

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ SCALE \_\_\_\_\_



FOOTING AND COLUMN SIZES FOR DIFFERENT SOLAR ARRAY AREAS AND COLUMN HEIGHTS					
A ≤	H ≤ 8'		H ≤ 12'		PIPE COLUMN NOMINAL DIAMETER
	W	D	W	D	
33 SQ. FT.	30" SQ	43"	30" SQ	49"	4"
44 SQ. FT.	30" SQ	48"	30" SQ	54"	5"
64 SQ. FT.	36" SQ	50"	36" SQ	57"	5"
88 SQ. FT.	36" SQ	56"	36" SQ	64"	6"
110 SQ. FT.	42" SQ	57"	42" SQ	66"	6"
130 SQ. FT.	42" SQ	61"	42" SQ	70"	8"

**COUNTY OF MONO**  
**COMMUNITY DEVELOPMENT DEPARTMENT**  
**BUILDING DIVISION**

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GENERAL REQUIREMENTS:

1. CODES AND REFERENCES

- a. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE 2019 CALIFORNIA BUILDING CODE (C.B.C.) AND 2019 CALIFORNIA RESIDENTIAL CODE (C.R.C.) BASED UPON THE 2018 INTERNATIONAL BUILDING CODE (I.B.C.) AND 2018 INTERNATIONAL RESIDENTIAL CODE (I.R.C.)
- b. A THOROUGH PLANCHECK SHALL BE MADE BY A QUALIFIED REPRESENTATIVE OF THE BUILDING DEPARTMENT PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. CORRECTIONS, IF ANY, SHALL BE MADE ONLY BY THE SUBMITTER OR HIS REPRESENTATIVE. ONCE THE BUILDING PERMIT HAS BEEN ISSUED NO CHANGES OR DEVIATIONS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE SUBMITTER, LEST AN UNSAFE OF UNLAWFUL CONDITION BE CREATED. CONTRACTOR SHALL COMPLY WITH ANY CODE OR LEGAL VIOLATION WHICH MIGHT BE POINTED OUT BY THE BUILDING INSPECTOR.
- c. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION, AND/OR ADDENDUM. THESE STANDARDS WILL BE REFERRED TO IN ABBREVIATED FROM AS LISTED BELOW:

ACI	AMERICAN CONCRETE INSTITUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
AWS	AMERICAN WELDING SOCIETY
ICC	INTERNATIONAL CODE COUNCIL
- d. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB SITE AND REPORT ANY ERRORS, OMISSIONS, OR POSSIBLE DISCREPANCIES TO THE SUBMITTER PRIOR TO PROCEEDING WITH THE WORK. SPECIAL CARE SHALL BE GIVEN SITE AND BUILDING LAYOUT THEREUPON.

2. PROTECTION BY CONTRACTOR

- a. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THE DRAWINGS AND PROTECT THEM FROM DAMAGE.
- b. HE SHALL COMPLY WITH ALL LAWS AND REGULATIONS REGARDING PROTECTION OF THE PUBLIC AND THE WORKMEN DURING CONSTRUCTION.
- c. HE SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT RELATIVE TO THE PROSECUTION OF THIS WORK.

**COUNTY OF MONO**  
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CONCRETE AND EMBEDDED ITEMS (C.B.C. CHAPTER 19):

1. ALL CONCRETE SHALL BE MIXED, FORMED AND PLACED ACCORDING TO THE AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318-08.
2. CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. USE 6 SACKS OF CEMENT (MINIMUM) PER YARD OF CONCRETE FOR WEATHER DURABILITY. EXCEPTIONS SHALL BE NOTED HEREIN OR ON PLANS.
3. CEMENT FOR CONCRETE SHALL BE A STANDARD BRAND "PORTLAND CEMENT," MEETING THE REQUIREMENTS OF ASTM C150, TYPE I OR II, LOW ALKALI.
4. AGGREGATES FOR CONCRETE SHALL MEET THE REQUIREMENTS OF ASTM C33.
5. CONCRETE SHALL BE MACHINE-MIXED USING A MAXIMUM OF 7<sup>1</sup>/<sub>2</sub> GALLONS OF WATER PER SACK OF CEMENT. READYMIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.
6. CONTRACTOR MAY USE A WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494, PROVIDED ARCHITECT IS NOTIFIED IN WRITING IN ADVANCE OF ITS USE.
7. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS EMBEDDED PIPES AND CONDUIT SHALL BE SECURELY FASTENED IN THE FORMS BEFORE CONCRETE IS POURED. ADEQUATE CLEANOUTS SHALL BE PROVIDED IN THE BOTTOM OF THE CONCRETE FORMS FOR PROPER CLEANING AND INSPECTION.
8. UNLESS NOTED OTHERWISE ON THE PLAN, MINIMUM EMBEDMENT OF ANCHOR BOLTS (A.B.) SHALL BE 7" IN HORIZONTAL CONCRETE SURFACES (FOOTINGS, etc) AND 4" INTO VERTICAL CONCRETE SURFACES (WALLS, etc). ALL BOLTS SHALL HAVE A 4 DIAMETER, 90° BEND AT EMBEDDED END. ANCHOR BOLTS SHALL BE SPACED 12 DIAMETERS, MINIMUM.
9. EXPANSION BOLTS, ITW RAMSET/"RED HEAD," etc, MAY BE USED IN LIEU OF CAST-IN-PLACE BOLTS WHERE SPECIAL CONDITIONS WARRANT THEIR USE, PROVIDED WRITTEN APPROVAL OF THE MONO COUNTY BUILDING DEPARTMENT IS OBTAINED.
10. FOOTING DOWELS SHALL MATCH VERTICAL WALL STEEL. LAP 36 DIAMETERS, MINIMUM.
11. CEMENT GROUT AND DRY-PACK GROUT SHALL CONSIST OF 1 PART CEMENT TO 2<sup>1</sup>/<sub>2</sub> PARTS FINE AGGREGATE BY VOLUME. ADD SUFFICIENT WATER TO MAKE THE MIXTURE FLOW UNDER ITS OWN WEIGHT. FOR USE AS DRY-PACK CONCRETE (HAND-PLACED BELOW METAL OR WOOD PLATES) ADD WATER TO MAKE A STIFF MIXTURE WHICH CAN BE MOLDED INTO A SPHERE. GROUT SHALL ATTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.