

Document Number:

INS-SOP-0212-01

Revision: 1

Standard Operating Procedure

SUNRUN

Ford Charge Station Pro Post Mount



Copies of this SOP including PDFs and paper copies are uncontrolled and may be out of date.

Field Operations Standard Operating Procedure

This SOP describes installing a Ford Charge Station Pro mounted on a post. Both a wooden post or metal post may be installed depending on customer preference. This may have been decided during the sale of the EV charger. Consult the plan set and the customer before determining the post type.

THIS SOP IS DIVIDED INTO TWO INSTALLATION PROCEDURES:

Option 1 for metal post.



Option 2 for wood post.



Prior to installing the post, the installer should consult with the homeowner about the location of the post and the trench location containing the underground conduit and conductors. The trench and underground conduit should already be done before starting the post installation performed in this SOP.

This SOP covers the post installation steps as follows:

- Construct the post.
- Dig the hole.
- Prepare the post mix.
- Set the post.
- Install the charger wall bracket
- Install the strut channel.
- Install the charger base.
- Install the conduit.
- Install the wiring.
- Install the covers.
- Power up the charger.
- Commission the charger system.

- The installer will need to refer to the documents identified in the *Related Documents* list for other equipment, depending on the system configuration (see next slide).



IMPORTANT: Three days prior to digging the trench or the post hole, contact [Call 811](#) to get underground hazards marked.

EV Charger Only

EV Charger + HIS Equipment

EV Charger + HIS + PV

EV Charger + HIS + PV + Battery

**Ford Charge Station Pro
Installation and Wiring SOP -
INS-SOP-0158**

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**Ford Charge Station Pro
Installation and Wiring SOP -
INS-SOP-0158**

**Ford Intelligent Backup Power
Setup App SOP - INS-SOP-0193**

**Ford Intelligent Backup Power
Setup App SOP - INS-SOP-0193**

**Ford Intelligent Backup Power
Setup App SOP - INS-SOP-0193**

**Ford Intelligent Backup Power
Setup App SOP - INS-SOP-0193**

**Ford Home Integration System
(Delta MID, Delta BDI Inverter, Delta
Accessory Battery Pack) -
INS-SOP-0226**

**Ford Home Integration System
(Delta MID, Delta BDI Inverter, Delta
Accessory Battery Pack) -
INS-SOP-0226**

**Ford Home Integration System
(Delta MID, Delta BDI Inverter, Delta
Accessory Battery Pack) -
INS-SOP-0226**

**Delta BDI Commissioning -
INS-SOP-0170**

**Delta BDI Commissioning -
INS-SOP-0170**

**Delta BDI Commissioning -
INS-SOP-0170**

**LG (Gen 3) Battery Installation -
INS-SOP-0133**

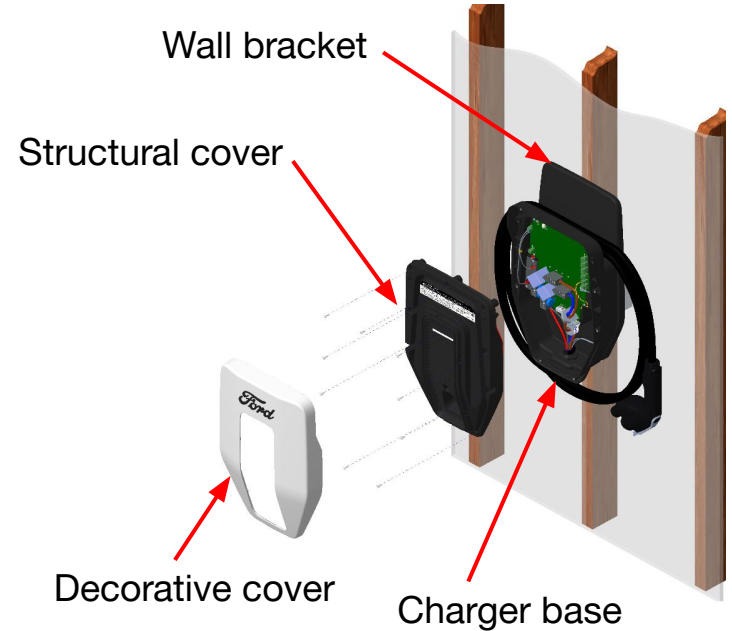
PLAN THE EV CHARGER SYSTEM INSTALLATION

The Ford Charge Station Pro consists of 4 major parts:

1. Wall bracket
2. Charger base (with circuit board and charge cable).
3. Structural cover
4. Decorative cover



Wall bracket



Requirements of the following related documents are also requirements of this SOP.

[Field Operations SOP Guide - INS-SUP-0007](#)

[Job Site Cleanup & General Workmanship - Work Instruction - INS-WRK-0021](#)

[Ford Charge Station Pro Installation and Wiring SOP - INS-SOP-0158](#)

[Ford Charge Station Pro Commissioning - INS-SOP-0165](#)

[Sika_PostFix Product Data Sheet.pdf](#)

[Sika-PostFix-How-To-Install-Application-Guide.pdf](#)

[Quikrete data sheet-fast setting concrete mix 1004-50.pdf](#)

Related Safety Documents

[Safety SOP & Policy Master List](#)

[Sika-Post-Fix-Part-A SDS.pdf](#) Not hazardous

[Sika-Post-Fix-Part-B SDS.pdf](#)  

[Quikrete fast setting concrete mix SDS.pdf](#)   

[Rust-Oleum cold galvanizing paint SDS.pdf](#)    

[Call 811 Dig Alert](#)

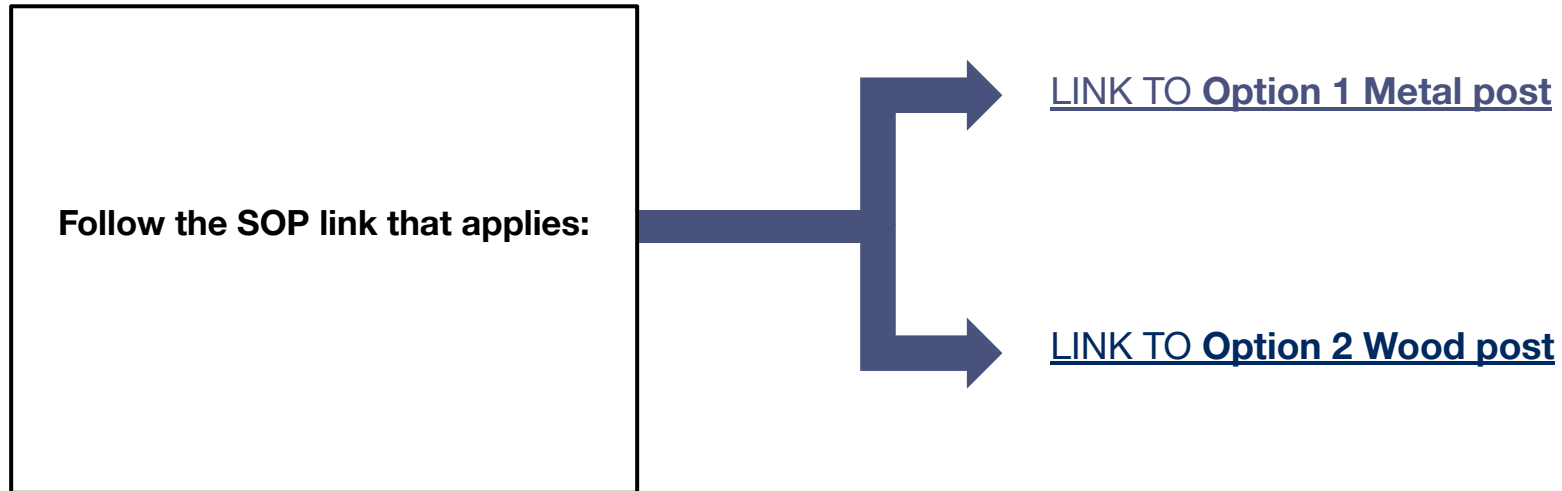
PLAN THE POST TYPE

Determine the post type: **Option 1 Metal post** or **Option 2 Wood post**.

- Consult the plan set for any requirements related to the post type and location.

Consult with the homeowner for approval on the following:

- Post type
- Location where the post will be installed.
- Trenching path from the electrical supply to the post.



PROCEDURE FOR INSTALLING THE METAL POST

Option 1 describes:

- Materials and tools
- Consult the plan set for any requirements related to the post location.
- Specific procedure steps for installing a metal post.
- Installing the Charge Station Pro
- Commissioning

Estimated Time:	4 hours
Materials:	<ul style="list-style-type: none">● Ford Charge Station Pro EV charger● 3 inch diameter IMC, or rigid conduit, with MNPT threaded end(s) (7 foot length needed)● 3 inch FNPT galvanized cap● 10 mil pipe wrap● Sika PostFix®[®], or fast-setting concrete● 1-5/8" strut channel● 1/4 inch drill bit● 1/4"X 6" threaded rod● 1/4 inch flat washers, lock washers, and 1/4" nuts● Strut channel straps● 3 inch U-bolts with matching size flat washers, lock washers and nuts● Galvanizing compound

Tools:

- Standard electrical tools
- Tape measure
- Marker
- Level
- Water (for fast-setting concrete mix):
- 5 gallon bucket (for water)
- File
- Drill
- Post hole digger
- Shovel
- Band saw or equivalent
- Conduit and fittings as needed

- 5 gallon bucket



- 10 mil pipe wrap



- Galvanizing compound



- 1/4" threaded rod



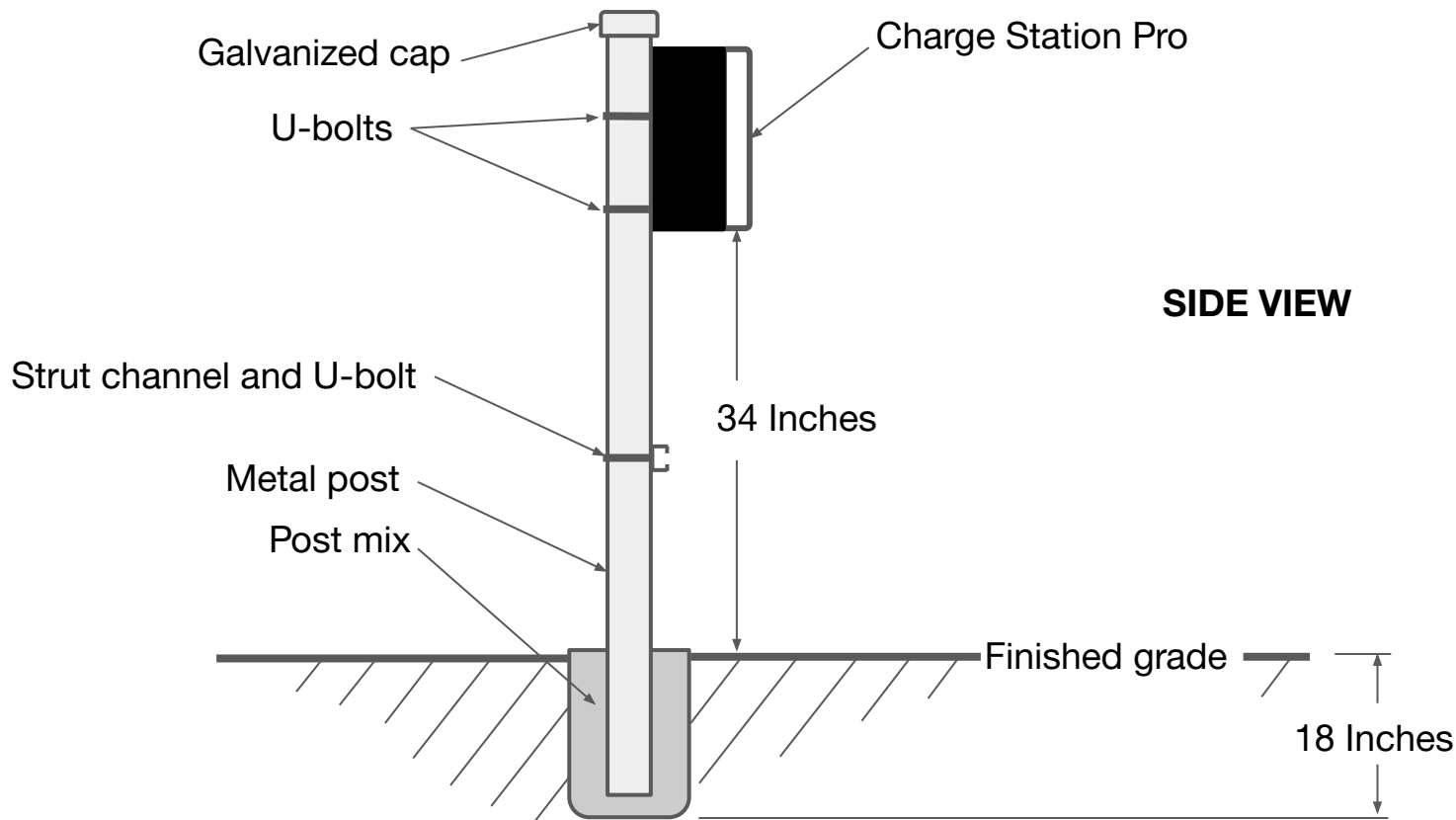
DETERMINE THE POST MIX TYPE

Determine PostFix® or fast-setting concrete mix will be used, plan accordingly. Sika PostFix® sets up very fast.

- Sika PostFix®
- Fast setting concrete mix



PLAN THE POST MOUNT



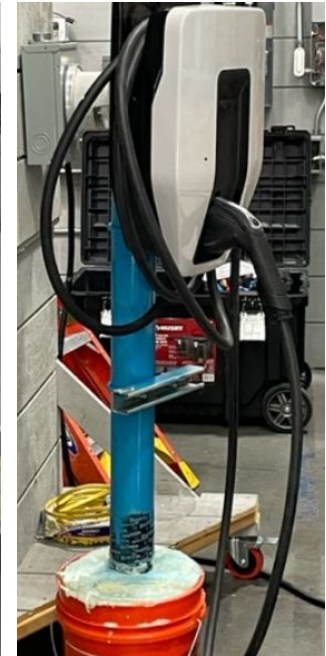
PLAN THE POST MOUNT

- The 7 foot height post will be mounted into a hole and secured with fast-setting post mix.
- Strut channel will be used to attach the conduit later.

The finished post will look like this:

NOTE: The bucket will not be attached to the pole as shown or buried in the ground.

NOTE: The blue paint shown in these pictures will not be used. Leave the post mount unpainted.



CUT THE POST

- Use 3" IMC, or rigid conduit for the post.
- Measure and mark the post at a length of 7 feet.

NOTE: The top end must have threads for the galvanized post cap.



FILE THE POST

- File down all burrs, sharp and rough edges, inside and out.
- Spray the cut end with galvanizing compound to prevent rust.



MARK CONDUIT

- Mark conduit at 18" from the cut end.



WRAP CONDUIT

- Wrap the conduit with 10 mil pipe wrap duct tape from the cut end to the 18 inch mark.



18 inch mark

DRILL THE POST

- Drill a 1/4" hole through the conduit at 3", and again at 90 degrees at 10" at the wrapped end.



- Insert 1/4"X 6" threaded rod into holes, use washers, lock washers, and 1/4" nuts to secure rods to post.



DIG THE POST HOLE

- Using a post hole digger, dig a hole 9” wide, by 18” deep.
- Backfill the trench to the post hole if it isn't already done.

- Place the post in the hole, with the 10 mil taped side down.

NOTE: The threaded rod helps secure the pipe in the post mix preventing it from being pulled out



This end down

SELECT POST MIX TYPE

Step 9A Instructions for mixing **Sika PostFix®** mix.



Step 9B Instructions for mixing **fast-setting post mix**.



MIX SIKA POSTFIX

IMPORTANT: Read the instructions for the Sika PostFix mix. Use the instructions on the package or use the attached instruction links:

[Sika PostFix Product Data Sheet.pdf](#)

[Sika-PostFix-How-To-Install-Application-Guide.pdf](#)

NOTE: Sika PostFix® sets up very fast.

MIX FAST-SETTING CONCRETE POST MIX

IMPORTANT: Read the instructions for the fast-setting concrete mix that are on the package or use this link:

[Quikrete data sheet-fast setting concrete mix 1004-50.pdf](#)

ADD POST MIX TO POST HOLE

- Make sure post is in hole, then place the post mix in the hole.

If using Sika:

- Center and level the post in the hole quickly. This is a very fast setting mix.

If using fast-setting concrete mix:

- Center and level the post in the hole.
- Use the strut channel and straps to hold the post level while the concrete sets.

CUT AND INSTALL STRUT CHANNEL

- Cut 1-5/8" strut channel at 10" length.
- File down all burrs, sharp and rough edges.
- Coat the cut edges with galvanizing compound.
- Level and secure to the post using U-bolt.



TRENCH AND CONDUIT

NOTE: The 18" deep trench with conduit, installed from the electrical source to the post hole should already be done. The conduit from the electrical source to the post hole should have a 90 degree bend up to the location where the post will be. The conduit ends should be above finished grade.



STRUT CHANNEL

NOTE: The conduit can be attached to strut channel or wait until after the post mix has set up.

- If not already done, cover the conduit ends to prevent dirt or post mix from entering the conduit. 10 mil pipe wrap tape can be used.



INSTALL THE CAP

- Install the 3" galvanized cap on top of the pipe.



PREPARE TO INSTALL THE WALL BRACKET TO THE POST

IMPORTANT: Before attaching the wall bracket to the pole using the U-bolts, flat washers, lock washers and nuts, make sure the U-bolt ends do not extend past the plastic trough on the wall bracket, they could interfere with the charger base and damage the charger. About a half inch may need to be cut off, from the U-bolts. Apply galvanizing compound to the cut ends.

Use a level to check that the U-bolt ends do not extend beyond the trough molded into the wall bracket.



Pro Tip: Put the nuts on the bolts before the cut is made. Removing the nut helps ensure straight threads.



INSTALL THE WALL BRACKET TO THE POST

- After the post is secure, attach the charger wall bracket to the pole at 34" above finished grade to the bottom of the wall bracket using two 3" U-bolts.
- Add flat washers, lock washers and nuts.
- Set the wall bracket height so that the top the bracket is just below the threaded section of the pipe. This allows room for the pipe cap.
- Level the wall bracket.
- Secure to post by tightening U-bolt nuts. **DO NOT OVERTIGHTEN AND AND DAMAGE THE WALL BRACKET.**



WIRE THE CHARGE STATION PRO

IMPORTANT: Run conduit into charger per AHJ recommendations.

- Install the charger base (wiring compartment) to the wall bracket.
- If the conduit was not previously attached to the strut channel, attach it now.
- Finish running conduit up into charger base, then pull wire, and terminate wires in accordance with: [Ford Charge Station Pro Installation and Wiring SOP - INS-SOP-0158](#).
- Attach the structural cover.
- Attach the decorative cover.

NOTE: The finished installation will look different depending on the Ford Charge Station Pro system called out in the plan set (See overview).

INSTALLATION AND COMMISSIONING

- Perform the procedures in the installation and wiring SOP(s):

The Ford Charge Station Pro must be commissioned prior to use. See [Ford Charge Station Pro Commissioning - INS-SOP-0165](#).

- Perform the procedures in the Commissioning SOP(s).

NOTE: Additional commissioning may be required depending on the specific Ford Charge Station Pro System configuration installed (See overview).

Step 16

TEST/VERIFY THE INSTALLATION

- Verify that the job site has been cleaned up.
- Verify that the home owner approves the post mount location if they are available.
- Verify that all cut metal ends are protected from rust using galvanizing compound.
- Verify the decorative cover is installed securely.
- A high quality, finished job contributes to our goal of customer obsession.

End of Option 1

PROCEDURE FOR INSTALLING THE WOOD POST

Option 2 describes:

- Materials and tools
- Consult the plan set for any requirements related to the post location.
- Specific procedure steps for installing a metal post.
- Installing the Charge Station Pro
- Commissioning

Estimated Time:	4 hours
Materials:	<ul style="list-style-type: none">● Plywood● Wood screws● 4" x 4" pressure treated wood post● Wood (1x4) and stakes sufficient for temporary braces.● Outdoor Paint● 1-5/8" strut channel● 1/4 inch drill bit● 1/4"X 6" threaded rod● 1/4" bolts, flat washers, lock washers, and 1/4" nuts● Strut channel straps● 10 mil pipe wrap● Minerallac straps or strut channel with mounting hardware● Lag screws to mount plywood to post.● Conduit and fittings

Tools:

- Post hole digger
- Standard electrical tools
- Impact driver and bits
- Drill and 1/4" drill bit
- Socket wrench or equivalent to tighten bolts
- Tape measure
- Marker
- Level
- Post hole digger
- Shovel
- Wood saw
- Paint brush
- Conduit and fittings as needed

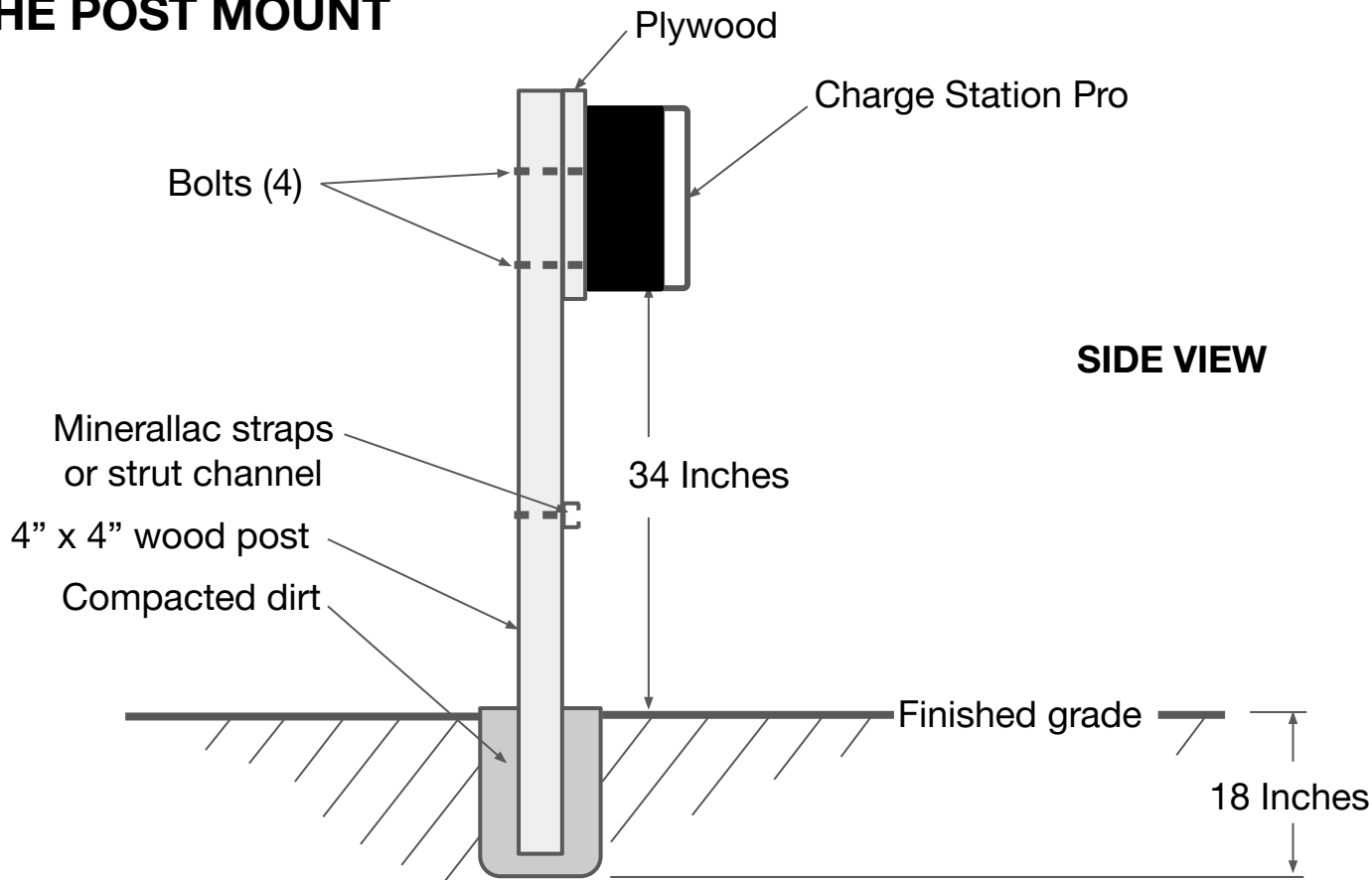
- 10 mil pipe wrap



- 1/4" threaded rod



PLAN THE POST MOUNT



TRENCH AND CONDUIT

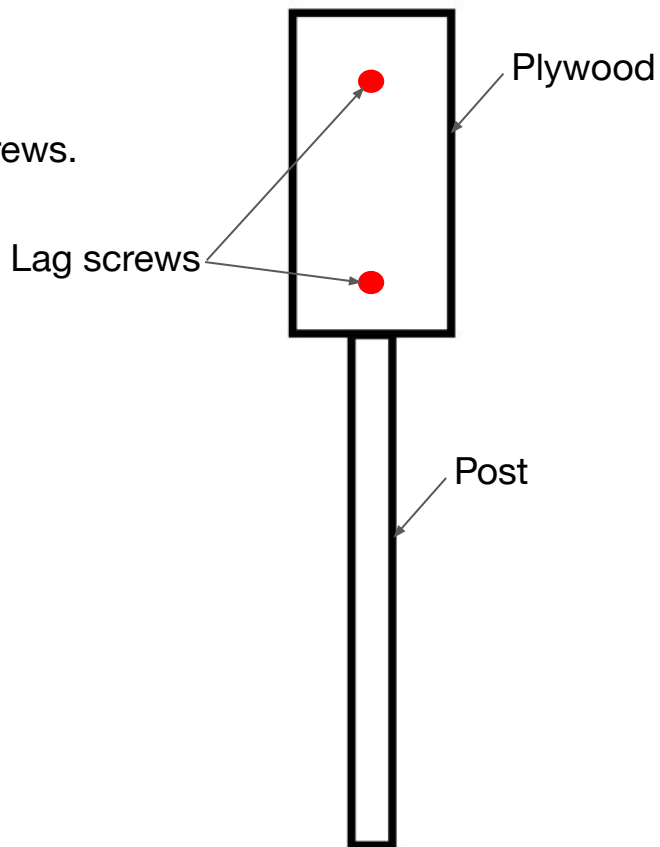
NOTE: The 18" deep trench with conduit, installed from the electrical source to the post hole should already be done. The conduit from the electrical source to the post hole should have a 90 degree bend up to the location where the post will be. The conduit ends should be above finished grade.

- If not already done, cover the conduit ends to prevent dirt from entering the conduit.



ATTACH PLYWOOD AND PAINT WOOD

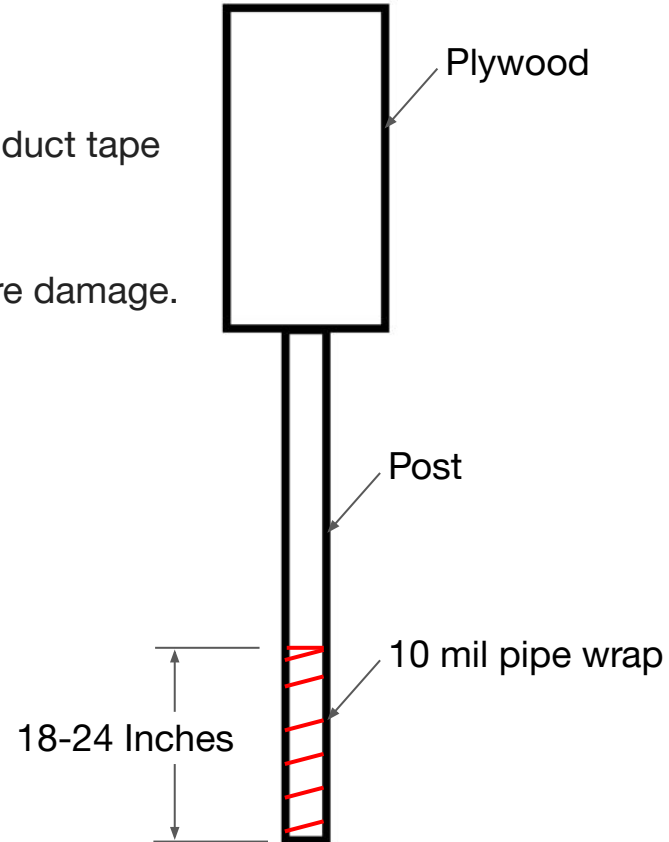
- Attach the plywood to the post with two lag screws.
- Paint the wood on all surfaces and let dry.



WRAP CONDUIT

- Wrap the bottom of the post with 10 mil pipe wrap duct tape for 18 to 24 inches.

NOTE: The pipe wrap helps protect the wood from moisture damage.



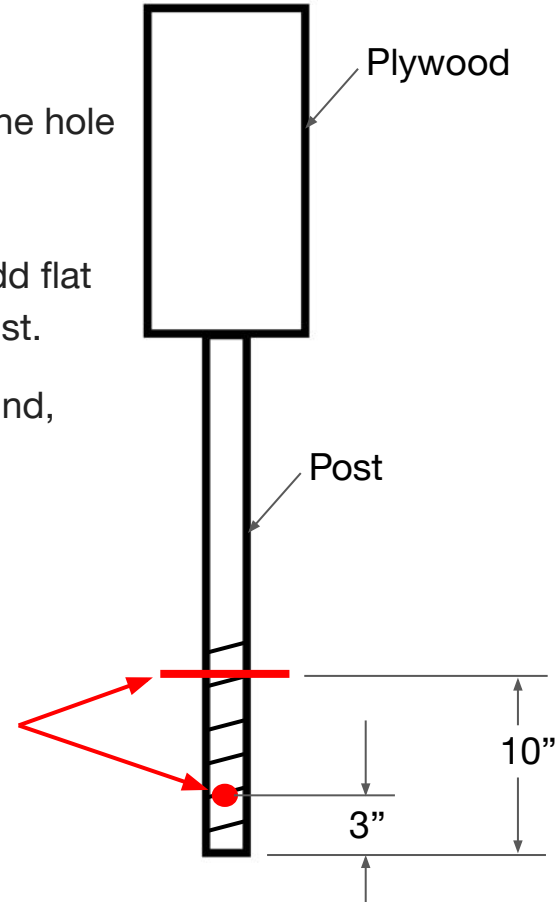
DRILL AND ADD THREADED ROD

- Drill two 1/4" holes through the post centered at 1-5/8." One hole at at 3", and one at 90 degrees at 10" from the bottom of wrapped end.
- Insert and center two 1/4" X 6" threaded rod into holes. Add flat washers, lock washers, and 1/4" nuts to secure rods to post.

NOTE: The threaded rod helps anchor the 4 X 4 post in the ground, preventing it from being pulled out.



1/4" X 6" threaded rod



DIG THE POST HOLE AND SET THE POST

- Using a post hole digger, dig a hole 9” wide, by about 18” deep.
- Backfill the trench to the post hole if it isn't already done.
- Place the post in the hole.
- Brace the post with wood and stakes approximately as shown.
- Backfill the post hole with dirt and pack it down to compact the dirt.

NOTE: The post is not painted in these pictures.



ATTACH STRUT CHANNEL AND SECURE CONDUIT

- Attach either strut or the minerallac straps to the post.
- Attach the conduit to the strut or minerallac straps.



INSTALL THE WALL BRACKET TO THE POST

- Hold the wall bracket at 34" above finished grade to the bottom of the wall bracket.
- Using the wall bracket as a template, level the wall bracket, then mark and drill four, 1/4" holes through the plywood.
- Attach the charger wall bracket to the plywood using four 1/4" bolts 4 flat washers, 4 lock washers and 4 nuts. Do not tighten yet.
- Level the wall bracket.



Wall bracket

34 inches between finished grade and wall bracket

PREPARE TO INSTALL THE WALL BRACKET TO THE POST

IMPORTANT: Before tightening the wall bracket to the pole, make sure the bolts do not extend past the plastic trough on the wall bracket, they could interfere with the charger base and damage the charger. Use a level to check that the bolts do not extend beyond the trough molded into the wall bracket. Tighten the bolts when clearance has been verified. **DO NOT OVERTIGHTEN AND DAMAGE THE WALL BRACKET.**



Check bolt clearance



INSTALLATION AND COMMISSIONING

- Perform the procedures in the installation and wiring SOP(s):

The Ford Charge Station Pro must be commissioned prior to use. See [Ford Charge Station Pro Commissioning - INS-SOP-0165](#).

- Perform the procedures in the Commissioning SOP(s).

NOTE: Additional commissioning may be required depending on the specific Ford Charge Station Pro System configuration installed (See overview).

THE FINISHED FORD CHARGE STATION PRO INSTALLATION

NOTE: The finished installation will look different depending on the Ford Charge Station Pro system called out in the plan set (See overview).



TEST/VERIFY THE INSTALLATION

- Verify that the job site has been cleaned up.
- Verify that the home owner approves the post mount location if they are available.
- Verify that all wood is painted.
- Verify the decorative cover is installed securely.
- A high quality, finished job contributes to our goal of customer obsession.

End of Option 2

Approvals			
Prepared by: D. Shumway	2022.11.22	Training:	
Reviewed by: RC	2022.11.28	Safety:	
Electrical:		Design:	
Electrical:		Other: FAE	2022.11.28
Structural:		Other: B. Sistrunk	2022.12.05
Quality:		Other:	
Product: J. Costner	2022.11.23	Other:	

