



**TECHNICAL DEPARTMENT**

4261 Clove St. Middleburg, Fl. 32068 office 904-413-7425 fax 855-218-9140

Weathertight Warranty - Technical Support - Machine Training - Installation Training - Estimating Services

October 31, 2013

**Project: City of Rapid City 2011 Storm Damage Recovery Project**

On October 23, 2013 I performed the Mid-Point inspection on the above named project. Present at the time of the inspection were the installation contractor, Pendo's Construction, representatives of Upper Deck Architects, Inc., the architect of record for the project and a representative of the city of Rapid City. Also present were Sam Webb and Tom Mooney of Bridger Steel. Bridger Steel is an authorized manufacturer of Sheffield Metals International products and manufactured the roof system for this project. I want to point out that there was no commutation from Pendo's Construction as to the schedule of this project. In a report dated March 13, 2013 I clearly stated how and what was expected pertaining to the installation of this project with great detail as how to perform certain installation details. I also stated the time requirements needed to perform the additional inspections. If it was not for a call from Bridger Steel commenting on their concerns as far as the progress of this project in regard to inspections and their overwhelming concern for the improper installation of the project there would be more issues to resolve.

We started the inspection on the Firehouse, there were numerous issues with the installation. The first thing visible is the improper seaming of the panels, improper flashing, curbs that did not have the required curb flashing. The side wall flashing at the jog of the parapet walls was unacceptable. The Z Closures for the hip and ridge were not installed to the installation details. During the March walk through I instructed Pendo's to contact me when they were removing the existing roof to review a flashing detail due to the jog in the parapet wall. They never made that contact. In the following pages of this report I cover the required repairs needed to comply with the requirements of the Weathertight Warranty. If the requirements are not followed and the repairs are not done to the installation details we will not be able to supply the WTW for this building.

Next we traveled to the three buildings in the Sue Park area. As we inspected the buildings I kept seeing more and more problems. The installation was poor at best.



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There were a numerous amount of seams that were damaged during the seaming process. As far as the trim on the three buildings, they did not follow any of the installation details at all. There were several valleys that did not have the proper sealant installed in the lap of the valley during the installation . With this, all trim must be removed from the three buildings and start over. All Z Closures must be slid down the hip/ridge further so the existing holes are not used. All existing holes must be sealed before the new Z Closures are installed. Check all valley laps for proper sealant, install sealant where missing. Replace short panels under overhangs. On the following pages there are direction as what to do.

I strongly recommend that Pendo's gets qualified installation help from this point forward. They have clearly demonstrated they do not have the ability to install the metal roof system on there own. With that being said, get me the information on the installers you are going to be using on this project moving forward so I can speak with them to see if there is a comfort level on their experience. On the next inspection, if it is found that you did not follow the installation details, Sheffield will have no choice but to remove the ability of the WTW being issued and will bill Pendo's Construction for all expenses incurred. I strongly recommend compliance with the installation details. If you have any questions, please contact me.

Jim Mitchell  
Sheffield Metals International  
Technical Director



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**Firehouse**

The two panels closest to the parapet wall will need to be removed so the new side wall flashing can be installed. This is due to the improper installation of the side wall flashing. This is the same for both sides of the roof.



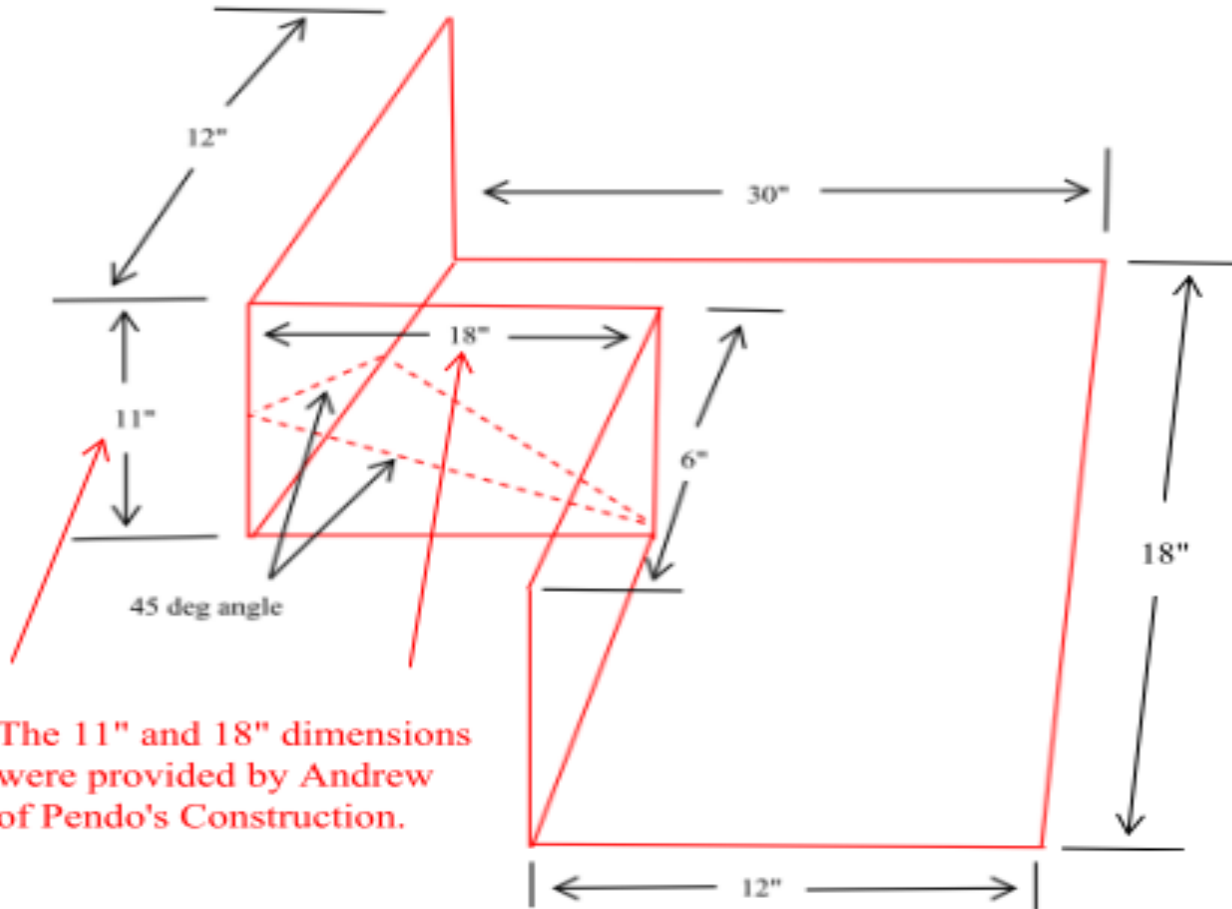
**Firehouse**

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**Firehouse**



The 11" and 18" dimensions were provided by Andrew of Pendo's Construction.

This is to be .050 alum with welded corners and cricket. This is to be used at the parapet wall on the firehouse. Two will need to be made, this one and one for the other side which will be the opposite of this one.

**NOTE:**

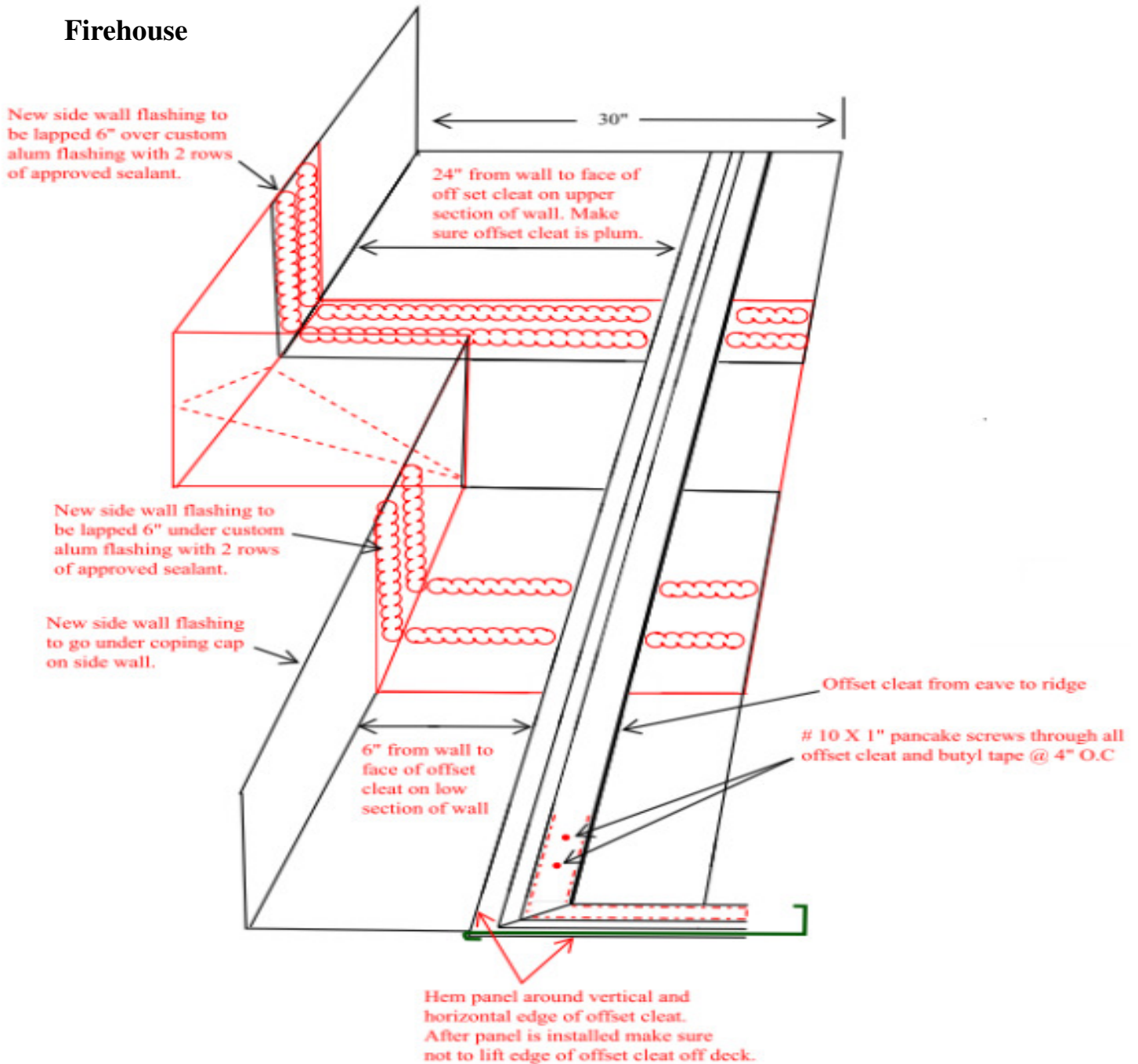
Roof pitch will be required for vertical sections of this custom flashing.

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**Firehouse**

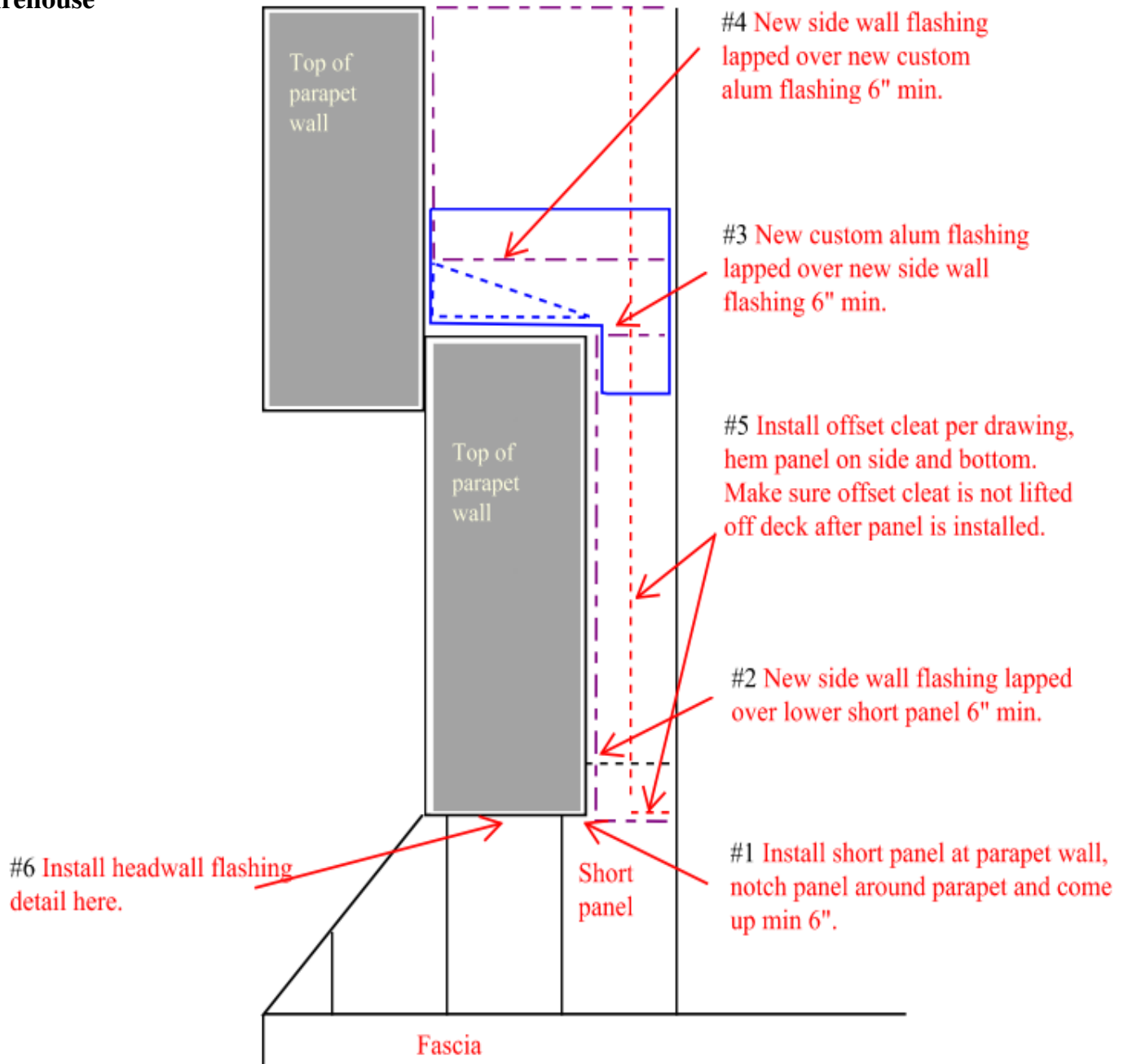


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**Firehouse**







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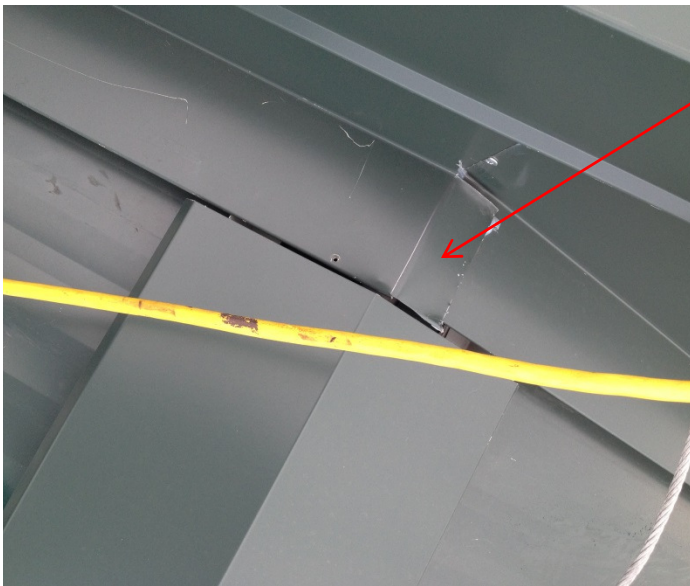


**Firehouse**

Remove head wall flashing and Z Closure.

Remove gable flashing and repair seam.

Install new Z Closure per installation details and extend vertical Z Closure per installation details. Check all vertical Z Closures on the building for proper lap and correct direction of lap so not to buck water.



Install ridge cap over side wall flashing.



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### Firehouse

In the next two pictures you can see the Z Closures at the ridge are not installed per the installation detail. Remove all existing Z Closures and install new Z Closures per the installation details. Note: Per the installation details there are 5 (five) fasteners per Z and no tab on the sides. Look very closely at the installation details to minimize future removal of components.







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**Firehouse**

All Z Closures must be installed per the installation details.



**Firehouse**

This side wall flashing is not installed to the installation detail. Remove existing flashing and install to proper side wall detail.



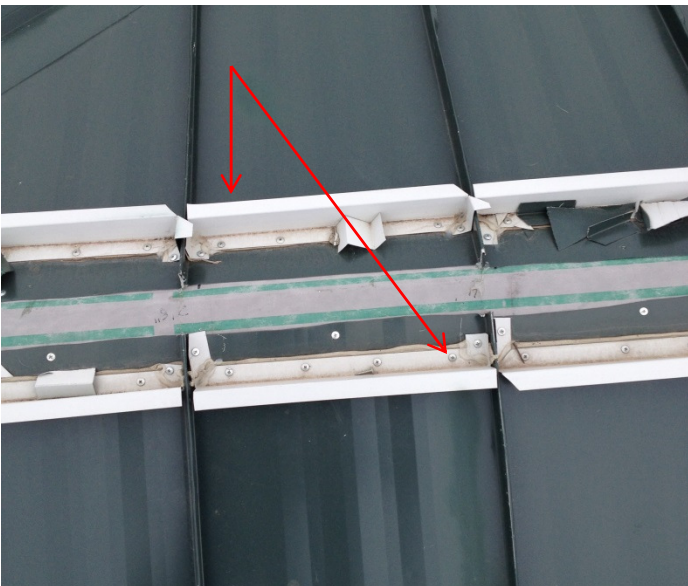
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### Sue Park Buildings

On all three of the buildings at the Sue Park location, all trim, Ridge caps, Z Closures, side wall flashing and head wall flashing must be removed and replaced with new trim. All trim **MUST** be installed to the installation details. If you are not sure about the detail, contact Sheffield's Technical Department for direction. A quick and easy way to determine if the detail is correct is to look at the installation, then the picture of the detail, if they match, your OK.



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**Sue Park Buildings**

With the side wall flashing removed, remove short panel and install new panel that is long enough to go from end to end with out splice. Seam panel to 180 deg. seam.



**Sue Park Buildings**

Huge hole at head wall, side wall flashing.  
No butyl tape behind head wall and counter flashing.  
Install all flashings per the installation details.





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#### **Improper Seaming of panels**

In these two pictures you can see that the seams were not seamed correctly. All damaged seams must be either repaired to a proper 180 deg. seam or the panels must be replaced and seam properly.

On the next page of this report there is a picture of what a proper 180 deg. seam looks like. Use this as your reference.





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This is what a proper 180 deg. seam looks like. If the seam can not be repaired, then the panels must be replaced.

