

## Pacheco Gregg, Patti

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**From:** Trippel, Andrew  
**Sent:** Wednesday, December 05, 2018 2:53 PM  
**To:** Pacheco Gregg, Patti  
**Cc:** Rose, William  
**Subject:** COMMUNITY BAPTIST CHURCH - FAUX STEEPLE request for additional information  
**Attachments:** DR18-005-Response to DRB materials information request.pdf

Good afternoon Chair Burch and members of the Design Review Board:

In advance of tomorrow's Design Review Board public hearing for the proposed Community Baptist Church – Faux Steeple and Building-mounted Minor Telecommunications Facility, attached please find the applicant's response to Chair Burch's request for additional information about the materials described as "radio frequency (RF) transparent screening materials that will mimic brick and wood" in the *Project Narrative and Proposed Design Analysis* (Attachment 5), including photos of the materials applied in other projects. The applicant has indicated that she will bring materials samples to tomorrow's Design Review Board public hearing.

Please feel free to contact me with any questions.

Thank you,

Andrew

**Andrew Trippel | City Planner**

Planning & Economic Development | 100 Santa Rosa Ave Rm 3 | Santa Rosa, CA 95404  
Tel. (707) 543-3223 | Fax (707) 543-3269 | atrippel@srcity.org



## **Gerie Johnson**

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**From:** Gerie Johnson  
**Sent:** Tuesday, December 4, 2018 1:11 PM  
**To:** 'Trippel, Andrew'  
**Subject:** RE: December 6 DRB Disclosure (PRJ18-003)  
**Attachments:** Church-Concealments.pdf; ComposiCon - Composite Systems & Structures.pdf; ComposiCon - Composite Systems & Structures2.pdf; Concealment-Illustrated-STEALTH®-2018-1.pdf; STEALTH® - MW02-Concealment-Panel-Product-Information-Sheet.pdf; STEALTHSKIN™-V-ESSV-concealment-panel-product-information-2018.pdf

Hi Andrew,

As I mentioned I will have materials at the Hearing. However, I want to provide you with brochures and information for your, and DRB review.

Please note that the vendor brochures provided, may not be the vendor who is contracted to do the work per the bid process. However, it provides information with respect to the materials, quality of materials, specification sheets, and the process to construct the faux wood and brick material.

Additionally, per feedback received from Loren Long at ComposiCon, *“we always make a real brick pattern and FRP mold or wood mold to match the brick each time we do a job. Brick layout, size, type, finish, grout width, grout finish, etc. are never the same and customers always want an exact match to existing.”*

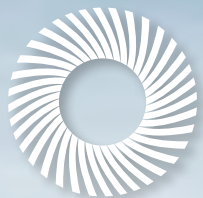
The faux materials are built to order to ensure the a high quality replication of real materials.

Best regards,

***Gerie Johnson, Planning Specialist***  
***Complete Wireless Consulting, Inc.***

(916) 709-2057  
(916) 313-3730 fax  
[GJohnson@completewireless.net](mailto:GJohnson@completewireless.net)  
2009 V Street  
Sacramento, CA 95818

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**STEALTH<sup>®</sup>**  
GO UNNOTICED<sup>™</sup>



**CONCEALMENT  
ILLUSTRATED**







# MAKE A [LAND] MARK ON THE SKYLINE

EAGAN, MN



# SO MUCH MORE THAN MEETS THE EYE

Since 1992, we have successfully designed and fabricated concealment solutions for the wireless industry that meet unique standards and requirements.

STEALTH has paved the way by understanding key factors affecting your concealment choices. We've ensured value for the long-haul and that you have a reliable concealment by evaluating durability, maintenance, serviceability, and long-term flexibility from the start.

**Go ahead, run through our interactive product collection and click on each image to see more photos of each product type.**

## STEALTH VISION

Exceed all of our clients' expectations. Make a difference in the lives of people. Demonstrate our position as the most innovative, creative and progressive company in the industry through every concealment built.

## STEALTH MISSION

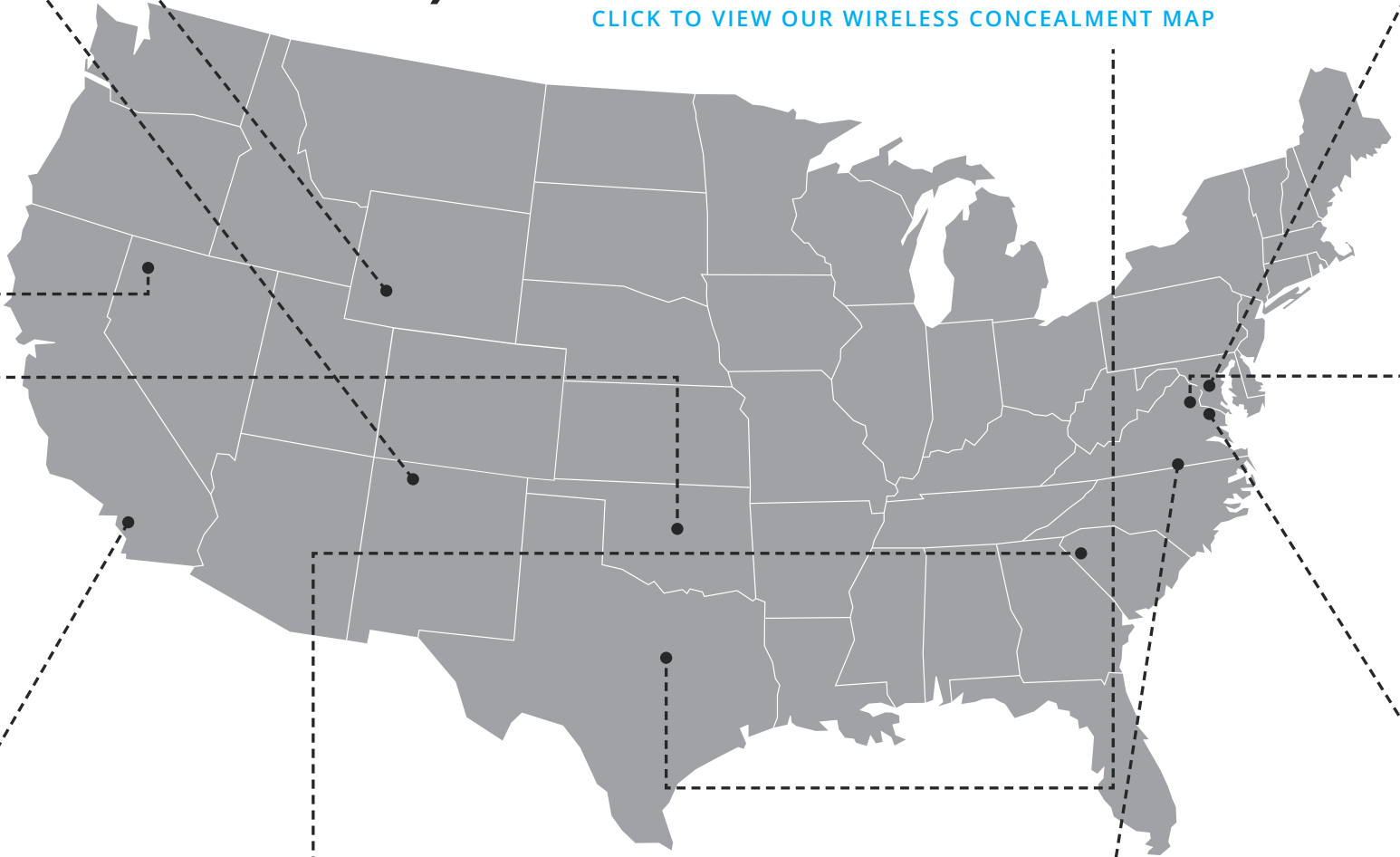
As the industry founder, we continuously strive to produce the highest quality and best performing concealment products, through world-class integration of dedicated employees, innovative design and cost effective materials.

## STEALTH CORE VALUES

The customer comes first, even when it hurts. We act with honesty and integrity on all actions and decisions. Teamwork and communication are critical to our success along with all STEALTH team members who dedicate their work to quality.

# 20,000+ SITES

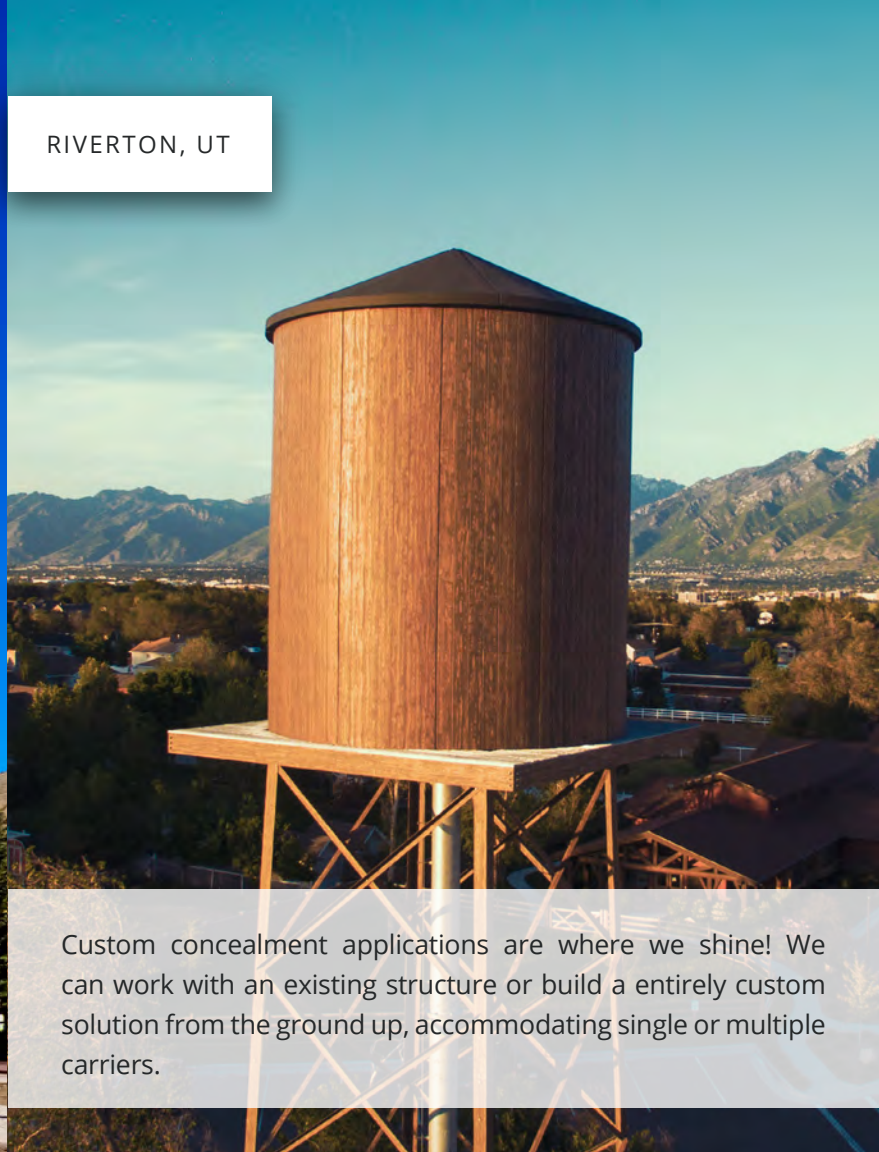
[CLICK TO VIEW OUR WIRELESS CONCEALMENT MAP](#)



JACKSON, WY



RIVERTON, UT



Custom concealment applications are where we shine! We can work with an existing structure or build a entirely custom solution from the ground up, accommodating single or multiple carriers.



COLUMBUS, OH



Utilizing the height of existing buildings in urban and suburban areas is our team's specialty. Disguise antennas by topping a structure with a screen wall, side mounted box or penthouse style concealment.

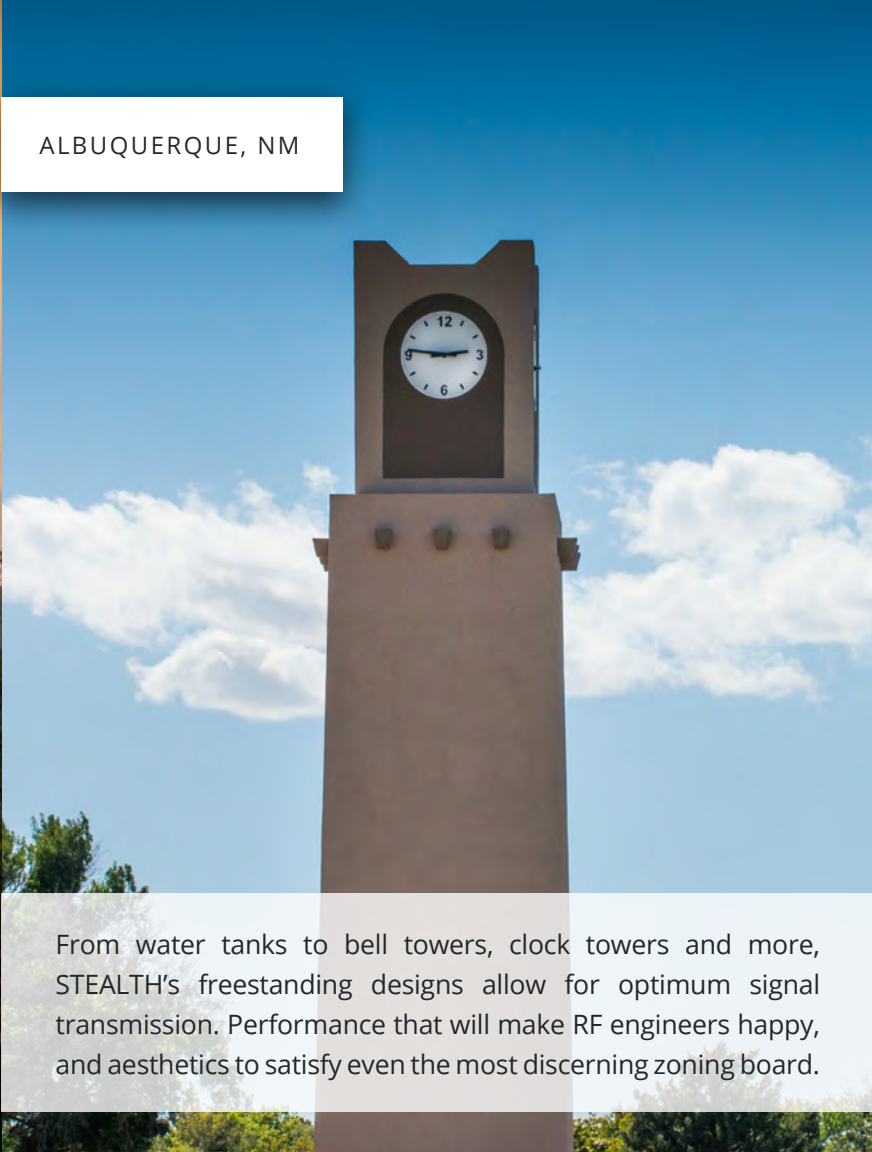
SACRAMENTO, CA



KILLINGTON, VT



ALBUQUERQUE, NM



From water tanks to bell towers, clock towers and more, STEALTH's freestanding designs allow for optimum signal transmission. Performance that will make RF engineers happy, and aesthetics to satisfy even the most discerning zoning board.





SALINE, MI



DILLSBURG, PA

Like our other tower concealments, our silos are designed to allow for expansion so you'll have the ability to add on down the road if needed. We can even apply brick or other custom textures!



BRAMPTON, ON



SPRINGFIELD, VA



STEALTH® has manufactured a wide variety of steeples – from antique to completely modern. No steeple? Consider adding or replacing RF-transparent louvers, windows or crosses to help spread the signal far and wide.



OKLAHOMA CITY, OK



HARRISBURG, NY

Windows can be manufactured from RF transparent materials just like any other rooftop concealment. We can create new windows or replace existing ones. Adding ornate trim or decorative mullions adds plenty of charm and character to the site.



CLEMSON, SC



PITTSBURGH, PA



The demand for bandwidth is increasing within heavily populated parks, hotels, arenas and sports centers and distributed antenna systems (DAS) are key. Blending with their surroundings, these solutions give fans and tourists the ability to share their experiences.



WILLIAMSPORT, PA



You may think a pole is just a pole, but that's not true! From stately flagpoles and multi-tasking stadium lights...a concealment pole can blend into its surroundings or add a focal point to your chosen site.

CHARLESTON, SC





WASHINGTON, DC



SARATOGA SPRINGS, NY



When a screenwall or pole won't do the trick, there's always pods or chimney pots. These concealments offer a great disguise and can even add a decorative element to any building.





DURHAM, NC

Probably the most widely known concealment, the tree! STEALTH's monopine is a great option for sites requiring a multi-carrier solution and they're designed based on your sites zoning requirements.



CLOVER, SC



# SMALL CELL SPOTLIGHT

STEALTH® has taken the lead in developing solutions for small cell sites. If we can beautifully conceal sites in one of the most historic cities in the country, our hometown of Charleston, South Carolina, we can do it anywhere.

Our small cell sites are designed to fit into the surrounding atmosphere and remain invisible. Our products span from poles to custom roof mounted structures covering a variety of applications!

Our unique designs are disguised as chimneys, pods, cupolas, sconces, side mounted boxes, lanterns and so much more. Of course, there are always plenty of completely custom options to fit the bill.

FRANKLIN SQUARE, NY



ELDERSBURG, MD



MURFREESBORO, TN




EVANSVILLE, IA



MADISON, WI



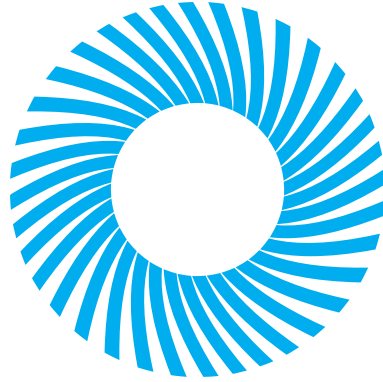




// WE ALWAYS TRY TO USE STEALTH®  
PRODUCTS. THE PRICING IS ALWAYS  
COMPETITIVE AND THE QUOTES ARE  
ACCURATE AND FAST! //

- MIKE CLODFELTER

HENRICO, VA



# STEALTH<sup>®</sup>

GO UNNOTICED<sup>™</sup>

3034-A ASHLEY PHOSPHATE RD. | N. CHARLESTON | SC | 29418

800.755.0689 | [stealthconcealment.com](http://stealthconcealment.com)





## Church Concealments

**Are you looking for a concealment that will also help you bring financial strength to your organization? Look no further!**

Congregations across the nation are taking full advantage of the financial benefit of having wireless antennas installed on their property.

STEALTH® offers a wide variety of church solutions - from steeples to louvers, to windows, crosses and more. Your concealment options are limitless! All of the materials we use are RF-transparent, which means excellent RF performance and quick installation. Whether you are looking for a traditional steeple, or a completely custom concealment, we've got a solution for you!

**Already have a concealment on your church property that you're looking to expand or upgrade? No problem!**

The STEALTH Team has years of expertise with replacements, extensions and expansions. Our concealments grace elaborate steeples in Massachusetts, beautiful stained glass windows in Los Angeles, and numerous custom towers in between! If it's crosses or bells you're after, we can do that too!

Church concealments share many elements with the other types of concealments we offer, however, every site is different, and STEALTH embraces each and every custom job. Sometimes this may mean an increase in cost, but we're happy to work with any budget. We have the ability to create something that hides multiple antennas while maximizing the beauty of any church. Contact us today to begin increasing your wireless signal and the aesthetics of your property.

Zoning



Expandability



Site Prep



Installation Time



Maintenance



3034-A ASHLEY PHOSPHATE RD. | N. CHARLESTON | SC | 29418 | 800.755.0689 | [stealthconcealment.com](http://stealthconcealment.com)

©2016 STEALTH CONCEALMENT SOLUTIONS, INC.

**DESCRIPTION** Through testing and the experience of thousands of concealment sites constructed, STEALTH® Concealment Solutions, Inc has determined that the type and placement of materials used for screening antennas play a vital role in their performance. All STEALTH® concealment panels allow for superior antenna signal transmission compared to fiberglass without the durability problems of fiber blooming or cracking over time. STEALTH® panels are engineered and manufactured to become part of the existing structure and withstand extreme weather conditions while maintaining their original appearance.

**APPLICATION** STEALTH® MW02 panels can be used to manufacture a variety of rooftop and tower type concealment products including screenwalls, wall replacements, side-mounted boxes, clock towers and bell towers. The panel can be factory textured to match most existing architectural appearances such as brick, stucco, aggregate, split face block and custom applications.

**RECOMMENDED FREQUENCIES** STEALTH® generally recommends MW02 panels for customers using high frequency microwave backhaul systems that require a wide range of potential frequencies to be used on a single cell site. Please contact STEALTH® for assistance with the best panel selection for microwave or backhaul applications.

**SIZES AND STYLES AVAILABLE** STEALTH® MW02 panels are available in 4' x 8', 4' x 10', and 4' x 12' standard sizes. Custom sizes are available upon request. Nominal panel thickness is 1.75". Panel weight is 2.3 lb/sf for a smooth/painted texture.

**PHYSICAL PROPERTIES** STEALTH® MW02 panels are manufactured with sandwich panel geometry. ABS plastic skins are laminated to an extruded polystyrene core using an ICBO approved adhesive. Physical performance properties of the skins and core are listed to the right.

**FABRICATION/INSTALLATION** STEALTH® MW02 panels can be fabricated into various sizes and bent into corner panels and other shapes including radius applications. Due to the critical design aspects of many of its applications, STEALTH® recommends that qualified designers or consultants design a total concealment system to support the panels.

**AVAILABILITY** STEALTH® maintains inventory of STEALTH® MW02 panels and has custom manufacturing capabilities in its facility in South Carolina. Please contact us at 843-207-8000 for sales information.

**TECHNICAL SERVICES** STEALTH® can provide technical information and support to address questions when using the STEALTH® MW02 panels. Technical personnel are available via telephone at 843.207.8000.

**PHYSICAL PERFORMANCE PROPERTIES OF ABS SKINS**

PROPERTY	UNITS	TEST METHOD	RESULTS
Specific Gravity	-	ASTM D-792	1.03
Water absorption (Saturated at 23°C)	%	ASTM D-570	1.03
Rockwell Hardness	-	ASTM D-785	95
Tensile Modulus (73°F)	psi	ASTM D-638	290,000
Tensile Strength (73°F)	psi	ASTM D-638	6,240
Tensile Strength Break (73°F)	psi	ASTM D-638	4,790
Elongation, Yield (73°F)	%	ASTM D-638	3.5
Flexural Modulus	psi	ASTM D-790	297,000
Flexural Strength	psi	ASTM D-790	9,570
Flammability Rating	-	UL94	HB

**PHYSICAL PERFORMANCE PROPERTIES OF  
EXTRUDED POLYSTYRENE CORE**

PROPERTY	UNITS	TEST METHOD	RESULTS
Density	lb/in <sup>3</sup>	ASTM D1622	1.5
Compressive Strength	lb/in <sup>3</sup>	ASTM D1623 (vertical)	20
Tensile Strength	lb/in <sup>3</sup>	ASTM C273	50
Shear Strength	lb/in <sup>3</sup>	ASTM C273	25
Shear Modulus	lb/in <sup>3</sup>	ASTM C273	330
Flexural Strength	lb/in <sup>3</sup>	ASTM C203	50
Flexural Modulus	lb/in <sup>3</sup>	ASTM C203	1600
Water Absorption	% by vol.	ASTM C272	.5
R-Value per Inch	F-ft-h/Btu	ASTM C518	5.0
Surface Burning Characteristics (Flame Spread/Smoke Developed)	-	ASTM E84	15/165

**DESCRIPTION** Through testing and the experience of thousands of concealment sites constructed, STEALTH® Concealment Solutions, Inc. has determined that the type and placement of materials used for screening antennas play a vital role in their performance. All STEALTH® concealment panels allow for superior antenna signal transmission compared to fiberglass without the durability problems of fiber blooming or cracking over time. STEALTH® panels are engineered and manufactured to become part of the existing structure and withstand extreme weather conditions while maintaining their original appearance.

**APPLICATIONS** STEALTH® ESSV panels are generally specified for dark color and desert climate applications. STEALTH® ESSV panels can be used to manufacture a variety of rooftop and tower-type concealment products including screenwalls, wall replacements, side-mounted boxes, clock towers and bell towers. The panel can be factory textured to match most existing architectural appearances such as brick, stucco, aggregate and split face block as well as custom applications.

**RECOMMENDED FREQUENCIES** STEALTH® generally recommends ESSV panels for frequencies up to 3GHz. STEALTH® has testing currently in process for higher frequency applications. STEALTH® has insertion loss lab testing for most panel and texture combinations up to 100 GHz at multiple incidence angles. Please contact us to help select the best concealment panel for your site.

**SIZES AND STYLES AVAILABLE** STEALTH® ESSV panels are available in 4' x 8', 4' x 10' and 4' x 12' standard sizes. Custom sizes are available upon request. Nominal panel thickness is 2.18". Panel weight is 1.5 lb/sf for a smooth/painted texture.

**PHYSICAL PROPERTIES** STEALTH® ESSV panels are manufactured with sandwich panel geometry. FRP (fiberglass reinforced plastic) skins are laminated to an extruded polystyrene core using an ICBO approved adhesive. Physical performance properties of the skins and core are listed to the right.

**FABRICATION/INSTALLATION** STEALTH® ESSV panels can be fabricated into various sizes and bent into corner panels and other shapes including radius applications. Due to the critical design aspects of many of its applications, STEALTH recommends that qualified designers or consultants design a total concealment system to support the panels.

**AVAILABILITY** STEALTH® maintains inventory of ESSV panels and has custom manufacturing capability in its facilities in South Carolina.

**TECHNICAL SERVICES** STEALTH® can provide technical information and support to address questions when using ESSV panels. Technical personnel are available via telephone at 843-207-8000.

## PHYSICAL PERFORMANCE PROPERTIES OF FRP SKINS

PROPERTY	UNITS	TEST METHOD	RESULTS
Coefficient of Linear Thermal Expansion	10 <sup>5</sup> /IN/IN/°C	ASTM D-696	3.46
Water Absorption (24 hours)	%	ASTM D-570	0.17%
Tensile Modulus	psi x 10 <sup>2</sup>	ASTM D-638	9.43 x 10 <sup>5</sup>
Tensile Strength, Yield	psi	ASTM D-638	8,000
Elongation, Yield	%	ASTM D-638	1.20%
Flexural Modulus	psi x 10 <sup>2</sup>	ASTM D-790	6.0 x 10 <sup>5</sup>
Flexural Strength	psi	ASTM D-790	17,000
Compressive Strength	psi	ASTM D-695	18043/13042 Transverse
Compressive Modulus	psi x 10 <sup>2</sup>	ASTM D-695	0.783/0.508 Transverse
IZOD Impact	F 0 lbs Inch Notch	ASTM D-256	7.0

## PHYSICAL PERFORMANCE PROPERTIES OF EXTRUDED POLYSTYRENE CORE

PROPERTY	UNITS	TEST METHOD	RESULTS
Density	Lb/ft <sup>3</sup>	ASTM D-1622	1.5
Compressive Strength	Lb/in <sup>2</sup>	ASTM D-1621 (vertical)	20
Tensile Strength	Lb/in <sup>2</sup>	ASTM D-1623 (vertical)	50
Shear Strength	Lb/in <sup>2</sup>	ASTM C-273	25
Shear Modulus	Lb/in <sup>2</sup>	ASTM C-273	330
Flexural Strength	Lb/in <sup>2</sup>	ASTM C-203	50
Flexural Modulus	Lb/in <sup>2</sup>	ASTM -203	1,600
Water Absorption	% by volume	ASTM C-272	0.5
R-Value per inch	F ft <sup>2</sup> h/Btu	ASTM C-518	5.0
Surface Burning Characteristics (Flame Spread / Smoke Developed)	-	ASTM E84	15/165





# ComposiCon

## COMPOSITE SYSTEMS & STRUCTURES

### Antenna Concealment



Cellular antennas and microwave dishes are very often required to be hidden from public view by municipalities due to their unsightly appearance. These devices are a necessary part of a wireless communication system, but they need not be visible to the public. Fiberglass reinforced plastic (FRP) is the answer to your concealment requirements due to its radio frequency (RF) transparency and structural properties.

Since 1997, ComposiCon has provided custom concealment solutions to the telecommunications industry. Our FRP fabrications are shop fabricated to meet building department and customer specifications. Fabrications vary from simple flat panels and cylindrical radomes to complicated structures, such as cupolas, multi-panel site screen systems, window panels, chimneys, and much more.

At ComposiCon, we have the ability to produce textures and finishes in FRP which are indistinguishable from the real thing. Commonly produced faux surfaces include brick, block, stucco, shingles, tile roofing, metal siding, plywood siding and wood lapped siding.

Where required, EXTREN® structural FRP and FIBREBOLT® connection hardware is used as a framing system to support our custom molded FRP fabrications. EXTREN® and FIBREBOLT® are also used for shop fabricated and/or field constructed complete antenna and microwave enclosures where custom molded faux surfaces are not required. Please see our "Strongwell Supplier" webpage for more FRP RF transparent decking and wall panel products.

As with all of our offerings, we can provide assistance with design, engineering and drawings. Please take a look at our [Antenna Concealment Gallery](#) webpage for some examples of our work.

For more information call (510) 538-8556 or email [composicon@comcast.net](mailto:composicon@comcast.net)



# ComposiCon

## COMPOSITE SYSTEMS & STRUCTURES

### Custom Molding



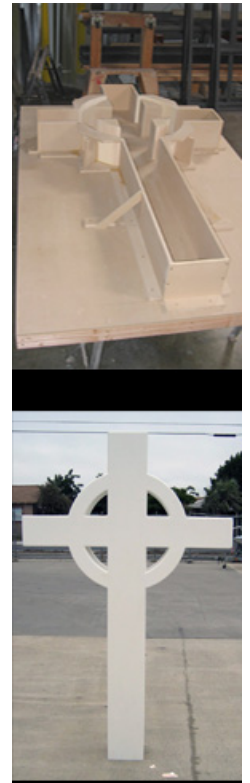
The practical uses of fiberglass are virtually endless and are only limited by your imagination. Fiberglass reinforced plastic (FRP) has opened many new avenues for creative designers due its unique physical properties which allow it to be easily molded, machined and finished to meet almost any application.

Today, more and more FRP is being used to produce products that were traditionally manufactured from steel, sheet metal, concrete, wood and other more conventional materials. Whether you are in the construction, recreation, marine, transportation, industrial, agricultural or communications field and have a unique custom component or a production item, we can help to produce it to your specifications.

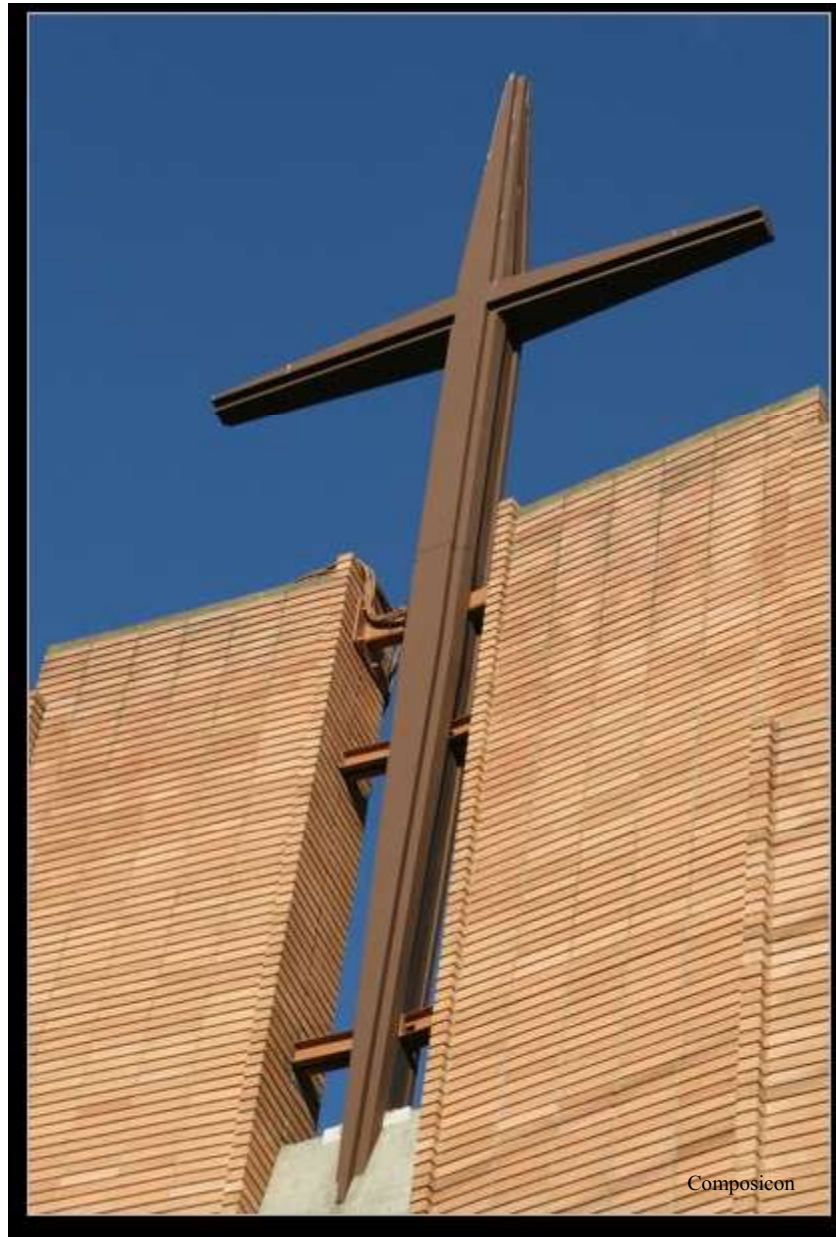
ComposiCon's years of experience in fabricating wood and FRP molds, patterns, and custom molded FRP products provides us the knowledge required to provide a quality finished product. Support services include design, drafting and engineering.

Bring us your plans or ideas, and we will work with you in the design and fabrication of your project.

For more information call (510) 538-8556 or email [composicon@comcast.net](mailto:composicon@comcast.net)



ComposiCon Project Image





ComposiCon Project Image



ComposiCon Project Image





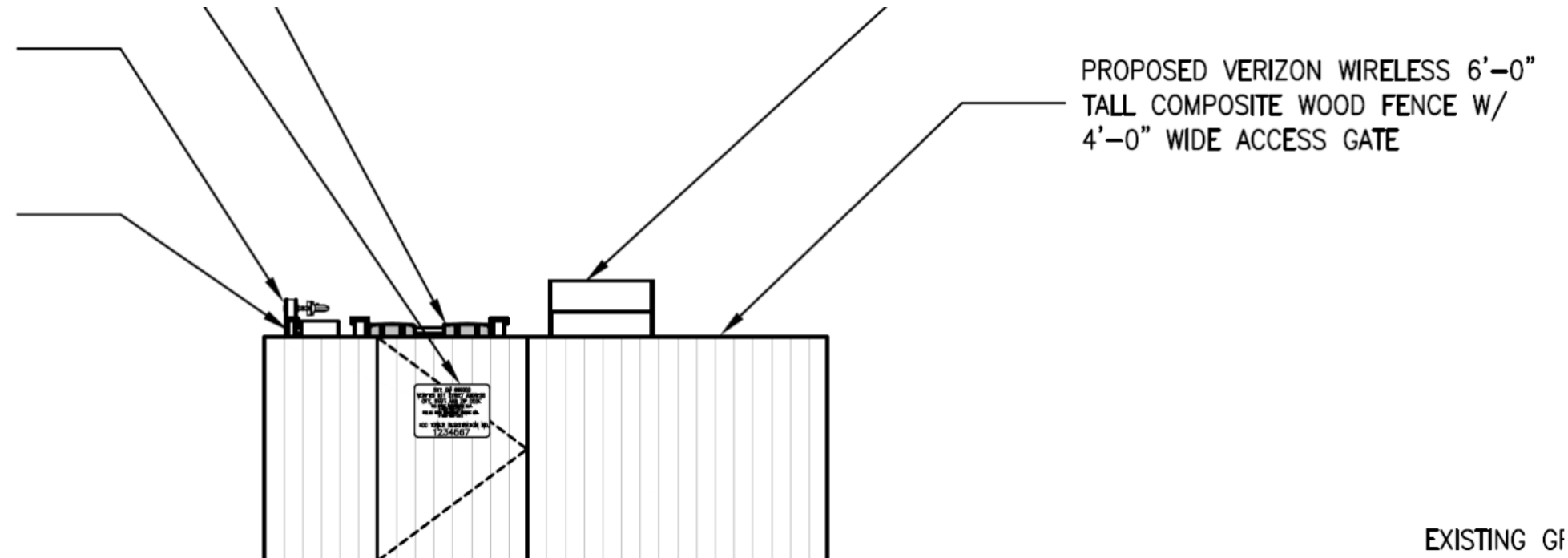


RE: December 6 DRB Disclosure

Gerie Johnson  
Sent: Monday, December 03, 2018 1:11 PM  
To: Trippel, Andrew [atrippel@srcity.org]  
Attachments:100\_3243.JPG (1 MB) ; VZW Sparks Crossing- view ~1.JPG (1 MB)

Hi Andrew,

Typically, the materials are built to order, but one vendor for the wood composite fence is Azek. Also attached are samples/photographs of the faux brick material from another project. I can provide more samples at the Hearing.



EXISTING GF



**Brownstone**

AZEK Harvest Collection

GET A FREE SAMPLE



**Kona**

AZEK Harvest Collection

GET A FREE SAMPLE



**Autumn Chestnut**

AZEK Harvest Collection

GET A FREE SAMPLE



**Slate Gray**

AZEK Harvest Collection



**Island Oak**

AZEK Harvest Collection

Best regards,

**Gerie Johnson, Planning Specialist**  
**Complete Wireless Consulting, Inc.**

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