



**CASE**  
EMERGENCY SYSTEMS

# ***NEW OR RE-DO***

**A Cost-Benefit Analysis  
for Emergency Phone and  
Call Box Systems**

**Emergency phone towers and call boxes are not a new concept. In fact, the first emergency communication access point is believed to have been a fire-station alert box that would telegraph a location code to fire stations whenever a lever was pulled in the box. That was in the 1880s - just a few years after the invention of the telephone.**

Over the next 130+ years, different iterations of emergency phone systems have been installed everywhere from highways and bridges, to campgrounds and stadiums, to college campuses and parks.

A number of different manufacturers have come along during that time, and many products have become obsolete as communication technology advances — which usually presents an almost universal question...

**Do you REPLACE an existing emergency phone system or do you RETROFIT?**







## ***WHY SYSTEMS DIE OUT***

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**Depending on the age, location, and hardware components of a particular emergency phone tower or call box, they can fail for a variety of reasons.**

- » Non-weather-resistant metal construction rusts from continued outdoor exposure
- » Electrical lines supplying power degrade over time
- » Corroded communication and data lines
- » Handsets, dial pads, and other parts are vandalized or lose functionality
- » Phone connection is not digitally compliant with 911-systems requiring auto-location technologies
- » Repair and maintenance no longer offered, or replacement parts unavailable when a manufacturer goes out of business



For decades, the only solution in these scenarios and others like them was to take out an old system and install a completely new one in its place — hopefully with design features that eliminate or mitigate common reasons for failure.

However, newer retrofit kits offered by manufacturers like **CASE Emergency Systems** are made to extend and enhance the life of existing systems — often saving substantial installation dollars in the process.





# NEW INSTALL BUDGET CONSIDERATIONS

Calculating budget estimates for the replacement or relocation of emergency call phones is difficult due to widely varying requirements for cabling, trenching, and distance to telephone, electrical, and network infrastructure. There is rarely a one-size-fits-all solution.

For instance, a recent contractor estimate in Texas to replace an existing surface-mounted phone was more than **\$1,500** for the single unit.

Replacing an emergency phone mounted on a building wall within a garage with integrated mass notification capabilities (including the required support and monitoring software and hardware) was estimated at more than **\$24,000** for a single unit.

Neither solution included labor costs of removing old units, running new wiring as needed, and installing the new units.

Clearly, any emergency phone system is an investment, and costs can quickly spiral out of control.



# RETROFIT — A REAL SOLUTION?

As communication technology continues to evolve, components become both smaller and more resilient. This has led to the development of retrofit and conversion kits that replace only the essential components of an emergency phone tower or call box, leaving the housing intact as well as any supporting installation of wiring, as applicable.



Retrofit and conversion kits are best suited for otherwise-functioning emergency calling systems that have been phased out due to obsolete cellular technology, or that have sustained physical damage that cannot be replaced by original manufacturers. In some scenarios, complete replacement of broken or obsolete equipment may be the more affordable solution. Be sure to consider all possible answers to your emergency communications needs.

## The benefits of retrofitting often include:

- » **Significantly reduced system hardware costs for replacing or upgrading emergency phone units**
- » **Less labor needed to re-run functional wiring that has not been damaged or degraded**
- » **Quicker resumption of operations with less installation time required**
- » **Better system performance due to new or enhanced features not previously available with legacy systems**

## Also note:

- » **Damaged or failing infrastructure must be repaired for hard-wired kits to function as expected**
- » **Additional power demand may be necessary when converting from older hard-wired electrical systems**

What some manufacturers have done to address these issues is offer an expanded retrofit kit that also includes solar-power and battery back-up options, as well as wireless connectivity that utilizes cellular or satellite phone technology to ensure help can be reached any time, anywhere.

# EVALUATING YOUR PROJECT — A CHECKLIST

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Once you know a system needs to be replaced or upgraded, it is good to frame the mandatory specifications of the project. The following checklist can help you decide whether a new install or retrofit is the most desirable solution for your circumstances.



**01. Is this a completely new installation?** If yes, then a retrofit kit is not applicable for your project - retrofit kits must be placed into an existing housing.

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**02. How many units in your system need replacement or upgrade?**

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**03. Are all units the same type or in the same condition?** It can be helpful to break out your units by type as follows.

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*Example:*

» **Pole-Mounted Emergency Phone Clam-shell Boxes**

Total Number: .....

Total Units Failing Due to Internal Unit Components: .....

Total Units Failing Due to Infrastructure Problems: .....

» **Emergency Phone Towers**

Total Number: .....

Total Units Failing Due to Internal Unit Components: .....

Total Units Failing Due to Infrastructure Problems: .....

Total Units With Only Partial Failures (missing/inoperable light, etc.): .....

Continue this format for your wall-mounted and other unit types.

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**04. Is the current system already failing or about to fail?**

If yes — Is the cause of the failure known?

# ***EVALUATING YOUR PROJECT — A CHECKLIST***

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**05. Are the housing components of the existing system still in serviceable condition? Are they properly mounted or attached to support structures? Are they relatively free from large dents, breakage, or missing components?**

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**06. Are the current emergency phone units hard-wired for electricity? What is the condition of the existing wiring?**

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**07. Are the current units hard-wired to a land-based phone line? What is the condition of these lines?**

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**08. Does your current system have a backup for power and/or phone outages?**

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**09. What features does your current system NOT offer that you wish to add?**

- » Solar power with battery backup
- » Mass notification system
- » Wireless installation capability (no trenching)

With answers to these questions in place, you can then begin to see the requirements of your project take shape. This will prove invaluable in obtaining quotes and estimates from providers who might otherwise try to sell you solutions you do not need or that do not answer the basic requirements of your project.

Once you've assembled your quotes, crunch the numbers and see what actually works best for your budget and long-term goals. It is not unusual to find that some units are beyond repair or upgrade and replacement is the only choice, while other units you were convinced were total failures would be ideal candidates for a retrofit.



# **CASE STUDY** *UNIVERSITY CAMPUS IN TEXAS*

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When comparing the cost of a new/replacement installation (Brand X) vs. a retrofit solution (in this instance, a CASE Emergency Systems Retrofit Kit) the cost differences were significant.



## **PLAN 1: COMPLETE EMERGENCY CALL PHONE REPLACEMENT FOR 4 GARAGES**

**Total Estimated Budget: \$408,355.00**

### **01. GARAGE 1**

- a. Provide and install (2) Brand X wall mount emergency phone stations
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### **02. GARAGE 2**

- a. Provide and install (15) Brand X wall mount emergency phone stations
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### **03. GARAGE 3**

- a. Provide and install (8) Brand X wall mount emergency phone stations
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### **04. GARAGE 4**

- a. Provide and install (20) Brand X wall mount emergency phone stations
  - b. Provide (3) Brand X Tower emergency phone stations
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- 05. ELECTRICAL PARTNER** will provide and install the required conduit infrastructure

# **CASE STUDY** *UNIVERSITY CAMPUS IN TEXAS*

## **PLAN 2: CASE EMERGENCY SYSTEMS WIRELESS EMERGENCY PHONE REPLACEMENT**

**Total Estimated Budget: \$251,181.00**

### **01. GARAGE 1**

- a.** 2 Wall Mount Emergency Phones, 1 button Phone panel, Solar Panel, Blue Strobe Light, Battery
- b.** Solar Power with additional pedestal post and strobe light
- c.** Additional 2 strobe Lights for lower level of garage

### **02. GARAGE 2**

- a.** 15 Wall Mount Emergency Phones, 1 button Phone panel, Blue Strobe Light, Battery
- b.** No solar panel needed for this location/AC power is accessible

### **03. GARAGE 3**

- a.** 8 Wall Mount Emergency Phones, 1 button Phone panel, Blue Strobe Light, Battery
- b.** No solar panel needed for this location/AC power is accessible

### **04. GARAGE 4**

- a.** 19 Wall Mount Emergency Phones, 1 button Phone panel, Blue Strobe Light, Battery
- b.** No solar panel needed for this location/AC power is accessible
- c.** 3 Tower Call box, 1B, C100, 20W Solar, 40Ah, High Power 1 button (Engraved) Phone with panel, Solar Panel, Blue Strobe Light, back up battery, PA System

- 05. ELECTRICAL PARTNER** will provide and install the required conduit infrastructure





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RESERVED  
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EMERGENCY



HELP





# **CASE**

EMERGENCY SYSTEMS

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