



P. O. Box 1201
Enfield, CT 06083
Ph : (860) 627-6870

Change Request

To: Loren Compson
Pacheco Ross Architects, P.C.
72 Voorheesville Avenue
PO Box 558
Voorheesville, NY 12186
Ph: (518)765-5105 Fax: (518)765-5107

Number: 29
Date: 10/21/14
Job: 14-009 Thompsonville Fire Station
Phone:

Description: Supply and install Tele-Data and Ext Emergency Phones

We are pleased to offer the following specifications and pricing to make the following changes:
Supply and install Tele-Data and Ext Emergency Phones

The total amount to provide this work is \$31,866.83

If you have any questions, please contact me at 860-627-6870.

Submitted by: Kirk Nassetta

Approved by: _____
Date: _____

Cc:

Proposed Change Order Detail Breakdown Sheet

PCO 29 Tele-data and Exterior Phones

Direct Costs: Item		PCO \$	
First Line Electric			\$26,329.36
EBI O&P	5.00%		\$1,316.47
SUBTOTAL - SUBS			\$27,645.83
EBI - Labor/Materials# Uts Rate			
Carpenter		68.5	\$0.00
Laborer			\$0.00
Mason			\$0.00
Concrete Material			\$0.00
Misc Equip/Mtl		35	\$0.00
Superintendent	40	88.75	\$3,550.00
EBI Overhead and Profit		10%	\$355.00
TOTAL DIRECT COSTS			\$3,905.00
Indirect Costs: Hrs Rate			
Project Manager	0	115	\$0.00
Chief Estimator	0	96.5	\$0.00
Project Engineer	0	37.15	\$0.00
			\$0.00
TOTAL INDIRECT COSTS			\$0.00
Bond Premium		1.00%	\$316.00
TOTALS			\$31,866.83

SUB-CONTRACTOR CHANGE PROPOSAL WORK SHEET

First Line Electric, LLC

Change Order Proposal No.: _____

17

Date:

10/15/14

Project

Thompsonville Fire Station

Name:

[Signature]
Signature

Supply and install wiring, patch panels and jacks for CAT 6 data and phones. Supply 3 emergency exterior phones.

EBI Project No :

13-016

Job No :

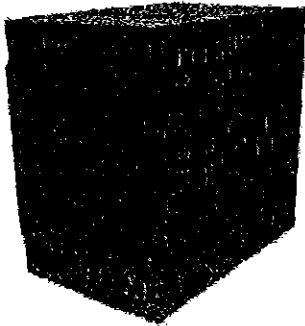
Section 1 Quantity	Unit	Description of Material and Equipment	Unit Cost	Lump Sum Cost	Insert "X" if Credit	(Quantity x Unit Cost OR Lump Sum) Total			
1	ea	cable, jacks, l-hooks, patch panels, faceplates, rack		\$ 7,617.00		\$ 7,617.00			
3		emergency phones	\$ 1,750.00			\$ 5,250.00			
						\$ 0.00			
						\$ 0.00			
						\$ 0.00			
						\$ 0.00			
						\$ 0.00			
Line #1	Subtotal Costs - Material and Equipment						\$ 12,867.00		
Column A	B	C	D	E	F	G	H	I	J
Section 2 Labor Classification	No. of Workers	Total Hours	Hourly Rate	Labor	Wages/OT/Other	Total Rate (D+E+F)	Total Cost Per Hour (D + E + F)xG	Insert "X" if Credit	Total Labor Hourly Cost (G x H)
Electrician	2	147.25	\$ 37.10	\$ 22.12	15.95	\$ 75.17	\$ 160.34		\$ 11,068.78
						\$ 0.00	\$ 0.00		\$ 0.00
						\$ 0.00	\$ 0.00		\$ 0.00
						\$ 0.00	\$ 0.00		\$ 0.00
						\$ 0.00	\$ 0.00		\$ 0.00
						\$ 0.00	\$ 0.00		\$ 0.00
Line #2	Labor Hourly Costs:							Total:	\$ 11,068.78
Line #4	Total Labor, Taxes and Materials (Total Lines #1 + #2 + #3)								\$ 23,935.78
Line #5	Total Mark-up on Sub Contractor's Own Work							10%	\$ 2,393.58
Line #6	Total Contractor Cost (Lines #4 + #5)								\$ 26,329.36
Section 5 - Trade	Other Firms associated with change (from attached proposed change order form)							Cost	
	5% OH and Profit								\$ 0.00
Line #7	Subtotal Other Firms								\$ 0.00
Line #8	Total Proposed Change Order Amount (Lines #6 + #7)								\$ 26,329.36

Product Highlights

- RoHS compliant
- Tested from 1 to 555 MHz
- Component compliant to TIA Category 6 requirements
- No internal pair separator
- Small outside diameter permits more cables per conduit than typical Category 6 cable
- Standard Reelex™ package made with 100% post consumer materials.

Packaging

- 1,000 foot (305m) reels
- 1,000 foot (305m) Reelex* (featuring reverse sequential numbering)
- 1,000 foot (305m) Reel-in-a-Box



Standard Reelex™ box shown above.

ECO™ (Plenum)

(c(UL)us Listed Type CMP, CSA Type FT6)

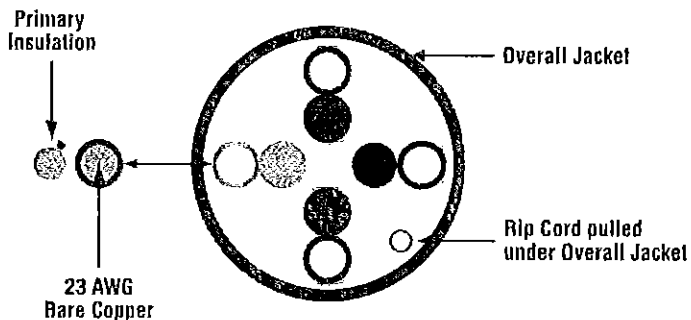
HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D.		CABLE WEIGHT	
		in.	mm	lbs/1000ft	kg/305m
30237-8	4	.192	4.87	26.0	11.8

ECO™ (Riser)

(c(UL)us Listed Type CMR, CSA Type FT4)

HITACHI PART NO.	NO. OF PAIRS	CALCULATED CABLE O.D.		CABLE WEIGHT	
		in.	mm	lbs/1000ft	kg/305m
30238-8	4	.195	4.95	23.4	10.6

Features



DIELECTRIC MATERIALS

	RISER	PLENUM
Primary Insulation	Polyolefin	FEP
Overall Jacket	Flame-retardant thermoplastic	Low-smoke, flame-retardant thermoplastic

HCM reserves the right to revise any specifications.

Category 6 ^{UTP}

UTP
Copper

Electrical Characteristics

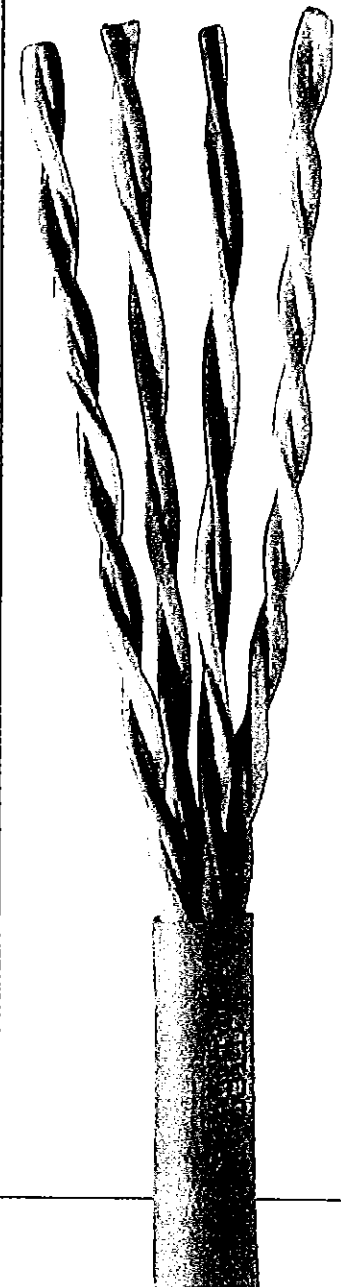
Input impedance	100 ± 15Ω (0.772 to 100 MHz)
Maximum resistance unbalance	5%
Maximum capacitance unbalance	330 pF/100 meters
Maximum delay skew	45 ns/100 meters
Nominal velocity of propagation (NVP)	68%, riser 70%, plenum

Transmission Specifications

TIA/EIA 568-B.2-1 Category 6 Verified
ISO/IEC 11801, 2nd ed. Class E Compliant

Freq. (MHz)	Ins. loss (dB/100 m)	NEXT loss (dB)	PSNEXT loss (dB)	ACR (dB)	PSACR (dB)	ELFEXT (dB)	PSELFEXT (dB)	Return loss (dB)
1	2.0	74.3	72.3	72.3	70.3	67.8	64.8	20.0
4	3.8	65.3	63.3	61.5	59.5	55.8	52.8	23.0
8	5.3	60.8	58.8	55.5	53.5	49.7	46.7	24.5
10	6.0	59.3	57.3	53.3	51.3	47.8	44.8	25.0
16	7.6	56.2	54.2	48.6	46.6	43.7	40.7	25.0
31.25	10.7	51.9	49.9	41.2	39.2	37.9	34.9	23.6
62.50	15.4	47.4	45.4	32.0	30.0	31.9	28.9	21.5
100	19.8	44.3	42.3	24.5	22.5	27.8	24.8	20.1
200	29.0	39.8	37.8	10.8	8.8	21.8	18.8	18.0
250	32.8	38.3	36.3	5.5	3.5	19.8	16.8	17.3
300*	36.4	38.1	36.1	-	-	19.7	16.7	16.8
350*	39.8	37.1	35.1	-	-	19.6	16.6	16.3
400*	43.0	36.3	34.3	-	-	18.8	15.8	15.9
500*	48.9	34.8	32.8	-	-	16.8	13.8	15.2
555*	52.0	34.1	32.1	-	-	15.9	12.9	14.9

*Frequencies beyond the TIA and ISO requirements are for information only.





HUBBELL
NextFrame Equipment Racks

Attractive Front Covers Enhance Appearance.

Channels Clip to Rack Greatly Speeding Assembly.

Gates and Spools can be Located as Needed Along Length of Channel.

FEATURES

- Sturdy, durable steel Z-frame construction.
- Universal hole pattern on rack uprights mates with other rack/channel models.
- Easy-to-use screws with dog-nose tip lead in and #3 Phillips combo head provided.

SPECIFICATIONS

- ◆ Material:
Rack: 6063-T2 aluminum.
Uprights: 1/4" web thickness.
- ◆ Finish: Durable black powder coat or mill finish.
- ◆ Weight capacity: 500 lbs. (static) when properly secured to floor.
- ◆ UL Listed - 7N69 Communications Circuit Accessory.
- ◆ EIA-310-D universal spacing tapped # 12-24 front and rear.

APPROVALS/INSTALLATION

- UL 1863 Listed.
- EIA 310-D Compliant Universal Mounting.
- Mounting Holes Tapped # 12-24.

APPLICATIONS

Use in data centers, the equipment room, and telecommunications room to provide racking, cable management, grounding, and power distribution for network hardware.

Superior Cable Management
Multiple tie-off points to organize cable.

Mates with most other models of racks and channels.

Hinged covers
Optional.

Gates store out of the way.



The NEXTFRAME® Equipment Rack is provided with vertical cable channels to structure and route cable efficiently. These racks are the answer to evolving requirements for handling, routing and organizing cable and optical fiber. Use in a typical cross connect/data center to house rack mount patch panels, cable organizers, hubs, routers and other network equipment.

19' Equipment Rack with 6' wide 'Z' Channels

Seven-foot cable management rack with 6' wide vertical cable management organizers in a single catalog number for ease in ordering. Use when maximum cable volume is required. Products are available in both black and clear aluminum finishes. Rack ships unassembled.

Order Information

- Delivery: 1 Rack, 7'H (HPW84RR19)
 2 Vertical Organizers (ref. VS76/VS76A - see page E11)

Rack Height	Rack Units	Finish	Cover Style	Catalog No.
7+(2134)	45	Black	Hinged	CS1976H
7+(2134)	45	Black	Clip on	CS1976
7+(2134)	45	Aluminum	Clip on	CS1976A



CS1976A

19' Equipment Rack with 3.25' wide 'C' Channels

Seven-foot cable management rack with 3.25' wide vertical cable management organizers in a single catalog number for ease in ordering. Use when space is limited. Products are available in both black and aluminum finishes. Rack ships unassembled.

Order Information

- Delivery: 1 Rack, 7'H (HPW84RR19)
 2 Vertical organizers (VS73/VS73A - see page E11)
 4 Covers (ref. VCC3/VCC3A - see page E12)

Rack Height	Rack Units	Finish	Cover Style	Catalog No.
7+(2134)	45	Black	Hinged	CS1973H
7+(2134)	45	Black	Clip on	CS1973
7+(2134)	45	Aluminum	Clip on	CS1973A



CS1973A

Equipment Rack

Shipped unassembled.

Order Information

- Delivery: 2 Floor angles 2 Top angles
 2 Vertical uprights 20 #12-24 x 5/8' equipment mounting screws
 1 Assembly hardware kit

Rack Height	Rack Units	Mounting Width	Finish*	Catalog No.
48' (1219)	24	19' (483)	Black	HPW48RR19
48' (1219)	24	23' (584)	Black	HPW48RR23
68.5' (1676)	36	19' (483)	Black	HPW66RR19
84' (2134)	45	19' (483)	Black	HPW84RR19
84' (2134)	45	23' (584)	Black	HPW84RR23
89.7' (2286)	48	19' (483)	Black	HPW90RR19
89.7' (2286)	48	23' (584)	Black	HPW90RR23
96' (2438)	51	19' (483)	Black	HPW96RR19
96' (2438)	51	23' (584)	Black	HPW96RR23

* For mill finish rack, add "ML" to catalog number.



HPW84RR19



HPW84RR19ML

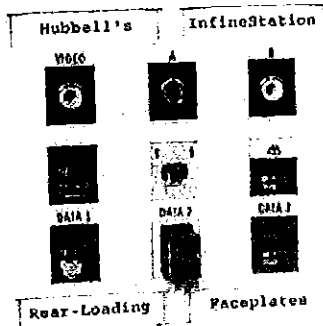


Hubbell Premise Wiring
 HUBBELL INCORPORATED (Delaware)
 14 Lord's Hill Road • Southington, CT 06378-0901 • (860) 535-8326 • 800-626-0005
 Fax (860) 535-8328 • Internet site: <http://www.hubbell-premise.com>

Worldwide Locations

Hubbell Premise Wiring, Asia Pacific	852-2836-7131	Fax: 852-2836-7132	Hubbell Premise Wiring, Latin America	305-408-4501	Fax: 305-408-8201
Hubbell Canada Inc.	905-839-1138	Fax: 905-839-9108	Hubbell de Mexico, S.A. de C.V.	(5255) 9151-9999	Fax: (5255) 9151-9989
Hubbell Premise Wiring, Central America	506-309-4158	Fax: 506-260-1616	Hubbell Premise Wiring, Middle East	971-4-393-4192	Fax: 971-4-393-4194
Hubbell Premise Wiring, China	8621-6309-0119	Fax: 8621-6309-0122	Hubbell-Taiwan Co., Ltd., Taiwan	886-2-2522-1862	Fax: 886-2-2522-1872
Hubbell Premise Wiring, Colombia	571-245-8940	Fax: 571-340-0925	Hubbell Premise Wiring, Turkey	90-216-313-5016	Fax: 90-216-414-8148
Hubbell Premise Wiring, Europe	44-01283 500500	Fax: 44-01283 500400	Hubbell Premise Wiring, Venezuela	58-416-660-7453	Fax: 58-281-274-7900
Hubbell Int'l. Inc., Korea Branch	82-2-02607-1363	Fax: 82-2-02603-7386			

Face Plates, Rear-Loading



Features/Benefits

- Provides a rear loading, snap in, flush mounting of Hubbell jacks and AV keystone connectors
- Available in single and double-gang.
- Individual port configurations allow specification flexibility.
- All IFP plates are supplied with paper labels, clear screw covers, and color-matched screw covers.

Specifications

- ◆ UL listed and cUL certified.
- ◆ ANS/TIA-606-B station labeling.
- ◆ UL 94V-0 rated flame-retardant material.
- ◆ Mounts to standard NEMA openings and boxes.



- Designed to flush mount with box eliminator.
- Durable construction.
- Complemented by a broad range of voice/data/video connectors



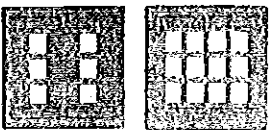
Compatible with Hubbell Labeling System - see page M8.

IFP Face Plates, Single-Gang



	1-port	2-port	3-port	4-port	6-port
Unit Package	1 per Bag	1 per Bag	1 per Bag	1 per Bag	1 per Bag
Order Qty.	Carton of 25	Carton of 25	Carton of 25	Carton of 25	Carton of 25
Color	Catalog No.	Catalog No.	Catalog No.	Catalog No.	Catalog No.
See Color Code	IFP11XX 10G	IFP12XX 10G	IFP13XX 10G	IFP14XX 10G	IFP16XX 10G

IFP Face Plates, Double-Gang



	6-port	9-port	12-port
Unit Package	1 per Bag	1 per Bag	1 per Bag
Order Qty.	Carton of 10	Carton of 10	Carton of 10
Color	Catalog No.	Catalog No.	Catalog No.
See Color Code	IFP26XX 10G	IFP29XX	IFP212XX

Multimedia Wall Plates



Accepts AV and Voice/Data connectors. High impact resistant thermoplastic plate. UL Listed 1863 - Communication Circuit Accessory and CSA Certified. See the Residential Section, page XX for more information. Standard 1-Gang, 4.625' x 2.875' 10G

Ports	1-port	2-port	3-port	4-port	6-port
See Color Code	NSP11XX	NSP12XX	NSP13XX	NSP14XX	NSP16XX

Standard 2-Gang, 4.625' x 2.875' 10G

Ports	4-port	6-port
See Color Code	NSP24XX	NSP26XX

Midsize 1-Gang, 4.875' x 3.125' 10G

Ports	1-port	2-port	3-port	4-port	6-port
See Color Code	NSP101XX	NSP102XX	NSP103XX	NSP104XX	NSP106XX

Blank Wall Plates



Standard, Nylon

Ports	1-Gang	2-Gang	3-Gang	4-Gang
See Color Code	NP13XX	NP23XX	NP33XX	NP43XX

Mid-Size, Nylon

Ports	1-Gang	2-Gang
See Color Code	NPJ13XX	NPJ23XX

Angled Face Plates, 4-port

Color	Gray	Office White	Telco Ivory	White
Catalog No.	AFP14G 10G	AFP14 10G	AFP14I 10G	AFP14W 10G

XX = Plate Color Options

AL= Almond	BK= Black	EL= Electric Ivory	GY= Gray	LA= Light Almond	OW= Office White	W= White
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HUBBELL Xcelerator

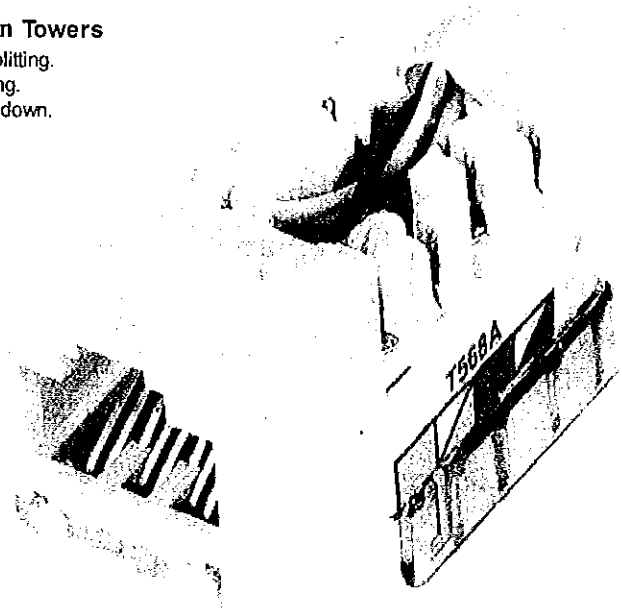
NEXTSPEED® and SPEEDGAIN® Category 6, 5e, 3, and USOC Jacks

Features/Benefits

- RoE tested and verified.
- Universal Hubbell keystone design fits into all Hubbell IStation™ and Delivery Plus™ products.
- Exclusive 1-Punch termination tool and QuickLace™ combination.
- 15 different colors aids identification of multiple applications.

Termination Towers

- Easy pair splitting.
- Simple lacing.
- Fast punch-down.



Specifications

- ◆ Construction Material:
 - Housing: High Impact Thermoplastic (UL 94V-0).
 - Stuffer cap: Lexan (UL 94V-0).
 - Dust cover: Polypropylene.
- ◆ Nose contacts:
 - Material: Beryllium Copper with Precious Metal plating with Nickel under-plating.
- ◆ IDC contacts: Phosphor Bronze with 100 micro-inch Tin plating over Nickel under-plating.

Stuffer Cap

- Secure strain relief.
- Positive "snap" latching.

Universal Wiring

- Two distinct labels eliminates wiring confusion, T568B or T568A.

HUBBELL Advantage

- Industry's First Tested Category 6 Component Compliant Jack.
- Labor Savings: Exclusive 1-Punch Termination Reduces Termination Time by 75%.
- Mating Cycles Exceed Industry Standards by 2 Times.
- Bulk Packaged to Eliminate Excess Packing Waste.

XCELERATOR™ Jacks, NEXTSPEED® and SPEEDGAIN® Category 6, 5e, 3 and USOC



See Jack Color Options Below

	Category 6	Category 5e	Category 3	RJ-25 (USOC)*	Color	RJ-61 (USOC)
Quantity = 1	HXJ6XX	HXJ5EXX	HXJ3XX	HXJUXX	Black	HXJU8BK25
Quantity = 25	HXJ6XX25	HXJ5EXX25	HXJ3XX25	-	Office White	HXJU8OW25

XX = See Jack Color Options below.

* Color exceptions: "P"= Purple and "GL"= Gold.

XX = Jack Color Options

AL= Almond	BK= Black	B= Blue	EL= Electric Ivory	GL= Gold	GY= Gray	LA= Light Almond
OW= Office White	OR= Orange	P= Purple	TI= Telco Ivory	W= White	Y= Yellow	

HUBBELL NextSpeed

Category 6 Patch Panels

Design

- Center balanced to Category 6 plug specifications.

Performance

- Balanced PCB design delivers significant headroom over the TIA Category 6 standard up to 250MHz providing true application assurance.

Administration

- Accepts Hubbell laser printable label sheets and industry recognized 0.5" hand held printer tape.

Reliability

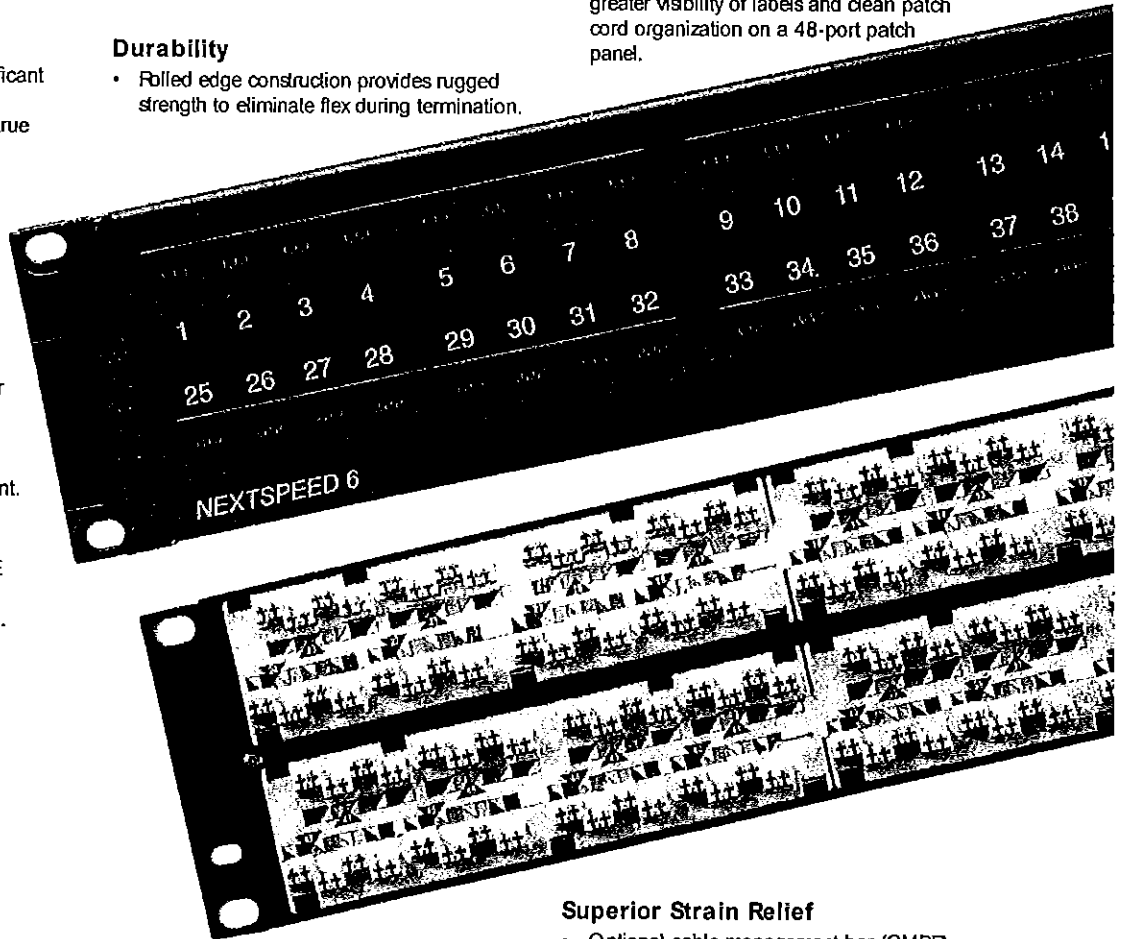
- Application: Third-Party qualified for 10 Gigabit Ethernet Transmission IEEE 802.3an (TSS-155).
- Component: Third-Party verified for TIA-568-C.2 Category 6 Component.
- Channel: Third-Party verified for ISO 11801 Class EA compliant.
- Current Capacity: Qualified for PoE and PoE+ IEEE 802.3at.
- Manufacturing: 100% factory tested.

Identification

- Centered port identification allows for greater visibility of labels and clean patch cord organization on a 48-port patch panel.

Durability

- Rolled edge construction provides rugged strength to eliminate flex during termination.



Superior Strain Relief

- Optional cable management bar (CMBR) attaches to the rack behind the panel providing excellent strain relief.

Installation Ease

- Third hand location pin provides a hands-free installation. Simplifies rack layout.

Specifications

- ◆ Nose contact material: Beryllium Copper with Precious Metal plating with Nickel under-plating.
- ◆ Contact performance confirmed over the full range of (FCC Specification) deflection limits.

Standards

- TIA-568-C.2 Category 6 Component.
- ISO 11801 Class E Compliant Category 6.
- IEEE 802.3at.
- UL Listed 1863.

- TIA Category 6 Component Compliance.
- Labor Savings: Exclusive 1-Punch Termination Reduces Termination Time by 75%.
- Third-Party Tested and Verified.
- Eco-Friendly Packaging Utilizes Recyclable Materials and Eliminates Excess Packing Waste.



NEXTSPEED® Universal Patch Panel, Category 6



The NEXTSPEED® Category 6 Patch Panel exceeds TIA Category 6 and ISO component specifications supporting network convergence protocols delivering maximum bandwidth and extended reliability for all LAN, multimedia, and Power over Ethernet applications

Ports	Height	Rack Units	Black, Protected PCB	White, Protected PCB
			Catalog No.	Catalog No.
24	1.75" (45)	1	P6E24U	P6E24UW
48	3.50" (89)	2	P6E48U	P6E48UW
96	7.00" (178)	4	P6E96U	P6E96UW



P6E48U

NEXTSPEED® Angled, Universal Patch Panel, Category 6



Ports	Height	Rack Units	Catalog No.
24	1.75" (45)	1	P624AU
48	3.50" (89)	2	P648AU



P624AU



P648AU

MUTOA, Category 6



Features/Benefits

- Delivers Category 6 performance in a flexible format for open office and extended LAN applications.

Specifications

- The Category 6 CPB is designed to exceed TIA-568-C component specs.
- UL and cUL Listed.

Description	Catalog No.
Consolidation point block, 12-port, Category 6, universal, 89D	P612U



P612U

1-Punch Termination Tool



1-Punch Tool for P6E Series Patch Panels

Patch Panel tool with head and blades	TX4PP
Patch Panel tool replacement head (includes blades)	TX4PPH
Patch Panel tool replacement blades	TX4PPBL



TX4PP

Rear Cable Management Bars



Description	Catalog No.
Screws to rear flange of 19" rack.	CMBR 10G
Holds each wire to maximize performance.	
Clips to rear of panels.	PCBLMGT



CMBR



PCBLMGT

EMERGENCY PHONE MOUNTS

ETP-WM/E – Economy Wall Mount Emergency Phone Station

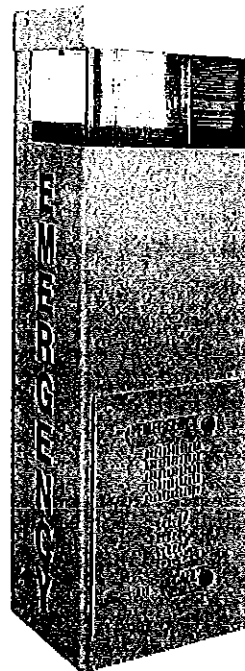
Description

Talk-A-Phone's ETP-WM/E Economy Wall Mount Emergency Phone Station is an ideal security solution for remote and high-risk areas. The economy version of the wall mount unit offers the same durability with stainless steel construction and a protective polycarbonate housing. An always-lit LED Blue Light provides high visibility and gives passers-by a sense of security. Patrons can call emergency personnel with a simple push of a button. At the same time, the LED Blue Light begins to flash, attracting attention to the location.

Talk-A-Phone's ETP-WM/E Wall Mount Emergency Phone Stations are often used at university and college campuses, parking facilities, shopping malls, medical centers, industrial campuses and transit facilities.

Features

- Attention-getting LED Blue Light is included and mounted inside a polycarbonate housing. The LED Blue Light is continuously lit and flashes for duration of a call when "EMERGENCY" button is pressed to draw attention to the unit.
- Vandal-resistant stainless steel construction
- Designed to resist extreme weather conditions
- A variety of signage, graphics and color choices are available
- ADA-compliant



Specifications

Dimensions (W x D x H):	10.7 x 8.0 x 32.0 in. (272 x 203 x 813 mm)
Weight:	41 lbs. (18.6 kg)
Construction:	12GA (.105 in.) stainless steel on front and sides with impact-resistant polycarbonate housing and resistance to UV-fade
Colors:	Stainless steel is standard. Available painted in custom colors.
Signage:	2 in. high reflective red "EMERGENCY" lettering with wide-angle visibility is standard. Available as "ASSISTANCE", "INFORMATION", or custom lettering, colors and graphics.
Lighting:	LED Blue Light: 209 lumens peak, 78 flashes per minute, 70% of initial lumens after 50,000 hours of operation
Power:	LED Blue Light: 7.8 watts, 120VAC 7.8 watts, 12-24VDC/24VAC
Mounting:	Mounts to a wall or straps to a pole or a kiosk
Compliance:	CSA Certified to UL Standard 60950
Warranty:	2-year warranty

ETP-WM/E – Economy Wall Mount Emergency Phone Station

Options

ETP-WM/E Configuration	Emergency Phone Options	Wall Mount Options
Analog Connectivity	ETP-400 Series Phone	ETP-WM/E-OP2 includes a housing for mounting your own fixed CCTV camera inside the wall mount above the emergency phone faceplate.
IP Connectivity	VOIP-500 Series Phone	ETP-WM/E-OP3 includes a Honeywell fixed day/night CCTV camera inside the wall mount above the emergency phone faceplate.

ETP-WM/E includes an LED Blue Light. Emergency Phone is purchased separately.

Accessories

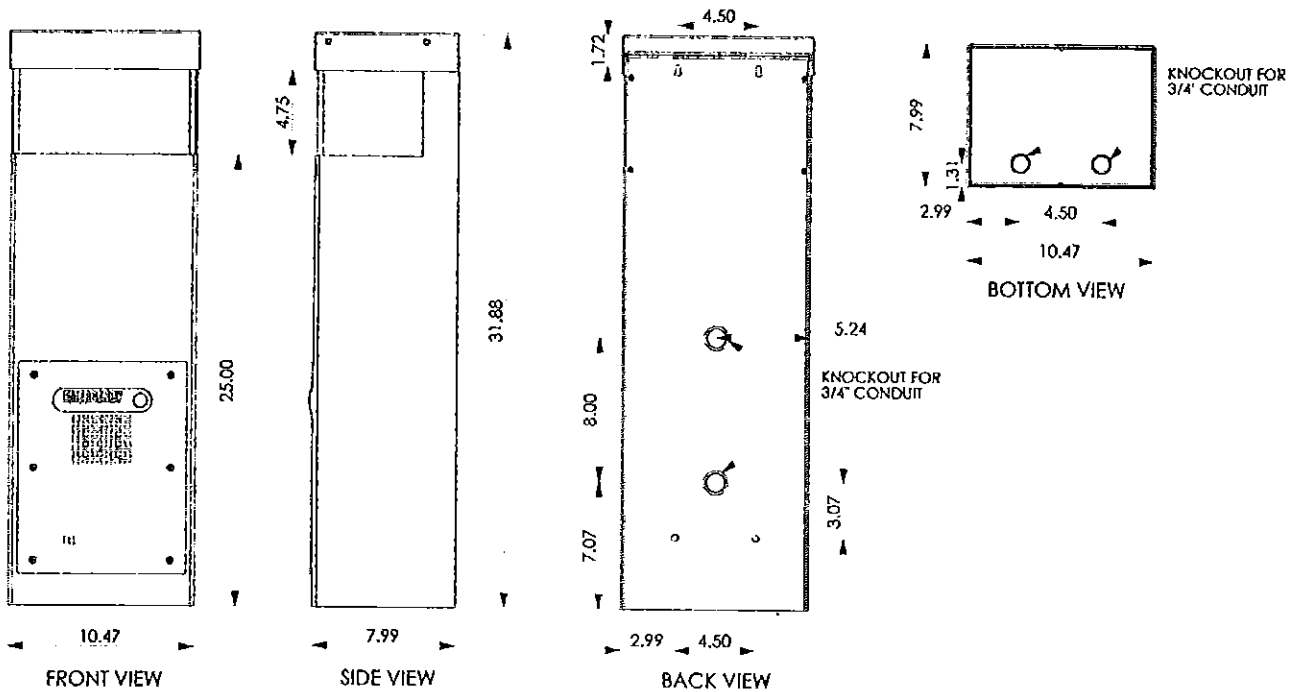
Pole Mounting Kit:

Order **ETP-PMKT** Pole Mounting Kit for strapping ETP-WM/E to a pole.

Strapping Tool:

Order **ETP-PMKT-TOOL** Strapping Tool for use with **ETP-PMKT** Pole Mounting Kit.

Dimensional Diagram



All dimensions are in inches and are provided for reference only.

Rev. 10/25/11



HUBBELL Vertical Cable Management

NextFrame

Cable Management Spools can be Located Along the Length of the Channel for Proper Cable Routing.

Assembles Quickly: Channels Clip to Equipment Rack.

Pass-Thru Holes Permit Cable Routing from the Front to the Rear of the Rack when Required.

FEATURES

- Rugged construction - Z-Frame withstands abuse.
- Universal hole pattern on rack uprights mates with other rack/channel models.
- Easy-to-use screws with dog-nose tip lead in and # 3 Phillips combo head provided.

SPECIFICATIONS

- ◆ Channel Material:
 - "Z" Frame: 14 ga. cold rolled steel.
 - "C" Channel: 16 ga. cold rolled steel.
- ◆ Cover material: 16 ga. cold rolled steel.
- ◆ Finish: Durable black or aluminum color powder coat finish.

APPROVALS/INSTALLATION

- U.S. Patent No. 6,347,714.
- UL Listed File No. E154937.
- Packaged to meet Telcordia GR63-CORE transportation requirements.

APPLICATIONS

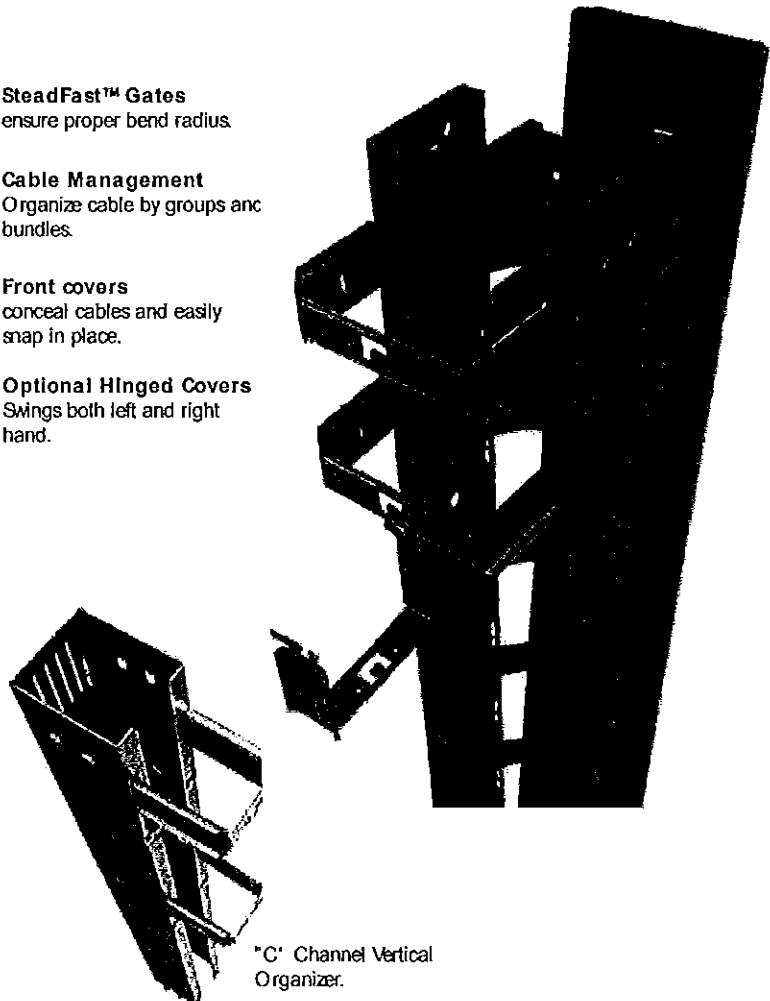
Use in data centers, the equipment room, and telecommunications room to provide racking, cable management, grounding, and power distribution for network hardware.

SteadFast™ Gates
ensure proper bend radius.

Cable Management
Organize cable by groups and bundles.

Front covers
conceal cables and easily snap in place.

Optional Hinged Covers
Swings both left and right hand.

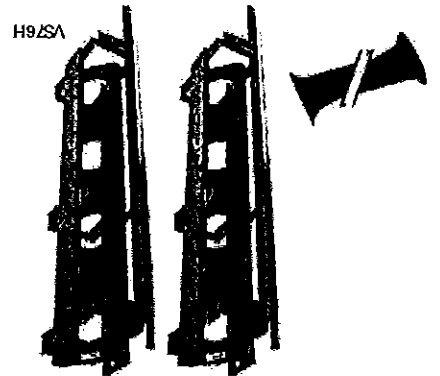


NEXTFRAME® Vertical Cable Channels are the most durable and easy-to-use channels ever developed.

Hubbell's innovative design incorporates many patent-pending, labor-saving features that speed assembly and simplify maintenance. Unparalleled durability ensures long-lasting reliability.

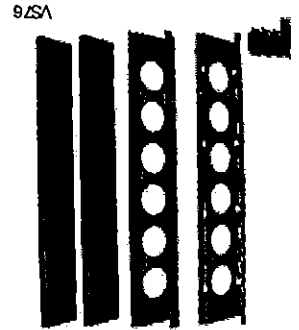
Most important, NEXTFRAME® Vertical Cable Channels protect cable by eliminating cold flow and maintaining the proper bend radius of cables entering and exiting the organizer ensuring maximum cable transmission performance.

Vertical Organizers with Hinged Covers



Delivery: 2 Z channels, 38.5" H x 10.5" D, 2 38.5" Covers, 4 Gates, 24 Spools, 4 Hinges, 2 F - 13x1" Bolt w/nut and lock washer.	Color: Rack Height	VS76H	VS74H	VS73H
	Catalog No. 6"W	VS76H	VS74H	VS73H
	Catalog No. 4 1/2"W	VS76H	VS74H	VS73H
	Catalog No. 3 1/2"W	VS76H	VS74H	VS73H

Vertical Organizers



For 7+ or 8+ rack. Suitable for approximately 800 4-pair UTP cables when fully utilized.*	Delivery: VS76(A)	2 Z channels	38.50" x 6" x 10.5"	VS76	VS86A
		2 Covers	38.50" x 6"	VS76	VS76A
		4 Gates	1/2" - 13 x 1"	VS76	VS76A
		24 Spools		VS76	VS76A
	Rack Height	7+(2134) or 7.5+(2286)		VS76	VS76A
	Catalog No. Black	VS76		VS76	VS76A
	Catalog No. Aluminum	VS76		VS76	VS76A

Delivery: VS74	1 Z channel	38.50" x 6" x 10.5"	VS46	VS46A
	1 Bolt/nut/washer	1/2" - 13 x 1"	VS46	VS46A
	8 Gates		VS46	VS46A
	Rack Height	4+(1219) and 5.5+(1676)	VS46	VS46A
	Catalog No. Black	VS46		VS46A
	Catalog No. Aluminum	VS46		VS46A

7+ Channel, 4F' wide	Delivery: VS73(A)	2 Z channels	38.50" x 4.5" x 10.5"	VS73	VS73A
		2 Bolt/nut/washer	1/2" - 13 x 1"	VS73	VS73A
		16 Gates		VS73	VS73A
	Rack Height	7+(2134)		VS73	VS73A
	Catalog No. Black	VS73		VS73	VS73A
	Catalog No. Aluminum	VS73		VS73	VS73A

7+ Channel, 4F' wide and 3 1/2" wide	Delivery: VS73(A)	2 C channels	38.50" x 3.25" x 10.5"	VS73	VS73A
		2 Bolt/nut/washer	1/2" - 13 x 1"	VS73	VS73A
		8 Gates		VS73	VS73A
	Rack Height	7+(2134)		VS73	VS73A
	Catalog No. Black	VS73		VS73	VS73A
	Catalog No. Aluminum	VS73		VS73	VS73A

* Capacity of front and rear of channel combined.

** When optional rear gates are used.

