ATTACHMENT A
SOLE SOURCE FACILITY JUSTIFICATION TRANSMITTAL

Public Contract Code section 3400 provides, in pertinent part, that:

"(a) The Legislature finds and declares that it is the intent of this section to encourage contractors and manufacturers to develop and implement new and ingenious materials, products, and services that function as well, in all essential respects, as materials, products, and services that are required by a contract, but at a lower cost to taxpayers.

(b) No agency of the state, nor any political subdivision, municipal corporation, or district, nor any public officer or person charged with the letting of contracts for the construction, alteration, or repair of public works, shall draft or cause to be drafted specifications for bids, in connection with the construction, alteration, or repair of public works, (1) in a manner that limits the bidding, directly or indirectly, to any one specific concern, or (2) calling for a designated material, product, thing, or service by specific brand or trade name unless the specification is followed by the words "or equal" so that bidders may furnish any equal material, product, thing, or service. In applying this section, the specifying agency shall, if aware of an equal product manufactured in this state, name that product in the specification. Specifications shall provide a period of time prior to or after, or prior to and after, the award of the contract for submission of data substantiating a request for a substitution of "an equal" item. If no time period is specified, data may be submitted any time within 35 days after the award of the contract.

(c) Subdivision (b) is not applicable if the awarding authority, or its designee, makes a finding that is described in the invitation for bids or request for proposals that a particular material, product, thing, or service is designated by specific brand or trade name for any of the following purposes:

(2) In order to match other products in use on a particular public improvement either completed or in the course of completion."

Tridium HVAC Building Level Controller

This is a sole source procurement because:

- ☐ This is a sole provider of a licensed, copyrighted or patented good or service.
- ☑ This is a sole provider of items compatible with existing equipment or systems.
- ☐ This is a sole provider of factory-authorized warranty service.
- ☐ This is a sole provider of goods or services that perform a unique function in order to meet the specialized needs of the District. Please provide specific detail below.

The Tridium Niagara JACE 8000 Building controller replaces the District's standard Landis (Siemens) Building Level Controller which the district used for 26 years, the Landis controllers are no longer produced and parts are not available. Additionally the district recently awarded a project to replace all Landis controllers and Server Level Software with Tridium Niagara 4 server Level software and Tridium Niagara JACE 8000 Controllers.

- ☑ There are overriding circumstances upon with the Board can find that the exception found in Public Contract Code section 3400 (c) (2) applies to the identified product(s). Please provide specific detail below

as to what those circumstances are, and why this sole source procurement would be in the best interest of the District.

The District has maintained a very sophisticated HVAC energy management system over the last 26 years which uses building level and field Level controllers to maintain interior building temperatures. The risk factors and challenges stated below present overriding circumstances which would negate the benefit that any competitive bid could offer:

- Risk of comfort control within the campus buildings.
- Lack of quality control as it relates to competitive products.
- Potential for system incompatibility and/or failure to integrate with new Tridium Niagara 4 Server level software.
- Cost of removal, disassembly and replacement of existing Server and Client Level software.
- Cost of additional training of staff and field level diagnosis equipment.

Tridium is the sole manufacturer of the District's new building Level HVAC controller, its affiliated franchises are the exclusive providers of the service and maintenance required to support the system.

What steps were taken to verify that these goods or services are not available elsewhere?

See Supplier and Contractor Information Page Below For Contact Details.
Each vendor was asked whether or not their firm could provide service, maintenance and monitoring to the Tridium HVAC Building Level Controller without removing, replacing or otherwise modifying the current equipment?

This is a restricted brand or trade name, and no substitutions are allowed because:

☑ The requested product is an integral repair part or accessory compatible with existing equipment or systems.

Equipment/System: Building Level Controller
Manufacturer/Model Number: Tridium Niagara JACE 8000 Building controller

☑ The District has standardized on the requested product, and use of another brand/model would require considerable time and funding to evaluate or implement. Please provide additional detail below.

The District has invested in a proprietary Building Level controller which directly integrates to the server level HVAC control software. These controllers are considered a substantial part of the overall HVAC energy management system. Installing other units could create instability in the operation of the buildings Heating and cooling systems.

Supplier or Contractor Information:
Tridium, Inc.
3951 Westerre Parkway, Suite 350
Henrico, VA 23233
(804) 747- 4771

RECOMMENDATION

Sufficient evidence has been provided upon which the Board can find that the exception found in Public Contract Code section 3400 (c) (2) applies to the identified product(s). Approve a finding to authorize use of the above stated exception for HVAC Building Level Controller in the MiraCosta Design Standards Manual for all the projects in the MM program. Require that said finding be included in all pertinent bid/proposal documents for those projects where such product(s) will be used.

SIGNATURE:

Tom Macias, Facilities Director	9/14/18 **Date**
Geoff Bachanas, PMO Director	9/13/18 **Date**

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ATTACHMENT B
SOLE SOURCE ARCHITECT/ENGINEERING JUSTIFICATION SUMMARY REPORT TRANSMITTAL

September 1, 2018

Re: Tridium HVAC Building Level Controller

Within the Design & Construction Standards MiraCosta CCD has identified or designed various proprietary systems or products that meet specific District performance requirements, allow for seamless integration into existing systems, provide ease of maintenance, and afford a lower total cost of ownership. In these instances, the District is requesting that these systems and products shall be provided without substitution. The following Specification Section 23 09 00 is one that meets these special requirements.

Our experience working with other Colleges and Universities shows that single sources for some materials, products, equipment, and systems is a common approach to achieving best value.

We have reviewed the facility justification transmittal for the above-referenced item and believe that the District's sole-sourcing of this specification section meets the requirements for District's benefit as described above.

Sincerely,

Joe Sion
Associate Principal/Senior Manager

523 W 6th Street #245
Los Angeles CA 90014

data sheet

JACE 8000 controller

PRODUCT DEFINITION

The JACE® 8000 is a compact, embedded IoT (Internet of Things) controller and server platform for connecting multiple and diverse devices and sub-systems. With internet connectivity and web-serving capability, the JACE 8000 controller provides integrated control, supervision, data logging, alarming, scheduling and network management. It streams data and rich graphical displays to a standard web browser via an Ethernet or wireless LAN, or remotely over the internet. Niagara Enterprise Security is a Niagara AX-based application that runs on the JACE 8000. Niagara Analytics 2.0 is a data analytics extension to the Niagara Framework® available on JACE 8000 controllers.

The licensing model for the JACE 8000 controller is simplified and features standard drivers, along with optional IO and field bus expansion modules for ultimate flexibility and expandability. The JACE 8000 controller operates with Niagara 4, the latest version of the Niagara Framework, for optimum performance. In larger facilities, multi-building applications and large-scale control system integrations, Niagara 4 Supervisors can be used with JACE 8000 controllers to aggregate information, including alarms, and historical and real-time data, to create a single, unified application.

HARDWARE SPECIFICATIONS

TI AM3352: 1000MHz ARM® Cortex™-A8
1GB DDR3 SDRAM
Removable micro-SD card with 4GB flash total storage/2GB user storage
*Wi-Fi (Client or WAP) *IEEE802.11a/b/g/n* *IEEE802.11n HT20 @ 2.4GHz* *IEEE802.11n HT20/HT40 @ 5GHz* *Configurable radio (Off, WAP, or Client)* *WPAPSK/WPA2PSK supported*
*USB type A connector *Back-up and restore support*
(2) isolated RS-485 with selectable bias and termination
(2) 10/100MB Ethernet ports
Secure boot
**Supply requirements: 24VAC rated at 24VA minimum, or 24VDC rated at 1A (24W) minimum
Runs Niagara AX: 3.8u1 and later
Runs Niagara 4: 4.1 and later
Niagara Analytics 1.1 requires Niagara AX 3.8u1 or later update builds
Niagara Analytics 2.0 requires Niagara 4.2 and later
Real-time clock
Batteryless

**Not supported with Niagara AX*
***Niagara Enterprise Security requires four hours of standby power*

powered by niagara framework®

Sole Source Item #10 - Tridium HVAC Building Level Controller

JACE® 8000 ORDERING INFORMATION: NIAGARA ANALYTICS 2.0

JACE 8000 SERIES ORDERING INFORMATION

Part number*	Description
NA-EC-N4-100	Niagara Analytics Framework (on Niagara 4) license for 100 analytic points for an Embedded Controller (JACE 8000)
NA-EC-N4-250	Niagara Analytics Framework (on Niagara 4) license for 250 analytic points for an Embedded Controller (JACE 8000)
NA-EC-N4-500	Niagara Analytics Framework (on Niagara 4) license for 500 analytic points for an Embedded Controller (JACE 8000)
NA-EC-N4-1000	Niagara Analytics Framework (on Niagara 4) license for 1,000 analytic points for an Embedded Controller (JACE 8000)

INCLUSION OF ANALYTIC POINTS AS A BASE

Part number*	Description
NA-N4-BASE-25	Niagara Analytics Framework (on Niagara 4) license for 25 analytic points for an Embedded Controller (JACE 8000) or Supervisor. Requires NO additional purchase of SMA (included as part of core Niagara 4 SMA)

**Effective September 9, 2016*

Niagara Analytics 2.0 licenses are conveniently and cost-effectively based on the number of analytical points and do not expire. Niagara 4 includes a Software Maintenance Agreement (SMA) that covers all Niagara Analytics enhancements, adding to the value of the SMA when you invest in Niagara 4.

KEY ADVANTAGES

- Data analysis at the onsite JACE controller level
- Real-time on-premise analytic control

Find additional data sheets for Niagara Analytics 2.0 on Tridium's website

powered by niagara framework®

EXPANSION MODULE AND IO CONFIGURATIONS

MAXIMUM EXPANSION (MODULES SUPPORTED)

- NPB-8000-LON (4)
- NPB-8000-232 (4)
- NPB-8000-2X-485 (2)

MAXIMUM IO (MODULES SUPPORTED)*

- T-IO-16-485 (16)*
- IO-R-16 (16)*
- IO-R-34 (8)*

**See JACE 8000 IO R data sheet for configuration details*

MAXIMUM NIAGARA ENTERPRISE SECURITY (MODULES SUPPORTED)*

- T-SEC-R2R*
- T-SEC-RIO*

**16 total each or combined*

MAXIMUM NIAGARA ENTERPRISE SECURITY INTRUSION KEYPADS

- SEC-INT-KP (6)

MAXIMUM COMBINATIONS

EXPANSION 1	EXPANSION 2	EXPANSION 3	EXPANSION 4
232 or LON	232 or LON	232 or LON	232 or LON
485 485	232 or LON	232 or LON	232 or LON
485 485	485 485	232 or LON	
485 485	485 485		

Expandability is dependent on the type of expansion module used

Sole Source Item #10 - Tridium HVAC Building Level Controller

JACE® 8000 CONTROLLER MOUNTING & DIMENSIONS

1. JACE 8000 controller. Allow at least 1.5" (38mm) clearance around all sides and minimum 3" (76mm) at bottom for Wi-Fi antenna
2. Expansion module. Up to four (4) may be used. See "Expansion Module and IO Configurations"
3. Distances between center of tabs from one unit to another unit

Compatible with (DIN43880) enclosures
Suitable for mounting to a panel or to an EN50022 standard 35mm rail

Vizio stencils available upon request

AGENCY CERTIFICATIONS

- UL 916
- CE EN 61326-1
- RCM
- FCC Part 15 Subpart B, Class B
- FCC Part 15 Subpart C
- C-UL listed to Canadian Standards Association (CSA) C22.2 No. 205-M1983 "Signal Equipment"
- 1999/5/EC R&TTE Directive
- CCC
- SRRC
- RSS
- RoHS

ENVIRONMENTAL SPECIFICATIONS

- **Operating temperature:** -20–60°C
- **Storage temperature:** -40–85°C
- **Humidity:** 5%–95% — Non condensing
- **Shipping & vibration:** ASTM D4169, Assurance Level II
- **MTTF:** 10 years+

Contact **support@tridium.com** for the latest agency certifications or global shipping guide

JACE 8000 ORDERING INFORMATION

Part number	Description
JACE-8000	Base unit includes two isolated RS485 ports, two 10/100MB Ethernet ports, USB Backup & Restore and Wi-Fi connectivity
JACE-8000-DEMO	Base unit includes two isolated RS485 ports, two 10/100MB Ethernet ports, USB Backup & Restore, Wi-Fi connectivity, all available Tridium drivers and a 500 device license. Hardware Accessories purchased separately. Available with Niagara Analytics 2.0 (non-production only).
NC-8XXX-DEMO	JACE 8000 Demo with 500 Device Core. Includes all available Tridium drivers. Requires Niagara 4.1 or higher. Available with Niagara Analytics 2.0 (non-production only). License will renew annually with the receipt of the annual support fee.
NC-8005	Up to 5 devices/250 point core
NC-8010	Up to 10 devices/500 point core
NC-8025	Up to 25 devices/1,250 point core
NC-8100	Up to 100 devices/5,000 point core
NC-8200	Up to 200 devices/10,000 point core
DEVICE-10	Up to 10 devices/500 point upgrade (can be purchased during initial licensing)
DEVICE-25	Up to 25 devices/1,250 point upgrade (can be purchased during initial licensing)
DEVICE-50	Up to 50 devices/2,500 point upgrade (can be purchased during initial licensing)
DEVICE-UP-10	Up to 10 devices/500 point upgrade (can be purchased post initial licensing)
DEVICE-UP-25	Up to 25 devices/1,250 point upgrade (can be purchased post initial licensing)
DEVICE-UP-50	Up to 50 devices/2,500 point upgrade (can be purchased post initial licensing)
JACE-8000-AX	Enables JACE 8000 controller to run Niagara AX 3.8u1 or later
NPB-8000-2X-485	JACE 8000 controller — add on dual port RS-485 module
NPB-8000-LON	JACE 8000 controller — add on single port LON FTT10A module
NPB-8000-232	JACE 8000 controller — add on single port RS-232 module
WPM-8000	Universal power supply for JACE 8000 controller
T-IO-16-485	Remote IO module, compatible with the JACE 8000 controller. Communication using RS 485, maximum IO supported T-IO-16-485 modules: 16
T-NPB-PWR	24V power supply for T-IO-16-485
T-NPB-PWR-UN	Universal power supply for T-IO-16-485
IO-R-16	Optional 16 point IO RS485 module designed for use with the JACE 8000 — Includes 8 Universal Inputs, 4 Form A Relay Outputs and 4 0-10 VDC Analog Outputs.
IO-R-34	Optional 34 point IO RS485 module designed for use with the JACE 8000 — Includes 16 Universal Inputs, 10 Form A Relay Outputs and 8 0-10 VDC Analog Outputs.

JACE 8000s include a Niagara 4 license and Tridium's standard drivers.
Please see Tridium's Niagara 4 drivers documentation for more details.

TRIDIUM

Sole Source Item #10 - Tridium HVAC Building Level Controller

JACE® 8000 ORDERING INFORMATION: NIAGARA ENTERPRISE SECURITY

NIAGARA ENTERPRISE SECURITY ON THE JACE 8000

Part number	Description
SEC-J8-AX	Niagara Enterprise Security license for JACE 8000 controller. Includes licensing for 32 readers (not included in capacity). Also includes JACE 8000 Niagara AX license option (JACE-8000-AX). Does not include the JACE 8000 controller.

JACE ACCESSORIES FOR NIAGARA ENTERPRISE SECURITY

Part number	Description
T-SEC-R2R	Security module for 2 readers/access doors and 2 digital inputs
T-SEC-RIO	Security module with 8 supervised inputs, 8 relay outputs and 2 digital inputs
SEC-INT-KP	Intrusion keypad with LCD display for arming/disarming security zones
T-SEC-ENC-LNP	Large enclosure with keyed lock, door status switch, and 2 din rails for mounting JACE 8000 controller and up to 4 remote reader modules or 2 remote IO modules. Several other combinations of devices may be mounted in this panel. Dimensions: 17"W x 22"H x 4"D.

Find additional data sheets for the Niagara Enterprise Security application on Tridium's website

The JACE 8000 controller is available through a wide variety of original equipment manufacturers. Our open distribution business model and open protocol support allow a vendor-neutral application compatible with devices and systems throughout the world.

TRIDIUM

tridium.com

Locations and customer support, worldwide

Headquarters
North America
1 804 747 4771

Support
North America & Latin America
1 877 305 1745

Europe, Middle East & Africa
44 1403 740290

Asia Pacific
8610 5669 7148

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2017-0001

JACE® 8000 CONTROLLER

a modular approach 4 global design

Tridium has created an all-new hardware platform optimized for Niagara 4: the JACE 8000 controller. This "next-generation" controller is a dramatic evolution in connecting and controlling devices worldwide, featuring a new global design that functions with legacy systems and has the ability to scale for future needs.

EFFICIENT GLOBAL DESIGN

The new, modular design of the JACE 8000 controller makes it easy to install, integrate and deploy. Tool-less installation with expansion capability reduces installation complexity and improves flexibility. Systems integrators can focus on engineering solutions, not assembling components. And their lives will be simplified with a global power supply and improved access to standard enclosures.

WIRELESS CAPABILITY

Standard Wi-Fi offers enhanced wireless capability when interfacing with the next generation of wireless sensors and devices. The JACE 8000 controller also is configurable as an access point so that mobile phones and tablets can display information and advanced graphics. Expansion also is available when interfacing with other wireless fieldbuses seen in connected buildings.

OPTIMIZED FOR NIAGARA 4

The JACE 8000 controller leverages the exciting new features of Niagara 4. It adds to the enhanced user experience, maximizing Niagara 4's key advantages: pure Web interface based on HTML5 with HTML5 views, charting and data visualization, a common design language, better reporting, robust security and improved device management.

The JACE 8000 controller is optimized for Niagara 4, easy to install and scalable for future needs

Sole Source Item #10 - Tridium HVAC Building Level Controller

JACE® 8000 Controller

key features

GLOBAL CAPACITY LICENSING AND UPGRADE CAPABILITY

Determine the number of devices that will be integrated and select the right capacity license from the start. License upgrades can be purchased in the future as your needs grow.

MODULAR HARDWARE DESIGN FOR FAST AND EASY INSTALLATION

Controller and option modules are designed for easy mounting on a 35mm-wide DIN rail.

EXPANDABLE WITH UP TO FOUR OPTION MODULES

Option modules directly attach to the controller for additional communications ports, including types for LonWorks®, RS232 and RS485 networks.

24VAC/DC—STANDARD GLOBAL POWER SUPPLY

INTUITIVE USER INTERFACE

Users can easily check system status by glancing at the front panel LEDs to diagnose network issues.

RICH CHOICE OF DIFFERENT COLORS, MATERIALS AND FINISHES FOR DIFFERENTIATED OEM BRAND IDENTIFICATION

CONNECTIVITY PROFILES

- Native Wi-Fi capability (WAP or Client) A, B, G or N networks
- Two 10/100Mb Ethernet ports
- Two isolated RS485 ports
- Optional LON FTT10 & RS232 expansion

The JACE 8000 controller is available through a wide variety of original equipment manufacturers. Our open distribution business model and open protocol support allow a vendor-neutral application compatible with devices and systems throughout the world.

To learn more about how to purchase, install and start using the JACE 8000 controller, or if you are an original equipment manufacturer and would like to add the JACE 8000 controller to your suite of offerings, please contact us.

TRIDIUM
tridium.com

804.747.4771 Corporate HQ / **877.305.1745** Customer Support

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