



DIVISION OF INDUSTRY SERVICES
 PO BOX 7162
 MADISON WI 53707-7162
 Contact Through Relay
 www.dsp.wi.gov/sb/
 www.wisconsin.gov

Scott Walker, Governor
 Dave Ross, Secretary

March 28, 2014

CUST ID No. 1172573

ATTN: Plumbing Inspector

JILL MCDONALD
 HELLENBRAND INC
 404 MORAVIAN VALLEY RD
 WAUNAKEE WI 53597

MUNICIPAL CLERK
 VILLAGE OF DEFOREST
 306 DEFOREST ST
 DE FOREST WI 53532

CONDITIONAL APPROVAL
PLAN APPROVAL EXPIRES: 03/28/2016

Identification Numbers
Transaction ID No. 2376851
Site ID No. 800313
Please refer to both identification numbers, above, in all correspondence with the agency.

SITE:

Country Creek Learning Center
 6187 Portage Rd
 Village of Deforest, 53532
 Dane County

FOR:

Facility: 739597 COUNTRY CREEK LEARNING CENTER
 6187 PORTAGE RD
 DE FOREST 53532
 Plan Type: Addition-Alteration; 1 Interior Fixture(s)

Object Type: Commercial Water Treatment Device Regulated Object ID No.: 1474344

The submittal described above has been reviewed for conformance with applicable Wisconsin Administrative Codes and Wisconsin Statutes. The submittal has been **CONDITIONALLY APPROVED**. The owner, as defined in chapter 101.01(10), Wisconsin Statutes, is responsible for compliance with all code requirements.

No person may engage in or work at plumbing in the state unless licensed to do so by the Department per s.145.06, stats.

The following conditions shall be met during construction or installation and prior to occupancy or use:

This approval is contingent upon compliance with the following stipulation(s):

- This product has undergone sufficient testing to document the product's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturer's published instructions.
- Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 267-9787.
- If this approved device is modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.

- This installation must undergo a final inspection prior to the device being put into service. The Plumbing Consultant having jurisdiction in this area is Ryan Boebel. Mr. Boebel can be contacted via the following:

Phone: 608-412-3998
 Fax: 608-283-7449
 E-mail: ryan.boebel@wi.gov

When the final inspection has been completed, this department will notify the Wisconsin Department of Natural Resources (WDNR). The WDNR will then monitor the performance of the device(s) to its satisfaction. A suggested frequency and overall duration of monitoring is provided elsewhere in this letter.

If these devices are installed and put in consumptive service prior to obtaining a final inspection, then any pertinent approval for the site specific device is immediately rendered null and void and the device may be ordered removed.

- When the final inspection has been passed, the Plumbing Consultant will notify the Wisconsin Department of Natural Resources (WDNR) Field Staff having authority over the well. The WDNR will then monitor the quality of the treated water to its satisfaction. Monitoring advice, which the WDNR is free to accept or reject, is provided elsewhere in this letter. The WDNR Field Staff having authority over this well is James Kralick. Mr. Kralick can be contacted via the following:

Phone: 608-275-3202
 E-mail: james.kralick@wisconsin.gov

- The suggested monitoring interval for this installation is quarterly. As a minimum, the following tests should be performed:

1. nitrate
2. nitrite
3. copper

The samples should be collected at a time of day when the device is under stress and at a time most remote from the last regeneration cycle as possible. Because this device is reportedly being installed on a copper water supply system, concerns relating to decreased alkalinity and subsequent corrosion are applicable. The purpose of the sodium carbonate (NaCO₃), commonly referred to as "soda ash", injection is to mitigate this potential effect. If copper is detected, then lead samples should also be collected. Lead and copper corrosion samples should be collected in accordance with the USEPA's Lead/Copper Rule (i.e. overnight dwell samples most remote from the point of entry as possible).

- The anion exchange, nitrate reduction device being installed is approved under DSPS product file number 20100292. The approval letter can be viewed at:

<http://dsps.wi.gov/sb/docs/sb-ppalopp/wtd/20100292.pdf>

All stipulations displayed in the approval letter for product file number 20100292 must be adhered to.

**TABLE 1 OF 1
 NITRATE/NITRITE REDUCTION CAPABILITIES**

Model Number	Salt 1 (lbs.)	Capacity 1* (grains)	Salt 2 (lbs.)	Capacity 2* (grains)	Salt 3 (lbs.)	Capacity 3* (grains)	Max. Flow* (gpm)
H125-NRS-40	20.0	33,600	40.0	40,800	60.0	44,000	16.0

* = A flow restrictor must be installed to prevent exceeding the flow rates displayed
 † = capacities listed at 25% SO₄²⁻ 1 grain = 64.79891 mg
 1 grain/gal. = 17.1 mg/l

- Flow controls shall be installed to preclude each nitrate reduction device from exceeding its maximum rated service flow rate (i.e. 16 gpm).

- Any water treatment chemicals injected into the potable water supply shall conform to ANSI/NSF Standard 61.
- Any wall hydrant that is not served by the nitrate treatment device must have one, or more, of the following:
 1. The handles of the hydrant shall be removed;
 2. The hydrant shall be capped and sealed using solder; or
 3. Signage shall be posted immediately above the hydrant indicating the water is unfit for human consumption.
- All water distribution piping shall be marked as required by Table SPS 382.40-1a. This is in addition to any signage/labeling that may be required by the WDNR via a notification requirement or nitrate waiver.
- The drain, waste and vent system shall be properly sized to handle the additional wastewater flow contribution of the water treatment system.
- Adding additional fixtures in the future may result in this system being undersized, which in turn may compromise treatment.
- The ongoing maintenance of this rental system will be performed by Hellenbrand Inc.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,



Glen W. Schlueter
Plumbing Product Reviewer
Department of Safety and Professional Services
Division of Industry Services
Bureau of Technical Services
(608) 267-1401 Phone
(608) 266-2602 Fax
glen.schlueter@wi.gov E-mail

A full size copy of the approved plans, specifications and this letter shall be on-site during construction and open to inspection by authorized representatives of the Department, which may include local inspectors. If plan index sheets were submitted in lieu of additional full plan sets, a copy of this approval letter and index sheet shall be attached to plans that correspond with the copy on file with the Department. If these plans were submitted in an electronic form, the designer is responsible to download, print, and bind the full size set of plans along with our approval letter. A department electronic stamp and signature shall be on the plans which are used at the job site for construction. All permits required by the state or the local municipality shall be obtained prior to commencement of construction/installation/operation.

In granting this approval the Division of Industry Services reserves the right to require changes or additions should conditions arise making them necessary for code compliance. As per state stats 101.12(2), nothing in this review shall relieve the designer of the responsibility for designing a safe building, structure, or component.

Inquiries concerning this correspondence may be made to me at the telephone number listed below, or at the address on this letterhead.

Fee Required \$	160.00
Fee Received \$	160.00
Balance Due \$	0.00

WiSMART code: 7657

cc: Hellenbrand Inc

Ryan M Boebel, Plumbing Consultant, (608) 412-3998 , 8:00 am - 4:00 pm

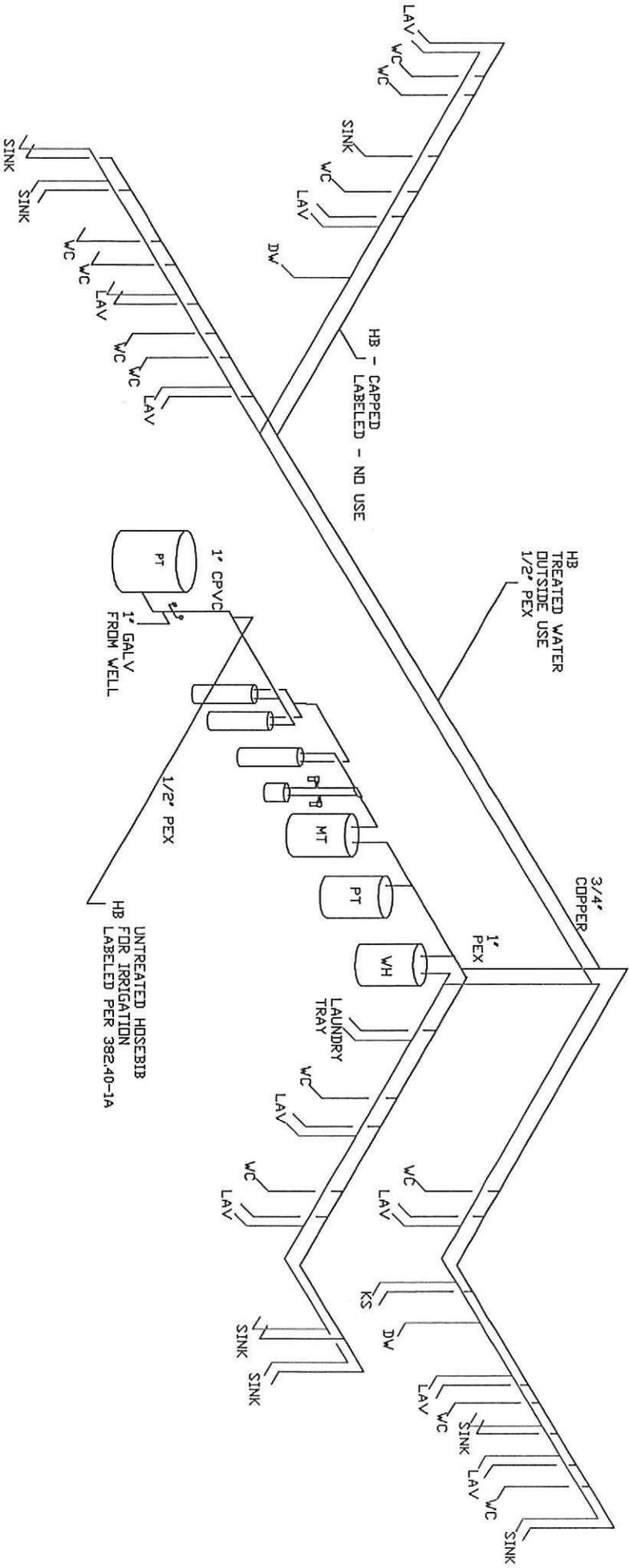
Candace Page, Country Creek Learning Center LLC

Note: Effective January 1, 2012, all codes under the jurisdiction of the Division of Industry Services (formerly Safety & Buildings) will be modified. Code references with prefixes starting with "Comm" have been replaced with "SPS" to recognize the relocation of the Division of Industry Services from the former Department of Commerce to the Department of Safety & Professional Services. Additionally, all IS (formerly S&B) codes have been renumbered and addressed in a "300" series. For future reference, the Wisconsin Commercial Building Code will be addressed by SPS Chapters 360-366.

3. Three Copies of Isometric Drawing

Loren Schuy 3/19/14 247928

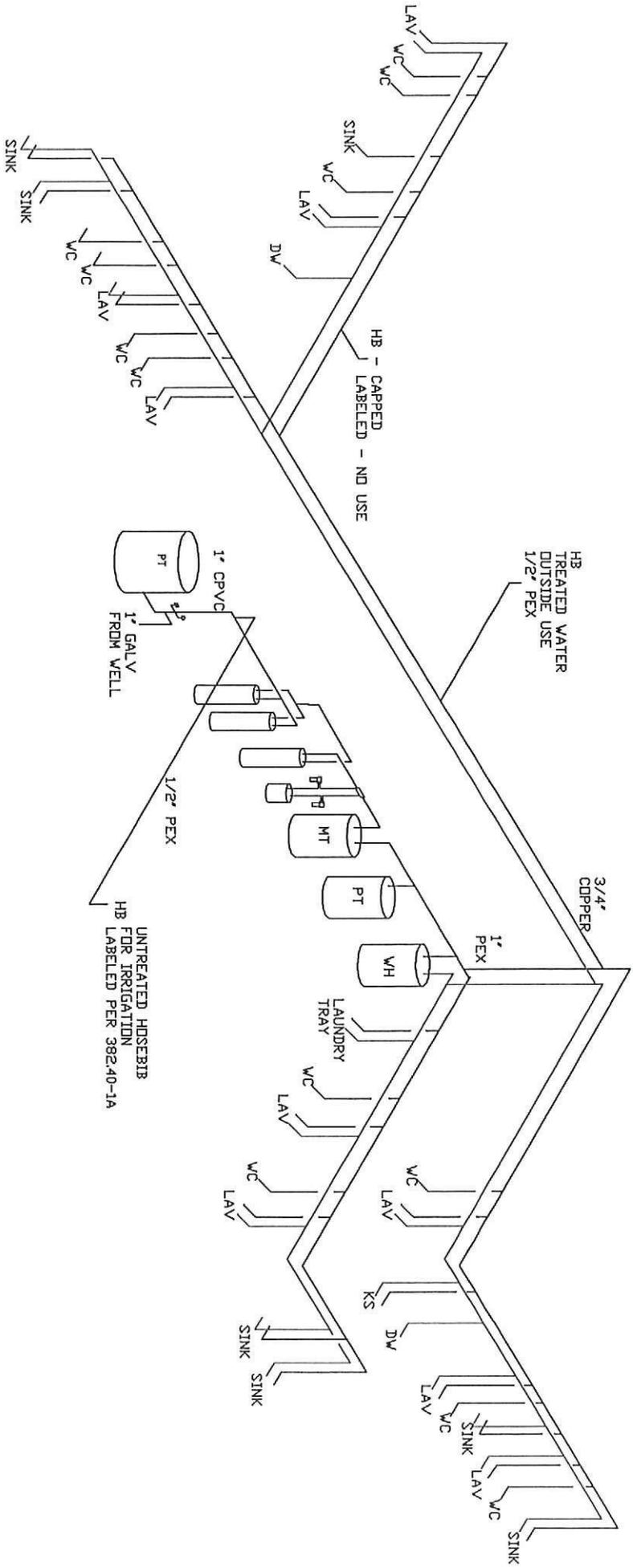
RECEIVED
MAR 20 2014
SAFETY & BUILDINGS



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COUNTRY CREEK ISO	
DWG #	COUNTRY CREEK ISO
2-20-14	
dwg by: J.WAACK	Waunakee, WI 53597 (608)849-3050
Approved by: J. McDONALD	Engineer





Conditionally

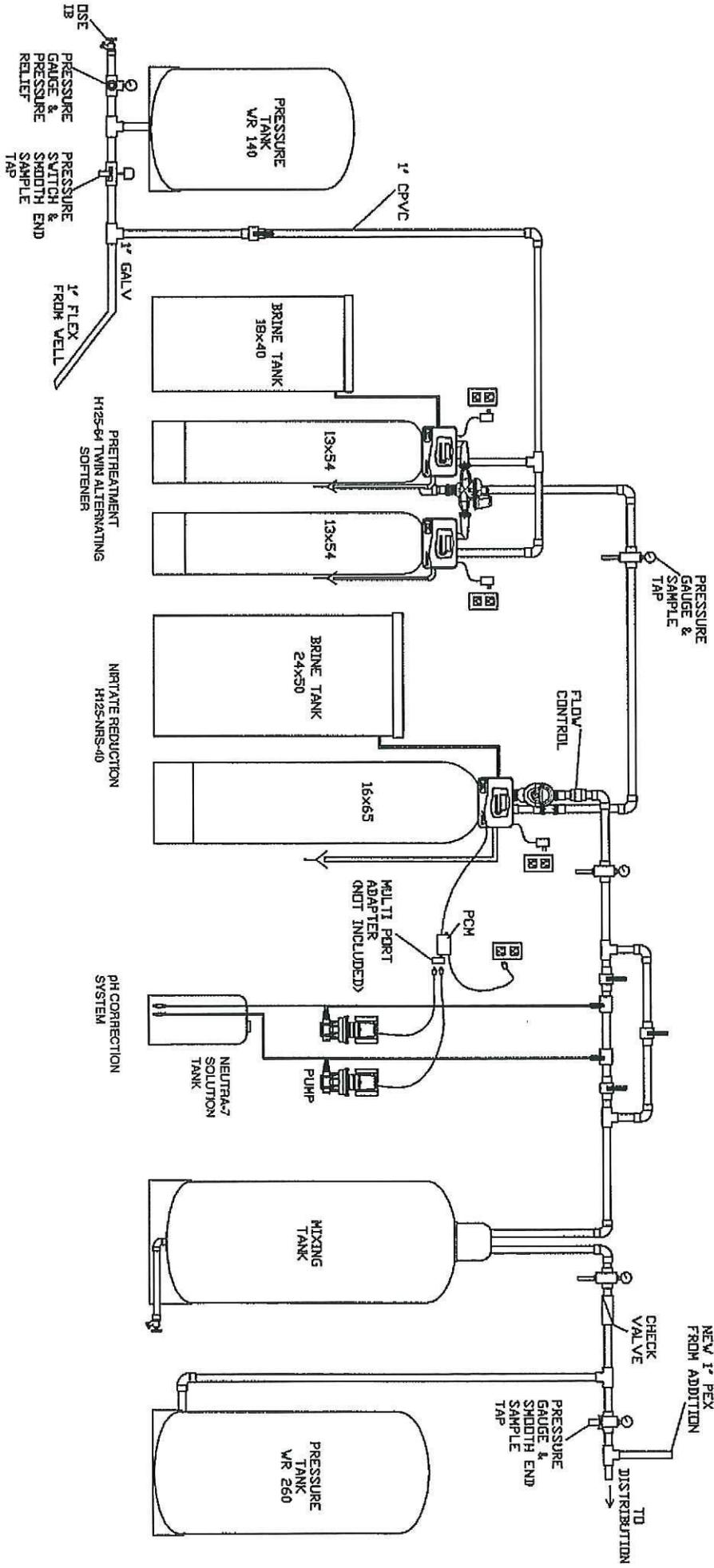
APPROVED

DIVISION 0. SAFETY AND BUILDINGS

SEE CORRESPONDENCE

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dwg by:	Waunakee, WI 53597
J.WAACK	(608)849-3050
Approved by	J. McDONALD
Engineer	





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DIVISION OF SAFETY AND BUILDINGS

SEE CORRESPONDENCE

COUNTRY CREEK - LAYOUT DWG	
DWG # COUNTRY CREEK LAYOUT 3-5-14	 Hellenbrand <i>It's what you don't see that counts</i>
dwg by JWAACK	Waunakee, WI 53597 (608)849-3050
Approved by Engineer	J. McDONALD

TYPE OF FIXTURE	QTY	HOT	COLD	TOTAL	FIX UNITS
auto ciths wshr, indiv.	2.00		2.00	3.00	0
auto ciths wshr, lg cap				1.00	0
bathub, w or w/o show hd	2.00		2.00	3.00	0
coffeemaker			0.50	0.50	0
dishwasher, commercial				2	2
drink dispenser			0.50	0.50	0
drinking fountain			0.25	0.25	0
glass filler			0.50	0.50	0
hose: 1/2" diameter			3.00	2	6
3/4" diameter			4.00	4.00	0
icemaker			0.50	0.50	0
lavatory	0.50		0.50	9	9
shower, per head	2.00		2.00	3.00	0
sinks: bar & fountain	1.50		1.50	7	14
barber & shampoo	1.50		1.50	2.00	0
bed pan washer			2.00	2.00	0
cup			0.50	0.50	0
flushing rim			7.00	7.00	0
hand wash	0.50		0.50	1.00	0
kit. & food prep., per faucet	2.00		2.00	1	3
kitchen kettle fill faucet			2.00	2.00	0
laboratory- * laundry tray	1.00		1.00	1	1.5
medical exam & treatment service	1.00		1.00	1.00	0
surgeon wash-up	2.00		2.00	3.00	0
urinal: siphon jet	1.50		1.50	2.00	0
washdown			4.00	4.00	0
wall hydrant, hot & cold mix 1/2" d			2.00	2.00	0
3/4" d			3.00	3.00	0
wash fountain: semicircular	1.50		1.50	2.00	0
circular	2.00		2.00	3.00	0
water closet: flushometer	0.00		7.00	7.00	0
gravity type flush tk			3.00	12	36

*laundry tray uses water in similar quantities and at similar rates

Total WSFU's

(3) 1/2" hoses in place, one on untreated water for irrigation, one will be capped permanently and is not included in count, 3rd one will be on treated H2O

Peak GPM Demand 35.5

71.5

	SFU	GPM
Next Larger SFU/GPM	80	38
Next Smaller SFU/GPM	70	35

FIX UNITS	FOM-SJU	FT-WU
1	1	1
2	2	2
3	3	3
4	10	4
5	15	4.5
6	18	5
7	21	6
8	24	6.5
9	26	7
10	27	8
20	35	14
30	40	20
40	46	24
50	51	28
60	54	32
70	58	35
80	62	38
90	65	41
100	68	42
120	73	48
140	78	53
160	83	57
180	87	61
200	92	65
250	101	75
300	110	85
400	126	105
500	142	125
600	157	143
700	170	161
800	183	178
900	197	195
1000	208	208
1250	240	240
1500	267	267
1750	294	294
2000	321	321
2250	348	348
2500	375	375
2750	402	402

FIXTURE

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 525 525
 593 593
 SEE CORRESPONDENCE



Water Testing Results and Recommendations

Water Test ID# WC-0211-14A

Sample Provided By

Company: **Hellenbrand, Inc.**
 Contact: Loran Schulz
 Address: 404 Moravian Valley Rd.
 City/St/Zip: Waunakee, WI 53597
 Phone: (608) 849-3050
 Fax: (608) 849-7398
 E-Mail: lschulz@hellenbrand.com
 Cell: (608) 575-8461
 Wholesaler: N/A

Sample Location

Address: 6187 Portage Rd.
 City/St/Zip: DeForest, WI 53532

Customer Information

Contact: Country Creek Learning Center
 Address: 6187 Portage Rd.
 City/St/Zip: DeForest, WI 53532
 Phone: (608) 244-3626
 Work:
 Email:

Sample Information

Date Sample Drawn: 2/11/2011
 Reason Submitted: Other
 Sample is: Raw
 Drawn From:

Current Softener: (2) FM-1200 - Working
 Other Treatment Equip:

Color when drawn: Clear
 Odor/Bad Tastes:
 Staining: No

On Site Tests:

Color of Stain:

Persons:

Bathrooms: 9

High Flow Fixtures:

Water Source: Private Well

Avg. Pressure:

Well Pipe Size:

Well Type: Drilled

Well Pump:

WP Horsepower:

Voltage:

WP Capacity:

Pressure Tank:

Gallons:

Diameter:

Height:

psi on start:

psi on finish:

Pipe Material:

Pipe Size:

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Lab Results

Sample Received By: Loran

Color before Test: Clear

Total Hardness: 23 g/g as CaCo

TDS 453 mg/l

Total Iron 0.01 mg/l

Nitrates 9.7 mg/l

Manganese 0.004 mg/l

pH: 7.35

Alkalinity: 280 mg/l

Saturation Index: +0.37

Total Comp Hardness: 23 g/g as CaCo

Tannins: mg/l

Tested By: DJ

Test Date: 2/11/2011

Remarks: Sulfates: 26mg/L. Phosphates: 0.2mg/L. *Chlorides: 64mg/L. *Chloride test was analyzed at a dilution due to insufficient sample volume; result approximate.

Additional Notes: Commercial anion nitrate reduction application.

Recommendations:

Date Results Sent: 2/14/2011

Results Sent: Jill McDonald., Loran S.

cc: Gretchen R.

Additional Notes:

4. Three Copies of Water Calculation Worksheet

Loan Schj 3/19/14 247928

INFORMATION REQUIRED TO SIZE WATER SERVICE AND WATER DISTRIBUTION:		
1-	Demand of building in water supply fixture units (WSFU);	(WSFU) <u>71.5</u>
1.a.	Demand of building in WSFU converted to Gallons Per Minute: (Table SPS 382.40-3)	(GPM) <u>35.5</u>
2-	Elevation difference from main or external pressure tank to building control valve; (feet)	<u> </u>
3-	Size of water meter (when required) 5/8" <u> </u> 3/4" <u> </u> 1" <u> </u> other <u> </u>	<u> </u>
4-	Developed length from main or external pressure tank to building control valve; (feet)	<u> </u>
5-	Low pressure at main in street or external pressure tank.	(psi) <u> </u>

CALCULATE WATER SERVICE PRESSURE LOSS

(unnecessary for internal pressure tanks)

6- Low pressure at main in street or external pressure tank. (value of # 5 above)

7- Determine pressure loss due to friction in inch diameter water service.
 Water service piping material is
 Pressure loss per 100 ft. = X (decimal equivalent of
 service length, i.e. 65 ft = 0.65) **Subtract value of "7"**
 Subtotal

8- Determine pressure loss or gain due to elevation, (multiply the value of # 2 above by .434) **Subtract value of "8"**

9- Available pressure after the bldg. control valve. Subtotal **40**

CALCULATE THE PRESSURE AVAILABLE FOR UNIFORM LOSS (VALUE OF "A")

B. Available pressure after the bldg. control valve. (from "9" above) Value of "B"

C. Pressure loss of water meter (when meter is required) **Subtract value of "C"**
 Subtotal

D. Pressure at controlling fixture*.
 (Controlling fixture is: furthest upstairs toilet). **Subtract value of "D"** **8**
 (*Controlling fixture is the fixture with the most demanding pressure to
 operate properly which includes the following when determining
 fixture performance; loss due to instantaneous water heaters, water
 treatment devices, and backflow preventers which serve the controlling fixture.)
 Subtotal **32**

E. Difference in elevation between building control valve
 and the controlling fixture in feet; 10 X .434 psi/ft. **Subtract value of "E"** **4.34**
 Subtotal **27.66**

Water Calc Worksheet

Country Creek Learning Center

Name of Project

F. Pressure loss due to water treatment devices and backflow preventers which serve the controlling fixture. (Water softeners, filters, etc.)

(Pressure loss due to; softener & nitrate reduction system).

F1. WSFU Downstream of Water Treatment Device; 71.5

F2. Convert wsfu to GPM using **Table 382.40-3**: 35.5

or
F3. Convert wsfu to GPM using **Table 382.40-3e***
(For individual dwellings only) _____

F4. Refer to manuf. graph to obtain pressure loss: 15
(If no water treatment device enter "0")

Subtract value of F4 12.66

Subtotal _____

G. Pressure loss through tankless water heaters, combination boiler / hot water heaters, heat exchangers which serve the controlling fixture;

Hot water WSFU's; _____ convert to; GPM = _____ (Table 382.40-3)
Refer to manufacturer's pressure loss graph to determine loss at the required GPM;

_____ pressure loss. **Subtract value of "G"** 0

Subtotal 12.66

H. Developed length from building control valve to controlling fixture in feet 60 X 1.5

Divide by value "H" 90

Subtotal 0.1407

Multiply by: 100

A. Pressure available for uniform loss **"A" =** 14.07

Water distribution piping is: 1" PEX + 1" Copper + 3/4" Copper

*Note: The "A" value obtained by using Table 382.40-3e can only be used for an individual dwelling when sizing the water treatment device (water softeners, etc) and no hose bibbs, hydrants, or high flow fixtures are being served by the water treatment device

Note: High flow fixtures are defined as fixtures that exceed a flow rate of 4 gpm @ 80 psi, and water velocity not exceeding 8 ft. per second.

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