DIVISION OF INDUSTRY SERVICES
PO BOX 7162
MADISON WI 53707-7162
Contact Through Relay
http://dsps.wi.gov/programs/industry-services
www.wisconsin.gov

Scott Walker, Governor
Dave Ross, Secretary

February 26, 2016

CUST ID No. 1293249

ATTN: Plumbing Inspector

ALAN MAST
HELLENBRAND INC
404 MORAVIAN VALLEY RD
WAUNAKEE WI 53597

MUNICIPAL CLERK
VILLAGE OF MERRILLAN
PO BOX 70
MERRILLAN WI 54754-0070

CONDITIONAL APPROVAL
PLAN APPROVAL EXPIRES: 02/26/2018

Identification Numbers
Transaction ID No. 2673839 **Site ID No. 757751**
Please refer to both identification numbers, above, in all correspondence with the agency.

SITE:
Atlas Resin Proppants
W10899 Cherry Rd
Village of Merrillan, 54754
Jackson County

FOR:
Facility: 758406 ATLAS RESIN PROPPANTS MERRILLAN WEST
W10899 CHERRY RD
MERRILLAN 54754
Plan Type: Addition-Alteration; 1 Interior Fixture(s)

Object Type: Commercial Water Treatment Device Regulated Object ID No.: 1588587

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:

- The Stenner 20.0 gallon per day (GPD) fixed rate chemical injection pump (E20PHG Econ Series) has undergone sufficient testing to document the device's ability to properly inject a chemical into a potable water supply system as specified in this approval letter:

  http://dsps.wi.gov/sb/docs/sb-ppalopp/20120155.pdf

- The sodium hydroxide [(NaOH) aka "caustic soda"] solution injected into this water supply system shall conform to ANSI/NSF Standard 60 and shall not exceed its listed maximum use concentration:

  http://info.nsf.org/Certified/PwsChemicals/Listings.asp?CompanyName=&TradeName=&ChemicalName=Sodium+Hydroxide&ProductFunction=&PlantState=&PlantCountry=&PlantRegion=

  Cross connection control is optional.

- Only a locking bypass shall be installed serving the chemical injection system.

- All water supply piping shall be labeled as required by Table SPS 382.40-1a.

- The drain, waste and vent system shall be properly sized to handle the additional wastewater loading generated by the water treatment devices being installed.

- Then finished installation shall undergo, and pass, a final inspection prior to the treated water being used for consumptive purposes. The plumbing consultant having jurisdiction in this area is Bruce Meiners. Mr. Meiners may be reached via the following:

  Phone: 608-399-4156 E-mail: bruce.meiners@wisconsin.gov

  If the treated water is used for consumptive purposes prior to passing the final inspection, then this approval may be rendered null and void and the devices ordered removed. The Plumbing Consultant shall provide a written indication of the final inspection to the system owner.

- 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 Jason Gazdecki. Mr. Gazdecki can be reached via the following:

  Phone: 715-284-1456 E-mail: jason.gazdecki@wisconsin.gov

- The suggested monitoring interval for this installation is monthly until a stable passivating layer has formed on the wetted pipe surfaces which may be inferred from coper and lead samples dropping off to below detectable limits. The following test should be performed:

  1. dissolved copper; 2. dissolved lead;
  3. alkalinity; and 4. pH

  Samples should be collected data a time when the chemical injection system is at, or near, peak demand. Untreated and treated water samples should be collected together in sets with untreated water samples being collected upstream of all water treatment devices; treated water samples should be collected from the most remote outlet relative to the point of chemical injection. All sampling should be "first draw" as typically required under the United States Environmental Protection Agency's (USEPA's) Lead and Copper Rule.

  It's suggested that copper should be tested first. If copper is detected at elevated concentrations, then the balance of the testing suggested should be run.

  Note that any copper that's exposed prior to the point of chemical injection will remain vulnerable to corrosion and may thereby complicate compliance testing.

- Any wall hydrants that are not served by the chemical injection system shall 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 hose connections shall be protected with vacuum breakers that conform to American Society of Sanitary Engineering (ASSE) standards 1011 or 1052.

- The ongoing maintenance of this system shall be performed by Gibson's WaterCare Service, 620 N. Hillcrest Parkway, Altoona WI 54720, 715-834-7716.

- A complete set of owner's manuals, installation and operating instructions for all water treatment devices installed shall be provided to the system owner and remain onsite.

- This site appears in the WDNR Public Water Supply Database as: BADGER MINING CORP-MERRILLAN WEST COATING PLANT, PWSID 62702684

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.

Sincerely,

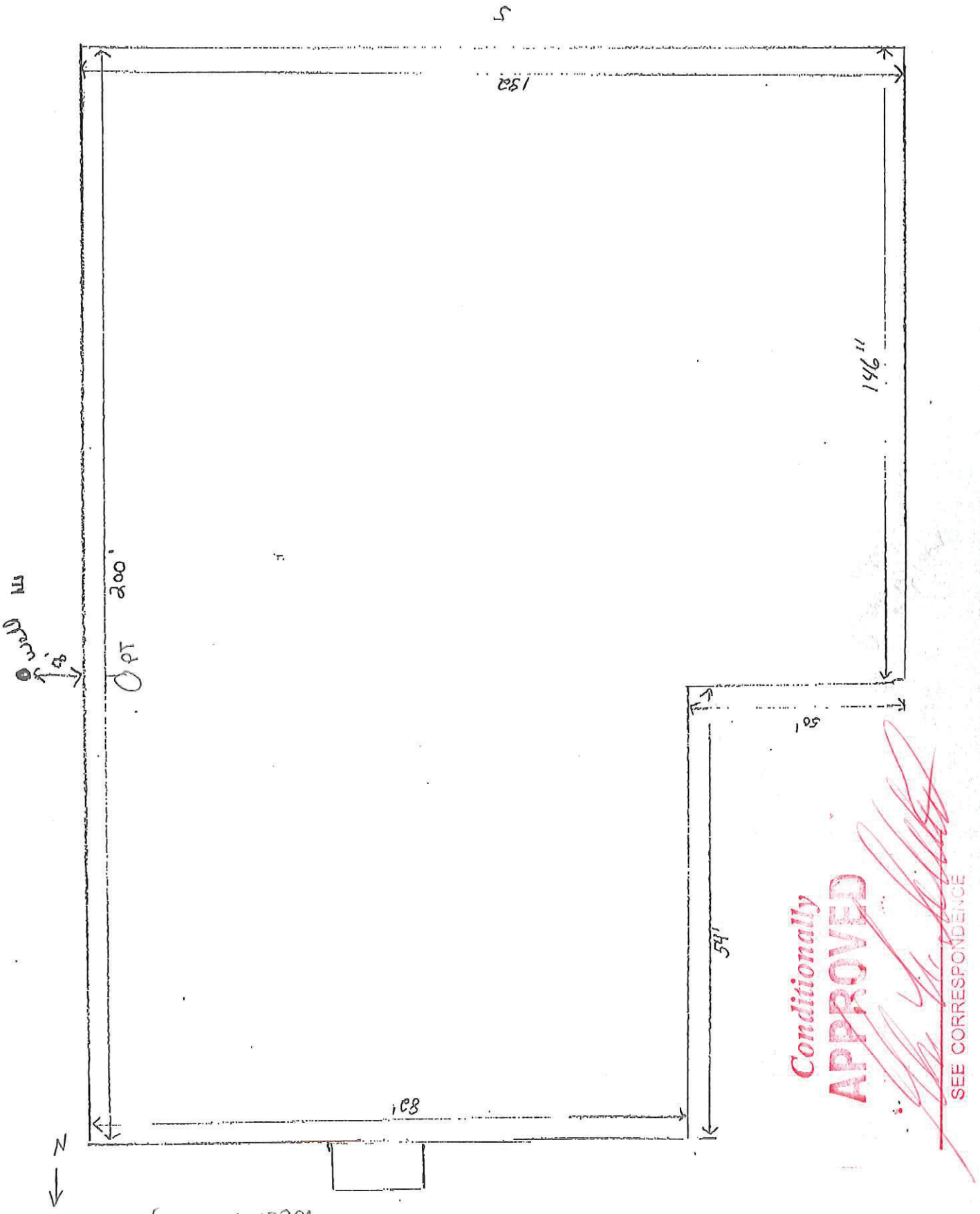
Glen W Schlueter
Plumbing Product Reviewer , Division of Industry Services
(608)267-1401 , Monday-Thursday 7:00AM-3:45PM
Friday 7:00AM-12:00PM
glen.schlueter@wisconsin.gov

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

WiSMART code: 7657

cc: Hellenbrand Inc
Bruce Emerson Meiners, Plumbing Consultant, (608) 399-4156 , Mon - Fri 8:00 am - 4:30 pm
Atlas Resin

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.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146'
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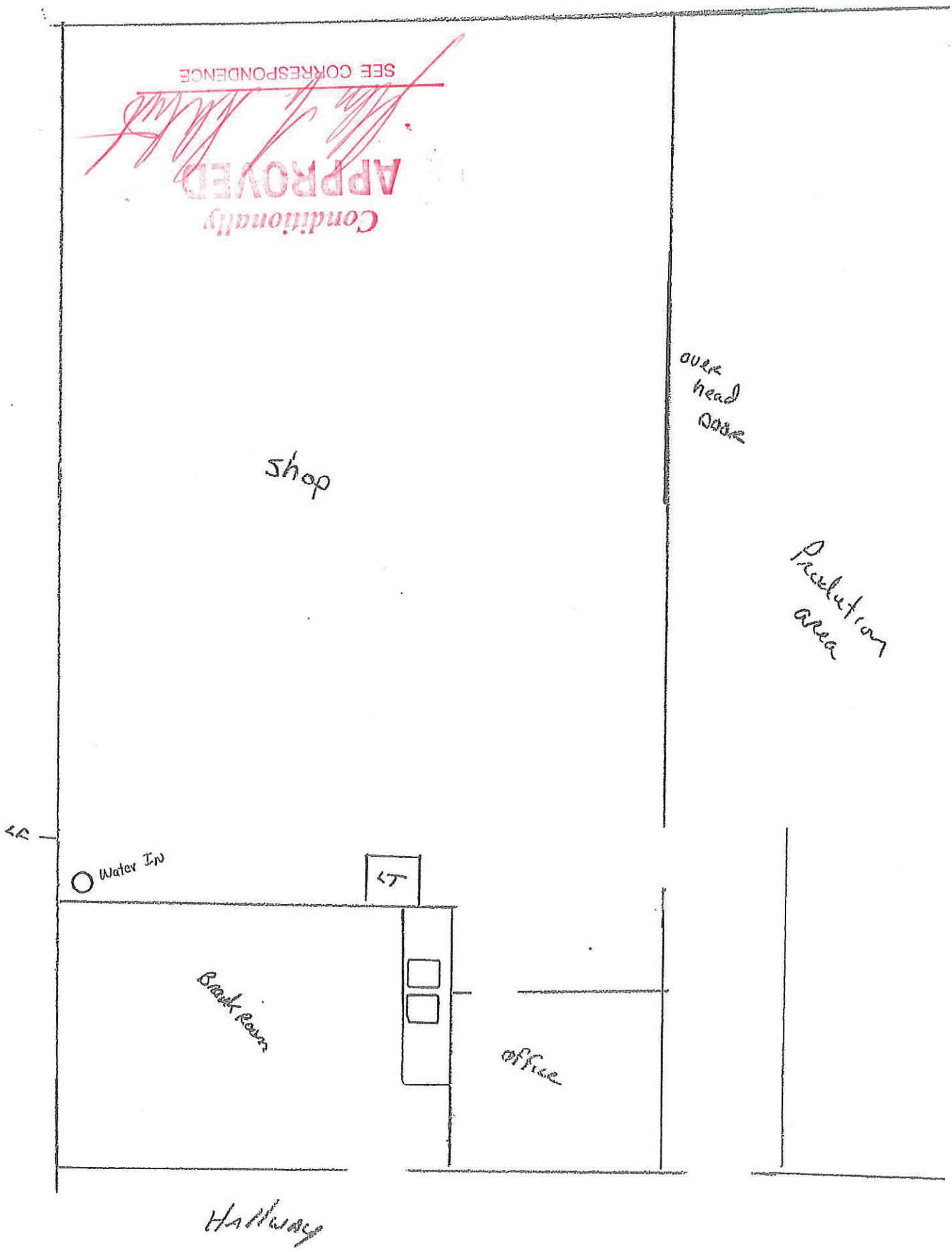
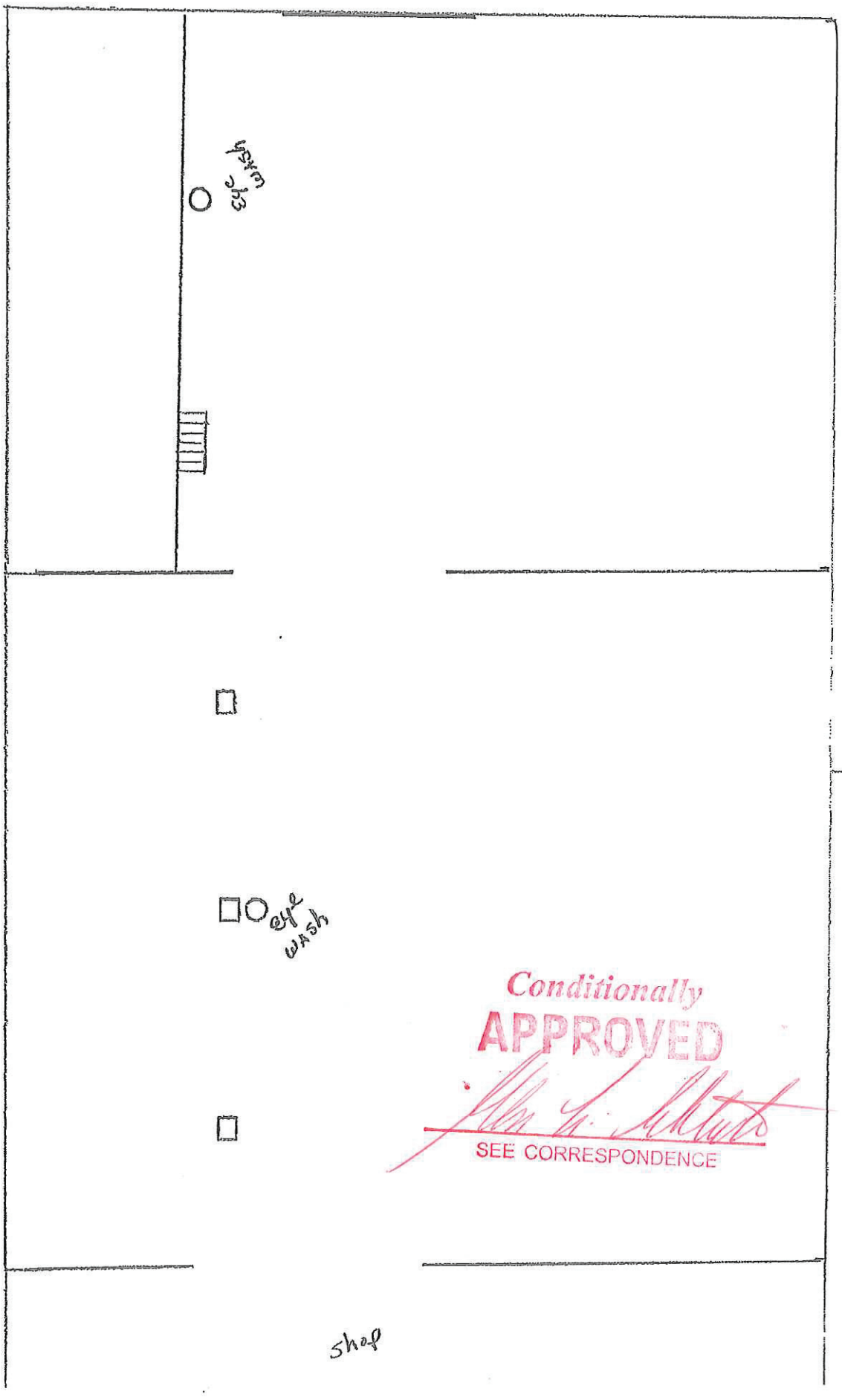
Conditionally
APPROVED
SEE CORRESPONDENCE


SEE CORRESPONDENCE
APPROVED
Conditionally
shop
overhead door
Pedestrian area
Water In
LT
Back room
office
Hallway



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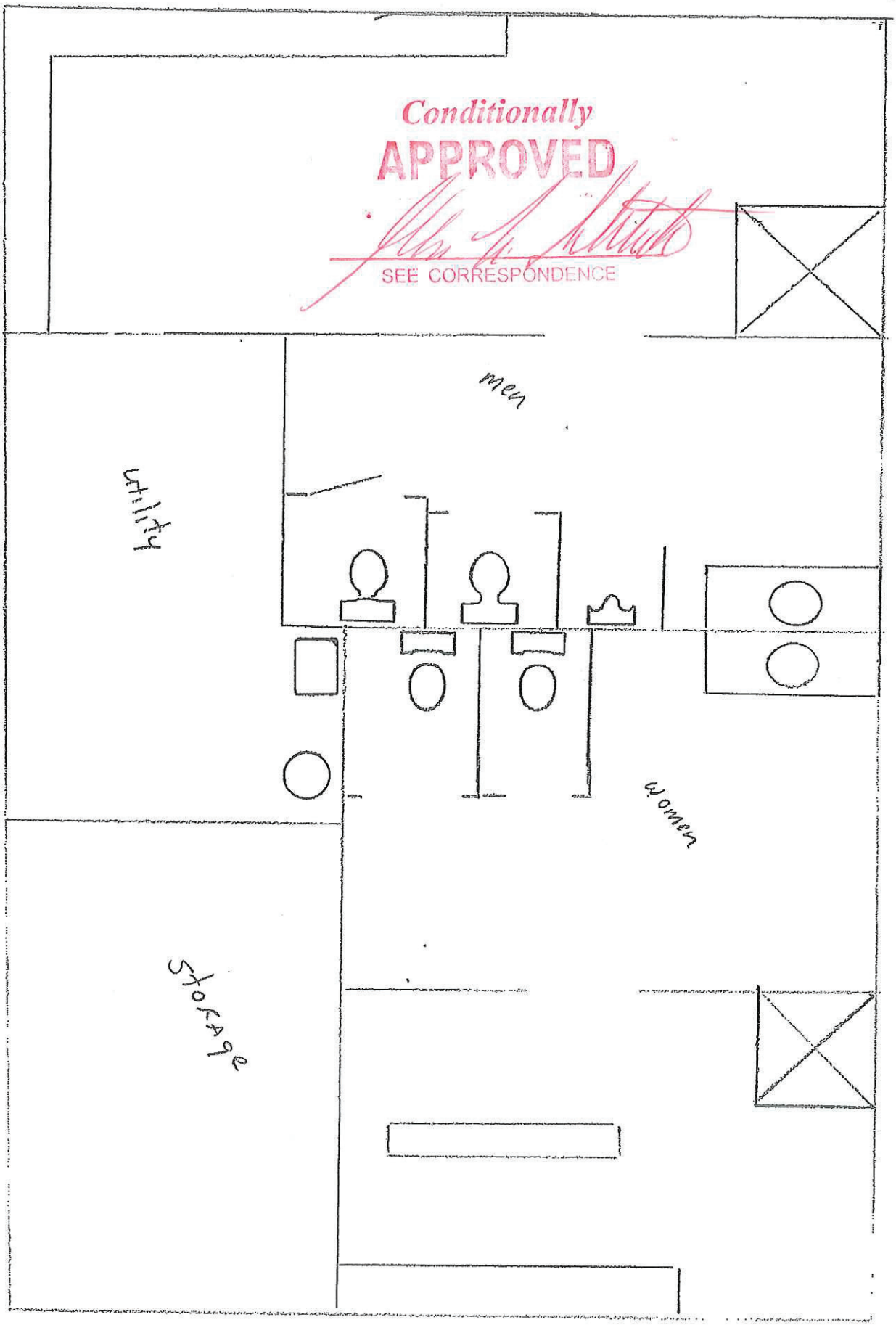
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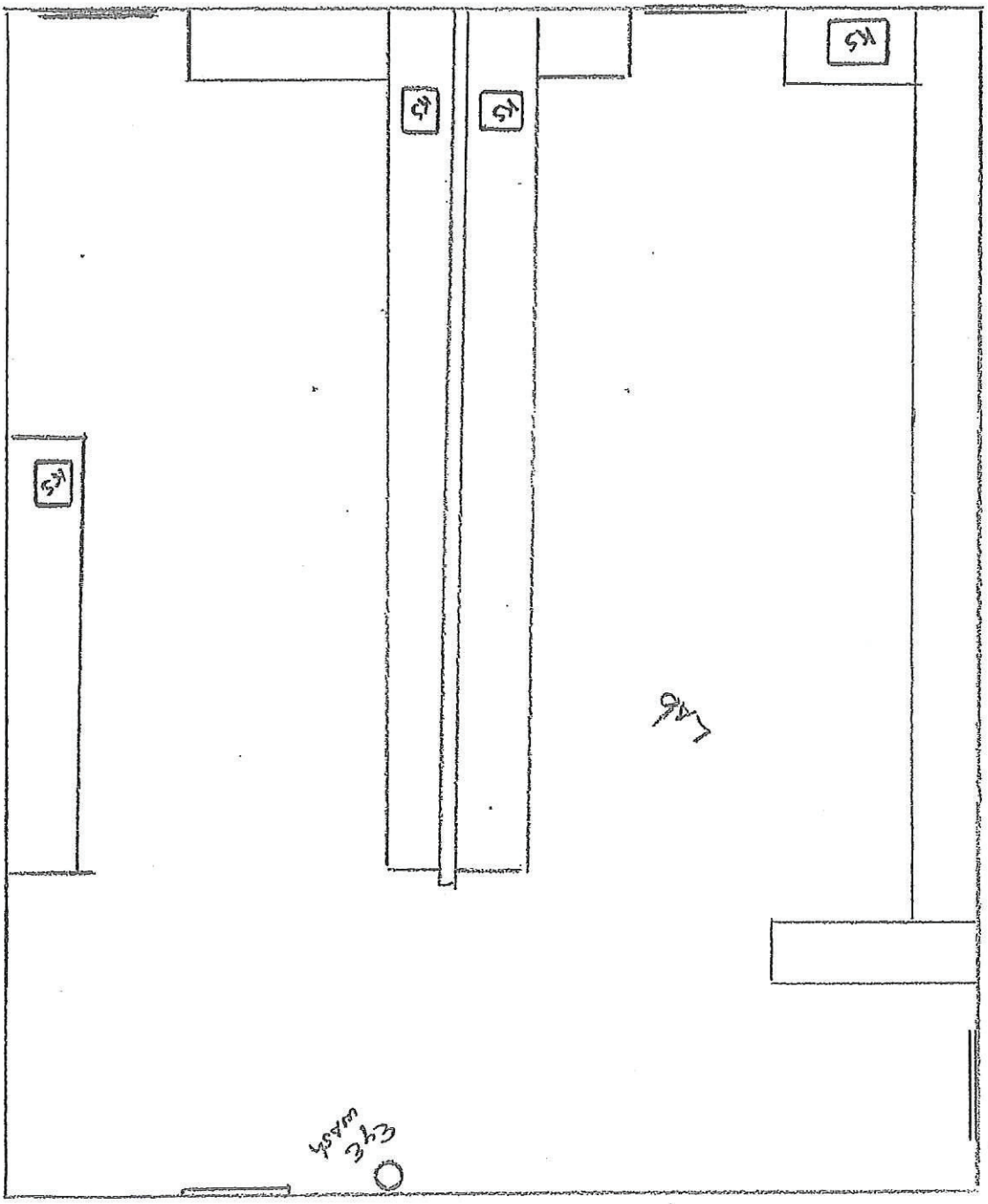
SEE CORRESPONDENCE
men
utility
women
storage



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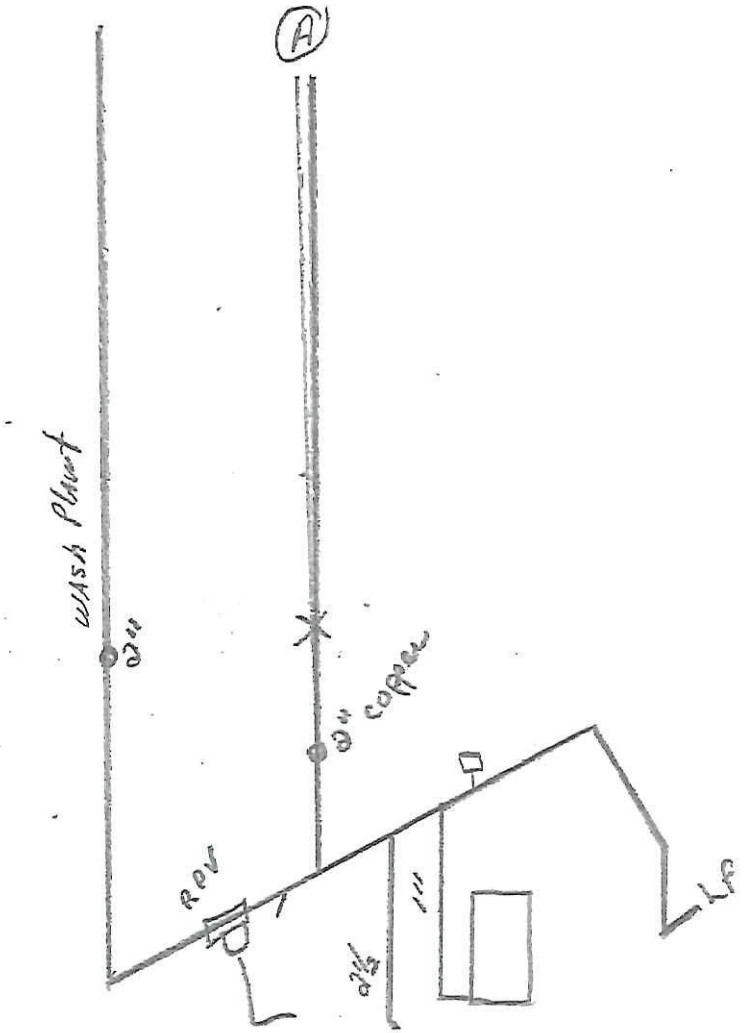
SEE CORRESPONDENCE

West Plant



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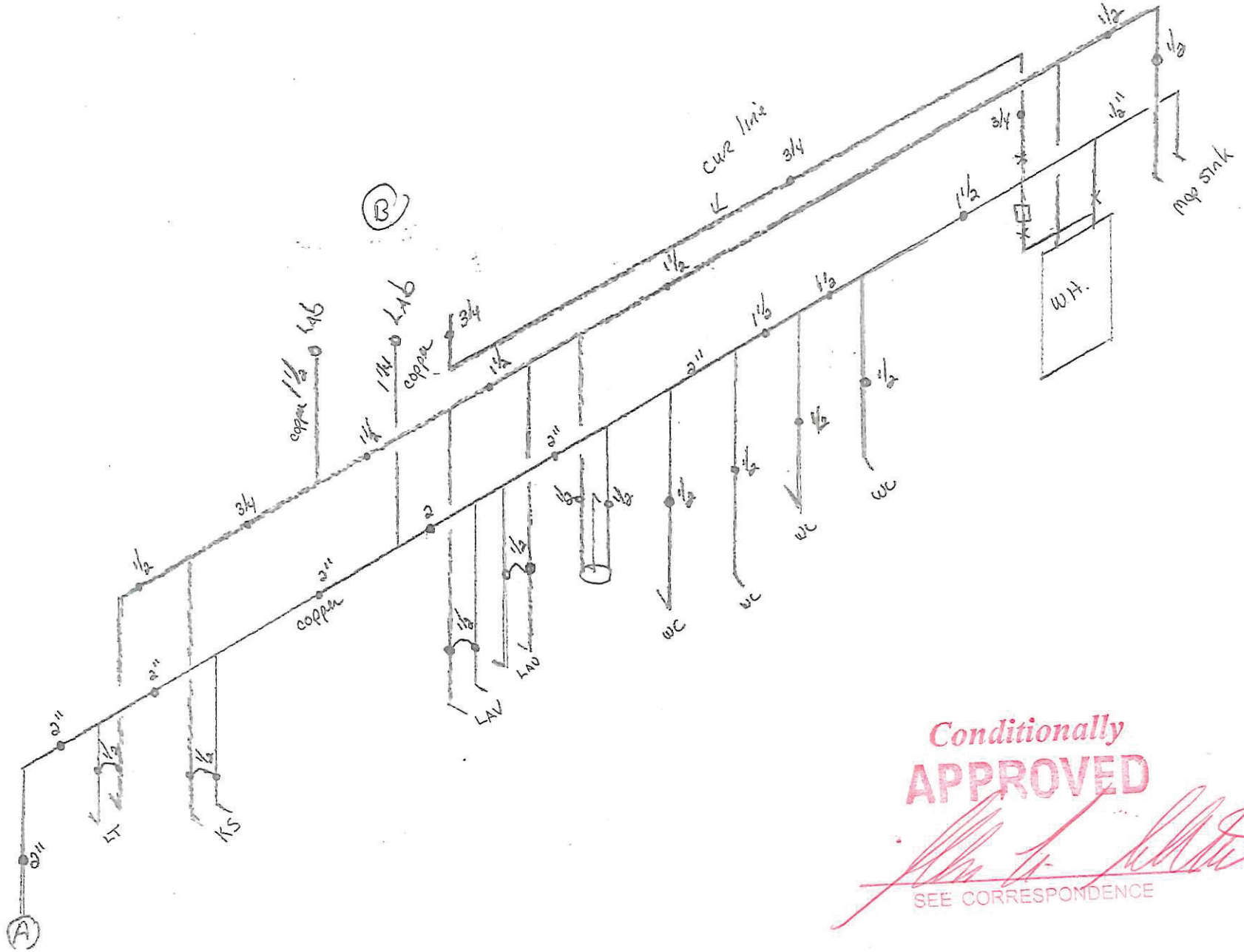
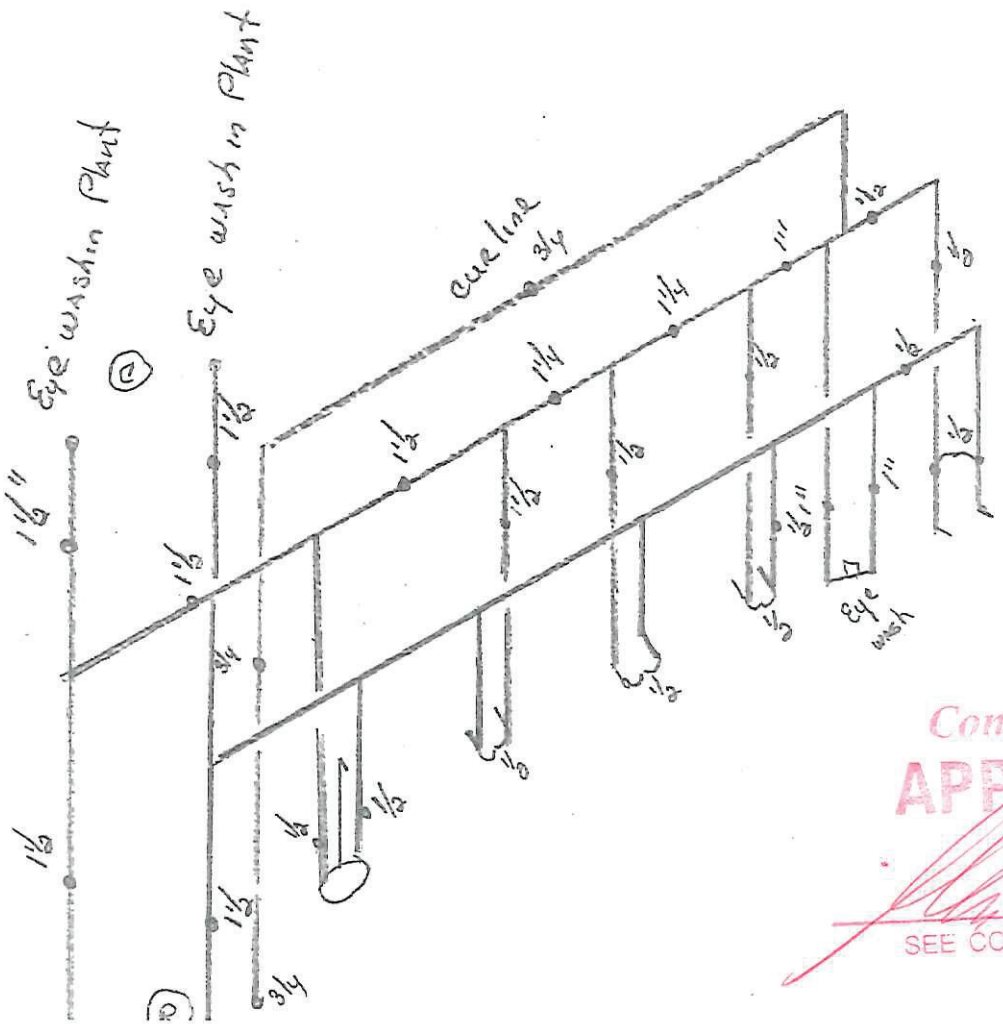
SEE CORRESPONDENCE



Conditionally
APPROVED

SEE CORRESPONDENCE

Lab
copper
Piping



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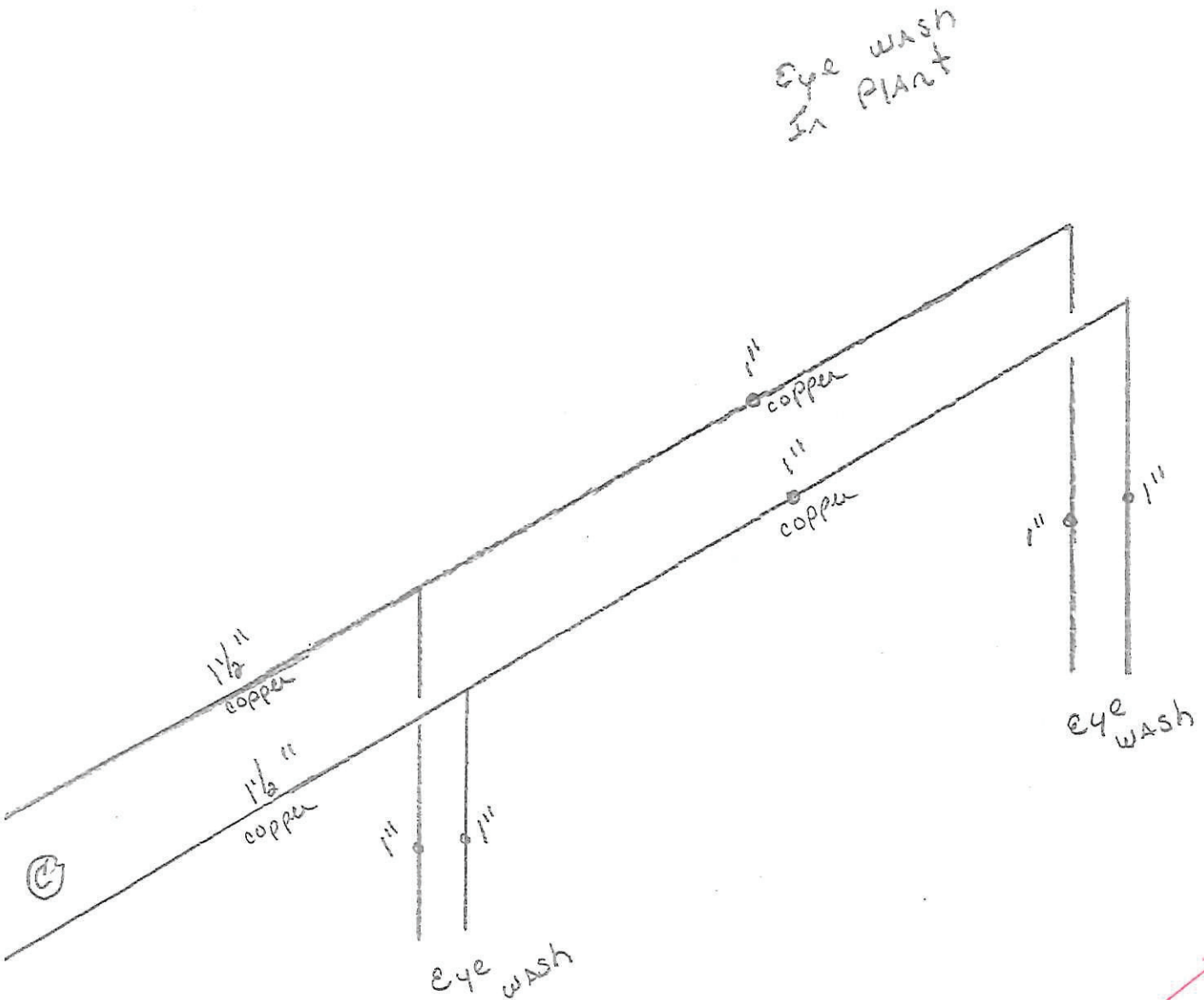
SEE CORRESPONDENCE



Conditionally
APPROVED

SEE CORRESPONDENCE

Water Calc. Worksheet Atlas Resin Merrillan WEST

Name of Project

INFORMATION REQUIRED TO SIZE WATER SERVICE AND WATER DISTRIBUTION:

1-	Demand of building in water supply fixture units (WSFU);	(WSFU)	47.5
1.a.	Demand of building in WSFU converted to Gallons Per Minute: (Table SPS 382.40-3)	(GPM)	27
2-	Elevation difference from main or external pressure tank to building control valve; (feet		0
3-	Size of water meter (when required) 5/8"____ 3/4" ____ 1" ____ other____		
4-	Developed length from main or external pressure tank to building control valve;	(feet)	100
5-	Low pressure at main in street or external pressure tank.	(psi)	65

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) 65

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 _____

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

B. Available pressure after the bldg. control valve. (from "9" above) Value of "B" 65

C. Pressure loss of water meter (when meter is required) **Subtract value of "C"** 0.0

Subtotal 65

D. Pressure at controlling fixture*.

(Controlling fixture is: Eye wash). **Subtract value of "D"** 30

(*Contolling 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 35

E. Difference in elevation between building control valve and the controlling fixture in feet; 3 X .434 psi/ft. **Subtract value of "E"** 1.3

Subtotal 33.7

Conditionally APPROVED

SEE CORRESPONDENCE

Water Calc Worksheet Atlas Resin Merrillan WEST

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; twin parallel contact tanks).

F1. WSFU Downstream of Water Treatment Device; 47.5

F2. Convert wsfu to GPM using **Table 382.40-3**: 27

or

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

F4. Refer to manuf. graph to obtain pressure loss: 2.2
(If no water treatment device enter "0")

Subtract value of F4 2.2

Subtotal 31.5

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"** _____

Subtotal 31.5

H. Developed length from building control valve to controlling fixture in feet 100 X 1.5 **Divide by value "H"** 150

Subtotal 0.21

Multiply by: 100

A. Pressure available for uniform loss **"A" =** 21

Water distribution piping is: 2" 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.

Conditionally APPROVED

SEE CORRESPONDENCE

HELLENBRAND, INC.
FIXTURE ANALYSIS
JOB & CUSTOMER: Atlas- Merrillan-West, WI

GALLONS PER MINUTE

TYPE OF FIXTURE	QTY	HOT	QTY	COLD	QTY	TOTAL	FIX UNTS
auto clths wshr, indiv.		2.00		2.00		3.00	0
auto clths wshr, lg cap						3.00	0
bathtub, w or w/o show hd		2.00		2.00		3.00	0
coffeemaker				0.50		0.50	0
dishwasher, commercial						1.00	0
drink dispenser				0.50		0.50	0
drinking fountain/ ice cream scoop rinse				0.25		0.25	0
Eye Wash			3	3.00		0.50	9
hose: 1/2" diameter				3.00		3.00	0
3/4" diameter				4.00		4.00	0
icemaker				0.50		0.50	0
lavatory		0.50		0.50		1.00	0
shower, per head		2.00		2.00	2	3.00	6
sinks: bar & fountain		1.50		1.50		2.00	0
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		3.00	0
kitchen standard				2.00	5	2.00	10
laundry tub						1.50	0
lav		0.50		0.50	2	1.00	2
medical exam & treatment		1.00		1.00		1.00	0
service		2.00		2.00	1	3.00	3
surgeon wash-up		1.50		1.50		2.00	0
urinal: siphon jet				4.00	1	4.00	4
washdown				2.00		2.00	0
wall hydrant, hot & cold mix 1/2" d		2.00		2.00		3.00	0
3/4" d		3.00		3.00		4.00	0
wash fountain: semicircular		1.50	1	1.50		2.00	1.5
circular		2.00		2.00		3.00	0
water closet: flushometer		0.00		7.00		7.00	0
gravity type flush tk			4	3.00		3.00	12

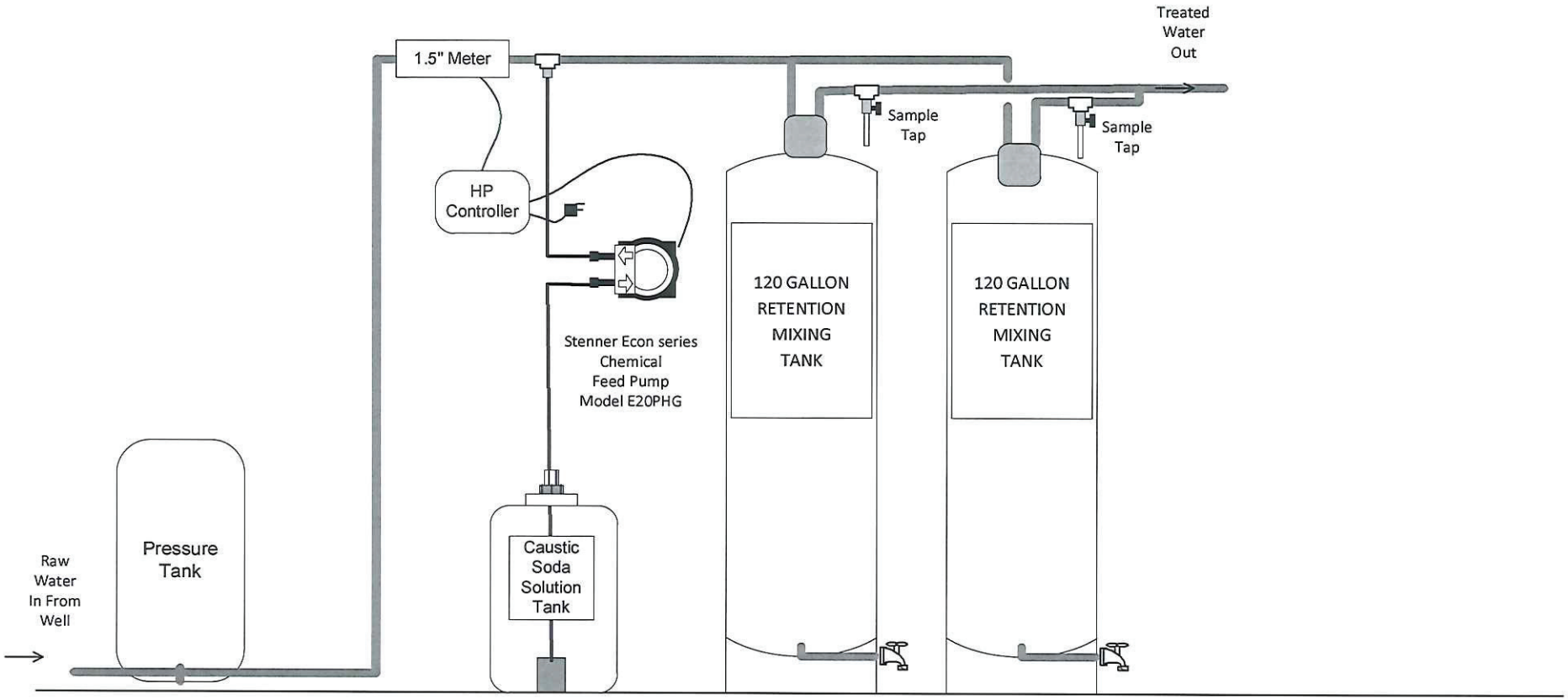
Total WSFU's	47.5

Peak GPM Demand **27.0**

	SFU	GPM
Next Larger SFU/GPM	50	28
NextSmaller SFU/GPM	40	24

FIX UNTS	FOM-SJU	FT-WU
1		1
2		2
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
3000	432	432
4000	525	525
5000	593	593

Conditionally APPROVED
FIXTURE CORRESPONDENCE



Conditionally
APPROVED
SEE CORRESPONDENCE

Caustic feed pH control system	
DRAWING #	Hellenbrand It's what you don't see that counts.
DATE: 2/19/2016	
JOB: Atlas Resin Proppants Merrillan East or West	
DWG. BY: A. MAST	Waunakee, WI (608)849-3050