



JAMES A. SEWELL & ASSOCIATES, LLC

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*Civil Engineering *Electrical Engineering *Land Surveying *Building Inspection * Land Use Planning

September 27, 2011

Idaho Department of Environmental Quality
1410 North Hilton
Boise, ID 83706

Attn: Ester Ceja, Sr. Water Quality Analyst
Subj: Oden Water Association Membrane Filter Plant Retrofit/Upgrade
Ref: Request for Categorical Exclusion

Dear Ms. Ceja:

I am writing on behalf of the Oden Water Association to request that the proposed Membrane Filter Plant Retrofit/Upgrade project be considered for a categorical exclusion pertaining to the environmental review process.

Purpose of the Project

The purpose of the project is to retrofit the existing Oden Water Association Aquasource membrane filtration plant to facilitate utilization of membrane modules that are produced by a different manufacturer and are lower cost, have a longer life, and are produced by a company that has a greater interest in doing business in the United States. Currently, the Oden Water Association has transmitted a boil water advisory to all system users due to concerns about water treatment efficacy caused by premature failure of recently installed membrane modules and subsequent increases in treated water turbidity. The proposed project will address the water treatment concerns and facilitate production of drinking water that meets State of Idaho domestic water treatment requirements and is safe to drink without requiring boiling.

Project Description

The project will consist of modifying the existing double-skid membrane filtration plant plumbing, electrical and controls systems to accommodate installation of membrane modules that are produced by a different manufacturer than the one that produced the existing membranes. The proposed project also includes installation of a new third membrane filtration skid to improve treatment system redundancy and to reduce system interruptions during construction. Existing filter plant rack structures, plumbing, and filter cleaning facilities will be rehabilitated and improved to reduce corrosion within the plant. Existing plumbing water hammer issues will also be addressed through control system modifications. Existing plumbing and filter modules that will be replaced will be properly salvaged or discarded. All of the work will be contained within the existing filter plant

building and there will be no additions to the existing building. A copy of a portion of the original design drawings for the filter plant building is enclosed. The proposed scope of work for the retrofit project is included in Alternative 3 within the Alternatives for Membrane Replacement Technical Memorandum No. 1 that is attached to the State Revolving Fund Loan Application.

Water System Growth Information

The population within the Oden Water Association service area is not expected to grow at a rate of 25% in excess of the 20-year population growth expectations for the entire State of Idaho. According to U.S. Census Bureau information, the population growth rate for Bonner County during the period of 2000 to 2010 was 11% and the growth rate for the State of Idaho during that same period was 21.1%. Since Oden Water Association is a private association, the Oden Water Board of Directors controls the number of equivalent residential units that are served by the system and can therefore effectively control the growth of the water system. According to Oden Water Association's by-laws, membership in the association is contingent upon approval of the board of directors.

The original filtration plant was designed to accommodate 500 equivalent residential units. The proposed retrofit project does not increase the filtration system capacity, however, it will increase system redundancy. There are currently approximately 343 equivalent residential units connected to the system. The Oden Water Association does not have plans for exceeding the original design capacity of 500 ERU's. Therefore, the proposed retrofit project will not provide capacity to increase the current system's population by greater than 500 ERU's.

Project Environmental Effects

The proposed filter plant retrofit project will not significantly impact the quality of the environment. The proposed project will facilitate domestic potable water production in a manner that is very similar to the manner that the original filter plant functioned for the first 10 years of operation.

The proposed project will not affect cultural resource sites; endangered or threatened species or their habitats; environmentally important natural resources; or other resource areas since the project will be contained within an existing building structure.

Project Cost Effectiveness

The Alternatives for Membrane Replacement Technical Memorandum No. 1 that is attached to the State Revolving Fund Loan Application attests to the cost effectiveness of the project.

Public Participation

As requested, the Oden Water Association Board of Directors issued the enclosed notice to their membership requesting written comments from their members regarding the proposed domestic water filtration system upgrade project. The notice was mailed to the members on August 25, 2011 along with their monthly billing invoices. As indicated within the notice, the 14-day period for commenting on the project extended from August 29, 2011 through September 12, 2011. Also enclosed are copies of the written public comments that were received in response to the notice. The enclosed September 26 meeting minutes indicate how the comments were addressed by the

Board. There is no known public controversy regarding the project.

Selection of Filtration System Upgrade Alternative

After reviewing and addressing the member comments, the Oden Water Association Board of Directors officially selected Alternative #3, as recommended within the Alternatives for Membrane Replacement Technical Memorandum No. 1. The selection was made by a motion at the September 26, 2011 meeting. A copy of the meeting minutes that states the selected alternative is enclosed.

Thank you for considering this request for categorical exclusion. Please let us know if there are questions regarding the above information.

Sincerely,

JAMES A. SEWELL & ASSOCIATES, LLC

By 

Kevin T. Akesson, P.E., S.E.

Enclosures

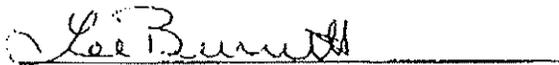
pc: Oden Water Association with enclosures

file with enclosures

NOTICE TO OUR MEMBERS

In accordance with the State of Idaho Department of Environmental Quality funding application requirements, the Oden Water Association, Inc. Board of Directors is requesting written comments from members of the Oden Water Association regarding a proposed domestic water filtration system upgrade project. The purpose of the project is to improve the existing inadequate Oden Water filtration system to meet water treatment rule requirements and to improve system redundancy. Project alternative consist of 1.) Replacement of the existing filtration modules with identical modules, 2.) Complete replacement of existing membrane filtration system with an entirely new membrane filtration system, and 3.) Retrofitting the existing membrane filtration system with alternative membrane modules. A complete discussion and comparison of the alternatives is included within Alternatives for Membrane Replacement Technical Memorandum No. 1, which may be viewed at the Oden Water Association treatment plant building by appointment with the Association Secretary, who may be contacted by telephone at (208) 255-4001. Written comments may be mailed to the Association Secretary at 1790 E. Shingle Mill Road, Sandpoint, Id. 83864. Comments will be received from August 29th through September 12th, 2011.

Oden Water Association, Inc.



Lee Burnett, President

Dated: 8-9-11

NOTICE TO OUR MEMBERS

In accordance with the State of Idaho Department of Environmental Quality funding application requirements, the Oden Water Association, Inc. Board of Directors is requesting written comments from members of the Oden Water Association regarding a proposed domestic water filtration system upgrade project. The purpose of the project is to improve the existing inadequate Oden Water filtration system to meet water treatment rule requirements and to improve system redundancy. Project alternative consist of 1.) Replacement of the existing filtration modules with identical modules, 2.) Complete replacement of existing membrane filtration system with an entirely new membrane filtration system, and 3.) Retrofitting the existing membrane filtration system with alternative membrane modules. A complete discussion and comparison of the alternatives is included within Alternatives for Membrane Replacement Technical Memorandum No. 1, which may be viewed at the Oden Water Association treatment plant building by appointment with the Association Secretary, who may be contacted by telephone at (208) 255-4001. Written comments may be mailed to the Association Secretary at 1790 E. Shingle Mill Road, Sandpoint, Id. 83864. Comments will be received from August 29th through September 12th, 2011.

Oden Water Association, Inc.



Lee Burnett, President

Dated: 8-9-11

8/8/11

Put in rapid sand filter.

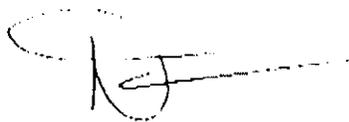
Marion Reed

Board of Directors
Cedar Water Association

Dear Sirs,

With regard to the required upgrades to our water filtration system and of the three alternatives presented, it seems that 'retrofitting the existing membrane system with alternative membranes' will be the simplest and most cost effective solution. Given our experience with the existing filtration modules and their manufacturer, further involvement with them seems foolish. Similarly complete replacement with a different membrane system seems costlier. If we were considering complete replacement I would be interested in a possible return of sand filtration versus membrane.

Thank you for your work for Cedar Water.


Bill Dechow
Executive Director
Fundamental

Oden Water Association, Inc.

September 26th, 2011

The September 26th, 2011 Oden Water meeting was called to order by President Lee Burnett at 6:30pm. Board members in attendance: Ken Babin, Ernie Brandt and Lee Burnett. Kevin from Sewell Engineering was also in attendance.

The meetings' purpose was to review public comment regarding the update to the Oden Water's filtration plant. Public comment was received from :

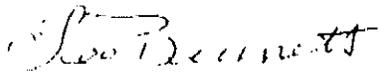
1. Sherman Rucker commented that he was in favor of a rapid sand filtration system. The inability and difficulty to meet current treatment requirements from the DEQ made this type of filtration system not an option.
2. Bill D'Olier commented that he was for the retro fit of the filters which would be option #3.

Ken Babin made a motion based on public comment to proceed with option #3 to retro fit filters with the present membrane filtration system. The motion was seconded by Ernie Brandt and the motion passed.

Sewell will proceed with the engineering due to DEQ approving the Whiskey Jack project.

Ken made a motion to have the line project from the plant to the tanks go out to bid. This would be labeled Phase I of the project. It was seconded by Ernie and the motion passed.

Meeting adjourned at 7:15pm.



Lee Burnett
President

ODEN WATER ASSOCIATION, INC. COMPREHENSIVE WATER SYSTEM IMPROVEMENT PROJECT FILTRATION AND INTAKE SYSTEM IMPROVEMENTS

JULY 1998
BONNER COUNTY, IDAHO

PROJECT ENGINEERS
James A. Sewell & Associates

DRAWING INDEX

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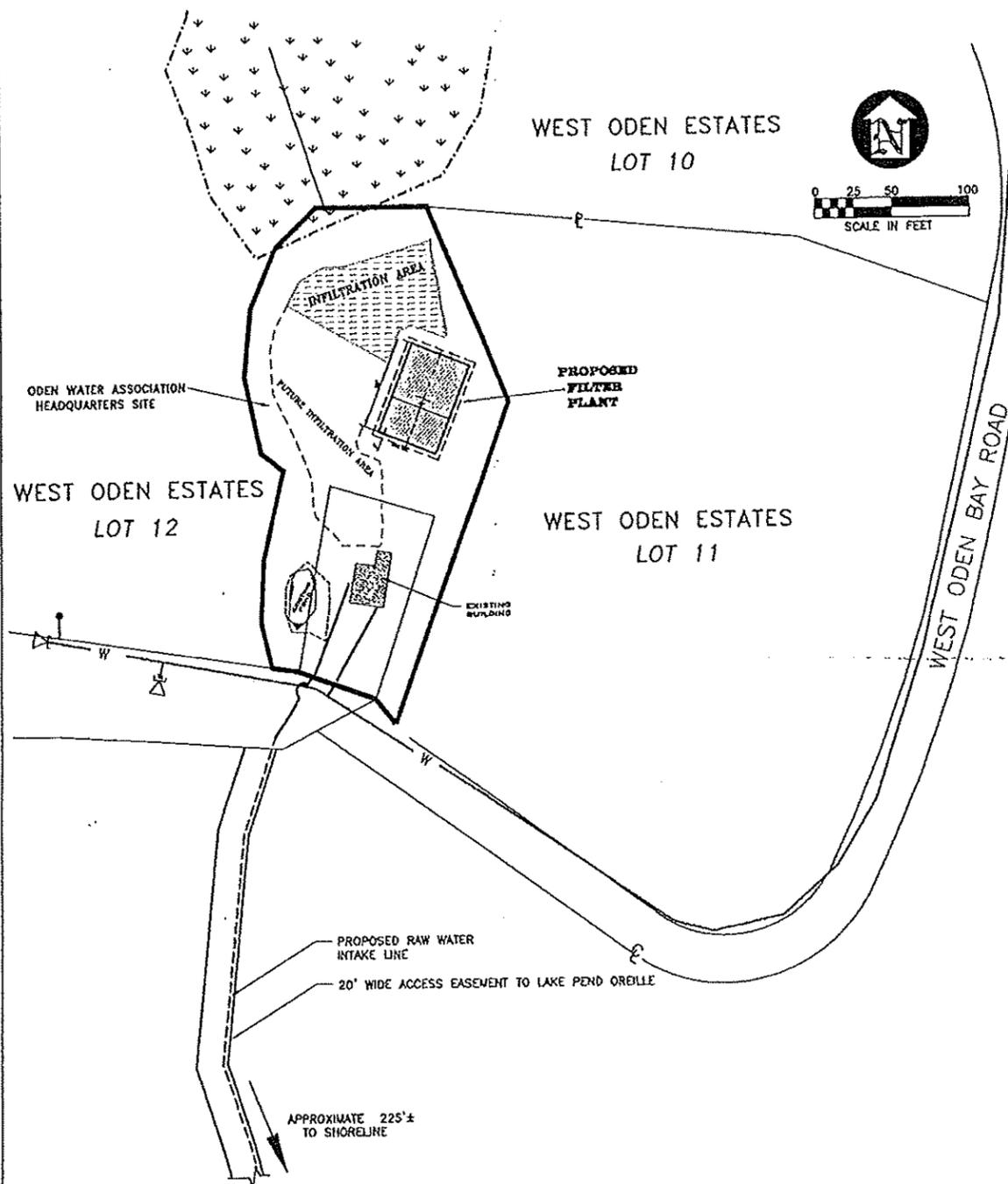
GENERAL DESIGN CRITERIA

FILTRATION/RAW WATER SUPPLY SYSTEMS
 FILTRATION PLANT TREATED WATER CAPACITY - 500 gpm WINTER, 600 gpm SUMMER
 FILTRATION PLANT MINIMUM TREATED WATER RECOVERY - 85%
 FILTRATION PLANT PARTICLE REMOVAL CAPABILITY - REMOVES PARTICLES DOWN TO 0.01 MICROMETERS
(CRYPTOSPORIDIUM OOCYSTS ARE 2 TO 5 MICROMETERS, GIARDIA IS 5-15 MICROMETERS)
 RAW WATER PUMP CAPACITY - 2 PUMPS @ 350 gpm PER PUMP
 TREATED WATER PUMP CAPACITY - 2 PUMPS @ 250 gpm PER PUMP
 LAKE INTAKE PIPES & SCREENS CAPACITY - 1200 gpm FOR LAKE ELEVATION OF 2052.5' (FOR BOTH PIPES COVERED)
 600 gpm FOR LAKE ELEVATION OF 2050' (FOR BOTH PIPES COVERED)

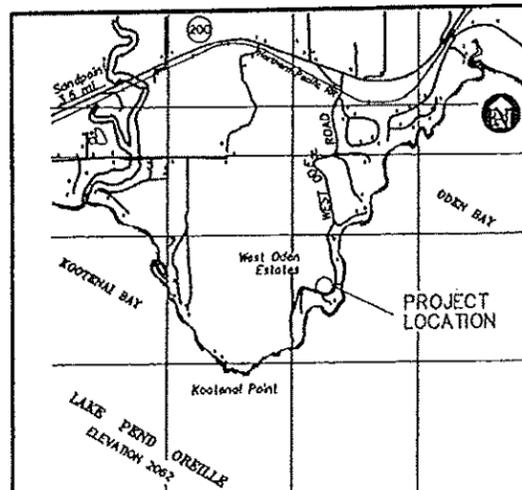
GIARDIA REMOVAL REQUIREMENT - 3 LOG
 VIRUS INACTIVATION REQUIREMENT - 4 LOG
 CT REQUIREMENT FOR 4-LOG VIRUS INACTIVATION - 12
 CHLORINE CONTACT TANK THEORETICAL CONTACT TIME - 60 MINUTES, 600 gpm, 6-1/2" DEPTH
 30 MINUTES, 1200 gpm, 6-1/2" DEPTH

THEORETICAL BACKWASH SOLIDS ACCUMULATION - 0.14 CF PER MILLION GAL TREATED WATER.
(ASSUMES 90% TREATED WATER RECOVERY,
 10 NTU AVERAGE BACKWASH STREAM TURBIDITY,
 90 PCF SATURATED SOLIDS DENSITY)
 SOLIDS TO BE REMOVED VIA PUMP TRUCK

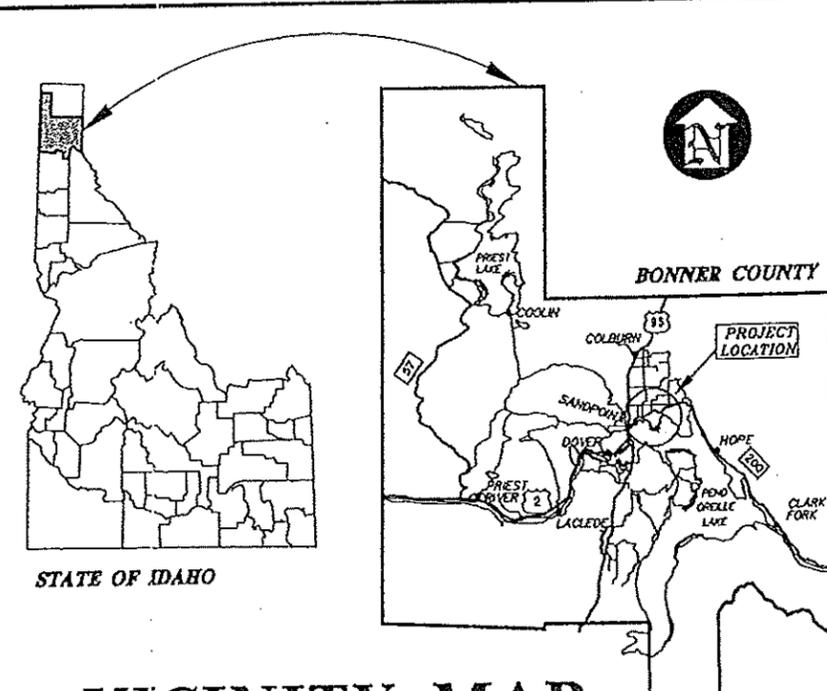
FILTER BUILDING
 ROOF SNOW LOAD - 55 PSF
 ROOF DEAD LOAD - 7 PSF
 CEILING DEAD LOAD - 8 PSF
 CEILING LIVE LOAD - TO BE DETERMINED BY PIPE SUPPORT SYSTEM
 FILTRATION ROOM FLOOR DEAD LOAD - 85 PSF
 FILTRATION ROOM FLOOR LIVE LOAD - 250 PSF OR 7000# CONCENTRATED
 OFFICE/CONFERENCE ROOM FLOOR DEAD LOAD - 85 PSF
 OFFICE/CONFERENCE ROOM FLOOR LIVE LOAD - 50 PSF OR 2000# CONCENTRATED
 WIND LOADING - 70 MPH, EXPOSURE B
 SEISMIC ZONE - 2B
 ALLOWABLE SOIL BEARING PRESSURE - 2000 PSF
(ALLOWABLE SOIL BEARING PRESSURE BASED ON
 SANDY GRAVEL SOIL. LESSER SOIL CONDITIONS WILL
 REQUIRE REVIEW & POSSIBLE FOOTING SIZE
 ADJUSTMENT BY THE ENGINEER.)



HEADQUARTERS SITE PLAN
ODENRW1.DWG

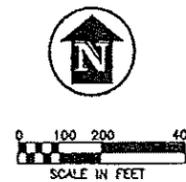
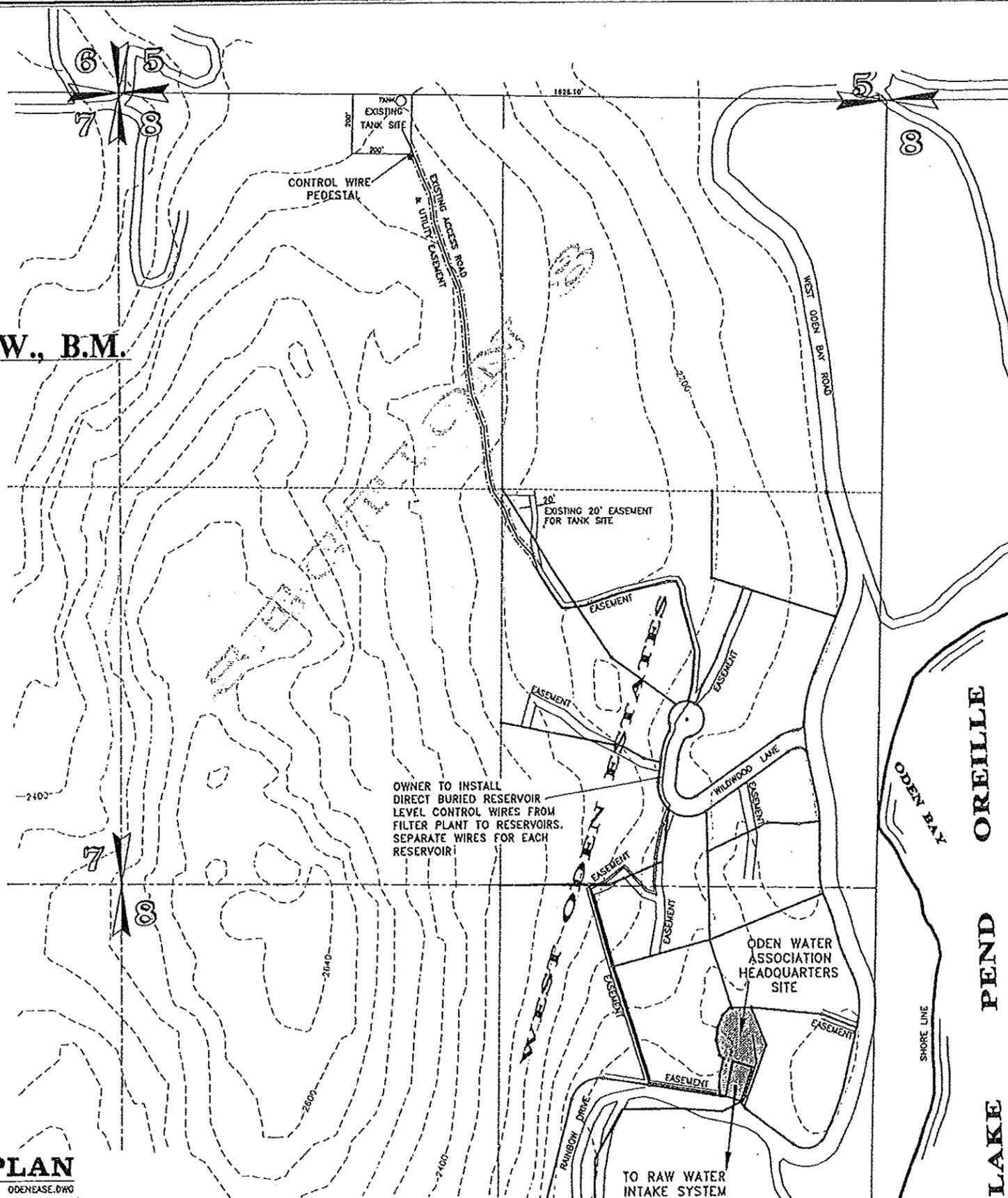


LOCATION MAP TWP 57N, R11W, 8M
N.T.S.



VICINITY MAP
N.T.S.

TWP. 57N., RNG. 1W., B.M.



4.1 **OVERALL SITE PLAN**
00ENEASE.DWG



ENGINEER'S STAMP

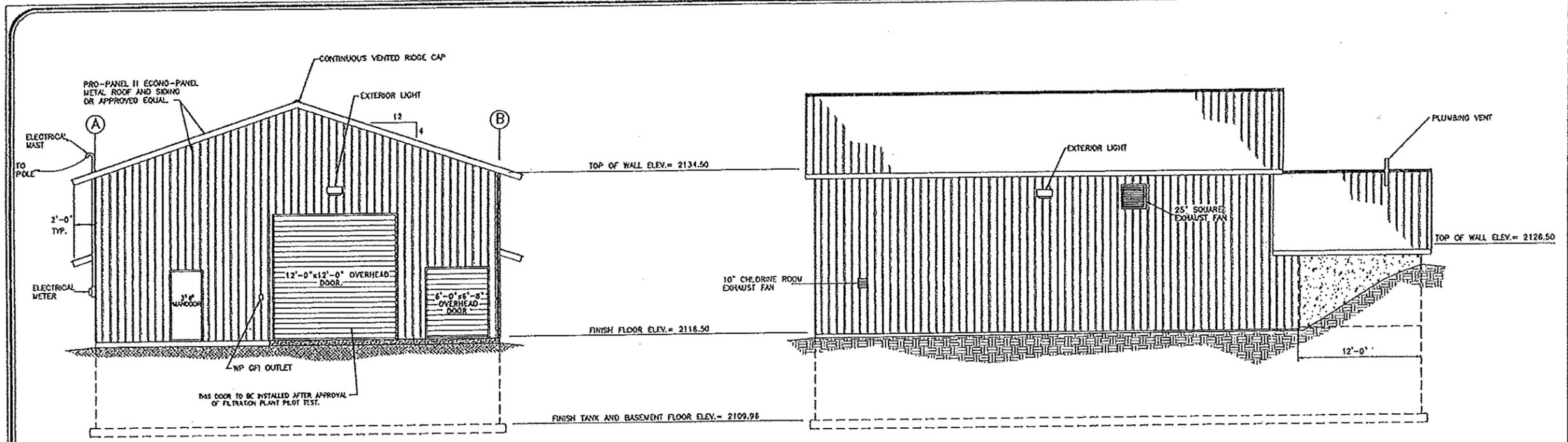
NO.	DATE	REVISIONS
1	8-10-98	DPH/EJA
2	8-18-98	DPH/KTA
3	9-29-98	DPH/KTA
4	3-11-00	AS BUILT

James A. Sewell and Associates
CONSULTING ENGINEERS
NEWPORT, WASHINGTON, 99156
(509) 447-3626



SHEET TITLE: **SCHEDULE 1**
FILTRATION SYSTEM IMPROVEMENTS
OVERALL SITE PLAN & CONTROL WIRE INSTALLATION ROUTE
PROJECT: ODEN WATER ASSOCIATION, INC.
COMPREHENSIVE WATER SYSTEM IMPROVEMENT PROJECT
SANDPOINT, IDAHO

DATE: 7-17-98
SCALE: AS SHOWN
DRAWN BY: DPH
DESIGNED BY: KTA
CHECKED BY: EJE/KTA
PROJECT: ODENEASE

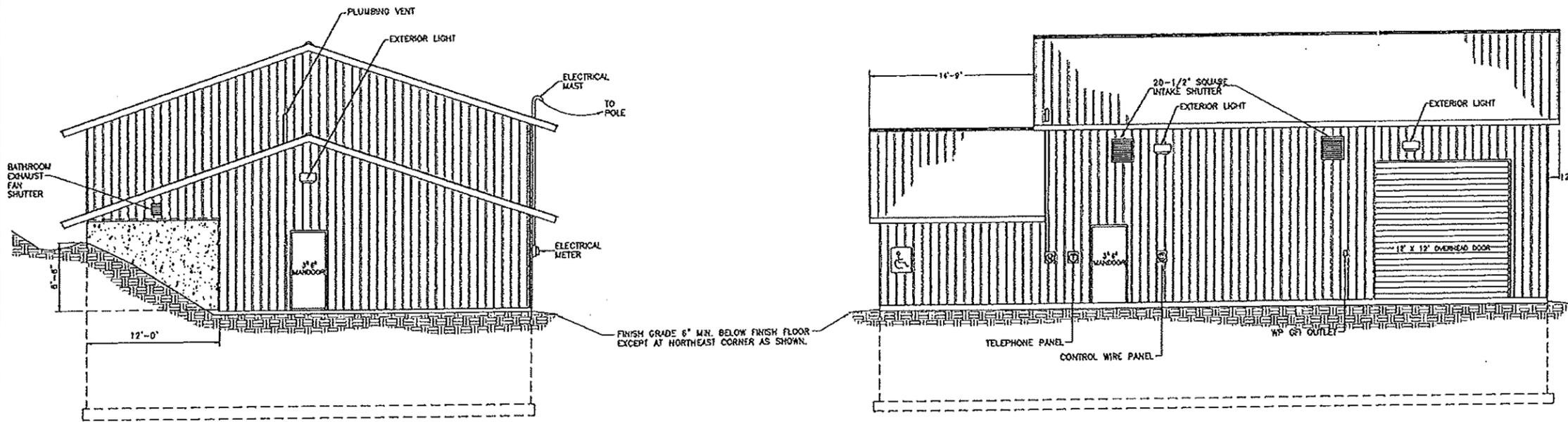


SOUTH ELEVATION

0 2.5 5 10'
SCALE IN FEET

0 2.5 5 10'
SCALE IN FEET

NOTE:
CONTRACTOR SHALL VERIFY THAT OVERHEAD DOORS ARE ADEQUATELY SIZED FOR INSTALLATION OF PROPOSED FILTRATION SYSTEM EQUIPMENT.



NORTH ELEVATION

0 2.5 5 10'
SCALE IN FEET

0 2.5 5 10'
SCALE IN FEET



ENGINEER'S STAMP

NO.	DATE	REVISION
1	8-10-88	ADDED CALLOUTS
2	8-11-88	ADDED MTS.
3	10-1-88	CHANGE ORDER #1, REVISED ELEVATIONS
4	10-28-88	REVISED ELEVATIONS
5	1-11-89	REVISED DOOR LOCATIONS
6	3-1-00	AS BUILT

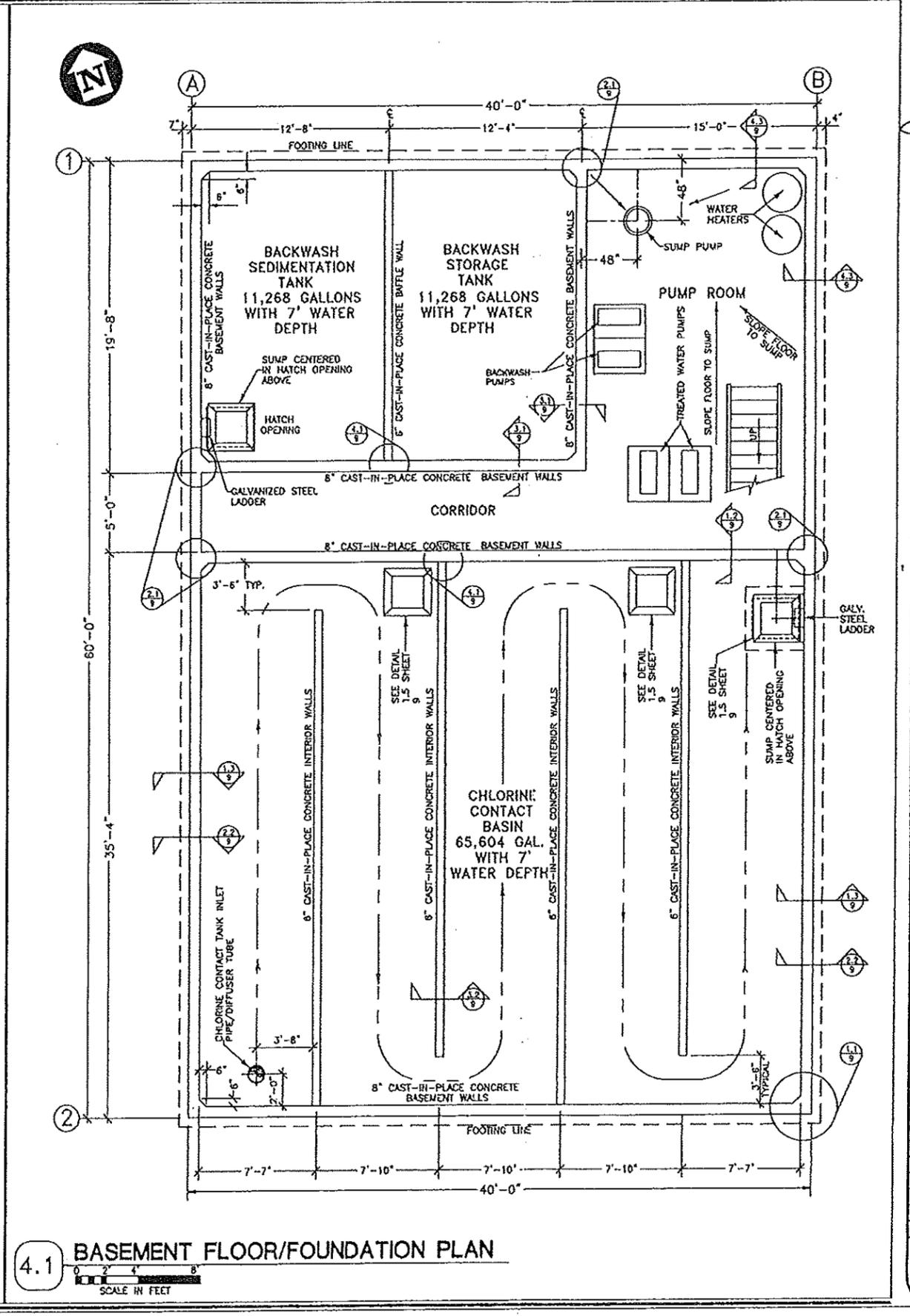
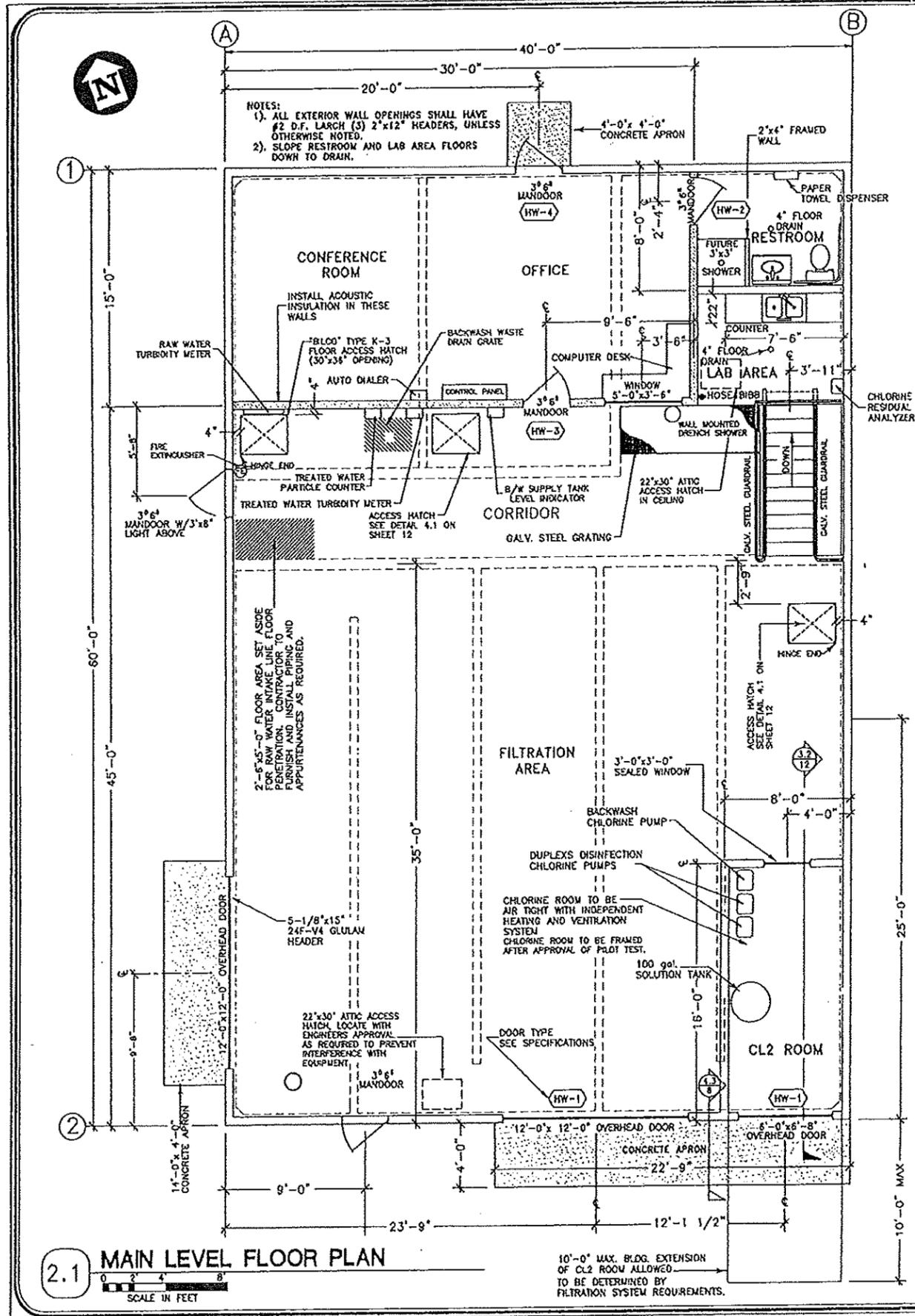
James A. Sewell and Associates
CONSULTING ENGINEERS
NEWPORT, WASHINGTON, 99156
(509) 447-3626

SCHEDULE I
FILTRATION SYSTEM IMPROVEMENTS
PROPOSED BUILDING ELEVATIONS

PROJECT:
ODEN WATER ASSOCIATION, INC.
COMPREHENSIVE WATER SYSTEM IMPROVEMENT PROJECT
SANDPOINT, IDAHO

DATE: 7-17-88
SCALE: AS SHOWN
DRAWN BY: BAD
DESIGNED BY: KTA
CHECKED BY:

FILE: ODNWELV01.dwg



ENGINEER'S STAMP

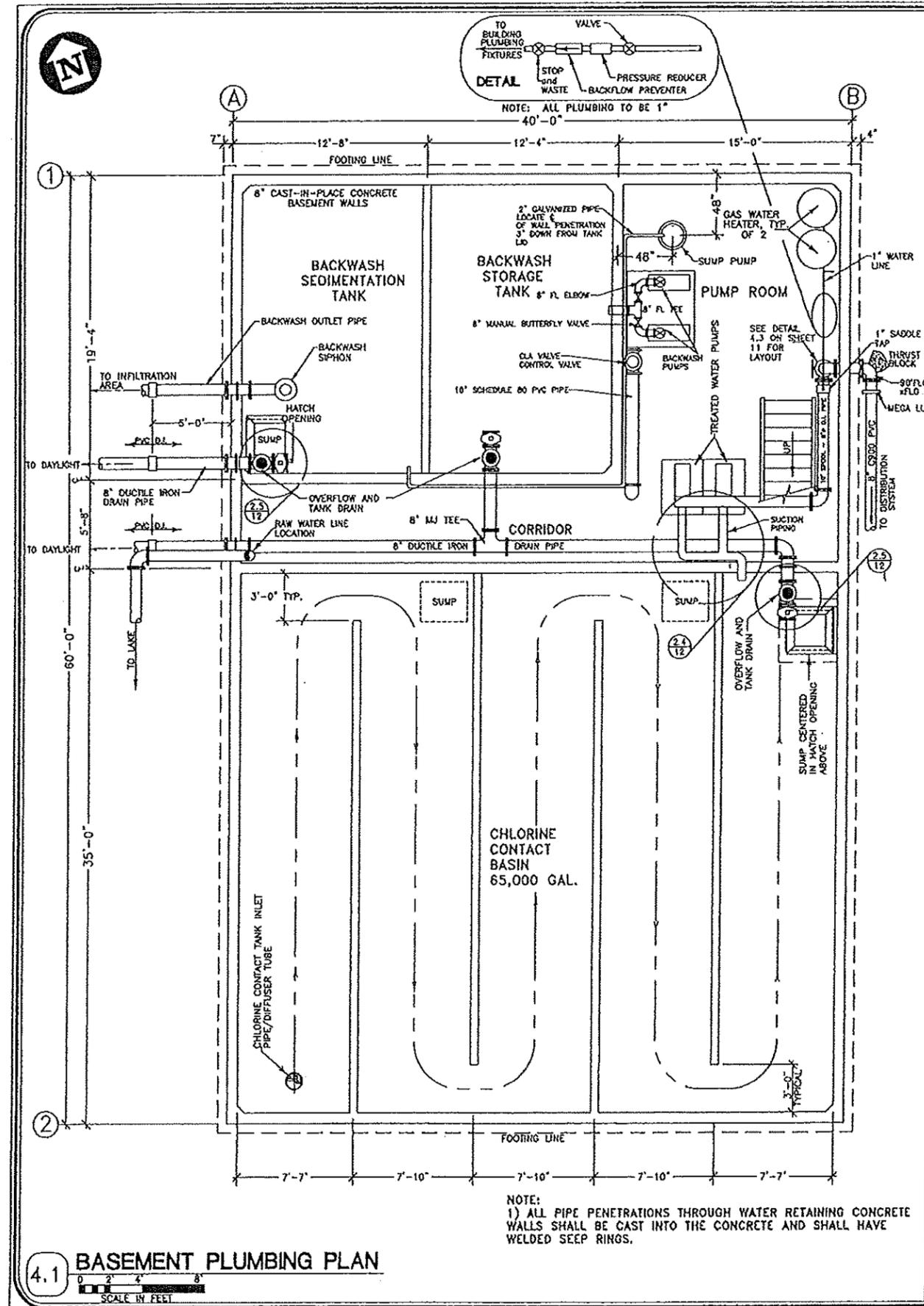
No.	DATE	REVISION
1	08/08/00	REVISED TO MEET O&E REQUIREMENTS
2	09-28-00	REVISED MATCH LOCATIONS, ADDITIONAL
3	1-12-01	REVISED DOOR LOCATIONS AND CL2 ROOM
4	3-1-00	AS BUILT

James A. Sewell and Associates
 CONSULTING ENGINEERS
 NEWPORT, WASHINGTON, 99156
 (509) 447-3626

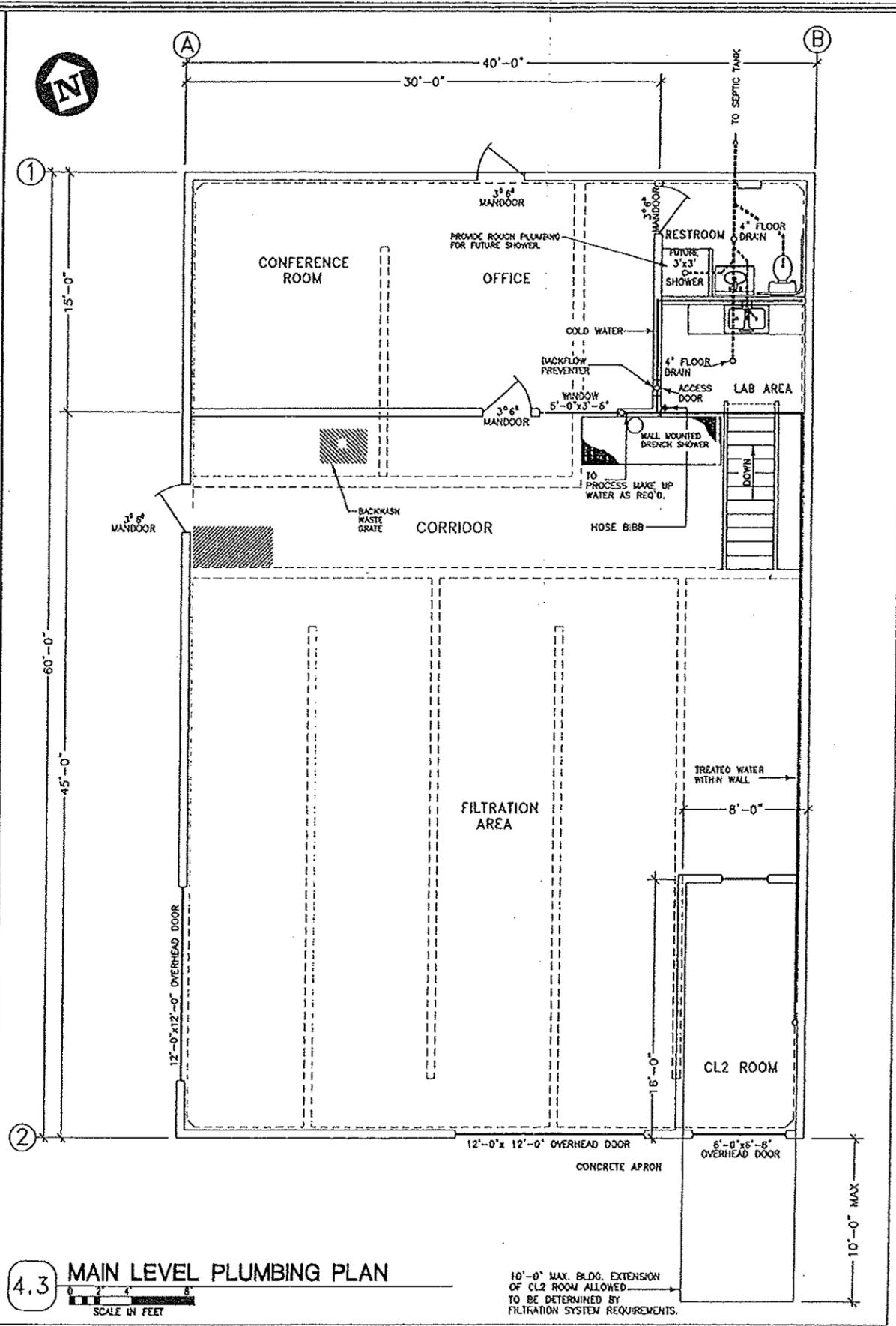
SHEET TITLE: SCHEDULE 1
 FILTRATION SYSTEM IMPROVEMENTS
 FILTER BUILDING FLOOR PLAN

PROJECT:
 ODE WATER ASSOCIATION, INC.
 COMPREHENSIVE WATER SYSTEM IMPROVEMENT PROJECT
 SANDPOINT, IDAHO

DATE: 7-17-98
 SCALE: AS SHOWN
 DRAWN BY: GNC
 DESIGNED BY: KTA
 CHECKED BY: EJE
 FILE: ODEFLOR.dwg



4.1 BASEMENT PLUMBING PLAN
SCALE IN FEET



4.3 MAIN LEVEL PLUMBING PLAN
SCALE IN FEET

REGISTERED PROFESSIONAL ENGINEER
JAMES A. SEWELL
PLUMBING & ELECTRIC

ENGINEER'S STAMP

NO.	DATE	REVISION
1	7-23-98	AS SHOWN
2	7-23-98	AS SHOWN
3	7-23-98	AS SHOWN
4	7-23-98	AS SHOWN
5	7-23-98	AS SHOWN
6	7-23-98	AS SHOWN

James A. Sewell and Associates
CONSULTING ENGINEERS
NEWPORT, WASHINGTON, 99156
(509) 447-3626

JAS
SEWELL
SEWELL
SEWELL

SHEET TITLE: SCHEDULE I FILTRATION SYSTEM IMPROVEMENTS PLUMBING PLAN and DETAILS
PROJECT: ODEEN WATER ASSOCIATION, INC. COMPREHENSIVE WATER SYSTEM IMPROVEMENT PROJECT
DATE: 7-23-98
SCALE: AS SHOWN
DRAWN BY: BAD
DESIGNED BY: KTA
CHECKED BY: EJE
PROJECT: ODEENPLUM.dwg

SHEET 10 of 27