



Design Review Committee Briefing #21

Subject: Administration and Laboratory Building Update

Date: April 12, 2019

The Issue

The intent of this Design Review Committee (DRC) briefing is to provide updates on the Administration and Laboratory Building preliminary design effort. The Technical Team has reviewed the potential alternatives for this facility and is providing a summary of the activities and status to date. The Technical Team will provide future updates related to this facility to the DRC as they become available.

Background and Analysis

The City of Nampa (City) Wastewater Treatment Plant (WWTP) had identified the existing Administration and Laboratory Building as a repair and replacement item in the Capital Improvements Plan for Phase II Upgrades. This facility is located near the existing Headworks Facility, was originally constructed in 1980, and later expanded to include 600 square feet (sf) of additional office space in 1999 and 1,000 sf of administration space in 2001. The original structure has not been upgraded structurally or architecturally. The laboratory plays a vital part in monitoring process performance, process control and permit compliance, as well as providing a safe, healthy environment for employees. The administration portion of the facility is the central hub to wastewater and stormwater collection divisions for the City. This facility houses key public works division leads and support staff, provides space for mechanical and maintenance work, locker rooms and conference rooms for wastewater and collections staff, and provides space for WWTP operations control.

Existing Administration and Laboratory Building

The Nampa WWTP laboratory performs the following functions: analytical testing to monitor WWTP performance and inform process control activities, provides timely, high-quality testing to satisfy Environmental Protection Agency (EPA) and Idaho Department of Environmental Quality (IDEQ) regulations, including the Clean Water Act, National Pollutant Discharge Elimination System (NPDES) permit, industrial pretreatment, and land application standards. As the Nampa WWTP expands so does the scope of laboratory work and administration activities. Based on the Facility Plan, the administration and laboratory facilities will need to support 7 to 9 additional staff and more sensitive and challenging laboratory analysis following the planned Nampa WWTP upgrades.

The existing laboratory facility, located within the existing Administration Building, is 850 sf and serves four employees and one operator (170 sf per employee). At any time, there can be 2 – 4 laboratory personnel, two pretreatment technicians, and members of WW operations staff occupying the space. Design rule-of-thumb suggests 200 – 400 sf of analytical space per lab analyst. The existing laboratory is undersized based on this design approach. Congestion in the laboratory space caused by narrow aisle widths and high occupant traffic can result in safety incidents, chemical spills, and errors in laboratory analysis. The existing laboratory also provides workstations for technicians to use computers, develop written procedures, document sample receiving and chain-of-custody, perform QA/QC, laboratory safety and waste management, general office correspondence, and handle phone calls.

The existing administration area (located adjacent to the laboratory within the same building) includes 830 sf of office space for department superintendents (IT, Environmental Compliance [ECD], Wastewater), administration support staff, conference rooms, records storage, and SCADA support systems. The overall existing facility, including the laboratory and administration areas, is about 11,000 sf.

Analysis

The Technical Team has used a series of programming meetings to establish the future laboratory and administrative space requirements. The programmed administrative and laboratory space accounts for existing and future organizational staff for Phase II Upgrades; it includes laboratory area (7 occupants at 300 sf each), spaces for ECD, IT, administrative support staff, IT, Pretreatment, Operations, Collections, and multi-use space/common areas. The space requirements for these departments and functions equal 8,000 sf. About 3,000 sf of space, currently used as a garage and for recordkeeping, will not be renovated. The total gross building area for the renovated facility is 11,000 sf, which equals the existing building footprint.

Next, the Technical Team reviewed three alternatives for the overall facility:

- **Alternative 1:** New Administration and Laboratory Building. This new building would be relocated out to the front end of the Nampa WWTP entry gate and the existing facility would be demolished. The programmatic cost estimate (i.e. including markups and soft costs) for this alternative is \$3.4M (range of \$2.4M to \$5.0M at the -30% and +50% ends of cost estimate).
- **Alternative 2:** Renovate Existing - Buildout of Administration Side. The existing administrative space would be repurposed under this alternative. The programmatic cost estimate (i.e. including markups and soft costs) for this alternative is \$2.0M (range of \$1.4M to \$3.0M at the -30% and +50% ends of cost estimate).
- **Alternative 3:** Renovate Existing - Buildout of Maintenance Side. The existing maintenance shop would be repurposed under this alternative. The programmatic cost estimate (i.e. including markups and soft costs) for this alternative is \$1.9M (range of \$1.4M to \$2.9M at the -30% and +50% ends of cost estimate).

The Technical Team selected Alternative 2: Renovate Existing – Buildout of Administration Side because it fits the Capital Improvements Plan budget and best utilizes the existing structure. Alternative 1: New Administration and Laboratory Building exceeds the Capital Improvements Plan budget. Additionally, WWTP operations staff indicated preference for a centrally-located facility to provide efficient employees access to the treatment facilities.

With the decision to renovate the existing facility, the Technical Team is working through layout schematics to define the administration and laboratory space adjacencies, workflow relationships, and other factors. The Technical Team will present the final Administration and Laboratory Building layout schematic to the DRC during a future meeting.

Potential Consequences

The Technical Team is providing the following information related to the Administration and Laboratory Building for the DRC's reference.

- The existing Administration and Laboratory Building includes a maintenance shop that provides space for regular maintenance of WWTP equipment, tool storage, and truck bays for vehicles. This maintenance space will be relocated to the east-side of the Nampa WWTP site in an existing garage-style building. The new location will have room for an office and two workstations for mechanics. This shop relocation benefits maintenance staff by limiting external foot traffic through the maintenance area, which presents a safety hazard. Moving the maintenance shop also allows the laboratory to be renovated in-place.
- The facility must be renovated without losing any administrative or analytical laboratory functions. Alternative 2 provides the best sequence of renovation activities by allowing each area or facility to be temporarily relocated while the area is being renovated. This limits the disruption to the employees' work and allows vital facility functions, such as laboratory and SCADA server rooms, to continue without interruption. The efficiency of the phased renovation also reduces time and cost of the project.

- The facility renovation will co-locate the wastewater and stormwater collections divisions within the same building. In the previous building configuration, these groups were not within the same building. Co-locating these groups promotes efficient workflow and improves overall organizational health.

Recommendation

The Technical Team recommends the selection of Alternative 2: Renovate Existing Administration and Laboratory Building. This alternative is within the Capital Improvements Plan budget. The intent of this briefing is to be informational to the DRC as the preliminary design process advances.