

Planning Commission's Summary Report

Date: November 12, 2024
To: Arapahoe County Planning Commission
Through: Molly Orkild-Larson, Planning Division
From: Sue Liu, PE., Engineering Services Division
Case name: UASI23-001 Front Range Energy Storage Facility USR1041



Purpose and Recommendation

The purpose of this report is to communicate the Engineering Services Staff findings, comments, and recommendations regarding the land use application(s) identified above.

Scope/Location:

Atwell, LLC on behalf of the property owner, Lowry Environmental Protection Cleanup Trust Fund, and applicant, Front Range Energy Storage, LLC, is proposing a project within unincorporated Arapahoe County. The subject property is a 19.10-acre (832,202 sf.) lot to be created by minor subdivision, within the A-1 Agricultural zoning district, generally located at the SW corner of S. Harvest Road and Quincy Avenue (a portion of PPI 2071-07-1-00-003). The proposed project is a battery energy storage system (“BESS”) that will enhance the reliability of the electrical grid and add value to the “Green Power Pathway” that has been approved by the Public Utilities Commission. The development application includes a minor subdivision and Use by Special Review with 1041 (“USR with 1041”). The minor subdivision includes one lot and one tract. The lot is 19.10 acres (the location of the proposed battery energy storage facility), and the tract is 83.67 acres (the remainder of the land owned by the Lowry Environmental Protection Cleanup Trust Fund).

Operationally, the proposed BESS will be interconnected to Xcel Energy’s Harvest Mile substation located directly south of the subject property. The BESS will provide Xcel Energy the ability to balance electric grid services by providing energy reserves, frequency regulation, and renewable energy balancing. The battery system will charge directly from the existing electrical grid (via the electricity provided by an interconnection to the substation during periods when demand for energy is low) and discharge electricity through the same path (through the substation and into the grid) when demand for energy is high. This is a very important project for the region and for the State of Colorado, as it will enhance the reliability of the electrical grid, improve the state’s ability to continue to diversify its energy mix, and help the state meet its objectives for electrical infrastructure modernization.

The BESS's batteries are contained within purpose-built enclosures that include bidirectional inverters (converting AC power from power lines to DC power for batteries, and vice versa). These containers are laid out in individual rows with electrical transformers. In addition to the battery containers, other accessory equipment is proposed, including a small, project specific electrical substation. The battery containers will be supported on concrete pad foundations. An electrical transmission line would also be installed to provide a connection to the Harvest Mile substation that is directly south of the site.

The estimated life span of the project is 20 – 30 years, within which time the facility would be re-powered with new equipment to continue operations, and batteries that have reached the end of their useful lives will be recycled, as practicable.

A minor subdivision plat (PM23-001) and development agreement (DA24-003) are running concurrently with this application.

Engineering Services Staff has reviewed the land use application(s) and has the following findings and comments:

1. This development lies within the boundaries of the following jurisdiction:
 - Southeast Metro Stormwater Authority (SEMSWA)
 - Mile High Flood District (MHFD)
 - Sable-Altura Fire District
2. This parcel is in the Murphy Creek drainage basin.
3. This development will require a Subdivision Improvement Agreement (SIA) to guarantee on-site and off-site public improvements.
4. SEMSWA, through a Memorandum of Understanding and associated Standard Operating Procedures administers the GESC Program on behalf of the County. SEMSWA, with concurrence from the County, will approve the GESC plans, issue the GESC permit.
5. SEMSWA jointly reviews and recommends approval of the Drainage Study, Operation & Maintenance Site Plan, and Civil Construction Plans for all stormwater facilities. SEMSWA's recommendation for approval must be obtained prior to final County approvals.
6. This development is subject to the Rural Transportation Impact Fee (RuTIF). The fee is a one-time payment on new development only to help offset the impacts on roadway infrastructure that occur with development. The fee is for new development in unincorporated Arapahoe County, east of Gun Club Road. It will be collected at time of building permit issuance of residential, commercial, industrial and office buildings.
7. The Right-of-Way (S. Harvest Rd) adjacent to this development are within the City of Aurora jurisdiction. Improvements within this ROW will need to be approved by the City of Aurora.

8. Drainage easements are required for the proposed detention and water quality pond, and the drainage convenience system. The easements are dedicated by the minor subdivision.
9. Access easement is required for the proposed access roadway crossing the lot & Tract A and be dedicated by the minor subdivision.
10. The following waiver/variances have been requested:
 - The applicant is requesting the variance to the County's Stormwater Management Manual, Section 9.7.5 – The drop within a manhole from the upstream to downstream pipe invert should normally not exceed 1-foot. Approximately 4.2' drop is proposed at 5' MH due to the proposed site grade.
 - TRC supports the variance request with the condition of demonstrating that the velocity for the entire pipe system will not exceed the maximum allowable velocity of 18-fps. An additional MH will be required if the velocity requirement cannot be met. The late submittal shows that the velocity for the pipe system does not exceed the allowable velocity of 18-fps.
 - The waiver request to the Traffic Impact Study (TIS) was granted by the review engineer. The request meets the County TIS waiver conditions listed below:
 - The average trip generation of the proposed project is less than 250 trips per day and 25 trips in the peak hour
 - The combination of the proposed development traffic plus existing traffic does not exceed an average of 150 vehicles per day on any unpaved road
 - Access is not being requested to either a State Highway or County arterial roadway No current traffic problems or local area concerns, such as an offset intersection or a high accident data.

Engineering Services Staff is recommending the land use application(s) favorably subject to the following conditions:

1. The applicant agrees to address the Division of Engineering Services' comments and concerns as identified within this report.
2. The applicant agrees to address comments issued by the Southeast Metro Stormwater Authority (SEMSWA).
3. The applicant executes a Subdivision Improvement Agreement.
4. The improvements within the City of Aurora's ROW must be approved by the City prior to County's final approval for the engineering documents.
5. The Minor Subdivision Plat shall be approved and recorded before the signing of the final copy of the Use by Special Review plan set.