



PLANNING COMMISSION STAFF REPORT

DATE OF MEETING: February 27, 2017 **Item No. 4-A**

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PROJECT NUMBER: SD13-0010, SD13-0011, UP13-0002 and UP13-0010

PROJECT LOCATION: 790 and 800 Derr Street; Assessor Parcel Numbers: 0061-160-220 and -230; 0061-111-030; 0061-010- 013 -110 and 180; 0062-020-101, -030, -040

PROJECT DESCRIPTION: Proposal to Develop a Marine Terminal and a Cement Processing Facility

PROPOSED ENVIRONMENTAL DETERMINATION: Statutory Exemption, pursuant to California Environmental Quality Act (CEQA) State Guidelines Section 15270 and Title 14 of the California Code of Regulations -- projects rejected by a public agency.

RECOMMENDATION: Adopt the Resolution (PC- 17-03) to Deny Major Use Permits UP13-0002 and UP13-0010 and Site Development Permits SD13-0010 and SD13-0011

PROJECT DATA SUMMARY:

Name of Applicant: Vallejo Marine Terminal LLC (SD13-0010, UP13-0002)
Orcem California Inc. (SD13-0011, UP13-0010)

Current General Plan Designation: Employment

Zoning Designation: Intensive Use (IU)

Existing Land Use: Unoccupied Grain Processing and Distribution Facility

Surrounding Land Uses North: Industrial
South: Open Space and Residential Uses
East: Residential
West: Mare Island Strait

Total Project Area: 32.55 Acres

BACKGROUND SUMMARY

In April and September of 2013, the applicants, Vallejo Marine Terminal (“VMT”) and Orcem California (“Orcem”), submitted separate applications for a major use permit and site development permit to repurpose the existing General Mills Flour site that has been vacant since 2004. VMT is proposing to develop a new marine terminal where bulk and break bulk materials would be shipped in, processed, and sent out by barge, rail, or truck. Orcem, a tenant of VMT, is proposing a cement processing facility where a variety of cement products would be produced. Orcem’s proposed primary product is an alternative to portland cement called ground granulated blast furnace slag (“GGBFS”). GGBFS is manufactured using a by-product of the steel-making process, granulated blast furnace slag (GBFS). According to Orcem, the raw materials are proposed to be imported via ship and milled and processed on site, then distributed to various markets throughout the Northern California region via rail or truck. However, because of the unknown market demand for the GGBFS, Orcem is also requesting approval to process portland cement. The VMT and Orcem projects would operate 24-hours per day.

Section 16.34.040 of the Vallejo Municipal Code (VMC) requires a major use permit to allow heavy industrial uses of this nature on the project site. Section 16.57.030 (A)(1) of the VMC also requires a use permit for 24-hour operations that are within 300 feet of residential uses or a residential zone district. In addition, because the project involves construction of new structures on the site, a Site Development Permit is required pursuant to Section 16.90.020 of the VMC.

Due to the scale and nature of the project it was determined that an environmental impact report (EIR) would be required to assess potential environmental impacts generated by the project. The Draft EIR was prepared in 2014-15 and was released for public review in September 2015. Two public hearings were held to accept comments on the adequacy of the document. There were numerous speakers at each hearing. While there were some attendees that supported the project, the majority of them expressed concerns about how this project would impact the quality of life in Vallejo and South Vallejo, in particular.

There were also a substantial number of comments on the Draft EIR and the project submitted to the City via email, US mail, and comments on Open City Hall (a web based platform). The

majority of the comments expressed concern about air quality, biological, health, noise, and traffic impacts generated by the project. Many of the comments requested that the City reject the proposed project. The comments and a response to the comments are provided as an attachment to the Draft Final EIR.

Project Description Revisions and the Revised Operations Alternative

After the public review period closed on the Draft EIR, the applicants began to consider changes to the initial project description that would reduce the impacts generated by the project. They ultimately decided to change the project. The proposed changes include: the elimination of the 5.25 acres of County unincorporated land on the northern portion of the site that were to be annexed into the City of Vallejo and relocation of the storage shed that was proposed on that site; limitation of the hours of loading and unloading of rails cars to 7 a.m. to 10 p.m.; and elimination of the proposed dike and the proposal to fill an area of the strait north of the deep-water berth (VMT's Phase 2). These changes helped to reduce air quality impacts, noise impacts, and biological impacts, respectively. In addition, the applicants requested that the environmentally superior project alternative presented in the Draft EIR, the Revised Operations Alternative (ROA) be presented to the Planning Commission for consideration. The ROA slightly reduces truck trips, reduces air quality impacts through improved fleet management, and reduces delays at railroad crossings during train movements. A more thorough discussion of these project revisions is provided in the Environmental Review Section of this staff report.

While the proposed revisions to the Project and the applicants' proposal to develop the environmentally superior alternative help to reduce potential impacts generated by the Project, staff does not find that those reductions are sufficient to offset the significant impacts to the community (e.g., air emissions, traffic) and the neighborhood compatibility issues that remain. A detailed discussion of these impacts and compatibility issues are provided in the Staff Recommendation section below.

It is important to note that the Project presented and analyzed in this staff report and addressed in the resolution and in the findings, is the ROA, which reflects all of the revisions made to the Project by the applicants and includes the operational changes outlined in the ROA, in accordance with the applicant's request.

1.0 City Landmark Status

On October 6, 2015 members of the public, pursuant to Section 16.38 of the VMC, submitted an application to the Architectural Heritage and Landmarks Commission (AHLC) to designate seven structures on the property as City landmarks. On March 1, 2016, the AHLC voted to approve the request to designate six of the seven structures as City landmarks. The applicants filed a timely appeal of the AHLC decision to the City Council. The appeal will be considered by the City Council at a later date, and will be aligned with the City Council consideration of any appeal of the Planning Commission's decision.

STAFF RECOMMENDATION

The proposal to develop a marine terminal and cement processing plant on the project site which is zoned Intensive Use (Industrial) and was formerly occupied by the General Mills flour plant, requires the approval of a major use permit and a site development permit. While the proposed uses are consistent with the existing General Plan land use designation and zoning district, the Project would result in significant and unavoidable air quality, cultural resource, greenhouse gas, noise, and transportation and traffic impacts. As a result, the Project would not be compatible with the neighborhoods adjacent to the project site and along the roads that would be used for truck travel. More specifically, the Project would result in the following issues of concern.

- The Project would have a negative effect on the neighborhood character as it would direct up to 495 trucks per day through areas zoned for low density residential uses along Lemon Street and Sonoma Boulevard on a 24-hour basis. The average truck trips arriving and leaving the site would range from 12 to 32 per hour during daytime hours (7:00 a.m. – 10 p.m.) and from 20 to 44 per hour during the overnight hours (10 p.m. – 7:00 a.m.). The areas along Lemon Street and Sonoma Boulevard that will accommodate 95% of the truck traffic include low density single family residential neighborhoods with older one- and two-story homes with traditional front yards. Lemon Street, the main route for trucks headed to and from points east and north, is a locally-serving roadway with 11-foot travel lanes, 8-foot parking lanes, and 5-6 foot sidewalks providing access to homes and small businesses. Sonoma Boulevard is a State urban highway under Caltrans' jurisdiction and is designed to accommodate higher levels of traffic, but also includes single family residences and multi-family residences. The very high volume of trucks arriving to and departing from the project site on a 24-hour basis would substantially increase noise, traffic, and generate air emissions that would alter the character of the existing residential neighborhoods along Lemon Street and Sonoma Boulevard and would have a harmful effect on the desirability of the neighborhood and their character.

The IU-zoned areas in the project vicinity include a mix of residential and commercial uses. While the commercial/industrial businesses operating in the area generate some truck traffic, they generally do not operate on a 24-hour basis and the number of truck trips is substantially lower. As such, the intensity of the proposed industrial activity and associated heavy-truck traffic traveling along these corridors may be considered incompatible with the existing setting from a land use context, unless the long-term vision of the area is to transition to heavy industrial uses in the area. This is not likely given that the existing commercial/industrial properties along Lemon Street are relatively narrow and lack the appropriate access and depth to accommodate redevelopment to heavy industrial operations. Therefore, the truck traffic associated with the proposed Project would also result in a degradation of the existing commercial/industrial neighborhoods adjacent to the transportation corridors serving the Project.

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- The substantial daily truck trips generated by the Project would impact the local community's commuting to and from work and school. The technical studies analyzing the Project indicate that there will be use of rail, trucks, and ships to transport materials and commodities to and from the project site. The Project would increase the number of truck trips along city streets by an additional 516 truck trips per day. Up to 289 trucks would travel on Lemon Street and 202 trucks would travel south on Sonoma Boulevard. This increase in truck traffic would impact residents' daily commutes to and from work, and students' and families' daily travel to and from Grace Patterson Elementary School, which is located approximately 0.3 miles southeast of the Project site.
 - The new rail traffic associated with the Project would create significant delays at City intersections. The Project would generate an estimated 200 rail cars per week between the hours of 7 a.m. to 6 p.m. The use of the railroad to import or export materials will result in temporary closures at rail crossings which will affect downstream intersections in Vallejo and American Canyon. The "gate-down" time at the crossings is between 4.06 to 4.16 minutes which will result in substantial delays at 28 intersections within the City. Thus, the Project will detrimentally change the capacity of the streets to accommodate traffic during peak and non-peak hours.
 - The new rail traffic that is associated with the Project would cause emergency vehicle response time delays within the City. The 4.06 to 4.16-minute delay of the flow of traffic due to rail car passage and congestion at rail crossing would adversely impact the average response time for emergency vehicles responding to calls for emergency services during "gate-down" times.
 - The increase in truck trips associated with the Project will make it much more difficult and less comfortable to navigate both Lemon Street and Sonoma Boulevard on foot and on a bicycle. The current roadway configuration on Lemon Street includes on-street parking, one lane of traffic in each direction and no separate bike lane. Sonoma Boulevard, which has four lanes of traffic and on-street parking in some areas, has incomplete cycling and pedestrian facilities. There are 1,660 linear foot gaps in the Class II bicycle lanes. In addition, there are approximately 2,048 linear feet on the east side of the Highway and 1,724 linear feet on the west of the Highway that are without sidewalks. Lemon Street and Sonoma Boulevard provide bicycle and pedestrian access to commercial uses, services and schools in the area including Grace Patterson Elementary School. The lack of facilities impacts cyclist and pedestrian safety, and a significant increase in daily truck traffic along this corridor would further decrease the perception of safety. The City's existing and future General Plan include policies to promote bicycle use. Specifically, the existing General Plan states that "in order for the bicycle to be a viable transportation alternative, the opportunity to bicycle to virtually any destination should be provided." The draft General Plan 2040 includes a number of policies and actions that address increasing pedestrian safety through education and physical improvements. Without significant improvements to the bicycle and pedestrian transportation system, the considerable increase in heavy-truck traffic from this Project

in South Vallejo increases the possibility of pedestrian/vehicular and bicycle/vehicular conflicts.

- The increased truck traffic generated by the Project would have negative impacts to pedestrian access to educational and recreational facilities in the area. Lemon Street is used as a route to access the Grace Patterson Elementary school which is within 0.3 miles of the project site and Lake Dalwigk Park which is located on Lemon Street. The heavy truck traffic generated by the Project has the potential to change the physical character of the street and make it more difficult for pedestrians, including children, to cross Lemon Street and Sonoma Boulevard as they travel by foot to and from school and the park.
- The Project would impact the physical capacity and infrastructure of City streets. More specifically, Lemon Street, which is categorized as a minor arterial with one travel lane in each direction and on-street parking, was not designed to accommodate the approximately 290 project-related truck trips per day that would travel along Lemon Street. While the applicants would be required to pay mitigation fees to improve and strengthen the roads at the time of construction of the facility, long-term maintenance of the roadway network serving the site would likely be borne by the City's general fund. The heavy volume of truck trips day after day will result in damage to the roads at a rate that the City may not be able to keep pace with or fund over the long-term.
- The Project is inconsistent with the City's General Plan Waterfront Development Policy 1. This policy states "BCDC's Public Access Design Guidelines should be used in reviewing all development proposals. In areas hazardous to public safety or incompatible with public use, in-lieu access at another nearby location may be provided". Due to the nature of the planned operations on the site, no public access would be permitted on the Project site. Public access to Mare Island Strait would continue to be provided adjacent to the project site along Derr Street to the north and Sandy Beach Road to the south. VMT has proposed providing the installation of a new self-propelled personal watercraft launch within the City Marina in lieu of public access to the waterfront from the subject site. This proposal does not meet the intent of the policy and the BCDC Public Access Design Guidelines. Two key objectives of the Guidelines include: 1) design public access areas in a way that makes the shoreline enjoyable to the greatest number of people; and 2) design public access for a wide range of users. The proposed public access is located within the Marina and is designed to serve people using a watercraft (e.g., kayak, paddle board). The proposed location and type of public access does not serve a broad enough sector of the community to be consistent with the General Plan Waterfront Development policy and BCDC's Public Access Design Guidelines. Thus, the Project is not consistent with the applicable General Plan policy.
- The Project would result in the degradation of the visual appearance of the waterfront. The proposed development would replace the existing industrial structures with new buildings and structures. While the new development would be in the same general

location as the existing structures and would be of a similar color, material, size and scale, the proposal includes open stockpiles of raw materials which may include limestone, gypsum, pozzolan, and GBFS. In Mode 1 and Phase 2 (GGBFS production only – the Applicant’s preferred mode) there would be three stockpile areas on the Orcem site. The smallest stockpile would be located in the southern portion of the site and would be approximately 16 feet high. A second stockpile would be directly to the north of the smaller stockpile and would be approximately 26 feet high. The third and largest stockpile would be in the eastern portion of the site and would be approximately 49 feet high. The stockpiles would be visible from the Mare Island Strait, Mare Island, Sandy Beach, the existing residences located directly above the subject site, and areas in northwestern Crockett and Rodeo. The existing view shed from these areas would be detrimentally impacted by the presence of an intensification of open storage areas on the site. While the proposed development would be visually consistent with the predominantly industrial uses located along the Mare Island’s Central Waterfront, most of the land along Vallejo’s waterfront is not used for high-intensity industrial uses.

Staff recommends the adoption of Resolution 17-03 (Attachment A) denying the major use permit and the site development permit applications and making the above findings based on the substantial evidence in the record. The Draft Final EIR was provided to the public and the Planning Commission for information purposes, but staff is not recommending certification of the EIR by the City at this time.

PROPOSAL AND ANALYSIS

1. Project Location

The project site totals 32.55-acres in the southwestern portion of Vallejo, fronting the Mare Island Strait. The project site is regionally accessible to vehicular traffic from Interstate Highways 80 (I-80) and 780 (I-780) via State Highway 29 (SR-29 or Sonoma Boulevard), Curtola Parkway and Lemon Street, to Derr Street. The site is also accessible for rail transportation via the California Northern Railroad rail line network that extends from north to south from points north of American Canyon through Vallejo. Furthermore, the site is accessible for shipping transportation via the adjoining deep-water terminal that is proposed to be redeveloped as part of the VMT component of the Project.

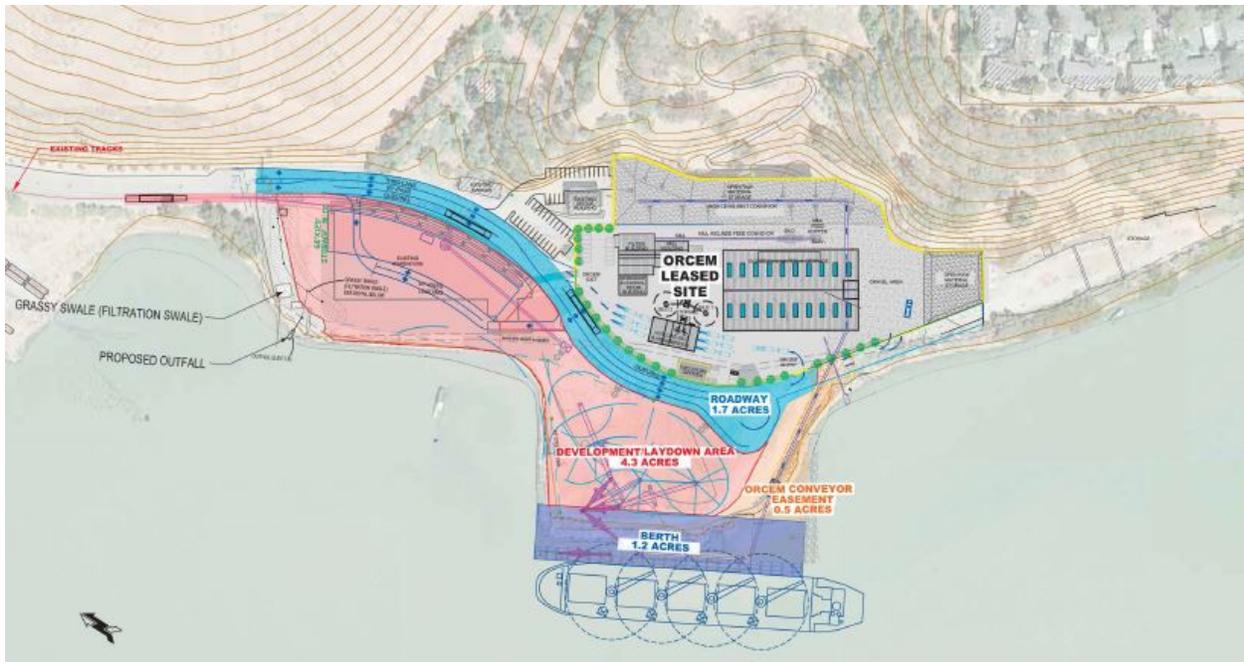


Project Site Map

As noted above and shown on the project site map, the site is bounded by the Mare Island Strait to the west, a steep hillside to the east, rail lines and existing industrial uses to the north, and undeveloped areas to the south that are owned by VMT, and located outside the City limits of Vallejo in unincorporated Solano County. Residential uses are located east and southeast from the site. The residential uses include the Bay Village Townhouses to the southeast, Harbor Park Apartments and single-family residences to the northeast, and single-family residences further to the south in unincorporated Solano County known as the “Sandy Beach” community located along the waterfront. The nearest school to the site is Grace Patterson Elementary, located approximately 0.3 mile southeast of the site.

2. Project Site

VMT owns a majority of the 32.55-acre project site and has a long-term lease on tidelands property which is owned by the City of Vallejo (City) as trustee of the State of California for the remainder of the site – 9.89 acres (APN 0061-160-230). Orcem would lease a 4.88-acre portion of the site from VMT for its proposed operations, while VMT would operate on the remaining 27.67 acres. The project site is currently secured by a fence which extends around nearly the entire land portion of the VMT Site.



VMT/Orcem Site Plan

As noted previously, the original Project included the additional 5.25 acres owned by VMT located along the waterfront between the project site and the Sandy Beach community to the south. These 5.25 acres, consisting of 2 lots, were initially proposed to include construction of a storage building to support the proposed activities of the marine terminal facility, and would have required an annexation, a General Plan Amendment, and pre-zoning as these lots are not currently located within the City limits. The applicants removed this component from the Project after filing their initial application.

The project site contains the former General Mills deep-water terminal and buildings associated with the former General Mills flour milling plant. The General Mills plant closed in 2004, and the project site has since remained vacant. Table 1 identifies the former General Mills buildings and equipment located on the project site, together with their approximate sizes and year of construction. The existing structures listed in Table 1 vary in height from one to eight stories, and in footprint size from approximately 300 to 42,500 square feet, comprising a total of approximately 211,460 square feet of floor area.

As proposed, the following structures would be demolished with implementation of the Project: (a) structures 1 through 7 (located on the Orcem Site) and (b) structures 11, 12, and 16 (on the VMT Site). Building 11 on the VMT Site would continue to be used for related warehouse and office purposes until it is demolished. Buildings 9, 10, and 13–15 would be used for office and administrative purposes as part of the VMT component of the Project. Structure 8 was removed from the project site in 2012.

**Table 1
Existing Structures Previously Used by General Mills**

Building Number	Structure	Type	Footprint (square feet)	Floor Area (square feet)	Year Built	Project Impact
1	Grain Silos and Elevator	Equipment	17,700	17,700	1917	Yes – Removed (Orcem)
2	Flour Mill	Building	35,000	134,000	1917	Yes – Removed (Orcem)
3	Old Bulkhouse	Building	1,200	1,200	1957	Yes – Removed (Orcem)
4	New Bulkhouse	Building	1,100	1,100	1985	Yes – Removed (Orcem)
5	Welding Shop	Building	400	400	1985	Yes – Removed (Orcem)
6	Pipe Storage	Building	600	600	1985	Yes – Removed (Orcem)
7	Forklift Repair	Building	300	300	1985	Yes - Removed (Orcem)
8	Mill Run Canopy (structure removed in 2012)	Building	0	0	1986	No
9	Administrative Building	Building	2,100	4,200	1917	No
10	Garage	Building	1,910	1,910	1918	No
11	Warehouse	Building	42,500	42,500	1947	Yes – Removed (VMT)
12	Bakery Bulkhouse	Building	4,700	4,700	1992	Yes – Removed (VMT)
13	Manager's House	Building	985	1,970	1901–1919	No
14	Manager's Garage	Building	380	380	1950's	No
15	Barn	Building	500	500	1901–1919	No
16	Dock (Wharf)	Structure	0	0	1901–1919	Yes – Reconstructed (VMT)
TOTALS			109,375	211,460		

3. Proposed Project

As previously noted, the following project description reflects the revisions made to the Project by the applicants and include the operational changes outlined in the ROA, in accordance with the applicant's request.

The operations of the VMT and Orcem Projects together are considered as the "Project" due to the shared site and the operating characteristics of the site. CEQA requires that when two projects that are interdependent with one another they should be evaluated in one environmental document in order to ensure that piecemealing of environmental review does not occur. The Orcem component of the Project would be sited on a portion of the VMT property, as well as a portion of the tidelands area owned by the City (please refer to the Tidelands Section of this staff report for more information) and leased to VMT. Orcem is highly dependent on the marine terminal and site improvements proposed by VMT for transporting raw materials to the site and the VMT component of the Project would be dependent on Orcem for a certain percentage of its business. However, because the proposed operations are different the two components of the Projects are described separately.

The VMT component of the Project would reestablish industrial uses on a portion of the 27.67 acres designated as the VMT Site (a portion of the combined 32.55-acre project site) located at 800 Derr Street. VMT would remove the deteriorated timber wharf used by General Mills and originally Sperry Mills since 1869 (expanded between 1917-1920), and construct a modern deep-water terminal, including wharf improvements, laydown area, and trucking and rail connections, primarily servicing the import and export of bulk and break-bulk commodities within approximately 8.05 acres referred to as the VMT Terminal Site. Construction of the terminal would require fill and dredging activities in Mare Island Strait. Some construction elements, such as demolition of the former General Mills Warehouse Building and connected Bakery Bulkhouse, and construction of rail improvements are tied to market demand and may therefore take place following completion of the initial VMT improvements. In addition to the construction and operation of this modern terminal, the VMT component would also reuse several of the existing buildings formerly occupied by General Mills. Buildings and structures to remain would be used by VMT for administrative office and commercial office uses consistent with the City's Intensive Use (IU) zoning district standards.

As an operational deep draft facility (allowing vessels with a vertical distance between the waterline and the bottom of the ship of up to approximately 38 feet), the VMT Terminal is anticipated to handle a wide range of commodities including the following:

- Feed grains
- Manufactured steel
- Timber/lumber
- Rock, aggregate, ores, and related materials (including granulated blast furnace slag (GBFS), portland cement clinker material (clinker), pozzolan, anhydrite/gypsum, limestone, and related materials used by Orcem)

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- Project-based break-bulk items (i.e., heavy lift transport, large construction assemblies)
 - Other bulk and break-bulk commodities
 - Marine construction materials
 - Portland cement (finished milled product)

Liquid bulk cargos or large-scale container operations would not be handled through the VMT Terminal. In addition, the VMT Terminal would not handle municipal waste, coal, petroleum coke or any other petroleum-based product such as gasoline or crude oil. It should be noted that, if the Project is approved, modifications to the list of commodities that could be handled through the VMT Terminal in the future would be subject to review by the City of Vallejo, and may require an amendment to the applicant's use permit, which would be subject to a discretionary process and subsequent environmental review under CEQA.

Remaining portions of the severely damaged and decayed wharf structure would be removed as part of the VMT component of the Project because, according to VMT, the structure is not physically suitable or economically feasible for reuse or repair. The remnants of the old wooden wharf which have undergone repair, replacement, and partial removal over the years have experienced substantial decay over the past century. The new deep-water terminal would be constructed at this location. The wharf is proposed to be constructed of a concrete pile-supported structural concrete deck, associated mooring and fender systems for docking vessels, and related improvements for deep-water marine transportation operations. The VMT component of the Project would operate with two 10-hour shifts, six days per week. While a ship is moored, and is being unloaded, operations would occur 24 hours per day, seven days per week. Please refer to Attachment B for the project plans for the VMT component.

The Orcem component of the Project would involve construction and operation of an industrial facility to produce an alternative for the traditional portland cement material used as one of the primary ingredients of concrete in most California construction Projects. The production of GGBFS is considered to be less polluting than the production of portland cement because it is produced using a by-product of steel manufacturing granulated blast furnace slag (GBFS). It should be noted that the proposed facility has been designed to also process portland cement in the event that there is little market demand for GGBFS. The portland cement and GGBFS would both be milled and processed in a similar manner and in the completely enclosed milling facility (closed circuit under negative pressure). The Orcem component proposes demolition of 155,300 square feet of existing buildings and structures and the construction of approximately 73,000 square feet of buildings, equipment, and enclosures, together with outdoor storage areas, on a 4.83-acre portion of the former General Mills plant site that would be leased from VMT. Eight of the buildings and equipment previously used by General Mills within the Orcem Site would be demolished and removed to accommodate construction and operation of the proposed GGBFS cement products production facility. The Orcem component would be constructed in phases to coincide with the growth in demand for Orcem's products. Orcem would import most of the raw materials used in the proposed plant via the proposed wharf on the adjoining VMT site. The proposed Orcem Plant adjoins residential land uses to the east and southeast. All equipment and operational areas on the Orcem Site would be located more than 300 feet from the nearest

residential zoning district boundary. The Orcem component of the Project is proposed to operate on a 24-hour basis, seven days per week. Please refer to Attachment C for the project plans for the Orcem component.

3.1 Construction

3.1.1 VMT Component

Originally, the Vallejo Marine Terminal (VMT) component was proposed to be constructed in two phases. The first phase, which is described below in depth, involves the construction of a modern wharf, placement of fill material to create a “lay down” area for the commodities arriving at the site, the demolition of two structures, rail improvements, and construction of a storage shed. As previously noted, Phase 2 of the VMT component has been removed from the Project. This phase would have involved the construction of a rock dike that would have been used for docking barges and would have required approximately 106,040 square feet of solid fill (approximately 15,800 cubic yards), additional grading fill of approximately 31,561 square feet (approximately 19,580 cubic yards) and dredging of approximately 46,500 cubic yards pursuant to the U.S. Army Corps of Engineers (USACE) permit.

Construction of the revised VMT component would begin with removing the remnants of the existing wharf and construction of a new wharf, including the installation of approximately eighty-one (81) 24-inch octagonal precast concrete piles and eight (8) 30-inch steel pipe piles which would be driven down to the underlying bedrock layer. The proposed design is a reinforced concrete wharf, comprised of structural concrete caps along pile rows, and a structural concrete deck extending 500 wall-feet along approximately the same line as the existing wharf, with an approximate width of 29 feet. The top elevation of the completed concrete deck would be approximately 11.5 feet above mean lower low water (MLLW) or the average height of the lowest tide recorded at a tide station each day during the recording period.

As noted above, the remaining elements of the existing timber structure would be removed to accommodate installation of the concrete piles and wharf improvements. Some riprap (rock slope protection) would be required along the land interface of the wharf as well as the slope beneath the wharf below the waterline. Additionally, riprap and engineered fill would be placed shoreward of the eastern edge of the wharf in order to “square out” the land-wharf interface. Construction of the VMT terminal would require approximately 50,453 square feet of solid fill (approximately 10,300 cubic yards), both engineered fill and riprap as slope protection, to the mean high water line. Additional grading fill, which occurs within the 100-foot Bay Conservation and Development Commission (BCDC) shoreline band, of approximately 100,452 square feet (approximately 10,900 cubic yards) would be needed to raise the proposed laydown area, which would be located directly east of the wharf, to a finished grade of 11.5 feet above MLLW. The laydown area would be used for temporarily storing materials on site. Most of the fill would be placed within the footprint of the existing wharf and shoreward above the mean high water line for site-grading purposes. It is anticipated that the engineered fill would partially consist of on-site recycled concrete made available through the proposed demolition of existing structures.

The eight-steel pipe mooring piles, 30 inches in diameter, are proposed to be driven within the footprint of the existing wharf and along the shoreline to establish mooring points for vessels. On the water side of the wharf, the channel which is currently between approximately 12 to 40 feet below the MLLW, would be dredged to a depth of 38.0 feet below MLLW (approximately 89,800 cubic yards, subject to a permit from the USACE) to accommodate deep draft vessels and barges typically engaged in carrying bulk and break-bulk cargoes. This depth would require ongoing maintenance dredging, to be regulated through the issuance of a USACE Section 10 Maintenance Permit. The applicants propose seeking beneficial reuse of dredge material through possible sale or disposal on site (provided the soils are clean) or deposit at the Carquinez disposal site, following the guidelines of the San Francisco Bay Long-Term Management Strategy for Dredging (LTMS). The LTMS is a cooperative effort of EPA, the USACE, the San Francisco Regional Water Quality Control Board (RWQCB) and the San Francisco Bay Conservation and Development Commission (BCDC), and implements the National Dredging Policy.

The need for, and frequency of, future maintenance dredging at the VMT terminal would vary depending on the level of naturally occurring scouring within the Mare Island Strait. Additionally, movements of vessels into and out of the terminal would also naturally displace or prevent some sediment build-up. Excluding any emergency dredging needs, which would be allowed under an emergency permit, VMT assumes that maintenance dredging would occur on average for a 5-day period every 4 years. Construction on the site would also include internal roadway improvements, rail improvements, and utility improvements.

The existing 42,500 square foot Warehouse Building and 4,700 square foot Bakery Bulkhouse is proposed to be demolished in order to accommodate rail access and an area for transferring (transloading) goods and materials to or from rail cars, and to establish efficient terminal logistics. Prior to its proposed demolition, the existing Warehouse Building would be utilized to accommodate equipment storage and maintenance, as well as other related operations. Following demolition of the existing Warehouse and Bakery Bulkhouse, a new, 7,200 square foot steel storage building (approximately 60 feet wide by 120 feet long), would be constructed in the location of the old Warehouse to accommodate VMT equipment maintenance and storage functions.

The on-site construction duration of the VMT component would take approximately 4–6 months. Rail improvements are driven by market demand, and would occur within one year following completion of initial construction and the initiation of operations.

There would be approximately 20 persons working on the site and onboard various construction barges and tugs during construction of the proposed demolition and development of the wharf and site improvements. Materials would be delivered to and shipped from the site by various means including barges, ships, trucks, and rail cars.

3.1.2 Orcem Component

The proposed Orcem component of the Project would consist of the following primary construction components: (1) site preparation, including demolition of seven remaining

structures formerly utilized by General Mills situated within the Orcem Site (to be performed by VMT); (2) development of the enclosed milling plant, including major buildings, storage facilities, conveyance systems and processing equipment; (3) construction of ancillary buildings; and (4) improvement of site infrastructure and supporting facilities, including fire hydrants, stormwater management improvements, and equipment for loading and unloading of rail cars. This work would be commenced concurrently with VMT construction. Construction would take an estimated 15 months.

Demolition of the existing buildings and equipment on the Orcem Site is scheduled to take place as part of the construction phase. The proposed Orcem component involves demolition of the seven- remaining former General Mills structures. The Flour Mill and silo/elevator buildings were designed and built in 1917 by the Sperry Flour Company to accommodate processing and storage of grain products. The structures are of advanced age, have physical deterioration, and are not designed to accommodate the large and heavy equipment and materials used in the milling of Orcem products. The remaining five smaller structures on the Orcem Site were more recently constructed to serve specific support functions for the General Mills plant. According to Orcem, reuse of these buildings would be infeasible and cost prohibitive.

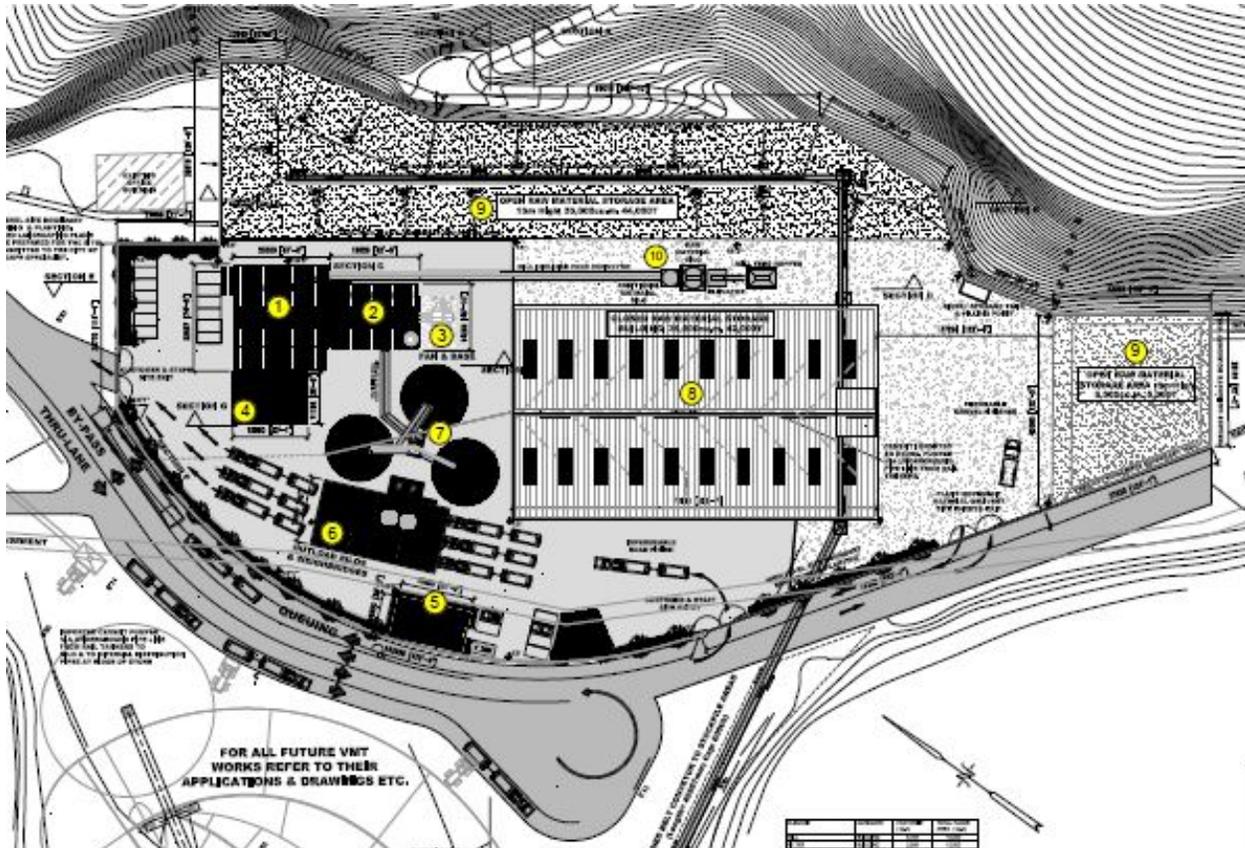
Construction of the new Orcem Plant would include 11 separate buildings and major pieces of equipment. These improvements would provide for a total building area of approximately 73,000 square feet, with a total footprint area of approximately 61,070 square feet. In the final configuration, the proposed Orcem buildings and equipment would cover 29% of the site.

**Table 2
Proposed Orcem Buildings, Equipment, and Major Facilities**

Figure Reference	Element	Element Type	Footprint (square feet)	Floor Area (square feet)	Height
1	Processing Mill	Building	5,700	10,200	97' 5"
2	Filter	Building	3,350	12,000	97' 5"
3	Main Fan and Base	Equipment	960	N/A	Varies
4	Workshop and Control	Building	1,950	3,900	38' 0"
5	Two-Story Office	Building	1,450	2,600	23' 5"
6	Outload Silos and Weighbridges	Building	4,400	5,800	62' 8"
7	Storage Silos (3) and Elevator	Building	5,260	N/A	131' 6"
8	Closed Raw Material Storage Building	Building	38,000	38,000	82' 7"
9	Raw Material Storage Areas (2)	Open Area	N/A	N/A	N/A
10	Mill Hopper, Silo, and Conveyor	Equipment	N/A	N/A	Varies
11	Conveyor to VMT Terminal	Equipment	N/A	N/A	Varies

Table 2
Proposed Orcem Buildings, Equipment, and Major Facilities

Figure Reference	Element	Element Type	Footprint (square feet)	Floor Area (square feet)	Height
	TOTALS		61,070	72,500	



Orcem Site Plan

The buildings and major facilities presented in Table 2 and shown in the site plan above are further described below:

- **No. 1 – No. 3:** The processing plant would consist of the enclosed Processing Mill building (no. 1), the connected Filter Building (no. 2) (which would contain the mill intake, hot air gas generator, and miscellaneous ancillary equipment), the vent stack, and the main fan and base (no. 3).
- **No. 4 Workshop and Control Room Building:** This building would include: (1) the central plant control office, locker room, breakroom, toilets, showers, and related facilities on the second floor; and (2) the light maintenance workshop area and a bathroom on the ground floor.

- **No. 5 Office Building:** This is proposed to be a two-story administrative and laboratory office building.
- **No. 6 and No. 7:** The finished product facilities would include two elevators, up to three fully sealed Storage Silos for finished products, the Outload Building with its three Outload Silos and Weighbridges, and the Airslide which would convey the finished product from the Processing Mill and Filter Building to the Storage Silos. The Outload Building would be designed to accommodate enclosed truck loading and weighing for the dispatch of the finished products to market.
- **No. 8 Closed Raw Material Storage Building:** A covered storage area for dry bulk materials requiring covered storage, e.g., portland cement clinker material (“clinker”).



- **No. 9 Raw Material Storage Areas:** The two open areas designated for storage of: (a) GBFS material along the easterly side of the Orcem Site; and (b) gypsum, pozzolan rock, and limestone materials within the southern end of the Orcem Site. One area is to the northeast of the Orcem’s proposed Buildings 1, 2, and 10 and the second area is to the southeast.



- **No. 10 Mill Hopper, Silo, and Conveyor:** A covered belt conveyor system to transport the raw materials from the Raw Material Storage Areas to the processing plant. This system would include the Mill Feed Hopper, the Raw Material Silo and Elevator, an additional material silo, and the conveyor leading to the Processing Mill and Filter Building.
- **No. 11 Conveyor from VMT Terminal:** The covered conveyor systems and intake hopper/extractor to be installed within an easement created over a portion of the VMT Site to facilitate the movement of raw materials between the terminal and Orcem Site as part of the Phase 1 and 2 operations.

3.2 Project Operations

3.2.1 Vallejo Marine Terminal Operations

The VMT component of the project would primarily service dry bulk and break-bulk cargoes as outlined previously. Liquid bulk cargoes, municipal waste, coal, petroleum coke or other petroleum based products, or large-scale container operations will not be handled through the VMT Terminal. While the primary focus of VMT operations would be the import/export and transportation of aggregate materials, the terminal would be designed to include both shipping and receiving of a wide range of products. As previously noted, if the Project is approved, modifications to the approved list of commodities that could be handled through the VMT Terminal in the future would require review by the City of Vallejo and an amendment to the applicant's use permit, which would be subject to a discretionary process and subsequent environmental review under CEQA.

Movement of Materials

Shipping Facilities

The overall volume of cargo handled through the VMT Terminal would be expected to increase over the first several years of operation in response to market demand. Prior to completion of improved rail access to the site, cargos offloaded from vessels would be loaded exclusively onto trucks, which would limit the overall capacity of the terminal due to space limitations. The capacity of the terminal to handle larger volumes of cargo would expand with completion of the rail access and transloading area improvements identified. VMT construction includes rail improvements which would maximize the capacity of the terminal to allow for up to a total of four deep draft vessels per month and a maximum monthly cargo of 160,000 metric tons (this volume includes 40,000 metric tons of material associated with Orcem Phase 1, and approximately 63,400 metric tons of material associated with Orcem Phase 2). This volume assumes each deep-water draft vessel would require five to six days of loading and unloading.

Terminal operations will also accommodate smaller vessels intended to follow the federal Short Sea Shipping Highway Initiative by focusing on short sea shipping opportunities that move more cargo by coastal and inland waterway barges on the nation's Marine Highway System. Such smaller vessels (with a capacity ranging from 2,000 to 8,000 metric tons) would be moored at the terminal for approximately one day each, at such times as the larger vessels are not present. These smaller vessels would accommodate movement of up to 48,000 metric tons monthly (of the total 160,000 metric tons of throughput) of materials using a maximum monthly average of 3.5 vessels. As noted in Table 2, accommodation of both large and smaller vessels may lead to a reduction in the maximum monthly shipping capacity of the Terminal, depending on the efficiency of loading and unloading operations.

As previously noted, during the time that vessels are moored at the facility, 24-hour, seven days a week operations, would be conducted for offloading or loading of cargo. Other VMT Terminal operations would be scheduled as two 10-hour shifts per day, six days per week.

The VMT Terminal improvements are designed to accommodate both Orcem's Phase 1 and Phase 2 operations. Therefore, the volumes of materials processed through the VMT Terminal would increase as Orcem operations move from Phase 1 to Phase 2. Table 2 reflects combined VMT and Orcem volumes.

Rail Facilities

The proposed rail transloading improvements (including rail realignment) would be completed based on market demand, and may therefore occur following initial completion of the remaining VMT Terminal improvements, but within approximately one year of initiation of facility operations. The rail transloading improvements would accommodate up to 16 rail cars for loading on site at one time. California Northern Railroad operates trains between the hours of 7:00 a.m. and 6:00 p.m. Other rail operations, including the loading and unloading of rail cars are proposed to be limited to the hours of 7:00 AM to 10:00 PM. Existing California Northern Railroad track spurs that adjoin the VMT Site's northern entrance would be used to store rail cars during the loading process. The rail spur area can accommodate up to 77 rail cars at one time, but the applicants are only proposing to bring in 50 rail cars at one time. VMT anticipates use of two switch-mobiles or a small locomotive to handle rail car movements on the VMT Site to and from the California Northern Railroad track spurs adjacent to the site. Material handling equipment such as a mobile hopper (loading equipment) connected to a mobile surge-bin (loading device) via an enclosed transfer conveyor would be used along the realigned rail tracks to accommodate loading and unloading rail cars. Additionally, there would be two Caterpillar 988 front-end loaders (or equivalent) and two to three forklifts to handle cargo movements in the laydown area. Trains would be scheduled to minimize interference along major street routes. The maximum number of anticipated rail cars per day associated with the proposed Project (including both VMT and Orcem components) are shown in Table 3.

Trucking, Circulation, and Access

Trucks would access the VMT Site from Derr Street coming from Lemon Street through a mixed commercial and residential area. They would travel to the freeway along SR-29 for southbound I-80 traffic, and along Lemon Street for northbound I-80 and eastbound I-780 traffic. The maximum number of anticipated roundtrip truck trips per day that are associated with the VMT component of the overall Project are shown in Table 3.

No public access is proposed to the VMT Site which would continue to be fenced with a security entrance. Because of international freight movements, this site would be secured and subject to Department of Homeland Security rules requiring all workers, including rail engineers and truck drivers to have a Transportation Worker Identification Credential in order to obtain unescorted access to the site. Additionally, the VMT Terminal would be a heavy industrial site with rail car, truck, and heavy equipment operations. Access to the existing buildings proposed for reuse with proposed administrative, commercial and industrial uses would be subject to the same security clearance and access control limitations.

Table 3
Summary of Proposed Maximum Material Volumes and Transport Methods -
Revised Operations Alternative VMT-Volumes (with Orcem Materials Included)

Average Vessels / Month*	Max. Monthly Shipping/Barge Cargo (metric tons) (VMT and Orcem)	VMT Trucks/Day	Average Rail Cars/Week (VMT and Orcem)**	Average Unit Trains/ Week
7.5	160,000	87	200	4 50-car trains

Notes:

- * The maximum monthly cargo is limited to 160,000 metric tons. The wharf capacity would be limited to accommodating a monthly maximum of four (4) deep water vessels and 3.5 barges. It is likely that there will be a mix of deep water vessels and barges in any given month.
- ** The maximum number of project related rail cars per year is 14,400 and this is based on a maximum of 300 rail cars per week. In general, the number of rail cars in any given month and week will fluctuate based on the type of product that is being transported from the project site to market, but the average number of rail cars per month is anticipated to be 800. It should be noted that if 300 rail cars are moved in one week this equates to six 50 car trains per week. The average number of rail cars and unit trains per week are identified in the table above.

All cargo and transportation figures presented in Table 3 are maximums, with the exception that the number of unit trains per week is expressed as an average. The use of barges and smaller vessels at the VMT Terminal may result in the potential for a portion of VMT’s total truck and rail volumes to be handled by barges, but may also result in an overall reduction in efficiency and total annual cargo throughput.

Concurrently with the escalation of Orcem’s operations after establishment of Phase 2, the percentage of maximum terminal capacity utilized for import of raw materials serving the Orcem Site is anticipated to increase (as quantified in Table 4 later in this discussion). That portion of the maximum remaining terminal capacity available for VMT import and export would therefore decrease with increased intensification of Orcem Phase 2 operations.

Cargos which are not containerized, or do not otherwise release fugitive dust or airborne/soluble toxic materials when handled and stored in the open, (e.g., lumber, aggregate) would be unloaded using portable equipment onto the paved or aggregate surfaces within the 8.05-acre VMT Terminal shipping and receiving site area. Existing pavement within these areas would be removed where necessary in order to complete finished elevation grading for stormwater management and to establish permeable surfaces where appropriate. All other cargo received or shipped through the VMT Terminal would be handled through enclosed transport devices. The existing impervious surfaces at the site would be used as temporary laydown areas for the cargo being prepared for loading onto vessels or unloaded for transfer to barge, rail, or trucks. Temporary storage structures could be used if all-weather coverage is warranted.

Stormwater

All stormwater on site would be directed to stormwater pipes, and eventually to vegetated swales and a bio-basin for retention and treatment through infiltration. The bio-basin would be designed so that direct discharges to the shoreline would only occur during prolonged and intense storms (i.e., greater than a 10-year storm), when the volume of the basin reaches capacity. At all other times stormwater would be treated through infiltration through a grassy

basin. This Project would be required to obtain an Industrial General Permit and an Industrial Stormwater Pollution Prevention Plan (SWPPP) from the Regional Water Quality Control Board (RWQCB) prior to operation. SWPPPs require the use of best management practices and they would work with VMT to determine which BMPs to apply to the Project.

Parking

A paved parking area for employees would be provided adjoining the existing Administrative Building, with a capacity for 40 vehicles, consistent with peak-period employee and visitor estimates. Ample all-weather surface space (approximately 74,052 square feet) would also be available to accommodate loading/unloading operations and truck and equipment parking within the VMT Site, as shown on the site plan.

Building Usage

The existing 42,500-square-foot Warehouse and adjoining 4,700-square-foot Bakery Bulkhouse (buildings nos. 11 and 12 listed in Table 2), may be used initially for VMT support operations, including equipment storage and maintenance; however, these buildings are proposed to be demolished as part of the VMT construction to accommodate rail access, establish efficient terminal logistics, and provide a more accessible laydown area for barge cargos. An approximately 7,200 square-foot storage and maintenance building is proposed in the location of the existing Warehouse to accommodate equipment maintenance and storage following its demolition.

The 4,200square-foot Administrative Building (building no. 9), and 1,910square-foot Garage (building no. 10), as identified on Figure 2-1, would initially be used as part of the VMT administrative and operational support, and may later be used to accommodate a variety of complementary terminal operations, warehousing, office, and general manufacturing uses. These future uses may involve independent long-term leases (as in the case of Orcem) with the potential for minor additions which would be subject to city permits.

Staffing

During vessel loading/unloading operations, there could be up to a total of 40 individuals working on the VMT Site. During regular operations, it would be expected that 25 individuals engaged in cargo loading and offloading, site maintenance operations, and administrative duties would be at the facility on a permanent basis. Additionally, there would be truck drivers and rail equipment handlers who would enter and exit the site based on operational needs. However, it is not anticipated that these employees would be employed by either VMT or Orcem.

3.2.2 Orcem Operation

It is Orcem's objective to primarily produce an alternative to portland cement. The processing of this alternative is known to produce less CO₂e (carbon dioxide equivalent) and other polluting air emissions than the processing of traditional portland cement. According to Orcem, the CO₂e associated with GGBFS processing is roughly 90% less than the volume associated with

portland cement processing on an annual basis. This product is also known in the aggregate and building materials industry as ground granulated blast furnace slag (GGBFS).

The primary raw material utilized in the manufacture of GGBFS is granulated blast furnace slag (GBFS), a recycled by-product from the first stage in the production of steel. GBFS, a nonhazardous substance, would be processed by drying and grinding to produce a very fine powder, to which a small quantity of gypsum/anhydrite would be added, yielding the principal finished product, GGBFS.

GGBFS is used in the ready mix and precast concrete industries and in the production of mortars and grouts to improve product performance. GGBFS can be either blended with ordinary portland cement to produce slag-blended cements for sale to concrete producers, or it can be sold alone and then blended with other cement-like materials by concrete manufacturers. GGBFS, as a finely ground powder, can emit fugitive dust particles if not properly contained within closed processing, storage, and loading facilities. The milling process is accordingly carried out in a closed-circuit system under negative pressure (no outlet to the exterior, except through high performance filters).

Because Orcem does not know if the demand for GGBFS will be sufficient, the Orcem Plant would be capable of operating in three different modes, two of which would involve portland cement. The modes are described as follows:

- Mode 1: Import of GBFS (the primary raw material) and production of GGBFS.
- Mode 2: Import of clinker (a nodular material made by heating clay and limestone) and production of portland cement.
- Mode 3: Import of GBFS and production of GGBFS, and import of portland cement.

As proposed, the Orcem Plant would be constructed in two major phases to coincide with the anticipated growth in demand for Orcem's products. The total throughput of raw materials of the plant in Phase 1 would be up to 500,000 metric tons per year and in Phase 2 would be up to 900,000 metric tons per year. These phases are further broken down into the following production milestones:

- Milestone 1: Import of 120,000 metric tons of primary raw material per year (Phase 1).
- Milestone 2: Import of 240,000 metric tons of primary raw material per year (Phase 1).
- Milestone 3: Import of 360,000 metric tons of primary raw material per year (Phase 1).
- Milestone 4: Import of 480,000 metric tons of primary raw material per year (Phase 1).
- Milestone 5: Import of 760,000 metric tons of primary raw material per year (Phase 2).

According to Orcem, when the raw, recycled GBFS (or clinker depending on which Mode) is imported and ground in the Mill with the other specified additives, a maximum of 900,000 MT of finished product would be yielded in Phase 2.

Movement of Materials and Production Process

The Orcem production process would involve the following key steps.

1. *Transport of Raw Materials to the Site*

The Orcem Plant would primarily focus on production of GGBFS as the principal finished product, but would also include production of other hydraulic cement products. The principal raw materials processed in the Orcem Plant for the production of GGBFS would be GBFS and gypsum/anhydrite. Other raw materials used in the production of other cement products include clinker, gypsum, limestone, and pozzolan. Under full Phase 2 operation, up to 760,000 metric tons of raw materials (GBFS) would be delivered to the Orcem Plant annually via a combination of shipping, rail, or truck, as described below:

Shipping

- *VMT Terminal:* Various sizes of ships (described below), would dock at the reconstructed VMT Terminal, carrying GBFS, limestone, gypsum, anhydrite, pozzolan, and/or clinker. The ships would then be unloaded via a covered conveyor system (see image) directly to the adjoining Orcem Plant storage facilities. Because of its proximity and based on anticipated capacity and availability, the VMT Terminal is the primary and most economically feasible method of material transport to the Orcem Plant on a long-term basis.
- *Geared Ships* such as a 40,000-metric-ton bulk carrier with onboard cranes (geared ship). This ship would berth at the VMT Terminal, and raw materials would be discharged from the ship using clamshell grabs fitted to the onboard cranes and deposited into mobile hoppers on the dock.
- *Self-Discharge Ships* such as a 70,000-metric-ton bulk carrier with onboard reclaim conveyors and a discharge boom with an integral belt conveyor (self-discharge ship). This ship would berth at the VMT Terminal and raw materials would be discharged from the ship via the self-discharge boom into a receiving hopper located on the shore.
- *Port of Richmond:* The Port of Richmond, located approximately 17 miles to the south (and alternatively the Port of Stockton located 60 miles to the east), would serve as an alternative short-term emergency source for delivery of GBFS and clinker, via ships from

sources in Asia and around the world. The raw materials would be loaded onto trucks at the port, driven to the plant, and offloaded for storage. This method would only be used in the event that the VMT Terminal is inoperable.

Rail Transport

Rail would be a third source for delivery of smaller consignments of gypsum, anhydrite, limestone, pozzolan, clinker, and portland cement. This option would provide access to raw material sources in Arizona, Nevada, and California. The existing rail line network extends south along the western edge of the site and would be upgraded as part of the VMT component of the Project. Rail cars would be unloaded via truck transfer and closed pipe to one of the adjoining Orcem material storage areas or the fully sealed Storage Silos (for fine materials such as cement).

Truck Transport

A fourth alternative source for delivery of gypsum, anhydrite, pozzolan, and limestone to the plant is via truck. The applicants have stated that most materials delivered via truck would come from sources in California (outside the local area due to a lack of local availability) and Nevada.

**Table 4
Summary of Proposed Maximum Material Volumes and Transport Methods –
Revised Operations Alternative Orcem Phase 1 and Phase 2 Volumes**

Orcem Phase	Annual Production (metric tons)	Max. Monthly Materials in Via Ship (metric tons)*	Max. Monthly Materials in Via Truck (metric tons)	Max. Monthly Materials in Via Rail (metric tons)	Max. Trucks Out / Day	Max. Rail Cars Out / Week**	Unit Trains/ Week
Phase 1	< 500,000	40,000	6,600	10,000	112 (2,948 metric tons)	31 (1,451 metric tons)	4
Phase 2	900,000	63,400	10,450	10,000	171 (4,286 metric tons)	31 (1,451 metric tons)	4

Notes:

* The Orcem maximum monthly shipping volume is included in the 160,000 monthly metric tons identified in Table 3. Truck volumes for Orcem materials are estimated at 22 metric tons per truck.

** Orcem rail volumes are based on a maximum 800 rail cars per year and 91 metric tons per car. The Orcem rail cars are included in the 50-car trains associated with VMT identified in Table 3.

2. *Movement of Materials from Ships to On-site Orcem Plant*

The following discussion provides more detail regarding the movement of raw materials from the ships to the Orcem Plant under Orcem Phases 1 and 2.

Phase 1 (up to 500,000 metric tons of throughput annually)

- The discharge rate using either geared ships or self-discharge ships would be an average of 660 metric tons per hour over the course of five to six days.
- The shipside hoppers, or metal collection bins into which particulate material (such as GBFS) is discharged from docked ships, would have a capacity of 80 metric tons. The material is transferred from the ships to the hoppers via the ships self-discharging boom or a crane. In Phase 1, the mobile hoppers at the dockside would feed onto a common mobile conveyor system. Raw materials (GBFS and clinker) would be loaded onto a continuous, covered belt conveyor system from the shipside all the way to the storage areas (a distance of up to 1,000 feet). This conveyor system would operate at an average rate of 660 metric tons per hour and would be located within an easement across the VMT Site.
- In the case of GBFS, during Phase 1, the conveyor would discharge the material in the open storage area. This material would then be consolidated into a managed pile as described below. As previously noted, Orcem has stated that the material has a consistency of damp sand.
- In the case of clinker, during Phase 1, the covered (not enclosed) conveyor would discharge the material into the covered Raw Material Storage Building.

Phase 2 (up to 900,000 metric tons of throughput annually)

- In Phase 2 the mobile hoppers at the dockside would continue to feed onto a common mobile conveyor system. Raw materials (GBFS and clinker) would be loaded onto a continuous, covered belt conveyor system from the shipside all the way to the storage areas (a distance of up to 1,000 feet). This conveyor system would operate at an average rate of 660 metric tons per hour, and would be located within an easement area across the VMT Site.
- In the case of GBFS during Phase 2, the conveyor system would discharge the GBFS in the area of the open stockyard floor. This material would then be consolidated into a managed pile as described below.
- In the case of clinker, during Phase 2, the conveyor system would discharge the clinker using an internal conveyor with a belt tripper in the covered Raw Material Storage Building.

3. *Storage of Raw Materials*

Storage Area for GBFS

GBFS and other raw materials (e.g., limestone, gypsum, and pozzolan) except for clinker, would be stored in open stockpiles for management in the up to three designated storage areas. It should be noted that GBFS, limestone, gypsum/anhydrite, and pozzolan are considered to be nonhazardous substances. The height of the open stockpiles would vary depending on the mode and the phase. In Mode 1 and Phase 2, there would be three stockpile areas that would range in height from 16 to 49 feet. If Mode 2 or 3 were operational, a storage materials building would replace one of the stockpiles.

According to the applicants, GBFS is naturally coarse, moist, and sand-like (with between 6% and 12% moisture content on delivery). When stored in a pile over a prolonged period of time, the material has a tendency to harden on the surface through agglomeration to form a crust which seals the stockpile. However, on reclaim, as described below, this material may be less moist and in these circumstances a stockpile water spray system would be in place to prevent fugitive dust emissions. This Project will be required to obtain an Industrial General Permit from the Regional Water Quality Control Board (RWQCB) prior to operation which will address erosion control and run-off. In addition, a permit will be required for the BAAQMD to address emissions and fugitive dust.

GBFS Stockpile Management

The GBFS would be transported from the ship to the stockpile by a series of covered belt conveyors. The conveyor would discharge the GBFS in the designated stockpile areas, and the material would be distributed with mobile stacker conveyors to form a maximum height of 40 feet. A front-end loader would move and lift this material as necessary. GBFS would be excavated using the same front-end loader and placed into the reclaim hopper for transport to the processing plant.

Storage Area for Clinker

Clinker, which is classified as a hazardous substance, would be stored in the designated enclosed storage building. As this material is naturally dry and hygroscopic, the stockpile must be enclosed and protected from exposure to rainfall and atmospheric moisture to prevent damage to the product. The clinker stockpile would be managed as described in the following paragraph.

In Phase 1 and Phase 2 of the Orcem operations, clinker would be transported to the enclosed Raw Material Storage Building by covered belt conveyors from the dockside (see Figures 2-7a, 2-7b, and 2-7c). The horizontal belt conveyor would be fitted with a traveling tripper which would allow the clinker to be discharged at sequential positions along the storage building floor to form a chevron stockpile with a maximum height of approximately 50 feet. The Raw Material Storage building would be equipped with an air filtration system to ensure that any particulate emissions created by either the stockpiling or reclaim process would be captured in the filters, and fugitive particulate emissions would be maintained within agreed Bay Area Air Quality Management

District permit limits, thereby allowing only clean air to leave the building. District permits must be obtained prior to operation of the facility. Material would be excavated from the face of the stockpile using front-end loaders and placing the clinker into the reclaim hopper of the conveyor feed to the processing plant.

4. Transport of Raw Material from Stockpile Area to the Process Plant

The raw materials would be taken from the stockpile areas and placed into a reclaim hopper of 2,000-cubic-foot capacity at ground level in the storage area. From this point the clinker or GBFS would move by covered belt conveyor to a bucket elevator which would discharge the material into a mill feed hopper with a capacity of 5,000 cubic feet. Alongside this mill feed hopper would be a smaller mill feed hopper with a capacity of 1,500 cubic feet, which would contain limestone and/or gypsum and other raw materials.

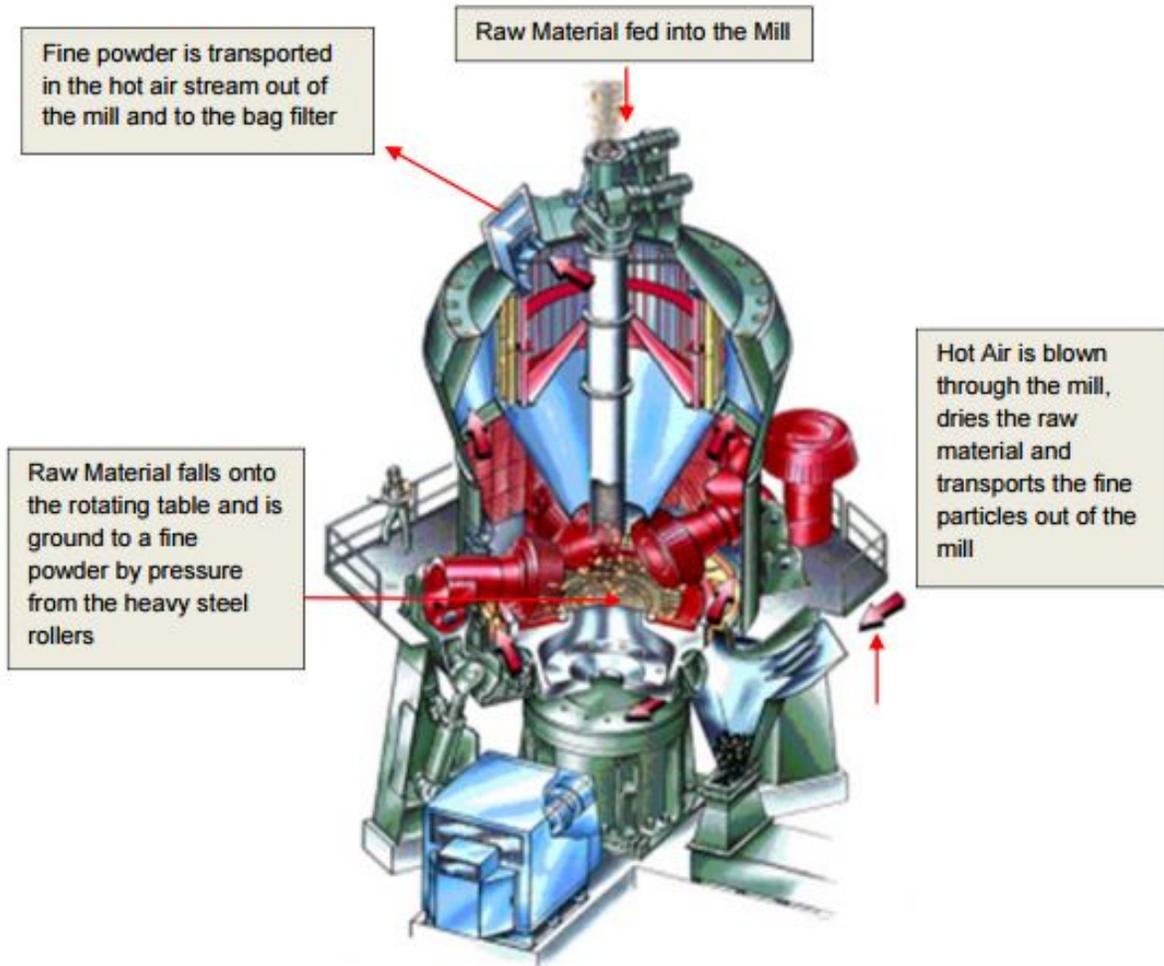
The clinker or GBFS would discharge from these mill feed hoppers via weigh belts which would regulate the flow of clinker or GBFS and gypsum/limestone (and other raw materials) onto the inclined covered belt conveyor to the processing plant and ensure that the conveyor feeding the processing plant receives the desired total feed rate of material for processing in the mill, typically between 70 and 100 metric tons per hour.

5. Drying and Grinding Raw Materials

The processing plant would be used to grind (or mill) the raw materials, dry them, and collect the product to capture the finished product. All of the equipment needed for this process would be contained within the Mill and Filter Buildings.

Milling Process

The proposed Orcem Plant would use an electric-powered vertical roller mill (VRM). Raw material is fed to the VRM via an airlock onto the center of a rotating grinding table, where the VRM grinds the raw material to fine powder. The milling process requires a high flow of air to pass through the mill. As a result, the material within the mill is subject to a high velocity airflow, which passes up, around, and over the grinding table. The airflow's primary function is to lift ground material particles from the table and convey them into an internal particle size classifier (a high efficiency separator), which directs particles as either small enough to meet the finished product or in need of further grinding. The figure below provides a graphic depiction of the proposed Mill.



Drying Process

The GBFS enters the mill with a moisture content of between 6% and 12%, but to properly store and transport the finished product the material must be dried to a moisture content of less than 0.2%. The high volume of air required for the milling process is also very effective at drying the material being processed. In some cases, additional heat is required to complete the drying process. In this process, the additional heat would be supplied by a natural gas-fired hot air generator which would preheat the air coming into the VRM to a temperature sufficient to evaporate the excess moisture during milling. Temperatures in the mill can be in excess of 1800° Fahrenheit.

The process air pulled through the mill and internal separator exits the mill with the particles sufficiently small enough to meet the finished product specification entrained. This combined air and finished product stream then enters the main bag filter unit where the finished product is collected on the surfaces of fabric filters and the clean moist air is drawn through the filter unit by an induced draft fan, commonly called the main mill fan.

The outlet of the main mill fan leads to a vertical vent stack where the air leaves the processing plant along with any moisture evaporated from the raw materials. The finished product collected in the main bag filter is transported by an enclosed air-slide conveyor to a bucket elevator which lifts the product and discharges it to the product Storage Silos.

6. *Storage, Loading, and Transport of Finished Product*

The finished product is proposed to be stored in three large sealed finished product Storage Silos, each with a capacity of up to 5,000 metric tons. These Storage Silos would hold the various finished products prior to transport to the Loading Silos. Each silo would be up to 46 feet in diameter and approximately 131 feet in height.

The bottoms of the large finished product Storage Silos would be aerated to fluidize (the process of converting granular material from a static solid-like state to a dynamic fluid-like state) the finished product powder for discharge. When the finished product is withdrawn from the Storage Silos, it would be transported in an enclosed conveyor system (see image) into smaller loading silos of approximately 80-metric ton capacity each for loading of tanker trucks and rail tankers (via tanker truck transfer).



There would be two loading silos configured at the Outload Building for loading tanker trucks. Each loading silo would have its own belowground Weighbridges, or scales, to monitor truck weight as they are loaded. The road transport vehicles would be tractor-trailer configurations, with standard tractors and single or double pneumatic dry bulk tank trailers. The tank trailers (commonly referred to as cement trucks) would be sealed and have loading hatches on top. When the trailers are loaded with product the hatches would be opened, loading bellows would descend, and their nozzle(s) would seal onto the tanks to be loaded. A computer-controlled filling system would be activated, and the tankers would be loaded to the desired level by the control system monitoring the Weighbridge. After the loading process is complete, a bill of lading would be printed for the driver to document that all tanker trucks leave the plant with the prescribed load on board.

Rail tanker cars would be served from the filling facility via tanker truck transfer using the upgraded and realigned California Northern Railroad rail spur line which currently extends into the adjoining VMT Site, running parallel to Orcem's western boundary.

Stormwater

The Orcem Project would manage stormwater using underground, concrete sand filter vaults and an overflow sand filter treatment chamber. Stormwater is proposed to be collected via a network of concrete valley gutters directing run-off to the sand filter vaults where the stormwater is treated. The treated water would then be conveyed to an underground stormwater retention tank. The retained water would be used for on-site dust suppression. Stormwater that is not captured for this use would continue on to the active treatment system (ATS) consisting of an oil-water separator, a pH adjuster, a pre-settlement chamber (i.e., underground weir tank), sand filtration, and a granulated active carbon filter. Furthermore, a sampling and monitoring structure is required downstream of the ATS. Stormwater discharge downstream of the ATS would be

monitored and tested to ensure treatment has been effective in reaching the testing requirements of the Industrial General Permit (IGP). Failure of a test would result in a violation of the IGP, in which case the ATS is highly customizable and would be modified to meet requirements. As previously noted, this Project would be required to obtain an Industrial General Permit and an Industrial Stormwater Pollution Prevention Plan (SWPPP) from the RWQCB prior to operation. SWPPPs require the use of best management practices (e.g., covering of stockpiles) and they would work with Orcem to determine which BMPs to apply to the Project.

Site Access and Parking

The entrance/exit at the southern end of the Orcem Site boundary would be used by traffic dedicated to hauling small amounts of raw materials by truck into the on-site raw material storage areas. It would not be used by customer traffic. A dedicated entrance located south of the office building would accommodate a flow of customers and staff separate from the flow of trucks headed to the outload facility. These vehicles would move in a northerly direction and exit the site through the gate located at the northern site boundary. Parking for customers and employees would be provided at both the office building and at the north end of the Processing Mill and Filter Buildings. A total of 20 parking spaces would be provided on the Orcem site which would be separate from the VMT parking area.

Staffing

The applicants have estimated that during the approximately 15-month construction phase, the Orcem Plant would create approximately 100 jobs. Once the Orcem Plant is operating, the plant systems would be operated by up to 20 full-time employees, operating in shifts during a 24-hour period, together with up to 20 administrative and sales staff, for a total of up to 40 full-time jobs at the facility (applies to both operational Phases 1 and 2).

3.3 Infrastructure

A storage area for an aboveground diesel fuel tank for filling site mobile equipment, together with associated spillage protection systems, would be provided in the surface water drainage network on the VMT Site. An aboveground diesel storage tank with appropriate safety equipment and associated spillage protection systems for fueling of Orcem Site mobile equipment would also be provided adjoining the concrete boundary wall between the GBFS and gypsum storage areas. In addition, a free-draining, permeable stone finish would be provided in the storage areas of the Orcem Site. All other areas, including vehicle roadway and parking areas, and those areas surrounding the Orcem Plant, would be finished with an impermeable asphalt or concrete surface.

An existing 8-inch to 10-inch diameter looped water main currently serves the overall site, delivering raw water for fire protection purposes. This fire protection system would be upgraded as needed with placement of approved fire hydrants, and permanently maintained in accordance with fire department standards to provide sustained water volumes for fire suppression purposes on the entire site.

The Orcem site would be secured by an approximately 15' fence (chain link or decorative) and a 10-foot pre-cast concrete wall. Landscaping including evergreen trees (e.g., cottonwood trees)

and shrubs are proposed along the western and northern boundaries of the Orcem Site to partially screen equipment and materials. A landscape plan with fencing details would be submitted prior to the issuance of a permit and would be returned to the Planning Commission for review.

The northern VMT Site boundary (adjoining Derr Street) would remain secured with six-foot chain link fencing and would continue to be served by the existing gated entrance. A rock jetty would be placed within the alignment of (and replace) the existing fence at the southern end of the VMT Site. A new chain-link fence would be installed along the top of the jetty and extend east to connect with the VMT Site boundary fence. The purpose of the rock jetty and fence is to improve site security by creating a stronger deterrent to trespassers. Perimeter site fencing would be repaired as necessary, as part of an overall effort to enhance site security consistent with marine terminal security requirements. Site lighting would be provided throughout the project site where necessary for safety. All lighting would be shielded or designed to prevent off-site glare. A lighting plan was submitted by VMT for the wharf. City review and approval of a site lighting plan for the entire site (VMT and Orcem) would be required prior to the issuance of a building permit and would be returned to the Planning Commission for review.

3.4 Proposed Public Access

Public access is required by BCDC as a condition of the permit approval process for most shoreline developments. As defined by BCDC's law, the McAteer-Petris Act, every proposed development along the shoreline within BCDC's jurisdiction should provide "maximum feasible public access, consistent with a proposed project." Because the Project site would be a secured site in accordance with Department of Homeland Security regulations, off-site public access improvements are proposed in lieu of providing direct public access to the waterfront on the project site.

The proposed public access improvements would involve installation of a new self-propelled personal watercraft launch within the Vallejo Municipal Marina. The improvements would be located just north of the access ramp to K Dock at the south end of the City of Vallejo Municipal Marina, which is located approximately 2 miles north of the project site. The proposed launch ramp would consist of a pre-cast articulated concrete mat, approximately 10 feet wide by 60 feet long, over a geotextile fabric. The top of the launch ramp would be approximately 8 feet above MLLW, and the bottom of the ramp would be 2 feet below MLLW. The launch ramp would not require any dredging and would be located in an area with ample public parking and restrooms. These improvements must be reviewed by BCDC at the time of the VMT Project component's permitting, and are subject to refinement. As described in further detail in the General Plan Consistency section below, BCDC staff expressed concern regarding the adequacy of this off-site access to mitigate the loss of public access at the Project site and its conformance with the Bay Plan. If additional mitigation is required by BCDC, additional environmental review may be necessary.



Proposed In-lieu Public Access

3.5 Proposed Dock Removal

The proposed reconstruction of the wharf would result in Bay fill. BCDC's authority over the water of the San Francisco Bay relates primarily to Bay fill. Bay fill (solid fill, pile-supported fill, floating fill, and cantilevered fill) can be approved by the BCDC only for water-oriented uses. When a water-oriented use is approved, compensatory mitigation is required as part of permit approval. In order to satisfy the mitigation requirement, the applicants are proposing to remove existing deteriorated dock improvements within the water area at the north end of the City's Municipal Marina. Approximately eighty (80) 14-inch-diameter creosote timber piles and deteriorated dock facilities would be removed from this portion of the marina. Removal of the deteriorated dock improvements would reduce the shaded habitat within the marina by 10,338 square feet (0.24 acre), and removal of the timber piles would increase benthic habitat within the marina by 87 square feet. BCDC has not determined if the proposed removal of the deteriorated dock facilities satisfies the mitigation requirement, which would be finalized if, and when, the Project seeks the appropriate BCDC permits.

3.6 Applicant Proposed Community Benefits

Economic Benefits: The applicants submitted a Fiscal and Economic Impact Study, prepared by Field Guide Consulting (November 7, 2014), and a statement describing community benefits that they believe will be generated by the proposed Project. The applicants state that these benefits are sufficient to offset any impacts the Project may have on the City of Vallejo and South Vallejo. It should be noted that the Fiscal and Economic Impact Study has not been peer reviewed by an independent third party to verify the veracity of the study. Please see Attachment D for more information on the estimated benefits.

Applicant Community Grant Program: The applicants propose to establish a \$1 million Community Grant Program to support the Vallejo community. The applicants state that the primary focus of the funds would be to support the South Vallejo community, which is in closest proximity to the project site. The funds would be spent to support local non-profits that provide services in the areas of education, youth, job training, and environmental sustainability. The applicants propose that the Community Grant Program would contribute \$200,000 per year for five years. The applicants would establish a process for the selection of grant recipients, based on criteria developed with community input. No additional detail has been provided by the applicants on this benefit. Please see Attachment E for a copy of the applicant's community benefit statement.

STAFF ANALYSIS

1.0 Conformance with Zoning Ordinance

The Intensive Use zoning district, as described in Chapter 16 of the Vallejo Municipal Code (VMC), is Vallejo's heaviest industrial district. The regulations for this district distinguish between "Permitted Uses" and "Permitted Uses Subject to A Major Use Permit." As detailed in Chapter 16.34 of the Zoning Code, "General Industrial Uses" are "Permitted Uses" (Section 16.34.020.C.2), whereas "Heavy Industrial Uses" are permitted upon the issuance of a major use permit (Section 16.34.040.B.1) which requires Planning Commission review. VMC Section 16.06.530 (Article V) distinguishes between "General" and "Heavy" industrial uses, classifying "General Industrial Uses" as consisting of "industrial plants engaged in manufacturing, compounding, processing, assembling, packaging, treatment or fabrication of materials and products" and classifying "Heavy Industrial Uses" as "all other plants" or any such plant which "involves the compounding of radioactive materials, petroleum refining or manufacturing of explosives." The proposed Project is considered a heavy industrial use requiring a major use permit. In addition, a Site Development Permit is required because the applicants are proposing to construct new structures on the project site. Below is a table identifying the zoning ordinance requirements the Project must conform to and the Project's conformance or non-conformance with these requirements.

**Table 5
Zoning Ordinance Requirements and Project Conformance**

Issue	Requirements	Proposed Project	Conformance
Height	75 ft.	Height ranges between 23 ft. 5 in. up to 164 ft. 1 in. (vertical vent)	No, the applicants would be seeking an exception allowed under Section 16.80.060.

Setbacks	None	N/A	N/A
Landscaping/ Screening	Screening is required along all boundaries other than streets where the building site abuts residential uses.	The Project site abuts residential uses directly to the east and is setback over 300 ft. from the property line. The site is at a significantly lower elevation and there are existing shrubs and trees along the slope that effectively screen the industrial use from the residential uses. In addition, Orcem would plant trees along the boundary of their operations to provide additional screening.	Yes
Parking	<p>Four spaces for the first 5,000 square feet of floor area and one space for each additional 2,000 square feet of floor area, or one space for every 1.5 employees, whichever is greater.</p> <p>VMT: 16,160 square feet of floor area = 10 parking spaces.</p> <p>Orcem: 72,000 square feet of floor area = 38 parking spaces</p> <p>Total Required Parking = 48 spaces</p>	<p>VMT: 40 parking spaces</p> <p>Orcem: 20 parking spaces</p> <p>Total Parking Provided = 60 spaces</p>	<p>Yes, VMT meets and exceeds the code requirements</p> <p>Orcem, on its own does not meet the code requirements.</p> <p>However, if the parking were shared, code requirements would be met.</p>
Performance Standards	These standards were addressed as part of the environmental review for the Project.		
Site Development Standards	1. Compatibility with Adjacent Projects: developments should be oriented to be compatible with less intensive uses.	The development would be at a significantly lower elevation than the residential uses to the east and existing vegetation on	Yes

	<p>2. Circulation and Access: provide for pedestrians and vehicles and screen loading areas</p> <p>3. Architectural Treatment: architectural harmony is encouraged.</p> <p>4. Utilities: screen equipment from public view.</p>	<p>the slope screens the Project. The Project would be partially screened from the Sandy Beach Community.</p> <p>The site is industrial in nature and its access is provided at the end of Derr Street where there is little or no pedestrian traffic. In addition, the site is fenced for security purposes.</p> <p>The Project is industrial in nature and is generally in harmony with the adjacent industrial uses and is similar in size, bulk, and scale to the existing on-site structures that were associated with the General Mills Flour Plant.</p> <p>The Project site is generally screened from major thoroughfares such as Sonoma Boulevard due to its location along the waterfront. The site can be seen from the Strait, from Mare Island, from the Sandy Beach residential development and from areas in northwestern Crockett and Rodeo. The Orcem Project provides screening around their portion of the site, but many of the structures are taller than the proposed screening due to their</p>	<p>Yes</p> <p>Yes</p> <p>No, the equipment will be visible from the Strait and nearby residential areas. For example, goods and materials will be delivered via a wharf that must be open to accept the materials during loading and unloading. In addition, on-site</p>
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		<p>industrial nature. Because of the orientation of the site along the Strait, screening of the ships and the conveyor system would not be possible.</p>	<p>equipment would be difficult to screen. The proposed overhead conveyor system is 71 feet high in some areas.</p>
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2.0 General Plan Consistency

Projects proposed within the City are required to be consistent with the City's General Plan. The policy consistency analysis prepared for the Project includes Vallejo General Plan policies as well as the Bay Conservation and Development Commission's Bay Plan (BCDC) policies. The proposed Project is considered to be consistent with most of the existing General Plan policies with the exception of Waterfront Development Policy 1 that states "BCDC's Public Access Design Guidelines should be used in reviewing all development proposals. In areas where access would be hazardous to public safety or incompatible with public use, in-lieu access at another nearby location may be provided".

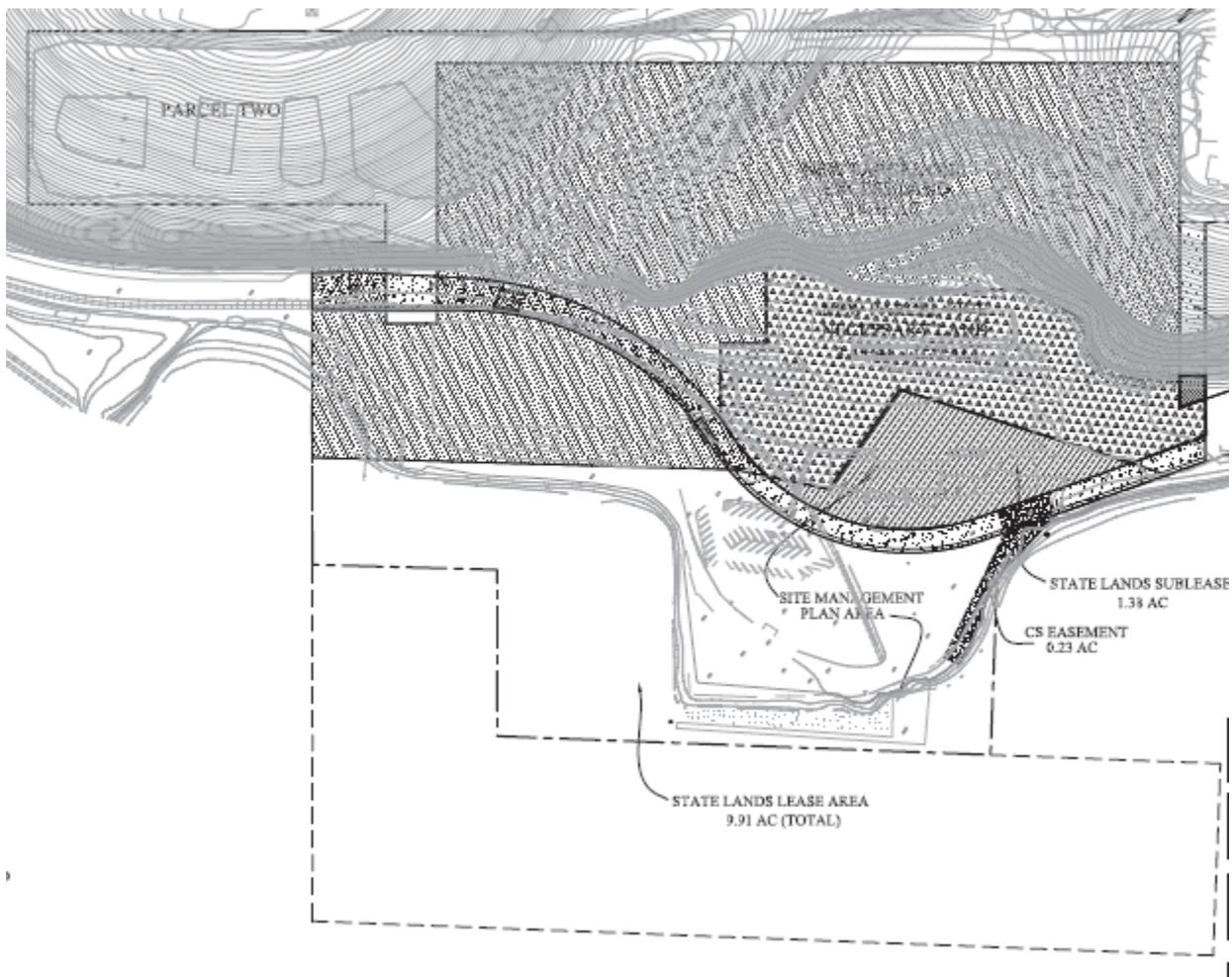
The BCDC Public Access Design Guidelines have been considered in the design of the proposed Project. However, as described previously, due to the nature of the planned operations on the site, no on-site public access would be permitted. Public access to Mare Island Strait would continue to be provided adjacent to the project site along Derr Street to the north and Sandy Beach Road to the south. The in-lieu access would be provided via the installation of a new self-propelled personal watercraft launch, as described above. However, based on review of the proposed access and coordination with BCDC staff, City staff finds that this proposal does not meet the intent of the policy of the BCDC Public Access Design Guidelines. Two key objectives of the Guidelines include; "design public access areas in a way that makes the shoreline enjoyable to the greatest number of people" and "design public access for a wide range of users". The proposed public access is located within the Marina and is designed to serve people using a watercraft (e.g., kayak, paddle board). Staff does not believe that the proposed location and type of public access serves a broad enough sector of the community to be determined to be consistent with this policy and BCDC's Public Access Design Guidelines.

With respect to the Bay Plan, BCDC will make the final determination regarding the Project's consistency with the Bay Plan policies at the time a permit is requested. However, BCDC staff has expressed concern about the adequacy of the public access proposed by the applicants in

their comment letters on the Draft EIR. See Attachment F which includes a complete policy consistency analysis.

TIDELANDS

A substantial portion of the project site was originally held by the State of California (State Lands Commission) and was granted to the City of Vallejo as trustee subject to the Public Trust Doctrine. Public Trust lands are sometimes referred to as “State Lands” although they are owned in fee by the City. This portion of the site, in common with other tidelands areas throughout the State of California, must serve statewide public purposes in addition to local public purposes. Allowable uses include maritime-related commerce, industry, fisheries, and navigation; environmental preservation; and recreation. Non-maritime-oriented commercial or industrial uses, as well as residential uses, are generally not permitted on public trust lands. The following graphic shows the location of the Public Trust/State Lands portion of the site. The proposed Project conforms to the allowable uses under the Public Trust doctrine.



PUBLIC COMMENT

An Open House was sponsored by the applicants on October 7, 2015 prior to the first public hearing on the Project EIR. The open house was held at the John F. Kennedy Library. A small number of community members attended the event, some of whom expressed opposition to the Project and some expressing support.

As of the writing of this staff report, the Planning Division has received a significant number of letters, emails, postcards, and comments on the City's web-based communication portal, Open City Hall, commenting on the Project. The number of comments responded to in the Draft Final EIR is approximately 2,200. The majority of the communications express concern about the Project and its impacts on the community and many ask the Planning Commission to deny the Project. The key areas of concern include air emissions, truck trips, potential health impacts, biological impacts, and noise associated with the proposed Project. In addition, comments express concern for the significant diminishment of the quality of life for those living in south Vallejo. The City has also received some communications expressing support for the Project and the desire to draw new industry and jobs to the City. For more detailed information please refer to the public comments and response to those comments in the Draft Final EIR.

Public comment on the Project received between November 3, 2015, the close of the public comment period on the Draft EIR, and February 3, 2017 is attached to the staff report for the Planning Commission's review and consideration (Attachment G).

ENVIRONMENTAL REVIEW

The City prepared an environmental impact report (EIR) to analyze the potential impacts associated with the Project. The findings of the Draft Final EIR are included in the staff report for informational purposes only. Staff is not recommending that the Planning Commission certify the document. The Project recommendation is to deny the Project and rely on CEQA State Guidelines Section 15270, Statutory Exemption of Title 14 of the California Code of Regulations which states that projects that are disapproved are not subject to CEQA.

1.0 Public Review Process

To initiate the EIR process, the City circulated an NOP to solicit agency and public comments on the scope of the environmental analysis to be included in the EIR. The 30-day public review period for the NOP began on May 20, 2014, and ended on June 19, 2014. The NOP was mailed and emailed to various federal, state, and local agencies, environmental groups, other organizations, and other interested individuals and groups.

A public scoping meeting was held by the City on Thursday, May 29, 2014. The purpose of this meeting was to provide the public and governmental agencies with information on the proposed Project and the CEQA process, and to give attendees an opportunity to identify environmental

issues that should be considered in the EIR. Attendees were invited to mail or email their comment letters to the City during the 30-day NOP public review period by no later than 5:00 p.m. on June 19, 2014. A total of six letters and emails were received and the comments were used to determine the scope of the EIR.

After preparation of the Draft EIR, the document was released for public review on September 3rd, 2015. The City held two public meetings to accept comments from the public on the adequacy of the draft environmental document. The first meeting was held on October 7, 2015 at the City Council chambers. The second meeting was held at the Norman King Community Center in south Vallejo on October 25, 2015. In response to requests from the public, the 45-day public review period was extended to 60 days and the public review period ended on November 3, 2015.

2.0 Project Revisions

As previously noted in the Background section of the staff report, after review of the Draft EIR and the public comments on the Project, the applicants proposed to revise the Project in an effort to reduce environmental impacts. The changes include the following:

- Removal of the proposed VMT Phase 2 Dike, which reduced potential biological impacts and potential inconsistencies with the Bay Conservation and Development Commission's (BCDC) Bay Plan relating to the 106,040 square feet of fill that was proposed to create the dike and additional laydown area.
- Removal of the 5.25-acre portion of the project site that is located in Solano County just outside the City's boundaries, but within its sphere of influence. The removal of this land from the Project reduced potential air quality impacts resulting from the conversion of the land from a Parks and Recreation designation in the Solano County General Plan and Open Space-Community Park in the City of Vallejo General Plan (the land is within the City's sphere of influence) to a more intensive use. The proposed use was not contemplated in the Bay Area 2010 Clean Air Plan and therefore any associated air emissions were not estimated in the Clean Air Plan.
- Restriction of loading and unloading of rail cars to the hours between 7:00 a.m. and 10 p.m. in order to reduce potential noise impacts to residents in the area.
- Relocation of the proposed storage shed from the southern portion of the site (formerly located on the 5.25-acre portion of the site that has been excluded) to the northern portion of the site. In addition, the shed increased in size from 6,000 square feet to 7,200 square feet near the entrance to the project site.

The changes to the Project are shown in the Draft Final EIR by using track changes. The objective is to clarify all of the changes to the project description and the resulting changes to the environmental analysis.

3.0 EIR Findings

The Draft Final EIR found that the Project would result in significant and unavoidable impacts as well as significant impacts that can be mitigated to a less than significant level. The significant unavoidable impacts occur in several issue areas including Air Quality, Cultural, Greenhouse Gas, Noise and Transportation and Traffic impacts. A summary of these significant and unavoidable impacts is outlined below.

Air Quality

- Operation of the Orcem Plant and VMT facility individually, as well as the combined operations of the two facilities together, would exceed the Bay Area Air Quality Management District (BAAQMD) CEQA levels of significance for NO_x during operations. Impacts would be **significant**.
- Combined operation of the VMT facility and Orcem Plant would exceed the BAAQMD threshold for NO_x. Cumulative impacts due to NO_x emissions during operations would be **significant**.

Cultural Resources

- Implementation of the proposed Project would result in a **significant impact** on historic architectural resources due to the loss of integrity of the potential Sperry Flour Mill Historic District associated with demolition of the flour mill, grain silos, and dock.

Greenhouse Gas Emissions

- The proposed Project would exceed the BAAQMD CEQA level of significance of 10,000 metric tons of carbon dioxide equivalent (MT CO₂E) per year. Impacts would be **significant**.
- It cannot be guaranteed that the proposed Project would be consistent with the overarching objective of the City's Climate Action Plan (CAP) to achieve the reduction targets as established for 2020 and 2035, or the state's GHG reduction goals for 2030 and 2050. Impacts would be **significant**.

Noise

- The VMT Project component would generate significant ground borne vibrations as a result of rail operations due to rolling stock on the existing jointed track; this is considered a **significant vibration impact**.

Transportation and Traffic

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- The proposed Project would cause substantial delays and queues at rail crossings (delays of over 1 minute during peak hours, or queues that block upstream intersections during the day and early evening when traffic volumes are at or near their peak hour levels) relative to delays and queues without the Project. Impacts would be **significant**.
 - The proposed Project would cause substantial delays and queues at rail crossings (delays of over 1 minute during peak hours, or queues that block upstream intersections during the day and early evening when traffic volumes are at or near their peak hour levels) relative to delays and queues in the Cumulative No Project condition. Impacts would be **significant**.
 - The proposed Project would have a substantial effect on emergency access, based on the potential delays generated by train crossings at the grade crossings in Vallejo, American Canyon, and crossings further north. Impacts would be **significant**.

In addition to the impacts that are significant and unavoidable, the Project would also result in significant impacts that can be mitigated to less than significant levels. Oftentimes there are significant and unavoidable impacts and significant impacts that can be mitigated in the same issue areas (e.g. Air Quality). The proposed Project would result significant impacts that could be mitigated to less than significant in the following issue areas: Aesthetic, Air Quality, Biological, Cultural, Geology and Soils, other Greenhouse Gas, Hazardous and Hazardous Materials, Hydrology and Water Quality, Noise and Transportation and Traffic impacts. For more information about the environmental impacts generated by the proposed Project, please refer to the Draft Final EIR.

However, as noted above, the Draft Final EIR is only provided for information purposes. Staff is not recommending certification of the document. Staff recommends that the Planning Commission rely on CEQA State Guidelines Section 15270, Statutory Exemption of Title 14 of the California Code of Regulations which states that Projects that are disapproved are not subject to CEQA.

4.0 EIR Project Alternatives

As part of the environmental review of the Project, the California Environmental Quality Act (CEQA) requires the identification of feasible alternatives to the Project. There was one feasible alternative, other than the “No Project” Alternative, that was analyzed in the Draft Final EIR. This alternative is called the “Revised Operations Alternative” (ROA). The ROA includes modifications to the Project’s operations that would help to reduce potential environmental impacts. The ROA was identified as the environmentally superior alternative in the Draft Final EIR. The applicants subsequently requested that the ROA be presented to and considered by the Planning Commission rather than the Project identified in the Project Description of the EIR. This alternative includes the following modifications to the Project operations:

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- The length of the trains serving the facility would be reduced from 77-car trains to 50-car trains which would reduce the intersection delays during rail activity.
 - A refined truck loading and weight confirmation system for Orcem would be implemented to improve the efficiency of the tanker trucks leaving the site so finished product loads would be increased from 25 to 26 tons. This would decrease truck volumes by 4% or 18 trucks per day.
 - The operations of the VMT and Orcem would be revised through ongoing fleet and equipment management which would help to reduce NOx emissions.
 - VMT would give priority to contracts with operators that use barges rather than trucks or trains which would reduce air quality, noise, and traffic impacts.

It should be noted that originally this alternative included a provision where VMT would *voluntarily* apply for a permit through the Bay Area Air Quality Management District (BAAQMD) which would allow them to purchase offsets for NOx, ROG, PM_{2.5} or PM₁₀ from the District's certified emission bank program. Since the publication of the Draft EIR, BAAQMD has stated that VMT would be *required* to obtain a permit for their stationary emission sources and are eligible to apply for offsets. The *voluntary* application for a permit can thus no longer be considered part of this alternative.

Overall, the ROA would help to reduce air quality, noise, and transportation and traffic impacts. However, even with the operational changes proposed in the ROA, the Project would still result in significant and unavoidable air quality, cultural, greenhouse gas, noise, and transportation and traffic impacts.

ENVIRONMENTAL JUSTICE ANALYSIS

An Environmental Justice Analysis" (EJA) refers to concerns that arose in the 1990s regarding the assessment of environmental impacts, primarily from the perspective of federal law, focused on the potential for projects to create adverse impacts that might be disproportionately borne by under-served or disadvantaged (minority and low-impact) communities. While federal environmental law (National Environmental Policy Act or NEPA) mandates consideration of Environmental Justice impacts, California State law recommends this analysis only under certain conditions. The proposed Project is not subject to NEPA, and analysis of Environmental Justice impacts is not required by CEQA. However, during the public review period of the Draft EIR for the Project, several members of the public requested that an EJA be prepared for the Project due to concerns about the potential for the Project to disproportionately impact low income and minority communities, particularly in South Vallejo. As a result of this feedback, City staff consulted with the applicants and they voluntarily agreed to funding the preparation of an EJA, even though an EJA was not required under CEQA. The EJA was prepared by Land Economics Consultants, LLC (LEC) in April 2016.

The EJA included an assessment of the significant and unavoidable impacts identified in the Draft Final EIR: Air Quality, Cultural Resources, Greenhouse Gas Emissions, Noise, Transportation and Traffic and their potential to create disproportionate effects on minority and low-income populations. It was found that due to the relatively high concentration of minorities in the City of Vallejo, and their relatively broad distribution throughout the city, no disproportionate impacts are expected to be created for minority populations by the proposed Project.

The EJA found that low-income populations are not so evenly distributed throughout the city and tend to be concentrated along the rail line and near industrial areas. However, the significant and unavoidable impacts generated by the Project will impact the entire community or region and not just the lower income areas including; Air Quality, Greenhouse Gas emissions, Noise, and Transportation and Traffic. Therefore, the impacts associated with the VMT/Orcem Project are not expected to be experienced disproportionately by low-income populations. It should be noted that the EJA finalized in April 2016 found that the some of the Project's noise impacts had the potential to disproportionately affect low income community members near the project site. Since April 2016, the applicants have revised the Project to limit the loading and unloading of rail car activities to the hours of 7:00 a.m. to 10:00 p.m. in order to eliminate the localized significant unavoidable noise impact generated by the Project. As a result, the revised EJA published in January 2017 found that the Project's noise impacts would not disproportionately impact low income neighborhoods because that specific impact had been eliminated. The Final EJA is provided in Attachment H.

APPEAL OF HISTORIC DETERMINATION

As previously noted, on October 6, 2015, the Vallejo Architectural Heritage Foundation filed an application with the City requesting that the existing administration building, flour mill, garage, grain silos, manager's house, dock, and barn be added to the City of Vallejo's Heritage Survey List and that the structures be designated as City Landmarks. The request was heard by the Architectural Heritage and Landmarks Commission (AHLC) on March 17, 2016. The AHLC voted to place all the structures, with the exception of the barn, which was deemed in eligible by City staff, on the City's Heritage Survey List and designated the structures as City landmarks. Staff will be bringing the appeal back to the AHLC for ratification pursuant to Section 16.38.180 on February 16, 2017.

The Applicants submitted an appeal of the decision on March 22, 2016. Appeals of AHLC decisions are heard by the City Council. The appeal has not been scheduled for a Council hearing to date. It is anticipated that the Planning Commission decision on the Project will be appealed to the City Council and staff plans to schedule both appeals on the same hearing date. This will allow the Council to consider both actions in the same hearing

CONCLUSION/RECOMMENDATION

As discussed in detail above, staff recommends that the adoption of Resolution 17-03 (Attachment A) denying the major use permit and the site development permit for the VMT/Orcem Project based on the findings provided in the resolution, this staff report, public testimony, and the substantial evidence in the record.

Delegation of Authority by the Development Services Director

In accordance with VMC §16.90.050(D) which “allows that whenever the Development Services Director finds that the decision on any application [for a site development plan/permit] is beyond his or her purview of authority, the application shall be forwarded to the Planning Commission for its determination.” Development Services Director (Planning Manager) has found the site development plan/permit application for the proposed project to be beyond her purview and has elected to transfer her authority to the Planning Commission to render a determination on the application.

APPEAL

The applicant or any party adversely affected by the decision of the Planning Commission may, within ten days after the rendering the decision of the Planning Commission, appeal in writing to the City Council by filing a written appeal with the City Clerk. Such written appeal shall state the reason or reasons for the appeal and why the applicant believes he or she is adversely affected by the decision of the Planning Commission. Such appeal shall not be timely filed unless it is actually received by the City Clerk or designee no later than the close of business on the tenth calendar day after the rendition of the decision of the Planning Commission. If such date falls on a weekend or City holiday, then the deadline shall be extended until the next regular business day.

Notice of the appeal, including the date and time of the Planning Commission’s consideration of the appeal, shall be sent by the City Clerk to all property owners within two hundred or five hundred feet of the Project boundary, whichever was the original notification boundary.

The Commission may affirm, reverse, or modify any decision of the Planning Division that is appealed.

ATTACHMENTS

- A. VMT/Orcem Planning Commission Resolution (17-03)
- B. VMT Project Plans dated 6/2/16
- C. Orcem Project Plans dated 11/5/15
- D. Fiscal and Economic Impact Study, prepared by Field Guide Consulting (November 7, 2014)
- E. VMT/Orcem Statement of Benefits

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- F. Policy Consistency Analysis Table
 - G. Public Comment - November 4, 2015 - February 3, 2017
 - H. Environmental Justice Analysis, January 2017
 - I. Draft Final EIR for VMT/Orcem Project, February 2017