RETURN

EVERGREEN • EAST HILLS VISION STRATEGY

SAN JOSÉ, CALIFORNIA

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EIR

APPENDIX

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MEMORANDUM

ON UTILITIES

MEMORANDUM

To: John Hesler
David J. Powers & Associates

From: Mike Sheehy
Ruth and Going, Inc.

Ron Conn
HMH Engineers

Date: Revised December 21, 2005

Subject: Evergreen • East Hills Vision Strategy
Utility Information for EIR

The below memorandum is meant to provide information for the preparation of the environmental impact report being prepared for the Evergreen/East Hills Vision Strategy. The number of dwelling units and square footage of commercial uses has been taken from the preliminary zoning documents prepared on behalf of the developers of the various properties.

Sanitary Sewer

Arcadia Property:

Sanitary sewer service to the site is provided by the City of San Jose through mains adjacent to the site. The Arcadia property has a 10-inch line on its north border, in Quimby Road, a 36-inch line to the West at Brahms and Chopin Avenues, and a 30-inch line on its south side, which borders Meadowfair Park, Leyva Middle School, and a mobile home park. The expected development proposes 1,875 dwelling units and up to 100,000 square feet of commercial with a total estimated peak flow of 0.97 Million Gallons per Day (MGD). This flow will be split between the 10-inch line in Quimby Road and the 36-inch line in Chopin Avenue. The main in Quimby Road joins a 12-inch main flowing west in Tully Road and a 15-inch sewer flowing north in King Road.

In order to determine the existing flows in the surrounding sewer mains, Sigma 910 Flow Meters were installed in both the main in Quimby Road (FM #2) and Brahms Avenue (FM # 3) over a period of several days. The flows in the existing 10-inch main in Quimby Road were monitored from July 8 to mid July 17, 2005. According to the flow monitoring, the average flow in this pipe varied from 0.246 MGD to 0.286 MGD, while the maximum flow varied from 0.333 MGD to 0.469 MGD. The maximum flow depths in the pipe varied from approximately 5.5 inches to 7.95 inches. Based on the flow monitoring, the available capacity of the main in Quimby Road is approximately 0.3 MGD. While flow monitoring in the 15-inch main in King Road was not done as a part

of this analysis, according to the City, the main in King Road is 95% full, while the 12-inch main in Quimby Road is 85% full. Flow monitoring was also conducted in the existing 30-inch main upstream of the 36-inch main in Brahms Avenue from April 27 to May 9, 2005. The results of the monitoring showed an average flow ranging from 1.849 MGD to 2.103 MGD, with a maximum flow varying from 8.827 MGD to 3.340 MGD. The depth of flow in the pipe varied from approximately 9.3 inches to 9.9 inches.

Therefore, by splitting the flow from the site between the 10-inch in Quimby Road and the 36-inch in Brahms Avenue, the existing network will be able to accept the discharge from the development. The flow permitted to be discharged to Quimby Road will be determined by the City based on sewer capacity and flow monitoring data. Additional sewer analysis and discharge requirements will be incorporated in the final site design.

Campus Industrial Property – Berg:

The Berg property is bounded on the North by Aborn Road, the South by Fowler Road and the IDS and Legacy properties, the East by open hillside, and the West by Yerba Buena Road. Three 8-inch lines serve the property directly; in Aborn Road, in Strada Circolare, and in Altia Avenue at Yerba Buena Road. The expected development proposes 1,100 dwelling units (500 dwelling units north of Fowler Road, and 600 dwelling units south of Fowler Road) with an estimated peak flow of 0.03 MGD to Aborn Road, 0.28 MGD to Michelangelo Drive, and 0.34 MGD to Altia Avenue.

Flow monitoring was done in several pipes downstream of the Campus Industrial properties, including the 8-inch sewer in Aborn Road at Ruby (FM #6), the 8-inch sewer in Michelangelo Drive at Via Borghese (FM #7), the 8-inch sewer in Fowler Road at Ruby (FM #8), and the 6-inch sewer in Delta Road at Ruby (FM #9). Each of the locations was monitored from April 27 to May 9. In addition, monitoring was conducted during this same period for the 12-inch sewer pipe in San Felipe Road north of Yerba Buena Avenue (FM # 5), and the 24-inch main in Aborn Road at Yellowleaf Court (FM # 4).

In reviewing the improvement plans for the "Evergreen Phase IV Sewer Interceptor, 3-12144", dated October 1996, we found that the interceptor main was specifically designed to the existing mains in Fowler Road and Delta Road would not connected to the interceptor in Ruby Avenue when the interceptor was constructed. This would explain the high flows recorded in San Felipe Road at Flow Meter #5, and the low flows observed in the 24-inch main at Flow Meter # 4, at Aborn Road at Yellowleaf Court. Therefore, this project should connect the exiting sewer mains in Aborn Road, Michelangelo Drive, Fowler Road and Delta Road to the interceptor main in Ruby Avenue. This will then bypass the flows around San Felipe Road and increase the capacity in this main. With this modification, the existing sewer network downstream of the Campus Industrial properties is available to accept the flows anticipated from the development. The assumption that the existing mains in Fowler Road and Delta Roads are not tied to the interceptor in Ruby Avenue must be confirmed by a field observation.

Campus Industrial Property – IDS:

The IDS property is bounded on the North and East by the Berg property, the South by an existing industrial campus, and the West by Yerba Buena Road. An 8-inch line directly serves the property in Verona Road at Yerba Buena Road. This main continues flowing through subdivisions to the west, ultimately connecting to the main flowing west in Delta Road. The main in Delta Road changes from 8-inch east of Pinot Blanc Way to a 6-inch west of Pinot Blanc, and continues as a 6-inch to San Felipe Road. The expected development proposes 225 dwelling units with an estimated peak flow of 0.14 MGD.

Flow monitoring was done in the 6-inch sewer in Delta Road east of Ruby Avenue (FM # 9) in late April and early May. The flow monitoring showed available capacity in this 6-inch main of approximately 0.2 MGD. While the estimated peak flow from the IDS property is less than this available capacity, it is anticipated that the flow from the north half of the Legacy property will also be tributary to this line. Therefore, it will be necessary to replace approximately 950 lineal feet of this 6-inch line, between Pinot Blanc Way and Ruby Avenue) with an 8-inch main to provide the capacity needed to serve the two projects. As previously stated in the discussion for "Campus Industrial Property – Berg", a review of the improvement plans for the Evergreen Phase IV Sewer Interceptor shows that the 6-inch main in Delta was not connected to the 15-inch interceptor main. This should be confirmed in the field, and if true, the flow from Delta should be directed to the interceptor main.

Evergreen Valley Community College:

The Evergreen Valley Community College site is bounded on the west by San Felipe Road, on the south by Yerba Buena Road, on the east by the existing Community College campus, and on the north by Evergreen Creek. Sanitary service to the site is provided by a 12-inch main in San Felipe Road. The expected development proposed 500 residential units and 100,000 square feet of commercial space, 75,000 square feet of new office and a new 23,000 square foot library. The estimated peak flow for this new development is 0.33 MGD. Flow monitoring identified available capacity in the 12-inch sanitary sewer main in San Felipe Road.

Pleasant Hill Golf Course:

Sanitary sewer service to the site is provided by the City of San Jose through mains adjacent to the site. Sanitary sewer lines servicing the site consist of a 24-inch pipe on the east side of White Pond, a 10-inch pipe on the south side of Tully Road, and an 8-inch pipe on the east side of Vista Verde Drive. The expected development proposes 825 dwelling units with an estimated peak flow of 0.40 MGD. Based on discussions with the Department of Public Works staff, it was determined that the existing sanitary sewer lines serving the site have adequate capacity.

Legacy:

The Legacy site is located easterly of Yerba Buena Road both north and south of Evergreen Creek. Sanitary service to the area of property south of Evergreen Creek is provided by an existing 12-inch line in Yerba Buena Road. Sanitary service to the area of property north of Evergreen Creek is provided by an existing 8-inch line in Yerba Buena Road. The expected development proposes 510 residential units south of Evergreen Creek and approximately 165 residential units north of Evergreen Creek, with estimated peak flows of 0.29 MGD and 0.11 MGD respectively.

Flow monitoring determined that the existing 12-inch line in Yerba Buena Road (FM # 11) has adequate capacity to serve the 510 units located south of Evergreen Creek. As stated in the discussion for "Campus Industrial Property – IDS", the existing 6-inch line in Delta Road east of Ruby Avenue will be replaced with an 8-inch line in order to provide capacity for the combined discharge of IDS and Legacy north.

Water Service

Arcadia Property:

Water service to the Arcadia property is provided by the San Jose Municipal Water System. The site is located in Pressure Zone #1.

Potable water is available to the property from existing mains in the streets surrounding the site. There is a 12-inch water main in Quimby Rd, along the north end of the site. An 8-inch water main exists along the site's western border in Chopin Avenue, and an 8-inch main stubs to the site at the easterly terminus of Brahms Avenue, also along the site's western edge. An 8-inch water main exists within the existing industrial property located at the Northeast corner of the site.

New 8-inch and 12-inch water mains will be constructed throughout the development to provide potable needs and fire protection requirements. In addition, Municipal Water staff is requesting a new water main be constructed along Capitol Expressway from Quimby Road south approximately 2,800 lineal feet to the intersection with Neiman Boulevard, tieing to existing mains.

The expected fire flow requirements for the site is 4,500 gallons per minute, the maximum demand for a mixed use development of this type. In conversations with Municipal Water staff, the system is capable of meeting this demand.

Recycled water is not currently available in the area of the site, but is anticipated in the future. Therefore, Municipal Water is requiring the development be designed for recycled water for all non-potable water needs. This will require construction of recycled pipelines in the new streets throughout the development, as well as along the Quimby Road frontage and along Capitol Expressway from Quimby Road to Neiman Avenue. Until such time as recycled water is available to the site, all irrigation uses will be from potable water supplies. However, at such time as recycled water becomes available, the construction of the dual piping system will allow the irrigation to be converted without new capital construction.

Campus Industrial Property - Berg:

Water service to the Berg property is provided by the San Jose Municipal Water System. The site is located in Pressure Zone #3.

Existing potable water mains located adjacent to the site include an 18-inch main in Aborn Road to the North, an 18-inch main in Fowler Road west of Yerba Buena Road, a 12-inch main in Altia Avenue, and an 18-inch main in Yerba Buena Road to the West. Additionally, two 18-inch mains cross the site outside of existing streets, one being within the proposed alignment of the extension of Yerba Buena Road between Fowler Road and Aborn Road, and the other going in a generally east-west direction from the intersection of Yerba Buena Road and Altia Avenue to the existing Conrad Reservoir

located on the hills east of the property. Of the three existing reservoirs located near the property (a 1 million gallon (mg) reservoir is located on the north side of Aborn Road, east of Yerba Buena Road, and the 1.5 mg Fowler Road Reservoir is located at the northwest corner of Fowler Road and Yerba Buena Road), only the Conrad Reservoir, with a capacity of 4.0 (MG), provides water to the site.

New 8-inch and 12-inch water mains will be constructed throughout the development to provide potable needs and fire protection requirements.

The expected fire flow for the development is 2,000 gallons per minute. A conversation with Municipal Water staff has determined that adequate capacity exists to service the proposed development.

Recycled water is available to the site from mains (12-inch) in Yerba Buena Road, Fowler Road, Altia Avenue, and Aborn Road. The project proposes to extend these recycled water mains into the development to provide for the irrigation of public and private open space areas.

Campus Industrial Property - IDS:

Water service to the IDS property is provided by the San Jose Municipal Water System. The site is located in Pressure Zone #3.

The IDS property has both an 18-inch potable water main and a 12-inch recycled water main in Yerba Buena Road along the site's westerly edge. Potable water and fire protection will be taken from this 18-inch main in Yerba Buena by extending new mains throughout the development. Similarly, new recycled water mains extended from the existing main will provide irrigation service to both public and private open spaces.

The expected fire flow demand for the site is 2,000 gallons per minute. According to Municipal Water staff, the System is capable of meeting these demands.

Evergreen Valley Community College:

Water service to the Evergreen Valley College site is provided by the San Jose Municipal Water System. The site is located in Pressure Zone #2.

There is an existing 12-inch potable water main located adjacent to the site in San Felipe Road. Potable water and fire protection will be taken from the 12-inch main in San Felipe Road by extending new mains throughout the development.

Recycled water is available to the site from mains in Yerba Buena Road. The project proposes to extend recycled water mains into the development to provide irrigation for public and private open space areas.

Pleasant Hill Golf Course:

San Jose Water Company (SJWC) provides water service to the project site. Water is supplied to the site through existing mains in White Road, Vista Verde Drive and Flint Avenue. Based on City of San Jose flow requirements of 3750 gallons per minute, SJWC has determined that adequate capacity exists to service the proposed project.

Recycled water is not available near this site.

Legacy:

Water service to the Legacy property is provided by the San Jose Municipal Water Company. The site is located in Pressure Zone #3. There is an existing 18-inch potable water main in Yerba Buena Road that has adequate capacity to serve the proposed development up to an elevation of 630 feet. Approximately 50 units above the elevation of 630 feet require a booster pump for domestic service.

Recycled water is available to the site from an existing 24-inch main in Yerba Buena Road. The project proposes to extend recycled water mains into the development to provide irrigation for public and private open spaces.

Storm Drainage:

Arcadia Property:

The Arcadia property is tributary to Lower Silver Creek, which flows south to north along the site's westerly edge. Lower Silver Creek is a Santa Clara Valley Water District facility. Formerly an open channel, the Creek was placed in a 72-inch cast in place (CIP) pipe in the mid-to-late 1970s. Lower Silver Creek flows from the southwest corner of the property to Quimby Road, where it continues in a pipe across the Eastridge Shopping Center. There is an existing City of San Jose stormwater line, consisting of 18-inch to 30-inch pipelines, flowing westerly in Quimby Road along the site's northerly edge. This main connects to the Lower Silver Creek where the Creek crosses Quimby Road.

The site slopes in a generally southeast to northwest direction with a gradient of less than 0.5 feet per 100 feet (0.5%). According to the Flood Insurance Rate Map, the property is not subject to inundation from a 100-year flood event.

All drainage from the site will be collected in a public storm drainage system of pipes constructed throughout the development and discharged to Silver Creek. Prior to discharge to the Creek, the on-site drainage will run through an Hydromodification Management Plan (HMP) basin.

Since the entire site is currently tributary to the Lower Silver Creek, it is not proposed to change or increase this tributary area, and discharge from the HMP basin up to a 10-year storm event will be designed to mirror the existing runoff from the site, there should be no capacity problems with downstream storm drainage facilities.

Campus Industrial Property – Berg:

The Campus Industrial Property slopes from east to west at approximately 5 feet per 100 feet (5%). The "north half" of the Berg property (that portion north of Fowler Road) is in the Fowler Creek watershed, while the "south half" of the Berg property (that portion south of Fowler Road) is in the Evergreen Creek watershed. Both Fowler Creek and Evergreen Creek watersheds are tributary to Thompson Creek, a facility flowing north to south along San Felipe Road, several miles west of the site. Thompson Creek, Evergreen Creek and Fowler Creek are all Santa Clara Valley Water District facilities. While all three creeks are open channels, drainage from development within the Fowler Creek watershed has been diverted into a large diameter pipeline referred to as the Fowler Creek Pipeline.

According to the Flood Insurance Rate Maps, the property is located outside of the area subject to flooding from a 100-year event.

Fowler Creek flows enter the Berg property in two branches, or forks, at two locations. The North Fork enters the "north half" of the Berg property from the hills to the east and continues across the property in an east-to-west direction in an ill-defined channel of only

a few feet in depth. Water is seldom observed to flow in this channel. While Fowler Creek continues west of the Berg property in an open channel, no provision has been made to allow it to flow under Altia Avenue at the site's westerly edge. The South Fork of Fowler Creek enters the "south half" of the Berg property from the hills east of the property at its northeast corner, adjacent to Fowler Road. The South Fork of Fowler Creek has no channel crossing the property after it exits the hills.

The Fowler Creek pipeline has been extended in Michelangelo Drive to the site's westerly edge as a part of the development of the Evergreen Specific Plan in the 1980s and 1990s. This pipeline will be extended across the Berg property to collect drainage from both the North and South Branches of Fowler Creek. For the North Fork, the pipeline will be continued in the extension of Michelangelo Drive to Yerba Buena Road, turn south in Yerba Buena and then east to the North Fork at the eastern edge of the property. For the South Fork, the pipeline will be constructed in Fowler Road from Altia Avenue to the South Fork. Two debris basins will be constructed on the property, one at each location where the Creeks enter the property. The purpose of the basins is to collect sediment and debris before the flows are collected in the pipelines. Refer to the separate memorandum by Schaaf and Wheeler for a discussion of the sizing and operation of the basins.

Drainage from the site will be collected in a public storm drainage system of pipes constructed throughout the development and collected in one or more HMP basins. It will then be discharged to existing City of San Jose storm drain pipes adjacent to the site. Besides the 66-inch Fowler Creek pipe in Michelangelo Drive, other City of San Jose storm drain pipelines available to the "north half" of the property include a 24-inch main in Aborn Road and 54-inch main in Altia Avenue. While the majority of the site will be drained to the 66-inch in Michelangelo Drive, portions of the site adjacent to Aborn Road, Altia Avenue and Fowler Road may connect to the mains in these streets. For the "south half", there is a 24-inch main in Yerba Buena Road that flows to a 48-inch main in Altia Avenue, and a 18-inch main in Yerba Buena that is collected by an 18-inch main in Veronia Avenue. The "south half" of the site will drain to Yerba Buena Road, Altia Avenue and Verona Avenue and ultimately to Evergreen Creek.

The storm drain pipes stubbed to the east edge of the Campus Industrial Property were constructed in the mid to late-1990's as a part of the Evergreen Specific Plan. These pipes were sized to meet the City's current design criteria of handling runoff from at least a 10-year storm event. According to the "Storm Drainage Map", dated July 1995, prepared by MacKay and Somps, the existing 48-inch storm line in Altia Avenue was sized for the majority of the industrial area south of Fowler Road, including Berg South, IDS and Legacy North. Therefore, collecting the entire Berg "south half" in a single HMP basin and discharging it to the main in Yerba Buena and Altia Avenue should not cause a capacity problem.

Campus Industrial Property – IDS:

The IDS property slopes in a generally east-to-west direction at approximately 5 feet per 100 feet (5%). It is tributary to Evergreen Creek, an open channel that flows to Thompson Creek. Both Thompson Creek and Evergreen Creek are Santa Clara Valley Water District facilities.

Drainage from the site will be collected in a public storm drainage system of pipes constructed throughout the development and collected in an HMP basin. It will then be discharged to existing City of San Jose storm drain pipes adjacent to the site which includes a 36-inch main along the site's Yerba Buena Road frontage. This pipe flows to an 18-inch main in Veronia Avenue and ultimately to Evergreen Creek.

Evergreen Valley Community College:

The Evergreen College property slopes in a generally east-to-west direction at approximately 2 feet per 100 feet (2%). It is tributary to Evergreen Creek, an open channel that flows to Thompson Creek directly. Both Thompson Creek and Evergreen Creek are Santa Clara Valley Water District facilities.

Drainage from the site will be collected in a private storm drainage system of pipes and discharged to existing City of San Jose storm drain pipes adjacent to the site. There is an existing 24-inch main in San Felipe Road that discharges to Thompson Creek and a 42-inch main in San Felipe Road that discharges to Evergreen Creek.

Since the site is currently tributary to the two creeks, and discharge from the HMP basin up to a 10-year storm event will be designed to mirror the existing runoff from the site, there should be no capacity problems with downstream storm drainage facilities.

Pleasant Hill Golf Course:

The Pleasant Hills site slopes from east to west at approximately ___ feet per 100 feet (___%). The site is in the Ruby Creek watershed, which is tributary to Silver Creek.

Stormwater lines serving the project consist of an 18-inch to 24-inch pipeline in the west side of Vista Verde Drive, an 84-inch pipeline in Tully Road, a 30-inch pipeline in White Road at the southerly end of the project, and a 30-inch pipeline White Road at the northerly end of the project. These storm lines discharge into Silver Creek, an existing open channel along the west side of White Road. A total of three existing outfall structures serve the existing storm drain collection system.

All drainage from the site will be collected in a public storm drain system constructed throughout the development. Prior to discharge to Silver Creek the on-site drainage will run through a Hydromodification Management Plan basin. Since the entire site is

currently tributary to the Silver Creek, it is not proposed to change or increase this tributary area, and discharge from the HMP basin up to a 10-year storm event will be designed to mirror the existing runoff from the site, there should be no capacity problems with downstream storm drainage facilities.

Legacy:

The Legacy property slopes in a generally east-to-west direction at approximately 5 feet per 100 feet (5%). The portion of the Legacy property on the south side of Evergreen Creek is tributary to Evergreen Creek and Yerba Buena Creek. Drainage from the site will be collected in a public storm drainage system of pipes and discharged to an HMP basin(s). Discharge from the HMP basin(s) will connect to existing City of San Jose storm drain pipes in Yerba Buena Road. A 24-inch pipe in Yerba Buena Road discharges to Evergreen Creek and a 27-inch pipe in Yerba Buena Road discharges to Yerba Buena Creek.

As with the other sites, collecting the storm runoff from the site into a single HMP basin should not cause a problem from a capacity standpoint since discharge from the HMP basin up to a 10-year storm event will be designed to mirror the existing runoff from the existing site.