



Appendix H
Technical Memorandum
Utilities and Service Systems





1.0 UTILITIES AND SERVICE SYSTEMS

This section evaluates the potential impacts associated with utilities and service systems related to ARTIC. This section discusses power distribution (electricity), water supply, wastewater treatment, stormwater drainage and run-off, and solid waste collection and removal, including recycling.

1.1 ENVIRONMENTAL SETTING

This section discusses the existing public utility systems within the study area. For utilities, the study area is within or adjacent to ARTIC.

Utility providers throughout the study area include municipal agencies, special utility districts, and private companies providing electricity, water, wastewater collection, wastewater treatment, stormwater collection, natural gas, and telecommunications services.

1.1.1 Water Supply

Through the City of Anaheim PUD, the City operates its own water utility and water treatment plant (City of Anaheim, 2009). The City utilizes two primary sources of water supply: The Orange County Groundwater Basin wells and imported water from MWD. MWD obtains its water from the Colorado River and the State Water Project in northern California. The City currently pumps approximately 66 percent of its drinking water from the County of Orange groundwater basins and purchases the remainder from the MWD (City of Anaheim, 2005).

OCWD has the responsibility for managing and conserving the groundwater basin and currently owns and operates approximately 1,000 acres of recharge spreading facilities located in cities of Anaheim and Orange adjacent to the Santa Ana River and Santiago Creek. OCWD has built a recharge system that supplies the majority of water. Other than recycled water, OCWD primarily recharges the Basin with water from the Santa Ana River and to a lesser extent with imported raw water purchased from MWD. As of January 2008, OCWD began recharging recycled water from the Groundwater Replenishment System (GWRS). The GWRS can currently produce up to 72,000 acre-feet per year of recycled water, and has increased the County of Orange’s water independence by providing a locally controlled, drought-proof supply of safe, high-quality water (Psomas, 2009).

The City’s water distribution system is generally divided into two main geographic areas, based on elevation: the Flatland Area and the Hill and Canyon Area. The Flatland Area is approximately 21,000 acres, situated generally north and west of the Santa Ana River, and almost entirely served by groundwater (with MWD imported water supplemented as necessary). ARTIC will be situated in the Flatland Area, west of the Santa Ana River, east of I-5, south of the Southern California Edison (SCE) easement, and north of the City limit. The Hill and Canyon Area is approximately 11,000 acres, situated generally south and east of the Santa Ana River, and is served primarily by imported water from the MWD.





1.1.2 Wastewater

Sewage created throughout the City is collected by the City’s sewer collection system facilities and conveyed to trunk sewers owned and maintained by the OCSD, which then treats the sewage at regional facilities (City of Anaheim, 2009). Two Orange County wastewater treatment plants serve the City. Plant 1 has a current capacity of 144 million gallons per day (mgd) and Plant 2 has a current capacity of 108 mgd. These capacities are expected to expand to 204 mgd for Plant 1 and 144 mgd for Plant 2 (City of Anaheim, 2009).

Most of the sewer system is adequate for existing and future development. Some areas will require additional facilities to keep pace with future needs. Various sewer lines are considered deficient (City of Anaheim, 2009). ARTIC is surrounded on three sides by OCSD Trunk Sewer lines along State College Boulevard, along the eastern edge of the Santa Ana River, and to the north of ARTIC, running parallel to the train tracks. A small portion of the sewer trunk line that runs along State College Boulevard, between Katella Avenue and Gene Autry Way, is considered to be in a state of deficiency. A new 18-inch sanitary sewer line will be installed from ARTIC to connect into the main sanitary sewer.

1.1.3 Storm Drains

The local storm drains that serve ARTIC are maintained under the jurisdiction of the City and Caltrans. There are also major storm drains under the jurisdiction of the OCFCD. Storm drains collect rainwater and other urban runoff from the community. This water travels through street gutters to storm drains, which channel the runoff to the Santa Ana River and eventually to the ocean.

Storm drains run beneath most streets with inlets along the curb face. The City is divided into 44 distinct drainage districts that are supported by a system of regional, intermediate, and municipal storm drainage facilities (City of Anaheim, 2009). Onsite water flows to the Santa Ana River via existing connections. Douglass Road runoff will flow to the river through existing connections.

1.1.4 Solid Waste

Solid waste collection and disposal is provided for the City through a private contractor. After the waste is collected, it is processed through the Material Resource Recovery Facility. Remaining non-recyclable waste is processed and consolidated before delivery to southern California landfills (City of Anaheim, 2009).

All municipal solid waste generated in the study area will be disposed of at any of the three County of Orange landfills. All three active landfills accept municipal solid waste (trash) and are permitted as Class III landfills. Class III landfills accept only non-hazardous municipal solid waste for disposal; no hazardous or liquid waste is accepted (County of Orange, 2003). The Olinda Alpha Landfill, with a permitted life to 2023, is the closest facility to ARTIC. It will likely be the solid waste facility most often receiving waste from the project area, although the





possibility remains that waste may be disposed of at either or both of the other facilities, depending upon daily permitted capacity and actual closure date (City of Anaheim, 2005).

The Countywide Integrated Waste Management Plan (CIWMP) requires that the County of Orange maintain a minimum of 15 years of disposal capacity. OC Waste & Recycling sets long range strategic planning goals to ensure that solid waste is safely disposed of and that future disposal needs are met, and administers the CIWMP. The Regional Landfill Options for Orange County strategic plan was developed to evaluate options for solid waste disposal over the next 40 years. In accordance with the City's diversion programs, the Regional Landfill Options for Orange County program, and the projected landfill capacities, it is assumed that adequate capacity is available for the City for the foreseeable future (City of Anaheim, 2009).

1.1.5 Electricity

The City of Anaheim PUD will provide electricity to ARTIC. The City's electric supply comes from resources located in or near the City and across the western US. Power supply comes primarily from PUD-owned interest in the Intermountain Power Project in Utah and the Magnolia Power Plant in Glendale, California. Electricity is delivered through PUD interstate and SCE interstate high-voltage transmission lines (City of Anaheim, 2010).

Power purchases and seasonal power exchanges, along with market purchases as necessary to meet peak demand, provide the overall electric supply to the City. SCE power lines in the project vicinity are currently serving existing demand. The electrical distribution system consists of approximately 1,500 circuit miles of transmission and distribution lines, of which 500 miles are underground. Eleven distribution substations are located throughout the City. Nearest to ARTIC are the Lewis and Katella Substation. The PUD provides its current customer base with more than 595,000 kilowatts and 3.3 billion kilowatt-hours annually (City of Anaheim, 2009).

The PUD provides service for the City, and will provide service for new developments within the Platinum Triangle, including ARTIC. A minimum service of 4.8 Megavolt Ampere (MVA) will be requested to serve ARTIC's electrical needs, which includes a future 15 percent increase allowance. A 1,000 kW emergency generator will also be available to provide supply to ARTIC in the event of utility power loss (Buro Happold, 2010).

1.1.6 Natural Gas

Natural gas supplies to California are expected to remain plentiful for several decades. The total resource base (gas recoverable with today's technology) for the lower 48 states is estimated to be about 975 trillion cubic feet, enough to continue current production levels for more than 50 years. Technology enhancements will continue to enlarge this resource base. Production capacity increases remain less certain. Despite this concern, production in the continental US is expected to increase from 17.1 trillion cubic feet in the 1994 base year to 25.9 trillion cubic feet in 2019 (California Energy Commission, 2000). ARTIC is within the service area of Southern California Gas Company (SCG) which is a utility provider under the Sempra Energy Company.





The availability of natural gas service is based upon present conditions of gas supply and regulatory policies. As a public utility, SCG is under the jurisdiction of the Public Utilities Commission and federal regulatory agencies. Should these agencies take any action that affects gas supply, or the conditions under which service is available, gas service will be provided in accordance with revised conditions.

SCG provides gas service in the City and has facilities throughout the City. SCG has gas lines along Orangewood Avenue, State College Boulevard, Katella Avenue, Gene Autry Way, and Lewis Street (City of Anaheim, 2005). SCG currently has facilities in the City, and gas mains for ARTIC could be provided from existing SCG gas mains located in various locations throughout the City (City of Anaheim, 2009).

Natural gas may be considered as the fuel type for ARTIC's emergency generator. The natural gas supply from the City mains cannot be considered a guaranteed supply (Buro Happold, 2010). Diesel may be considered as an alternate fuel.

1.1.7 Telephone Service

Telephone and cable television service are provided by AT&T and Time-Warner throughout the Platinum Triangle (City of Anaheim, 2008). While development of ARTIC may contribute to the cumulative demand on the telephone and/or cable television service, due to the expandable nature of these services, systems can be upgraded as necessary by the provider without significant impacts (City of Anaheim, 2008).

1.2 THRESHOLDS OF SIGNIFICANCE

According to the CEQA Guidelines, the thresholds of significance for Utilities and Service Systems are defined by:

- a) *Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*
- b) *Would the project require or result in the construction of new water or wastewater treatment facilities (including sewer (waste water) collection facilities) or expansion of existing facilities, the construction of which could cause significant environmental effects?*
- c) *Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*
- d) *Would the project have sufficient water supplies available to serve the project (including large-scale developments as defined by PRC § 21151.9 and described in Question No. 20 of the Environmental Information Form) from existing entitlements and resources, or are new or expanded entitlements needed?*





- e) *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*
- f) *Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*
- g) *Would the project comply with Federal, State, and local statutes and regulations related to solid waste?*
- h) *Would the project result in the need for new systems or supplies, or substantial alterations related to electricity?*
- i) *Would the project result in a need for new systems or supplies, or substantial alterations related to natural gas?*
- j) *Would the project result in a need for new systems or supplies, or substantial alterations related to telephone service?*
- k) *Would the project result in a need for new systems or supplies, or substantial alterations related to television service/reception?*

1.3 PROJECT IMPACTS

- a) ***Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*** (Less Than Significant Impact)

Point sources, which in the case of ARTIC will include sewage from on-site sanitary systems, will be discharged to a new local collection system and then to the existing sanitary sewer system. It will be treated by OCSO. During construction of ARTIC, construction personnel will use rented portable restrooms and sinks. Wastewater will be transported to a wastewater treatment facility for proper treatment. Less than significant impacts are anticipated for this issue area.

- b) ***Would the project require or result in the construction of new water or wastewater treatment facilities (including sewer (waste water) collection facilities) or expansion of existing facilities, the construction of which could cause significant environmental effects?*** (Less Than Significant Impact)

During construction of ARTIC, construction personnel will use rented, portable restrooms and sinks. Wastewater will be transported to a wastewater treatment facility for proper treatment.





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ARTIC is expected to create approximately 71,600 gallons per day of wastewater (Psomas, 2009; City of Anaheim, 2005). This represents approximately 0.02 percent of the current available combined capacity of 348 mgd between Plants 1 and 2 for the City (City of Anaheim, 2005). This is considered a negligible increase in wastewater flow going into the existing treatment facilities. ARTIC will include wastewater reduction strategies, such as water recycling, within its design goals that will further reduce wastewater created on-site.

The existing 8-inch sewer line at Douglass Road, south of Katella Avenue, that currently serves the Industrial property and Ayres Hotel will remain and will not be disturbed by ARTIC. A new 18-inch sanitary line will be installed to serve ARTIC and will connect with the existing OCSA sanitary line at Katella Avenue.

During construction of ARTIC, water trucks will supply water to the project. The use of water trucks is required during construction to comply with Fugitive Dust Rule 403. This water will be supplied by local sources.

Other than the installation of a new 16-inch water transmission main in Douglass Road, ARTIC will not require or result in the construction of new water facilities or expansion of existing facilities because the projected use of the volume of water at ARTIC will not exceed existing or projected water uses presented in the Platinum Triangle Water Supply Assessment (WSA) and the City's 2005 UWMP (City of Anaheim, 2009; City of Anaheim, 2005). The Anaheim Metrolink/Amtrak Station and existing facilities on the ARTIC site currently have a stated wastewater usage. Operation of ARTIC will have a negligible increase in wastewater in addition to the existing amount. Less than significant impacts are anticipated for this issue area.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? (Less Than Significant Impact)

The project site is currently developed with industrial buildings and associated parking lots. The project site is covered with impervious surfaces and the rate or volume of stormwater generated by ARTIC will not be greater than the existing conditions. According to the Platinum Triangle Drainage Study, the project site is located within Benefit Zone SD-20, which is part of District 27 drainage area and is directly tributary to the Santa Ana River. Additional lines into the zone are not anticipated. Development in this area is based on a 25-year storm frequency and the appropriate surface flow limitations (City of Anaheim, 2009).

The design of the storm drainage facilities for ARTIC will be divided into the Douglass Road and Caltrans SR-57 Drainage System, and a drainage system specifically designed for ARTIC, including the building, the plaza and the parking areas (B. Jones, electronic mail, January 15, 2010).

Storm drain facilities for Douglass Road and SR-57 will include the construction of a new 48-inch reinforced concrete pipe, a pump station on the east side of Douglass Road including a diversion structure to discharge the water, a new trunk line located at the west side of Douglass





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Road, the removal and reconstruction of an existing 48-inch reinforced concrete pipe, and a new manhole structure (B. Jones, electronic mail, January 15, 2010).

Storm drain facilities for ARTIC will be separated into three watershed areas for stormwater surface runoff. These watersheds include the collection of stormwater from the following areas:

- Parking lot south from the LOSSAN Corridor;
- Building pads and underground area; and
- Parking area north of the Plaza (B. Jones, electronic mail, January 15, 2010).

The RWQCB criteria to control the discharge of pollutants associated with stormwater runoff will be met through the implementation of BMPs either based on volume or flow. The identified BMPs will be in compliance with the current municipal stormwater permit (B. Jones, electronic mail, January 15, 2010). Less than significant impacts are anticipated for this issue area.

d) *Would the project have sufficient water supplies available to serve the project (including large-scale developments as defined by PRC § 21151.9 and described in Question No. 20 of the Environmental Information Form) from existing entitlements and resources, or are new or expanded entitlements needed?* (Less Than Significant Impact)

During construction of ARTIC, water trucks will supply water to the project. The use of water trucks is required during construction to comply with Fugitive Dust Rule 403. This water will be supplied by local sources.

The WSA for the expansion of the Platinum Triangle (City of Anaheim, 2009) has found that there will be sufficient water supply to provide water to ARTIC and the rest of the Platinum Triangle. The City of Anaheim PUD will be able to continue to meet its future demand with imported water and groundwater supplies (Psomas, 2009). Less than significant impacts are anticipated for this issue area.

e) *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?* (Less Than Significant Impact)

ARTIC is expected to create approximately 71,600 gallons per day of wastewater. This represents approximately 0.02 percent of the current available combined capacity of 348 mgd between Plants 1 and 2 for the City. This is considered a negligible increase in wastewater flow going into the existing treatment facilities. ARTIC will include wastewater reduction strategies, such as water recycling, within its design goals that will further reduce wastewater created on-site. This is





considered a negligible increase in wastewater flow going into the existing treatment facilities. Less than significant impacts are anticipated for this issue area.

- f) *Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*** (Less Than Significant Impact)

During construction, demolition material will be recycled on-site and off-site to reduce the volume of material required for disposal to the landfills. The excess soil generated during excavation will be transported to landfills for daily cover or transported to other developments requiring fill. During operation, ARTIC will create minimal daily solid waste. This will account for less than one percent of the combined daily capacity of the three County of Orange landfills. This percentage will not significantly reduce capacity at these associated landfills. ARTIC will be adequately accommodated by these landfills. Solid waste reduction strategies, waste diversion, and recycling efforts that are being planned for ARTIC will further reduce solid waste associated impacts. Less than significant impacts are anticipated for this issue area.

- g) *Would the project comply with Federal, State, and local statutes and regulations related to solid waste?*** (Less Than Significant Impact)

ARTIC will comply with all federal, state and local statutes and regulations related to solid waste. Less than significant impacts are anticipated for this issue area.

- h) *Would the project result in the need for new systems or supplies, or substantial alterations related to electricity?*** (Less Than Significant Impact)

The City of Anaheim PUD provides service for the City, and will provide for new developments within the Platinum Triangle, including ARTIC. A minimum service of 4.8 MVA will be requested to serve ARTIC's electrical needs, which includes a future 15 percent increase allowance. A 1,000 kW emergency generator will also be available to provide supply to ARTIC in the event of utility power loss (Buro Happold, 2010). ARTIC will not result in the need for new systems, supplies, or alterations of current systems related to electricity. Less than significant impacts are anticipated for this issue area.

- i) *Would the project result in a need for new systems or supplies, or substantial alterations related to natural gas?*** (Less Than Significant Impact)

Due to the availability of natural gas and the limited impact to supply that ARTIC is anticipated to have (City of Anaheim, 2008), ARTIC will not result in the need for new systems, supplies, or alterations of current systems related to natural gas. Less than significant impacts are anticipated for this issue area.



j) Would the project result in a need for new systems or supplies, or substantial alterations related to telephone service? (Less Than Significant Impact)

While development of ARTIC may contribute to the demand on the telephone service, due to the expandable nature of this service, systems can be upgraded as necessary by the provider without significant impact (City of Anaheim, 2008). ARTIC will not result in the need for new systems, supplies, or alterations of current systems related to telephone. Less than significant impacts are anticipated for this issue area.

k) Would the project result in a need for new systems or supplies, or substantial alterations related to television service/reception? (Less Than Significant Impact)

While development of ARTIC may contribute to the demand on cable and/or television service, due to the expandable nature of this service, systems can be upgraded as necessary by the provider without significant impact (City of Anaheim, 2008). ARTIC will not result in the need for new systems, supplies, or alterations of current systems related to cable and/or television. Less than significant impacts are anticipated for this issue area.

1.4 CUMULATIVE IMPACTS

The capacity for utilities and service systems was evaluated in conjunction with service providers to ensure adequate capacity for ARTIC. The overall system capacity is known by the providers who have indicated adequate capacity for the currently anticipated projects in the area. The implementation of ARTIC and proposed projects within the Platinum Triangle were analyzed in Platinum Triangle Subsequent EIR No. 332, which includes an appropriate payment mechanism that is available to fund the necessary utility improvements as planned by each utility service provider. Impacts as a result of Platinum Triangle Subsequent EIR No. 332 are considered less than significant. Less than significant cumulative impacts are anticipated for this issue area.

1.5 EXISTING REGULATIONS AND STANDARD CONDITIONS

- City of Anaheim General Plan;
- Anaheim Municipal Code, Chapter 10.19 (Model Water Efficient Landscape Ordinance);
- Anaheim Municipal Code, Chapter 10.18 (Water Conservation Ordinance No. 6138);
- NPDES Permit No. CAS004001; and
- Senate Bill 610.



1.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

ARTIC will have a less than significant impact associated with utilities and service systems.

1.7 MITIGATION MEASURES

ARTIC will have a less than significant impact associated with utilities and service systems. No mitigation measures are required for this issue area.

1.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

ARTIC will have a less than significant impact associated with utilities and service systems. No significant impacts were identified.

