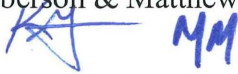


APPENDIX J

Dry Utility Plan

TECHNICAL MEMORANDUM

Date: August 6, 2010 (Revised August 30, 2010)¹
To: Bob Shattuck, Lennar Communities
From: Ken Giberson & Matthew Mudd, MacKay & Somsps
TM No.: 10 
Subject: Dry Utility Plan
SunCreek Specific Plan
Rancho Cordova, CA
Job No.: 7991-10
Task No.: Task E.1

A. Introduction

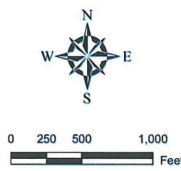
The SunCreek Specific Plan Area, hereinafter referred to as “The Project”, encompasses about 1265.5 acres in Sacramento County. It is bordered on the north by the Sun Ridge Specific Plan Area, east by Grant Line Road, west by Sunrise Blvd., and south by The Arboretum Specific Plan Area. At buildout, the project will have approximately 4,697 low, medium and high density residential units, as well as schools, public facilities, and 59.4 acres of town center employment land uses.

Reference **Figure 1 – SunCreek Land Use Map** for more information.

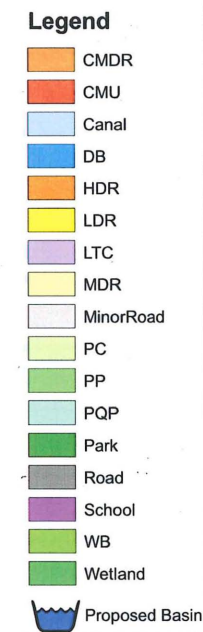
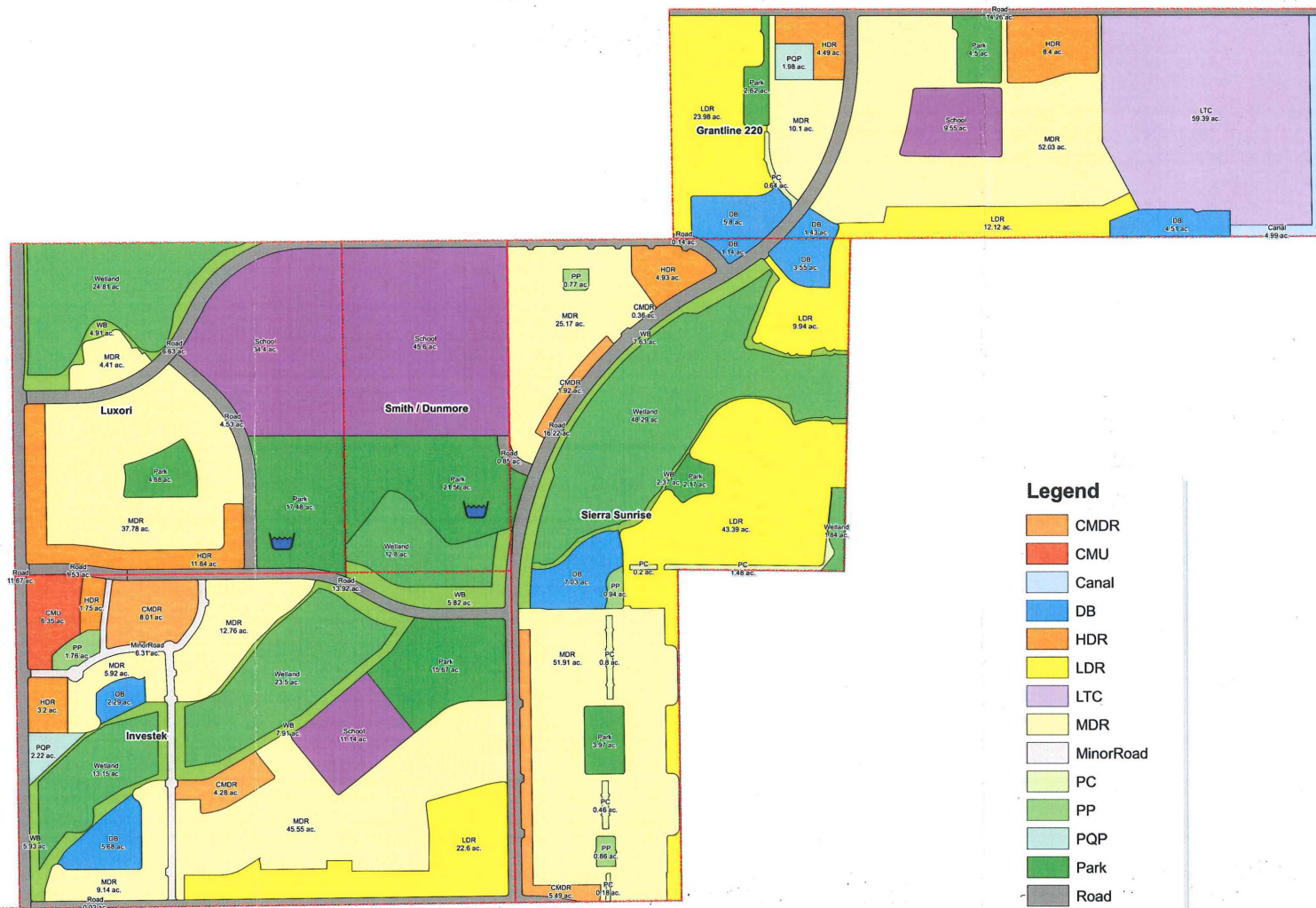
Sacramento Municipal Utility District (SMUD), Pacific Gas & Electric Company (PG&E), Frontier Communications and AT&T will serve the project. All four utilities have been provided with the latest land use plan (Dated May 28, 2010) and other vicinity maps for their long range planning purposes.

The purpose of this technical memorandum is to describe each utility company’s nearest existing facilities and possible points of connection, as well as summarize necessary offsite and onsite improvements needed to service The Project. As such, project descriptions in this document, taken from each utility source, are preliminary and subject to change pending utility negotiations and actual development progression.

¹ This submittal has revised the Introduction and the Summary & Conclusions sections as requested (received by MacKay & Somsps on August 27, 2010). Also, additional information relating to AT&T fiber optic facilities was added to the telecommunications sections of this technical memorandum which were received after the initial August 6, 2010 publication date.



Land Use Type	Area (acres)	Dwelling Units	Average Density Per Acre
LDR - LOW DENSITY (2.1 to 6 du/ac)	169.4	900	5.311461427
MDR - MEDIUM DENSITY RESIDENTIAL (6.1 to 12 du/ac)	322.7	2517	7.800926019
CMDR - COMPACT DENSITY RESIDENTIAL (12.1 to 18 du/ac)	20.1	286	14.26214398
HDR - HIGH DENSITY RESIDENTIAL (18.1 to 40 du/ac)	34.6	735	21.24598938
CMU	31.9	259	
LTC - LOCAL TOWN CENTER COMMERCIAL AND EMPLOYMENT CENTER	59.4		
PQP - PUBLIC/QUASI_PUBLIC	13.0		
PP - NEIGHBORHOOD GREEN	4.3		
PARK	87.1		
PC - PARKWAY, PASEOS AND TRAILS	9.1		
WB - PRESERVE BUFFER	45.2		
DB - DETENTION BASIN	46.9		
STORM WATER CANAL	5.0		
WETLAND PRESERVE	203.7		
SCHOOL	110.9		
MINOR ROADS	23.2		
MAJOR ROADS	79.0		
Grand Total	1265.5	4697	



August, 2010
MACKAY & SOMPS
 CIVIL ENGINEERS, INC.
 ROSEVILLE, CALIFORNIA (916) 773-1189

FIGURE 1
Land Use Map
Suncreek Specific Plan
 County of Sacramento, California

B. Existing Facilities

Electric Facilities

The nearest SMUD electric facilities include²:

- Existing 69kV line along the east side of Sunrise Blvd.
- Existing 69kV line along the east side of Grant Line Road from Jackson Road to Kiefer Blvd.

A major electric transmission corridor containing SMUD and PG&E transmission lines traverses the southwestern edge of The Project, near the intersection of Kiefer Blvd. and Sunrise Blvd. The PG&E 230kV line is within an existing 75 foot wide easement and one PG&E tower is within the Project in areas designated open space. SMUD has an existing 230 kV and 69kV line within a 200 foot easement parallel to the PG&E easement and has one tower within the Project in areas designated open space.

Coordination with the utility companies during development of the project will be required for activities within these electrical transmission easements, as both utilities have easement restrictions.

Reference **Figure 2 – SMUD Facilities** for more information.

Natural Gas Service

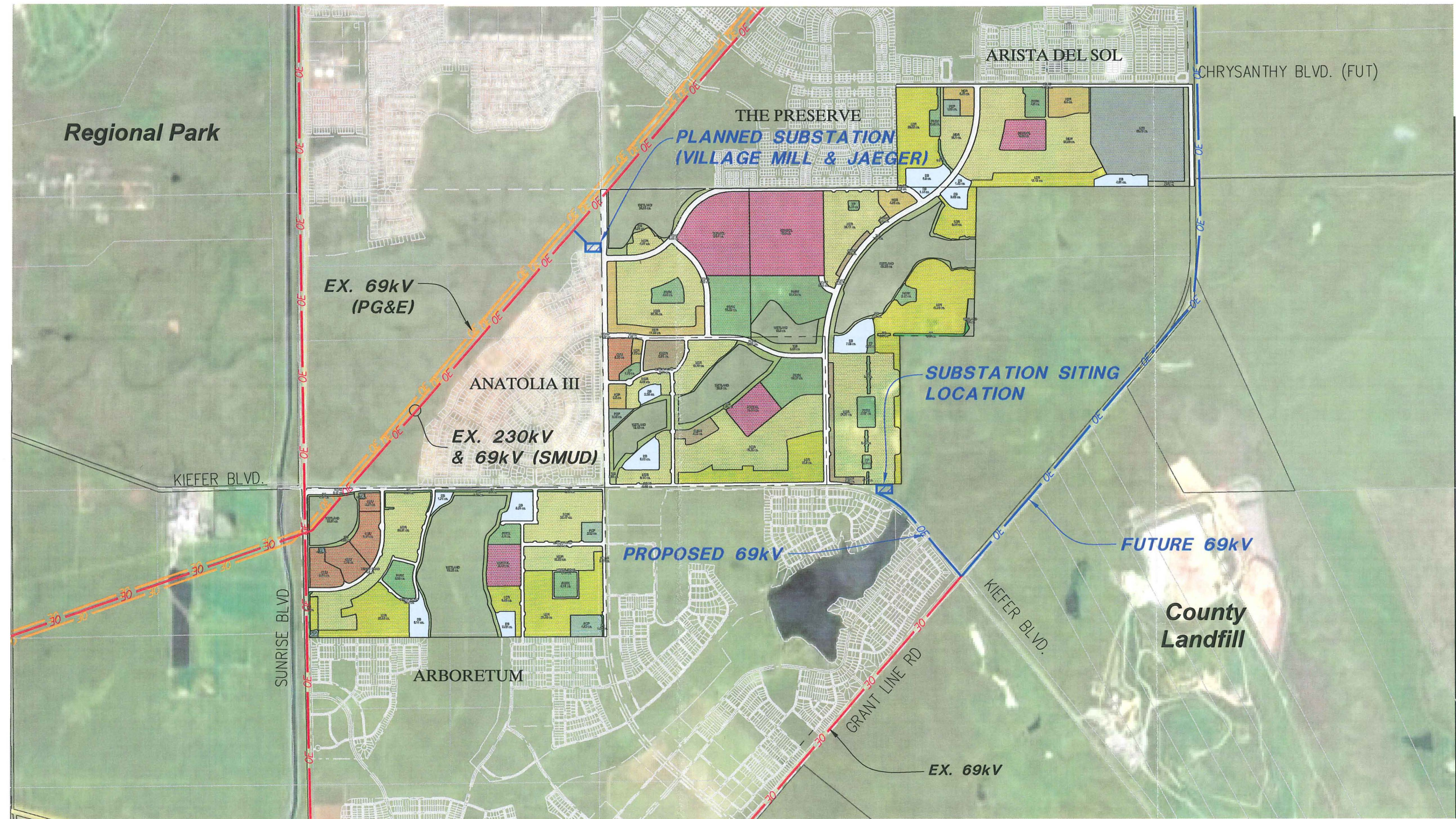
The nearest PG&E gas facilities include³:

- Existing 8-inch plastic distribution main rib which extends along Kiefer Blvd., east from Sunrise Blvd to the Jaeger Road intersection.
- Existing 8-inch distribution main rib which extends approximately 3,300 feet along Jaeger Road north from Kiefer Blvd.
- Existing 8-inch distribution main rib located in Douglas Blvd., extending 2.2 miles east from Sunrise Blvd.

All three of the distribution mains described above operate at a maximum allowable operating pressure (MAOP) of 50 psig. Reference **Figure 3– PG&E Facilities** for more information.

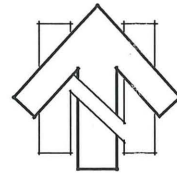
² Source: Correspondence with Katarina Miletijev P.E., SMUD Distribution System Engineer, July 2010. (For ex. and prop. facilities)

³ Source: Correspondence with Donny Kennedy, PG&E planner, July and August 2010. (For ex. and prop. facilities), Gas Plats (#2590, D3-D5) were provided for verification.



LEGEND

-  EXISTING 69 kV
-  EXISTING 230 kV
-  PROPOSED 69 kV
-  PLANNED/POTENTIAL SUBSTATION



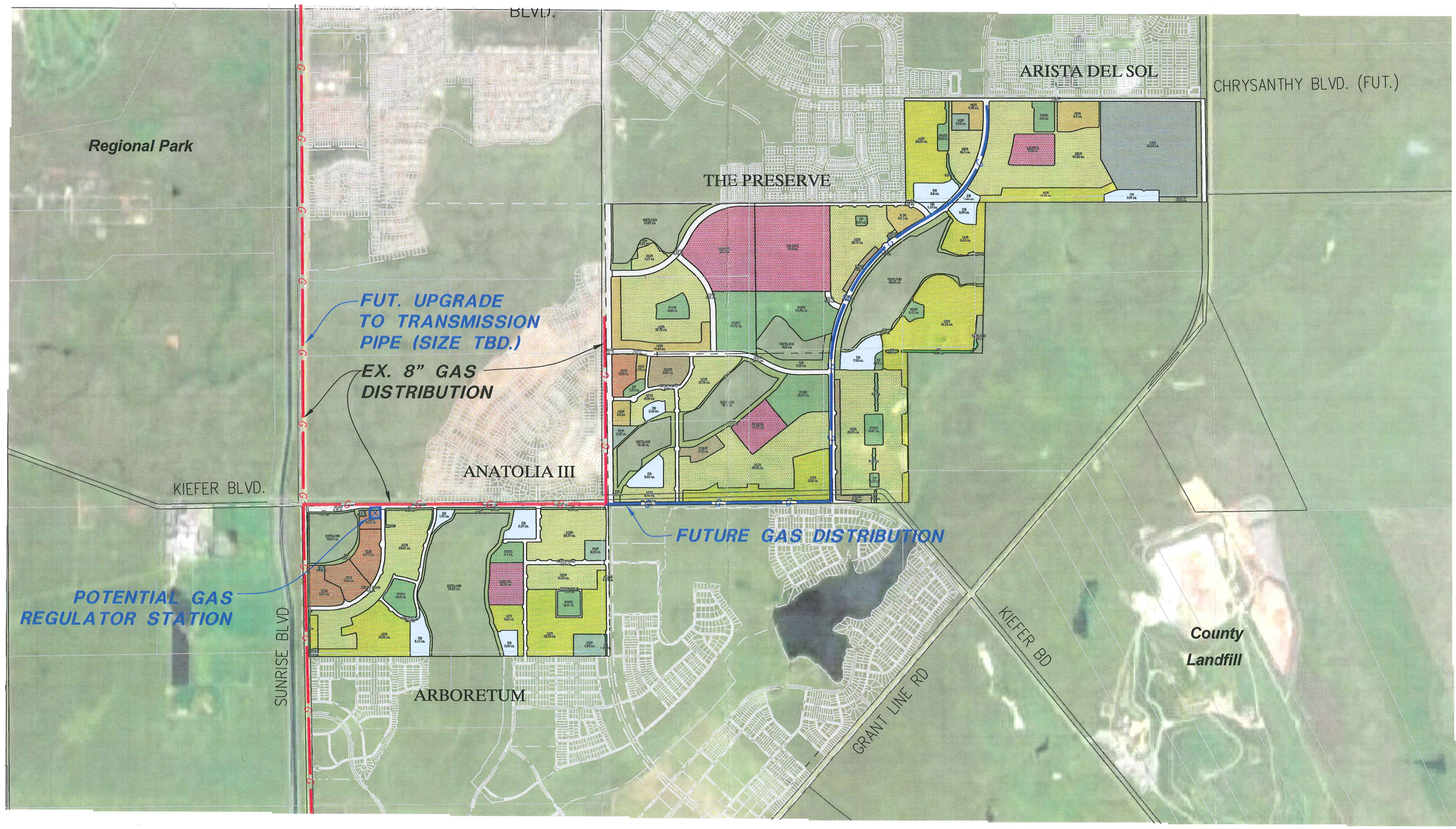
SCALE: 1" = 2000'

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FIGURE 2
SMUD FACILITIES
Suncreek Specific Plan

County of Sacramento,

California
 August, 2010






POTENTIAL GAS
REGULATOR STATION

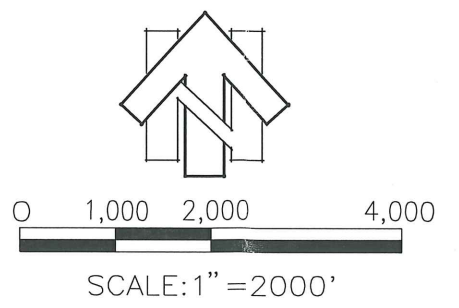
FUT. UPGRADE
TO TRANSMISSION
PIPE (SIZE TBD.)

EX. 8" GAS
DISTRIBUTION

FUTURE GAS DISTRIBUTION

LEGEND

-  EXISTING GAS
-  PROPOSED GAS
-  GAS REGULATOR STATION
(POTENTIAL SITING - SCHEMATIC)



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FIGURE 3
PG&E FACILITIES
Suncreek Specific Plan
County of Sacramento, California
August, 2010

8-31-2010 10:58:56 mmudd L:\Sacramento\7991\00\Master Plans\Dry Utility MP\Fig 3 - GAS Facilities.dwg
 L:\Sacramento\7991\00\Master Plans\RegionalBase.dwg [2] L:\Sacramento\7991\00\Master Plans\7991-00 Master Plan Base.dwg [3] L:\Sacramento\7991\00\Master Plans\Dry Utility MP\Sun Creek with

Telecommunications Service:

Frontier Communications is the incumbent local exchange carrier (ILEC) for the majority of the Project. The most northeast 220 acre portion of the Project lies within the AT&T service area.

The nearest Frontier facilities include⁴:

- Existing aerial lines along Sunrise Blvd.
- Existing underground conduit extension within Kiefer from Sunrise Blvd. to approximately Country Garden Drive.

The nearest existing AT&T service connection for this area is from aerial lines on Grant Line Road and existing fiber facilities at the intersection of Douglas Blvd. and Americanos Blvd. Until development occurs within Arista Del Sol, located north of the Project, service may come from aerial lines routed easterly along Douglas Blvd. and southerly along Grant Line Road.⁵

Reference **Figure 4 – Telecommunication Facilities**

C. Proposed/Planned Facilities

Electric Facilities

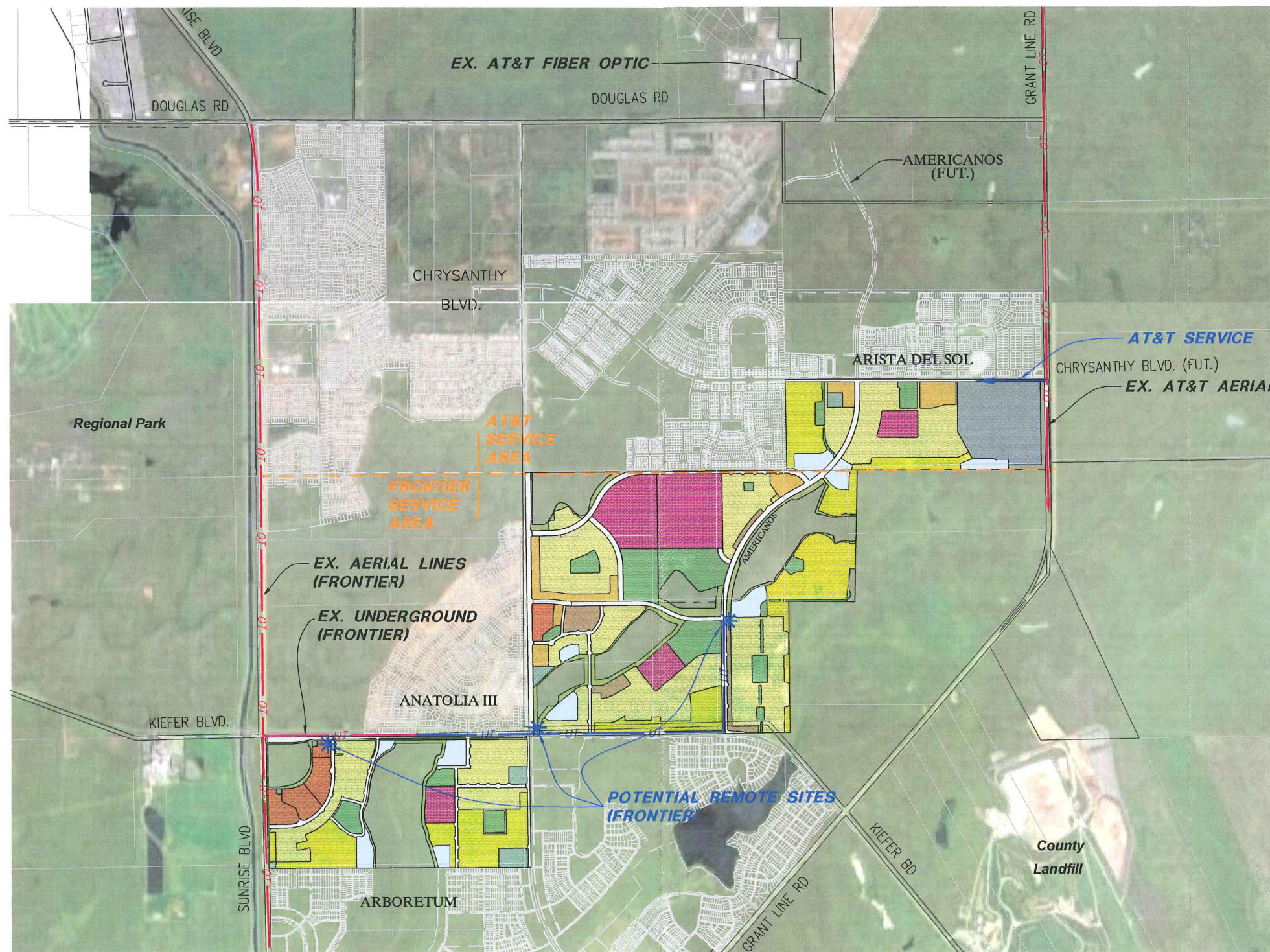
The facilities that SMUD proposes include:

- Planned substation at the northwest intersection of Village Mill Way and Jaeger Road. (within Anatolia III Specific Plan Area)
- Future substation at the southeast corner of the Sun Creek development along Kiefer Blvd.
- Future 69kV line along Grant Line Road, extending from Kiefer Blvd. to Douglas Road.
- Future 69kV line to the SunCreek Project along Kiefer Blvd, connecting the existing Grant Line 69kV to the future substation to be sited at the Project's southeast corner along Kiefer.





Preliminary demand calculations performed by SMUD present an electrical demand of 35 MVA, requiring the single distribution substation described above, containing two 25 MVA transformer banks. It is necessary to plan for ½ to ¾ acres for a substation site, depending the shape and orientation of the parcels (squares and rectangles are preferred). According to SMUD, an ideal substation is 150 feet by 150 feet. (+/- 0.5 acre).

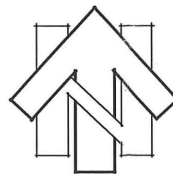
⁴ Source: Correspondence with Rich Singer, Frontier Communications network engineer, July and August 2010. (For ex. and prop. Facilities)

⁵ Source: Correspondence with Frederick Dazo, AT&T loop planner, August 2010. (For ex. facilities)



LEGEND

-  EXISTING AERIAL LINE
-  PROPOSED UNDERGROUND LINE
-  POTENTIAL REMOTE TERMINAL SITE
-  AT&T/FRONTIER SERVICE LIMIT



0 2,500 5,000

SCALE: 1" = 2500'

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FIGURE 4
TELECOMMUNICATION
FACILITIES PLAN
Suncreek Specific Plan

County of Sacramento,

California
 August, 2010

8-31-2010 11:00:47 mmudd L:\Sacramento\7991\00\Master Plans\Dry Utility MP\Fig 4 - Telecom Facilities.dwg L:\Sacramento\7991\00\Master Plans\RegionalBase.dwg [2] L:\Sacramento\7991-00 Master Plan Base.dwg [3] L:\Sacramento\7991\00\Master Plans\Dry Utility MP\Sun Creek with

Natural Gas Facilities

PG&E has tentative plans to upgrade the existing 8-inch steel distribution main rib, which runs along Sunrise Road between Douglas Blvd. and Kiefer Blvd. to a larger transmission main that would operate at a maximum operating pressure (MOP) of 240 psig and a maximum allowable operating pressure (MAOP) of 500 psig. Note that the State Department of Education requires the easement of an underground transmission pipeline to be at least 1,500 feet from a school.

PG&E has plans to install a new distribution regulator station at the intersection of Kiefer Blvd. and Sunrise Blvd. as part of the transmission upgrade. The timing, size and location of these future facilities has not been determined at this time. Once identified, the developers may need to plan on a request for a 20-foot by 80-foot gas regulator station easement, including all weather access for maintenance and operation.

PG&E may provide service to the Project by extending service from one or more of the existing distribution main ribs described in Section B. Service extension may be along existing and/or future roads. PG&E will work with the developer to extend additional new distribution mains in joint trench with other utilities in franchise or adjacent public utility easements. Feeder mains would distribute natural gas through the Project via joint trench in major roads. Service lines will extend off the feeder mains and be sized based upon anticipated gas loads to each parcel.

Telecommunications Facilities

Frontier would extend underground service to The Project area from the existing conduit stub located within Kiefer Blvd. Upgrades along the Sunrise Blvd. aerial line and Kiefer Blvd. underground line may be needed to increase the fiber feed. Frontier needs sufficient lead time to plan for the service upgrades. The developers may need to plan on a request for three remote terminal sites requiring 25-foot by 25-foot easements located along major roads within or along a green belt. In addition to three remote terminal sites, plan for 4-foot by 2-foot above ground hubs spaced throughout The Project. The number and spacing of hubs to be determined at final design.

AT&T would provide service from the existing aerial lines on Grant Line Road and the existing fiber optic facilities located at the intersection of Douglas Blvd. and Americanos Blvd. In the absence of earlier completion of Americanos Blvd. between Douglas Road and the SunCreek Project, the existing fiber optic facilities would need to be extended easterly along Douglas Blvd. and southerly along Grant Line Road to the Project. Additionally, upgrades may be needed to increase the fiber feed within Douglas Blvd.

A 10-foot by 20-foot easement for a remote terminal site may be needed within the northeast portion of the SunCreek Project. If development occurs to the north prior to SunCreek, service could potentially be extended from a planned AT&T remote terminal site within Arista Del Sol⁶

⁶ Source: Per phone conversation with Frederick Dazo on August 6, 2010, a remote terminal site to be located in development north (Arista Del Sol or Grantline 208), may be sufficient to extend service to this portion of SunCreek.

D. Summary & Conclusions

All the major dry utilities (natural gas, electric, telecommunications) necessary to serve The SunCreek Specific Plan Area either already existing onsite or are available immediately adjacent to the site. Those not onsite are easily extended to the Project. Issues that require future attention include:

- Negotiating substation site and 69kV transmission routing with SMUD
- Negotiating a gas regulator station site with PG&E
- Negotiating remote terminal sites with Frontier and AT&T, as well as coordinating timing of fiber upgrades
- Negotiating natural gas transmission pipeline routing with PG&E