



DESIGN REVIEW BOARD

Staff Report

Planning & Environmental Services
130 Cremona Drive, Suite B, Goleta, CA 93117
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www.cityofgoleta.org

AGENDA ITEM M-1

DATE: August 11, 2009
TO: Goleta Design Review Board
FROM: Alan Hanson, Senior Planner
SUBJECT: 09-039-DRB; NextG Networks Inc.; Located within City rights-of-way and utility easements over various public and private parcels within the City of Goleta

APPLICANT: NextG Networks Inc.
5720 Thornwood Drive
Goleta, CA 93117

PROJECT DESCRIPTION:

This is a request for Conceptual review. The proposed project involves the installation of 19 radiofrequency transport service system nodes within City rights-of-way (ROWs) and utility easements over various public and private properties throughout the City of Goleta. Each node would include an omnidirectional antenna and supporting equipment cabinet below the antenna mounted on an existing utility pole, traffic signal, or street light. Each node would be connected by fiber-optic cable installed either on existing utility poles, in joint conduit, or through shallow trenching within City streets. Support equipment for each node would be installed at a minimum height above existing grade of nine (9) feet. Two new City standard "marble lite" street lights would be installed at the Pacific Oaks/Phelps and Los Carneros/Cathedral Oaks intersections to provide mounting structures for proposed nodes that are consistent in height and design with existing street lights in these locations to minimize visual impacts to the existing visual context of these two areas. All antennae and supporting equipment would be non-reflective in color and materials. The electrical power supply for each node would be provided from existing utility lines installed on either existing utility poles or in joint conduit. No new utility poles for the supply of electrical power to any of the nodes are proposed. No removal or trimming of any native or any ornamental trees within any City ROWs, utility easements over either public or private parcels, or other City owned property as a result of project implementation would occur. The project was filed by HP Communications, agent on behalf of NextG, the applicant. Related cases: 09-039-CP.

BACKGROUND:

The project was submitted on May 21, 2009. This is the first time the project has been before the DRB. NextG Networks is a fiber based, carrier neutral radiofrequency transport service provider operating under a statewide franchise from the California Public Utilities Commission (CPUC). NextG is not a cellular service provider; rather it uses antennae to receive/transmit radiofrequency (RF) signals from cellular customers and converts such transmissions to fiber optic signals and vice versa which are relayed to the actual cellular providers NextG has contracted to serve. This type of RF transport service system network is designed and intended to provide extended telecommunication service capacity and close existing gaps in service, potentially reducing the need for construction/installation of new larger, more traditional cellular/telecommunication facilities sites. As a member of the Southern California Joint Pole Committee under CPUC regulation, NextG has a vested right to attach its facilities to existing utility poles within City ROWs and utility easements throughout the City.

The proposed project represents a relatively new type of telecommunication technology to the City. Basically, the "nodes" of the system are comprised of the receiving/transmitting antennae that receive/transmit RF signals to cellular customers, a multiplexor to convert the RF signals to fiber optic signals and vice versa contained within a metal cabinet mounted below the antennae on the supporting utility pole, traffic signal, or street light, electrical power supply with possibly a transformer to reduce voltage if higher voltage electrical lines are used to power the system, and a system of fiber optic cable to attach each node to the overall RF transport service system network. The actual types of antennae and supporting equipment that comprise each node differ somewhat depending on the nature of the mounting pole and the power supply.

ANALYSIS:

Zoning Consistency:

Standard	Required	Proposed	Compliant
Setbacks	None if mounted on utility pole	All antennae & support equipment to be mounted on operational utility poles or similar structures	Yes
Exclusion of the public	General public to be excluded from the facility & facility posted	All equipment mounted 9' above grade on utility poles & posted per conditions of CUP approval	Yes

Federal Communication Commission (FCC) compliant	All telecommunication facilities shall comply with all FCC regulations	The system will operate well below the FCC Maximum Permissible Exposure (MPE) level as well as comply with all other FCC regulations	Yes
Access/parking	All telecommunication facilities shall have adequate access & parking for maintenance purposes	Access to all proposed telecommunication nodes will be provided from City streets Parking will be provided from City ROWs where parking is allowed	Yes
Facility lighting	Antenna lighting shall be shielded & directed downward where required and equipment cabinets shall be illuminated with minimal lighting over the cabinet doorway	No lighting for any element of the proposed network is proposed	Yes
Location within Airport Clear Zone	Prohibited unless approved by the FAA/airport operator	No elements of the proposed network are located within any Clear Zone of the SBMA	Yes
Visible support facilities	All visible support facilities shall be non-reflective	All proposed system support equipment will have non-reflective surfaces	Yes

Mounting structure surface colors/materials	All mounting structures (utility poles, light standards, signal lights, etc) shall be non-reflective	With exception for the new mounting structures at Pacific Oaks/Phelps and Los Carneros/Cathedral Oaks, all system elements will be installed on existing utility poles or traffic signals New mounting structures at Pacific Oaks/Phelps & Los Carneros/Cathedral Oaks will use new street light poles compliant w/City standards	Yes
Most diminutive technology	The most efficient and diminutive telecommunication technology shall be utilized to minimize visual impacts and number of telecommunication facilities needed to serve the area	Small omnidirectional antennae with minimal support facilities designed to fit within the profile of the utility poles on which they are mounted are proposed	Yes
1 ⁰ power source	The 1 ⁰ power source for telecommunication facilities shall be provided from a public utility and power line extensions beyond 50' in length shall be undergrounded	The 1 ⁰ power source for the proposed network nodes will be provided from existing Southern California Edison power lines No overhead power line extensions/new power poles are proposed	Yes

Co-location	Co-location shall be required except for certain circumstances pursuant to the ordinance	<p>With exception for the two proposed nodes at Los Carneros/Cathedral Oaks & Pacific Oaks/Phelps, all nodes would be mounted on existing utility poles and/or traffic signals</p> <p>Nodes at Los Carneros/Cathedral Oaks & Pacific Oaks/Phelps would be located on new street lights meeting City standards</p> <p>The use of existing utility poles to mount new antenna/support equipment represents excellent example of "co-location"</p>	Yes
Max of three (3) co-located facilities	No more than three telecommunication facilities shall be co-located on the same structure	Only one node/mounting structure is proposed	Yes
Undergrounding of support facilities, if feasible	Support telecommunication facilities shall be undergrounded if feasible to reduce visual impacts	All support equipment is designed to fit within the profile of the mounting poles to minimize visual impacts	Yes
Facility location on prime soils (CZ only)	No telecommunication facility shall involve disturbance to prime soils in the Coastal Zone	None of the proposed network elements would involve site disturbance in areas of prime soils in the Coastal Zone	Yes

Location between the ocean & the 1 st parallel public road	No telecommunication facility shall be located between the ocean and the 1 st parallel public roadway unless visual impacts would be minimal and such location was the least intrusive needed to fill service gaps	Only one node (GOL 45) proposed for an existing utility pole on the S side of Hollister adjacent to Sandpiper Golf Course As no new mounting structure is required, this location represents the least visually intrusive location to fill the existing service gap in this area	Yes
Visibility from scenic highways	No telecommunication facility shall be located so as to silhouette against the sky if visible from a designated public scenic view corridor/state highway	All proposed nodes visible from any public designated view corridor or state highway/roadway would be located on existing utility poles, below the top of the pole, & of a sufficiently minimal size/volume to minimize visual impacts from scenic corridors or highways/roadways	Yes
Location on exposed ridgelines	No telecommunication facility shall be located on any exposed ridgeline unless it is designed to blend into the existing environment to the extent that it is not substantially visible	None of the proposed 19 nodes would be located on any exposed ridgeline	Yes

Two (2) mile separation of substantially visible facilities	No telecommunication facility substantially visible from a public viewing area shall be located closer than two miles from any other substantially visible facility from a public viewing area	All proposed nodes visible from any public view as designated pursuant to the City's GP/CLUP will be mounted on existing utility poles thereby avoiding substantial visual impacts from these viewing areas	Yes
Requirements for substantially visible facilities from public viewing areas	Telecommunication facilities that could be substantially visible from public viewing areas shall be sited below ridgelines, depressed, or located behind berms—Such facilities shall also be designed to blend in with the natural environment and be visually compatible with the surrounding area	None of the proposed 19 system nodes would be located on any new mounting structures that would be substantially visible from any public viewing areas	Yes
Location within ESHAs (CZ only)	Telecommunication facilities shall be located so as to avoid the need for any site disturbance within any Coastal Zone ESHA	The only nodes proposed within the Coastal Zone would not involve any site disturbance within any ESHA	Yes

As noted above the proposed project is consistent with all applicable requirements of the City's recently adopted telecommunications ordinances for the Coastal (Article II, Chapter 35) and Inland (Article III, Chapter 35) Zoning Ordinances.

ISSUES:

Staff believes that the applicant has made a good faith effort to utilize the most efficient and diminutive equipment necessary for system operation pursuant to their franchise with the CPUC to minimize potential project visual impacts. However, staff would appreciate input from the Board as to possible design modifications such as color of equipment cabinets, location on mounting structures, etc that could possibly further reduce potential visual impacts without affecting system operations.

ATTACHMENTS:

1. "Node" Prototypes A-D
2. "Node" Matrix
3. System Map

ATTACHMENT 1

“Node” Prototypes

Attachment 1 shows five prototypes that represent the range of antenna and supporting equipment cabinets to be installed at each proposed node, given mounting structure and power supply parameters.



EXISTING



PROPOSED



NextG Networks, Inc.
5720 THORNWOOD DRIVE
GOLETA, CA 93117
PHONE: (408) 854-1580

PROJECT INFORMATION:

PHOTOSIM
GOLETA
GOLETA, CA 93117

CURRENT ISSUE DATE:

07/18/2009

PERMIT SUBMISSION:

REV.: DATE: DESCRIPTION: BY:

PLANS PREPARED BY:

HP COMMUNICATIONS
INC.

5720 THORNWOOD DRIVE
GOLETA, CA 93117
PHONE: (951) 471-1819

PLANS APPROVED BY:



NextG Networks, Inc.

REP:

COMMENTS:

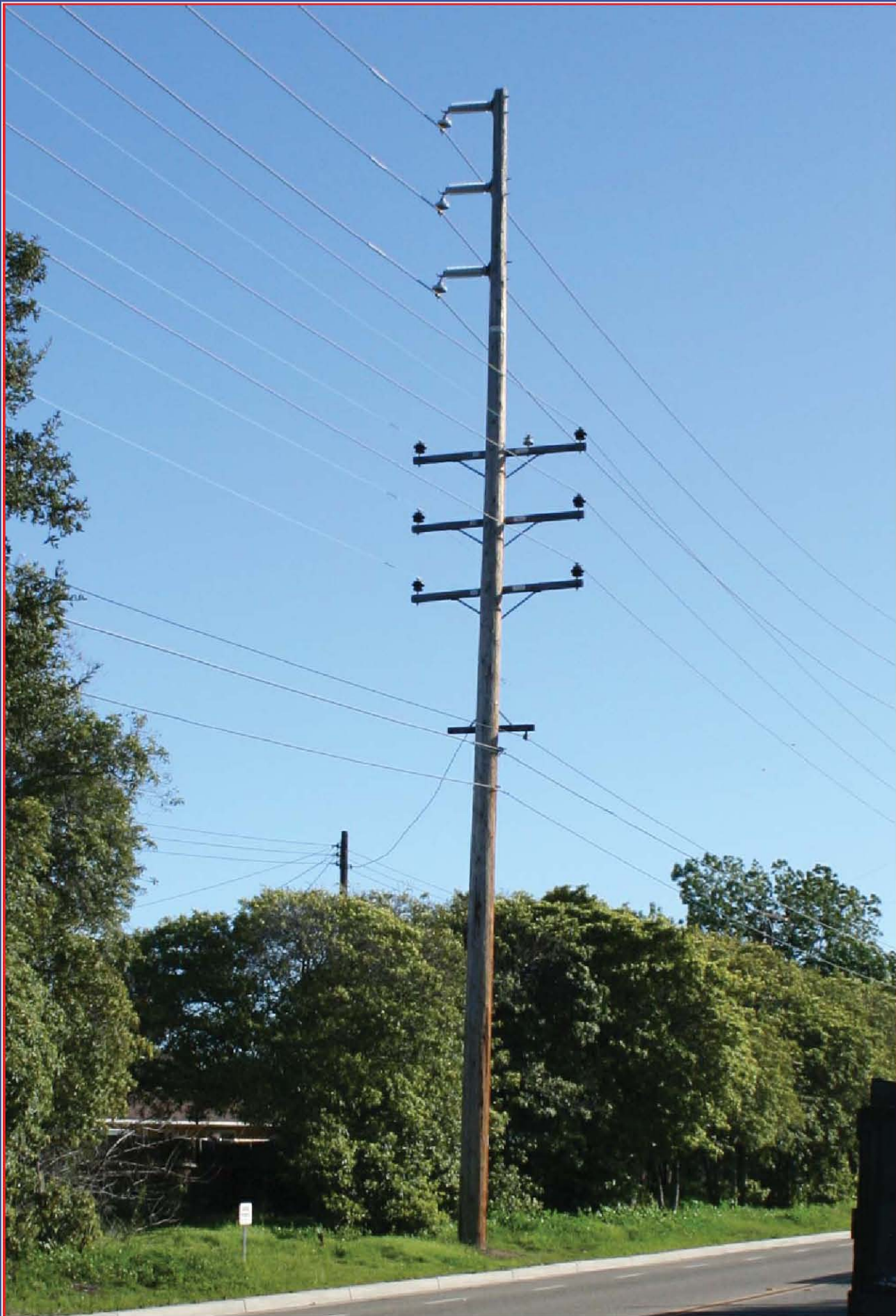
SHEET TITLE:

1. ARM MOUNT
PHOTOSIM

SHEET NUMBER: REVISION:

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EXISTING



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NextG Networks, Inc.
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INC.

5720 THORNWOOD DRIVE
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PHONE: (951) 471-1919

PLANS APPROVED BY:



NextG Networks, Inc.
REP:

COMMENTS:

SHEET TITLE:

ALTERNATE POWER
POLE
PHOTOSIM

SHEET NUMBER: REVISION:

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PROPOSED

PROJECT INFORMATION:

PHOTOSIM
GOLETA
GOLETA, CA 93117

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PHONE: (951) 471-1919

PLANS APPROVED BY:

 **NextG Networks, Inc.**
REP:

COMMENTS:

SHEET TITLE:

2. STRAND MOUNT
PHOTOSIM

SHEET NUMBER: REVISION:



EXISTING



PROPOSED

PHAZAR ANTENNA CORP.
MODEL AWS360-1710-7-TOM-N
1710-2155 MHz
OMNI-DIRECTIONAL ANTENNA

ANTENNA MOUNTING
KIT 14

SH001 KIT 001

PROJECT INFORMATION:

**PHOTOSIM
GOLETA
GOLETA, CA 93117**

CURRENT ISSUE DATE:

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PLANS PREPARED BY:

**HP COMMUNICATIONS
INC.**

5720 THORNWOOD DRIVE
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PHONE: (951) 471-1919

PLANS APPROVED BY:

REP:

COMMENTS:

SHEET TITLE:

**3. POLE TOP
PHOTOSIM**

SHEET NUMBER: REVISION:

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EXISTING



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NextG Networks, Inc.
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GOLETA, CA 93117
PHONE: (408) 954-1580

PROJECT INFORMATION:

PHOTOSIM
GOLETA
GOLETA, CA 93117

CURRENT ISSUE DATE:

07/18/2009

PERMIT SUBMISSION:

REV.: DATE: DESCRIPTION: BY:

PLANS PREPARED BY:

HP COMMUNICATIONS
INC.

5720 THORNWOOD DRIVE
GOLETA, CA 93117
PHONE: (951) 471-1919

PLANS APPROVED BY:



NextG Networks, Inc.

REP:

COMMENTS:

SHEET TITLE:

4. TRAFFIC SIGNAL
PHOTOSIM

SHEET NUMBER: REVISION:

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EXISTING



PROPOSED



PROJECT INFORMATION:

PHOTOSIM
GOLETA
GOLETA, CA 93117

CURRENT ISSUE DATE:

07/18/2009

PERMIT SUBMISSION:

REV.: DATE: DESCRIPTION: BY:

PLANS PREPARED BY:

HP COMMUNICATIONS
INC.

5720 THORNWOOD DRIVE
GOLETA, CA 93117
PHONE: (951) 471-1919

PLANS APPROVED BY:



REP:

COMMENTS:

SHEET TITLE:

5. STREET LIGHT
PHOTOSIM

SHEET NUMBER: REVISION:

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ATTACHMENT 2

Node Matrix

Attachment 2 is a matrix identifying each of the proposed 19 nodes to be installed within the City as well as the antennae/support equipment prototype that would be utilized at each node.

Node ID #	Node Location	Node Specifications	Node Type
GOLN001	7993 Calle Real	*Install antenna and equipment on wood utility pole *Pole height: 67'4" *Antenna: 26" omni, TOA (top of antenna) 32' *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 1 – Arm Alternate power pole
GOLN002	NE corner of Pacific Oaks/Phelps Rd	*New streetlight, location to be confirmed by City of Goleta *Antenna: 24" Dual Band Omni *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 5 – Streetlight
GOLN003	151 La Patera Ln	*Install antenna and equipment on wood utility pole *Pole height: 25' *Antenna: 26" omni, TOA (top of antenna) 29'1" *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 3 - Pole Top Alternate power pole
GOLN004	6209 Stow Canyon Rd	*Install antenna and equipment on wood utility pole *Pole height: 42'7" *Antenna: 26" omni, TOA (top of antenna) 28'1" *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 2 – Strand
GOLN005	701 Fairview Ave	*Install antenna and equipment on wood utility pole *Pole height: 33'8" *Antenna: 26" omni, TOA (top of antenna) 28'1" *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 2 – Strand
GOLN006	550 Cambridge St.	*Install antenna and equipment on wood utility pole *Pole height: 28' *Antenna: 26" omni, TOA (top of antenna) 23' *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 2 – Strand

GOLN012	SW corner of Los Carneros Rd/Cathedral Oaks Rd.	*New streetlight, location to be confirmed by City of Goleta *Antenna: 24" Dual Band Omni *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 5 – Streetlight
GOLN013	NE corner of Cathedral Oaks Rd	*Install antenna and equipment on traffic signal pole *Antenna: 24" Dual Band Omni *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 4 - Traffic Signal
GOLN014	7503 Evergreen	*Install antenna and equipment on wood utility pole *Pole height: 37'10" *Antenna: 26" omni, TOA (top of antenna) 28'1" *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 1 – Arm Alternate power pole
GOLN016	NW corner of Los Carneros/Hollister Ave	*Install antenna and equipment on traffic signal pole *Antenna: 24" Dual Band Omni *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 4 - Traffic Signal
GOLN018	42 Brandon Dr.	*Install antenna and equipment on wood utility pole *Pole height: 36'9" *Antenna: 26" omni, TOA (top of antenna) 26' *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 2 – Strand
GOLN019	95 Alpine Dr.	*Install antenna and equipment on wood utility pole *Pole height: 50' *Antenna: 26' omni, top at 31' *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 1 – Arm
GOLN020	7034 Calle Real	*Install antenna and equipment on wood utility pole *Pole height: 43' Antenna: 26" omni, TOA (top of antenna) 29' *Node: 14"x47.34"x11"WTR: 12"x12"x6"	Type 2 – Strand
GOLN034	7433 Hollister Rd	*Install antenna and equipment on wood utility pole *Pole height: 43'5" *Antenna: 26" omni, TOA (top of antenna) 29'1" *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 2 – Strand

GOLN039	172 S Kellogg Ave	*Install antenna and equipment on traffic signal pole *Antenna: 24" Dual Band Omni *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 4 - Traffic Signal
GOLN043	5810 Berkeley Rd	*Install antenna and equipment on wood utility pole *Pole height: 39' *Antenna: 26" omni, TOA (top of antenna) 26' *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 2 – Strand
GOLN044	6069 Shirrell Rd	*Install antenna and equipment on wood utility pole *Pole height: 32'5" *Antenna: 26" omni, TOA (top of antenna) 27'1" *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 2 – Strand
GOLN045	8155 Hollister Ave	*Install antenna and equipment on wood utility pole *Pole height: 48'8" *Antenna: 26" omni, TOA (top of antenna) 36'1" *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 2 - Strand Alternate power pole
GOLN054	5801 Calle Real	*Install antenna and equipment on wood utility pole *Pole height: 44' *Antenna: 26" omni, TOA (top of antenna) 34'1" *Node: 14"x47.34"x11" *WTR: 12"x12"x6"	Type 1 - Arm Alternate power pole

ATTACHMENT 3

System Grid Map

Attachment 3 is a map of the City showing graphically the location of each node, and the routing and type of installation proposed for the connecting fiber optic system.

