Appendix D: Infrastructure

Prepared by RMC

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BACKGROUND AND OBJECTIVES

The City of Milpitas (City) is currently examining the Midtown area of Milpitas as a redevelopment location of primarily industrial land for new residential and commercial development. The City has begun development of a plan for the Midtown Transit Area, a component of the larger Midtown Specific Plan Area. In partnership with Dyett & Bhatia, the City has undertaken the Milpitas Transit Area Concept Plan as the first phase of the planning process for the area, prior to the preparation of a Midtown Specific Plan amendment.

The Milpitas Transit Area Concept Plan builds upon previous planning studies that have included the Midtown Transit Area. These studies touch on aspects of the Transit Area's utility infrastructure and lay the groundwork for potential future development. Previous studies that examine aspects of the Transit Area's infrastructure include:

- Midtown Specific Plan (2002)
- Midtown Specific Plan Environmental Impact Report (2001)
- Milpitas Water Master Plan (2002)
- Milpitas Sewer Master Plan (2002)
- Milpitas Storm Drain Master Plan (2001)

The objectives of this Technical Memorandum (TM) are the following:

- Summarize the extent of existing coverage for the existing utilities:
  - Potable Water
  - Wastewater
  - Storm Drains
  - Recycled Water
  - Electricity
  - Gas
  - Phone/Communications
  - Cable
- Identify the potential areas of expansion of utilities required as a result of future development

EXISTING INFRASTRUCTURE

There are plans for BART lines and stations to be built in this area which will affect the base condition of the existing utilities. At the time we are proceeding without an evaluation of what the utilities will be after BART is installed. This section summarizes the existing systems and describes the extent of existing infrastructure coverage for the Midtown Transit Area.

POTABLE WATER

The City owns and operates the municipal water system that provides potable water to the Midtown Transit Area. The City receives wholesale potable water directly from two sources: the San Francisco Public Utilities Commission (SFPUC) and the Santa Clara Valley Water District (SCVWD). Water from the two sources is not blended under normal circumstances due to the different disinfection and corrosion control methods utilized by SFPUC and SCVWD. Water from SFPUC is primarily distributed to residential customers, while water from SCVWD primarily is distributed to non-residential customers, such as business or industrial users. In addition to these two sources, the City owns and operates two local groundwater wells for use in emergency shortages and has access to three emergency interties; one with the San Jose Water Company, and two with the Alameda County Water District.

The City has a distribution system consisting of 4 turnouts delivering wholesale water to 193 miles of water mains with approximately 15,000 service connections. Other facilities include:

- 5 Reservoirs
- 5 Pump Stations
- 41 Isolation Valves
- 15 Pressure Regulating Valves

The distribution network is divided by elevation into six pressure zones to allow water to flow from turnout stations and storage reservoirs to zone of services. The SFPUC supply is distributed to four pressure zones (called "SF" zones) and the SCVWD supply is distributed to two pressure zones (called "SC" zones). The Midtown Transit Area is covered primarily by Zones SC1 and SC2, and is adjacent to a portion of Zone SF1. The water main network found within the Midtown Transit Area is shown in Figure 1.

The City's water system has been analyzed by RMC Water and Environment, as part of the City of Milpitas Water Master Plan (2002). The Water Master Plan updated a previous Master Plan prepared in 1994. Water requirements used in the analysis were based on land use information compiled in three databases: City Planning Division FileMaker database, County GIS database, and City GIS draft parcel database. Land use classifications were based on General Plan land use designations and the land use categories developed for the 1994 Water Master Plan.

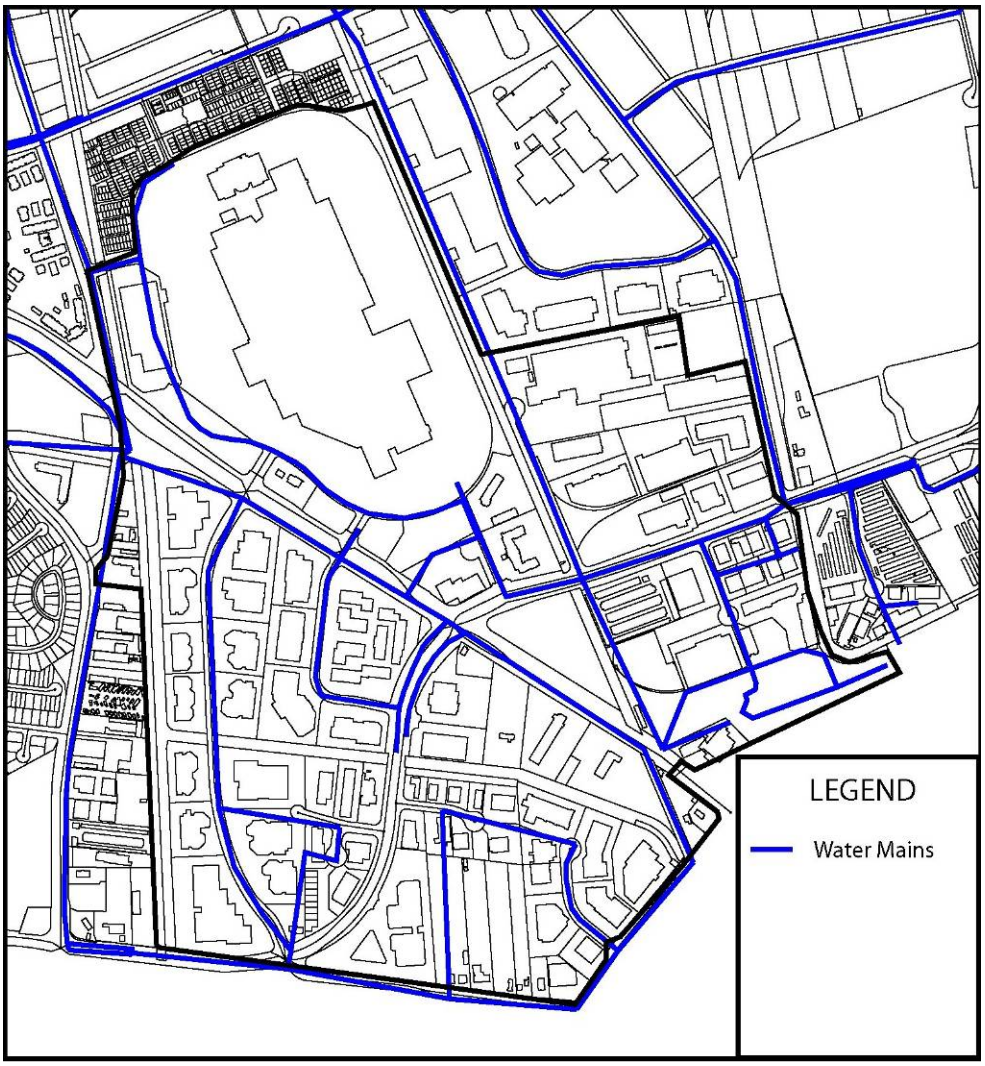

Figure 1: Midtown Transit Area Water System.

STORM DRAINS

The City of Milpitas owns and maintains a system of underground pipes and a network of street gutters that convey flows from urban runoff to the San Francisco Bay. Within the Midtown Transit Area, the majority of stormwater runoff is conveyed to Berryessa Creek and Lower Penitencia Creek, with portions of the area draining into Wrigley-Ford Creek. Most major drainage facilities within the City, such as creeks and channels, are owned and maintained by SCVWD, although within the Midtown Transit Area, the City owns and maintains Wrigley-Ford Creek. Figure 2 shows the storm drainage system for the Midtown Transit Area.

The City's storm drain system was analyzed in July 2001 by Schaaf & Wheeler as part of the City's Storm Drain Master Plan. The document describes the results of a capacity analysis of the existing system and proposes improvements to accommodate flows at buildout of the City's current general plan.

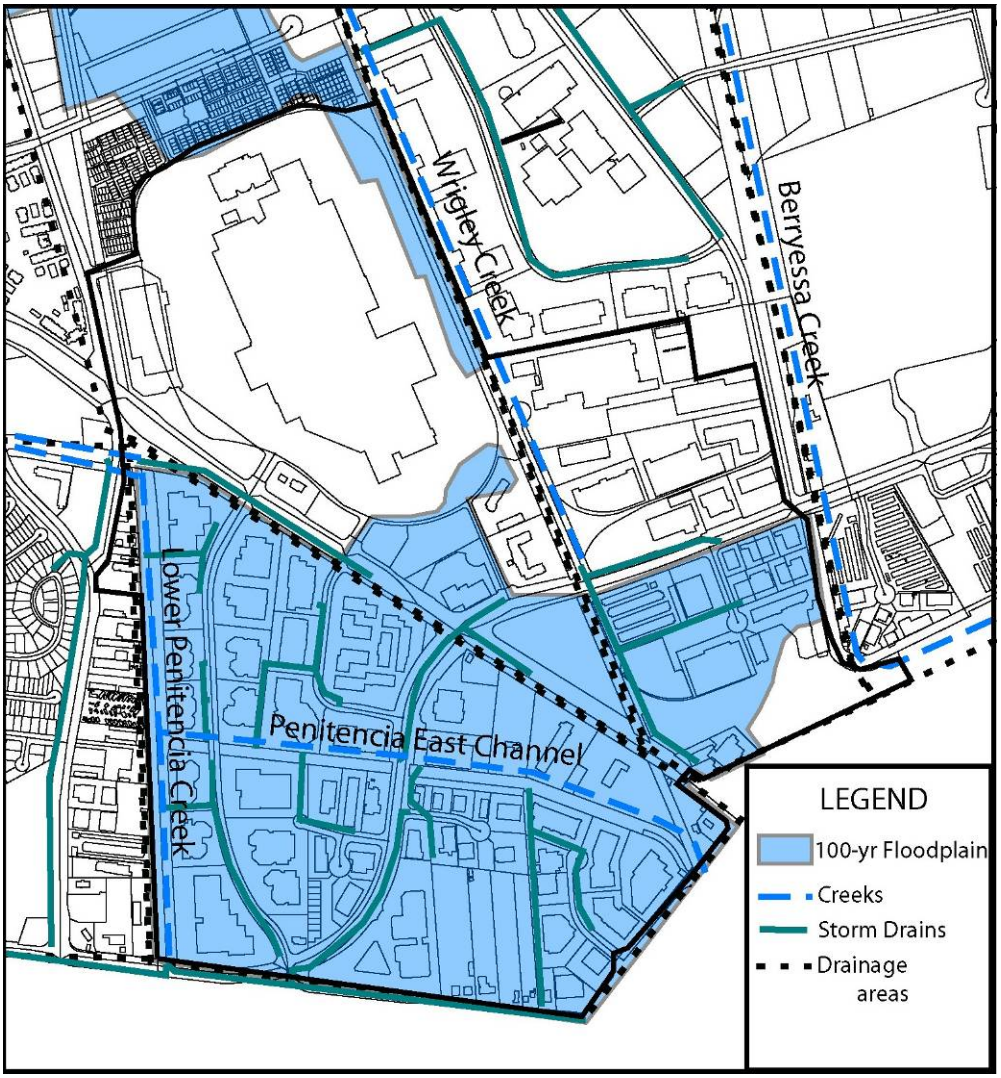

Figure 2: Midtown Transit Area Storm Drainage.

The majority of the Midtown Transit Area lies within Federal Emergency Management Agency (FEMA) flood zones A, AO, and AH of the 100-year floodplain. These zones are low-lying areas that are subject to ponding during the 100-year event. The 100-year floodplain is shown in Figure 2. The improvements listed in the Stormwater Master Plan correspond to alleviating problems associated with flooding in these areas due to insufficient storm drains capacities.

WASTEWATER

The City of Milpitas owns and operates a sanitary sewer system that collects wastewater flows from approximately 6,000 acres within the City planning area, including all of the Midtown Transit Area. The City's wastewater flows are conveyed mostly by gravity to the Milpitas Main Pump Station, which pumps all the flow to the San Jose/ Santa Clara Water Pollution Control Plant (WPCP) through two force mains.

The collection system within the Midtown Transit Area is comprised of a network of pipes, ranging in size from 8 to 15 inches in diameter. The main lines within the area flow northwest on Great Mall Parkway, north along South Main Street, and north along the eastern edge of the Great Mall parking lot. The sanitary sewer mains within the Midtown Transit Area are shown in Figure 3.

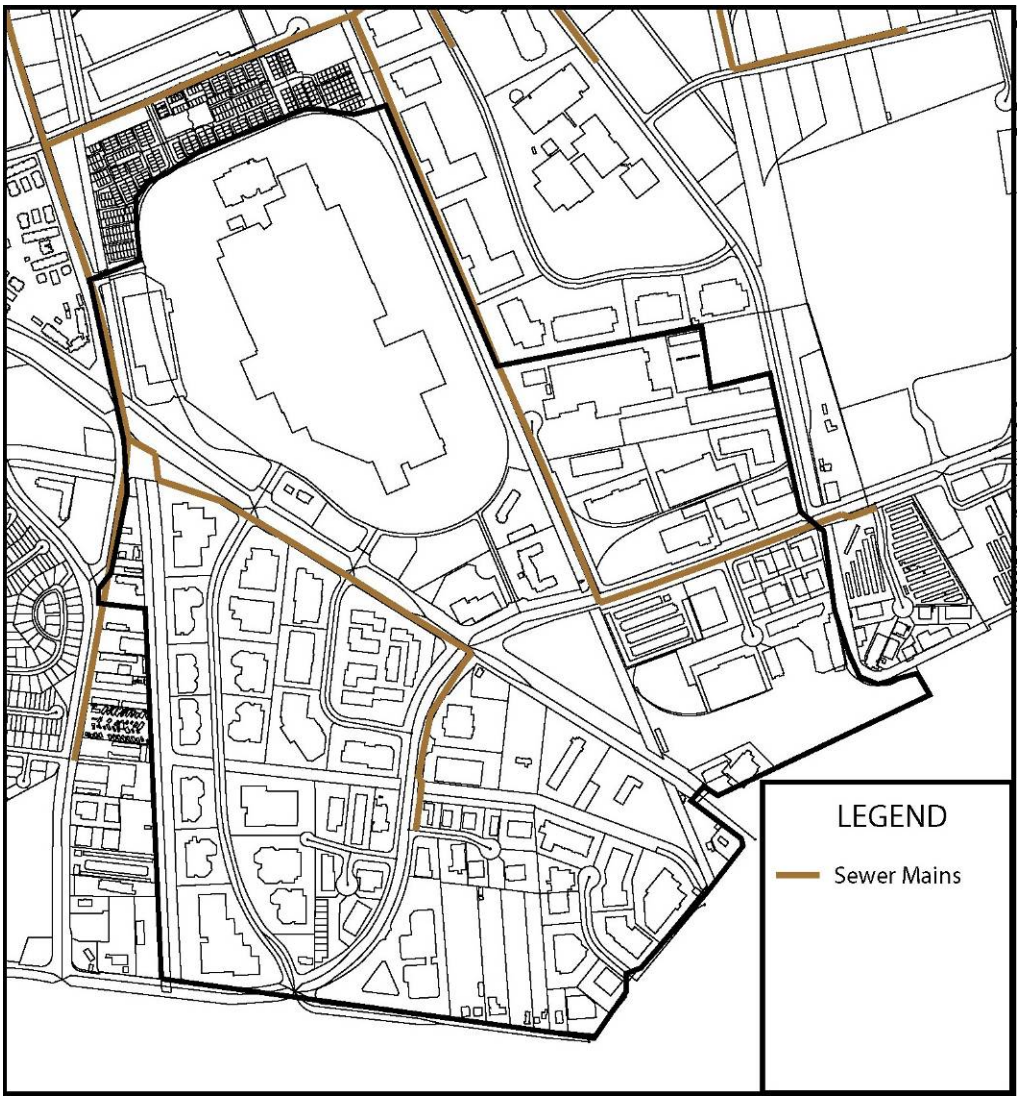

Figure 3: Midtown Transit Area Sewer Mains.

The City's sanitary sewer system was analyzed by RMC as part of the Sewer Master Plan Revision, completed in 2004. The revision re-evaluated the 2002 Sewer Master Plan and included evaluation of the City's plans to redevelop the Midtown Specific Plan area.

RECYCLED WATER

Recycled water is provided to the City of Milpitas through the South Bay Water Recycling Program (SBWRP). An existing transmission line located just north of the Great Mall conveys recycled water to a series of mains that serve landscape irrigation users within the Midtown Transit Area. Recycled water use has surpassed 600 acre-feet per year (AFY) since 2000 and is expected to rise to approximately 1,100 AFY by 2010. Figure 4 shows the existing recycled water infrastructure within the Midtown Transit Area.

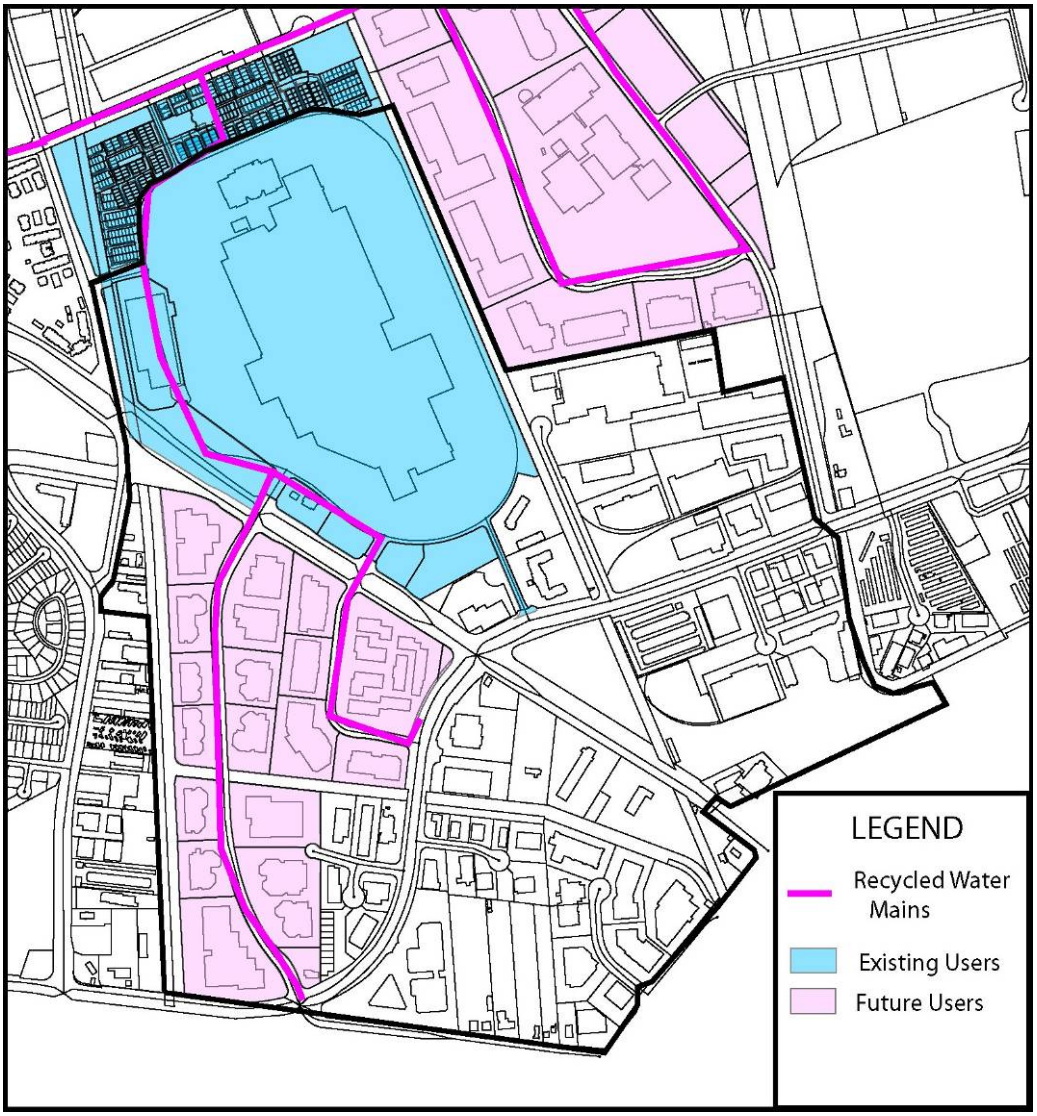

Figure 4: Midtown Transit Area Recycled Water Mains.

Current City policy requires new commercial or industrial users within reasonable proximity of existing recycled water mainlines to use recycled water for landscape irrigation. Additionally, the 2001 Midtown Specific Plan, which includes the Midtown Transit Area, requires new de-

velopment in the area to include recycled water lines for irrigation, and for existing irrigation users to convert to recycled water for irrigation as soon as feasible.

ELECTRICITY

Pacific Gas & Electric (PG&E) provides electrical service to the Midtown Transit Area. PG&E transmits electrical power through its 115/21 kilovolt (kV) Montague Substation located east of I-880 on Montague Expressway and its 115/21/12 kV Milpitas Substation located on Milpitas Boulevard, north of Montague Expressway. The primary circuits are 21 kV and mostly located underground except in two places along Main Street, and along Montague Expressway and East Capitol Avenue, which are still served by overhead wire.

GAS

PG&E provides natural gas service to the Midtown Transit Area. Three transmission lines convey natural gas to the area: a 34-inch line along Great Mall Parkway, a 24-inch line along East Capitol Avenue and a 34-inch transmission main along the Penitencia East Channel. The transmission lines connect to a network of gas main lines between 4 and 8 inches in diameter, with service lines to existing customers ranging between 1¼ and 2 inches.

CABLE

Comcast provides cable service to the Midtown Transit Area. Currently Comcast facilities are limited to areas along the border of the study area. Coaxial cable lines run along South Main Street, Lundy Place, and Capitol Avenue, while fiber optic lines run along Trimble Road at the southern edge of the Midtown Transit Area, Lundy Place and Capitol Avenue.

PHONE/COMMUNICATIONS

SBC provides phone service to the Midtown Transit Area. Phone service currently is available to all existing users within the Midtown Transit Area, with most connected by underground service lines following the road network in the area. Some overhead facilities exist along Great Mall Parkway, East Capitol Avenue, and Montague Expressway.

OPPORTUNITIES AND CONSTRAINTS

POTABLE WATER

The City system within the Midtown Transit Area includes a system of mainlines varying in diameter from 6 to 14 inches. The 2002 Water Master Plan recommended five capital improvement projects, three of which were near-term improvements, and two that were long-term. None of the projects lie within the boundaries of the Midtown Transit Area, however, three of the five are within the SC1 and SC2 pressure zones that serve the area:

- Construct 300 LF of 12-inch pipe to three dead-end pipes, one on Abel and two on Carlo Street; and parallel 260 LF of existing 8-inch pipe on Carlo with a 6-inch pipe.
- Construct 750 LF of 12-inch pipe parallel to existing pipe at Gibraltar turnout near SCVWD interconnection with SFPUC
- Construct a 1.3 MG tank within SCVWD system

For the Water Master Plan analysis, demands were based on land use and examined in four phases: (1) 2002 land use, (2) 2008 land use, (3) 2018 land use, and (4) the Midtown Specific Plan area build out scenario. The latter two projects listed above are required under the current build-out scenario for Milpitas, including development plans for the Midtown Specific Plan area. Between 2008 and 2018, approximately 22 acres of industrial development will be converted to multi-family, very high density transit-oriented development (MFVH-TOD). The following phase, between 2018 and the Midtown build-out scenario will convert approximately 10 more acres of industrial and commercial land into MFVH-TOD land. These land use scenarios will change with the new plans for the Midtown Transit Area.

Potable water demands for residential, commercial, and mixed use development areas are generally higher than for industrial development. In particular, high and very high density residential development can have significantly higher demands than industrial development, with water use factors ranging from 270 gallons per day per dwelling unit (gpd/DU) to 800 gpd/DU for residential compared with 1,250 gpd/acre to 1,600 gpd/acre for industrial. The Water Master Plan estimates the overall water demand within the City to rise from 12.4 mgd to 16.6 mgd at build-out (including the Midtown Specific Plan area). While the existing storage available will not be enough to accommodate the increased demands, the available supply of treated water from SFPUC and SCVWD should be sufficient to meet demand. Further analysis is required to determine more precisely what improvements will be necessary to accommodate the expected increase in potable water demand within the Midtown Transit Area.

STORM DRAINS

The existing storm drain facilities in the Midtown Transit Area range in size from 12 to 60 inches in diameter. According to the 2001 Storm Drain Master Plan, the area requires some improvements under the previous development plans within the Midtown Transit Area including: 1) constructing a new parallel 48-inch culvert beneath Montague Expressway at Piper Drive and 2) replacing an existing 30-inch pipe with a 36-inch pipe to drain the low end of Tarob Court. A table listing all proposed storm drain capital improvement projects is located in Table B.

With development plans for the Midtown Transit Area generally changing land use from predominantly industrial to high density residential and commercial, stormwater runoff will likely decrease from previous estimates. The runoff coefficients for residential, retail mixed use, and commercial land uses are lower than those for industrial, resulting in less stormwater runoff if the land use for the Midtown Transit Area changes. Storm drain improvement projects would be funded through a one-time fee paid when new developments are constructed that would require expansion of storm drain capacity. Also, any future developments constructed one foot above the 100-year flood plain would not be required to buy flood insurance, while those under one foot must be covered by insurance. Further analysis is required to confirm that runoff would be reduced under development plans for the Midtown Transit Area.

SCVWD and the Army Corps of Engineers are currently working on plans to improve drainage canals and creeks to reduce flooding impacts in the area. Projects are underway on Upper and Lower Berryessa Creek as well as Upper and Lower Penitencia Creek to reduce the extent of impact of flooding events. Local opposition to plans developed in 1990 by the Army Corps of Engineers for the Berryessa Creek project kept the project from being implemented. The original project called for concrete lining on a large part of the creek, while the current project will

incorporate more aesthetic appeal along with flood protection. These programs will protect the Midtown Transit Area from flooding, but any floodplain designation changes would come after FEMA has reviewed the projects.

WASTEWATER

The 2004 Sewer Master Plan Revision called for several capital improvement projects within the Midtown Specific Plan area, consequently the Midtown Transit Area. The improvement projects known as the Great Mall Project are of the highest priority for the Midtown Transit Area. The Great Mall Project includes the following improvements:

1. Along Great Mall Parkway between South Main Street and Montague Expressway:
   - Replace 360 LF of 15-inch with 18-inch diameter pipeline
   - Replace 1,820 LF of 10-inch with 18-inch diameter pipeline
   - Replace 450 LF of 10-inch with 15-inch diameter pipeline
2. Along Montague Expressway
   - Replace 885 LF of 10-inch with 12-inch diameter pipeline
   - Replace 30 LF of 8-inch with 15-inch diameter pipeline
   - Replace 325 LF of 8-inch with 12-inch diameter pipeline
3. Along South Main Street, north of Great Mall Parkway
   - Replace 590 LF of 18-inch with 27-inch diameter pipeline
   - Replace 370 LF of 12-inch with 27-inch diameter pipeline
4. Along South Main Street, south of Great Mall Parkway
   - Replace 1,515 LF of 8-inch with 12-inch diameter pipeline
   - Replace 269 LF of 8-inch with 10-inch diameter pipeline

The 2004 Sewer Master Plan Revision indicates that the City's current contracted capacity with the WPCP of 12.5 mgd will be reached by 2015 under current development plans. Flow estimates for the City at build-out, including current development plans for the Midtown Specific Plan area would reach 13.0 mgd.

As with the Water Master Plan, the Sewer Master Plan flow scenarios were based on changing land use, analyzed in phases for the years 2004, 2008, 2018, and the Midtown Specific Plan build-out scenario. Approximately 32 acres of industrial and commercial development would be converted to MFVH-TOD land at build-out. Residential and mixed use development generally generates more wastewater than commercial and industrial development. High and very high density residential development can generate roughly between 85 to 90 gpd/person, while commercial and industrial development generates approximately 1,000 gpd/acre. Further analysis is required to determine whether the recommendations from the 2004 Sewer Master Plan update are still valid under the development plans expected for the Midtown Transit Area.

RECYCLED WATER

The Midtown Transit Area contains recycled water mains ranging in size from 6 to 10-inch diameters, with a 20-inch transmission line delivering the recycled water to the area's northern edge. Plans for the Midtown Transit Area include many opportunities for additional recycled water users. Fortunately, existing recycled water lines extend into most of the Midtown Transit Area and the proposed new development areas. For recycled water service to reach the entire area, new mainlines must be installed extending to the east along Great Mall Parkway and East Capitol Avenue.

ELECTRICITY

The existing substation capacity is likely to be adequate for the expected land uses in the Midtown Transit Area; however a load analysis of the demands associated with the redevelopment plans will be required to confirm the capacity. New circuits requiring substructures and cabling should be installed when development occurs. Any improvements that need to be made to existing facilities will depend largely on the preferred voltage for future customers in the Midtown Transit Area.

GAS

Natural gas service can be provided to new land uses; however existing mains may need to be extended to provide natural gas to new development. In particular, areas where new roads will be constructed to accommodate new residential areas will require expanded gas mains.

CABLE

It is likely that cable service lines will require extension in parts of the Midtown Transit Area in order to accommodate the future residential development. Expansion of service within the Midtown Transit Area will likely require installation of new service lines, however no other obstacles are expected to impede connections to new customers. Closer consultation with Comcast will be required with regard to specific development plans for the Midtown Transit Area to determine the requirements for connection of cable service to the area.

PHONE/ COMMUNICATIONS

Construction of more densely-developed land within the Midtown Transit Area will require more connections to phone service than currently exists. There are no expected obstacles to extension of service to new residential and commercial customers; however it will likely require installation of more service lines to accommodate the new customers. Closer consultation with SBC will be required with regard to specific development plans for the Midtown Transit Area to determine the requirements for connection of phone service to the area.

CONCLUSIONS AND RECOMMENDATIONS

Utility coverage within the Midtown Transit Area is generally adequate for new development; however some utility improvements will be required to accommodate the redevelopment planned for the area. Many of these improvements have already been identified in the City's Master Plan documents, although modifications to those recommendations may be required after a closer examination of the development plans for the Midtown Transit Area. Because of the nature of proposed changes to land use within the area, namely from a primarily industrial

area to a residential and commercial area, the demands for potable water, sanitary sewer services, recycled water, as well as other utilities will increase. With the proposed addition of a BART line running through the area, the existing conditions of utilities could change to accommodate the project. A more detailed analysis of these demands will be prepared in the coming months, allowing for more specific recommendations within the Midtown Transit Area.

Table B: Storm Drain CIP Projects

Project ID	*Location*	*From*	*To*	*Description*	*Size*	*Lineal Feet*
			Priority 1 Projects			
PD1.1	Vista Way	street sag	Piedmont Creek	Parallel Storm Drain	60	245
PD1.2		Rocky Mtn. Ave.	Clear Lake Ave.	Replacement Storm Drain	48	270
PDB1.1	Wrigley Way	Midpoint	Vista Way	Parallel Storm Drain	24	400
PDB1.2	Vista Way	Wrigley Way	Berryessa Creek	Replacement Storm Drain	42	350
PDB1.3	Watson Court	Street sag	Montague Expressway	Parallel Storm Drain	24	300
L2.1	South Park Victoria Dr.	East Calaveras Blvd.	Los Coches Creek	New Storm Drain	42	640
T1.1	Jacklin Road	Off-street drain	Tularcitos Creek	Parallel Storm Drain	54	300
BT1.1	Traughber Street	Traughber Street	Tularcitos Creek	Replacement Storm Drain	72	150
BT1.2	Park Hill Drive	Park View Dr.	Kennedy Drive	New Storm Drain	36	175
BT1.3	Traughber Street	North Park Victoria	Wool Drive	New Drain	66	890
BT1.4	Traughber Street	Prada Drive	North Park Victoria	Parallel Storm Drain	60	750
BT1.5	Prada Drive	Stemel Way	Traughber Street	Parallel Storm Drain	54	290
WTCA1.1	Berryessa Pump Station			Discharge Piping Retrofit		
W1.1	Montague Expressway		Wrigley Creek	Parallel Culvert	48	140
PB1.1	Abbott Avenue	Redwood Avenue	Hall Park Lagoon	New Storm Drain	36	560
PB1.2	Coyote Street	Abel Street	Main storm drain	Relief Drain	42	930
P3.1	Spence Creek Pump Station			Standby Power		
P4.1	Manor Pump Station			Extra Capacity + Standby		
P5.1	California Circle Pump Station			Rehabilitation (Caltrans)		
P6.1	Jurgens Pump Station			Station Rehabilitation		

Project ID	*Location*	*From*	*To*	*Description*	*Size*	*Lineal Feet*
P6.2	UPRR			(4) Parallel 5' x 4' RCBs		150
C1.1	Sycamore Drive	Barber Lane	Buckeye Drive	Parallel Storm Drain	42	1280
			PRIORITY 2 PROJECTS			
PD1.3	Dempsey Road	Yosemite Drive	Piedmont Creek	Parallel Storm Drain	54	720
PD1.4	South Park Victoria Dr.			Parallel Storm Drain	24	260
PD1.5	Sequoia Drive	Big Basin Dr.	Clear Lake Ave.	Parallel Storm Drain	36	730
PD1.6		Mesa Verde Dr.	Crater Lake Ave.	Replacement Storm Drain	24	540
PD1.7		Moulton Dr.	Blueridge Dr.	Replacement Storm Drain	36	650
PDB1.4	Wrigley Way	Offsite		Replacement Storm Drains	24	240
				Replacement Storm Drains	30	500
				Replacement Storm Drains	42	400
L2.2	Dempsey Road	Selwyn Dr.	Los Coches Creek	Parallel Storm Drain	30	500
T1.2	Off-street drain	Fox Hollow Court	Jacklin Road	Replacement Storm Drain	48	180
BT1.6	Printy A venue	Burdett Way	Wool Drive	Replacement Storm Drain	36	350
BT1.7	Quail Drive		Simas Drive	Parallel Storm Drain	42	250
BT1.8	Calle Oriente	Evans Road	North Park Victoria	Replacement Storm Drain	54	1050
BR1.9	Temple Drive	Fair Hill Drive	Kennedy Drive	Parallel Storm Drain	24	250
BR1.10	Quince Lane					
BT1.11	Ridge Drive			Parallel Storm Drain	18	315
CA2.2	Minnis Circle			Parallel Storm Drain	18	460
CA2.3	Minnis Circle			Replacement Storm Drain	30	200
CA2.4	North Milpitas Boulevard	Midwick Drive	Calera Creek	Parallel Storm Drain	48	660
W1.2	Piper Drive	Cul-de-sac	Wrigley Creek	New Lateral	36	140
W1.3	Piper Drive	Wrigley Creek	UPRR	Parallel Drain (bored)	24	390

Project ID	*Location*	*From*	*To*	*Description*	*Size*	*Lineal Feet*
W1.4	Wrigley Creek	Piper Drive	Open channel	Parallel Culvert	54	500
W1.5	South of Turquoise St.	S. Milpitas Boulevard	Wrigley Creek	Replacement Storm Drain	66	670
W1.6	Wrigley Street	Montague Expressway	Piper Drive	Concrete "U" Channel		560
F1.1	Sinott Lane			Parallel Storm Drain	30	155
F1.2	Ford Creek	Railroad Avenue		Replacement Culvert	60	60
F1.3	Ford Creek	Calaveras Boulevard		Parallel Culvert	72	270
F1.4	Ford Creek	Calaveras Boulevard	Railroad Court	Widen Channel to 20'		970
PB1.3	Off street	Coyote Street	Penitencia Pump Station	Replacement Storm Drain	72	810
P1.1	Tarob Court	Cul-de-sac	Penitencia East Channel	Replacement Storm Drain	36	310
P2.1	Evergreen Way (off street)	Greenwood Way	Woodland Way	Replacement Storm Drain	42	950
P2.2	Woodland Way	Sunrise Way	Fallen Leaf Drive	Parallel Storm Drain	42	850
P3.2	Spence Creek			Replace Culvert	66	70
P5.2	Abbott Pump Station			Standby Power		
P5.3	California Circle	Street sag	Nimitz off-ramp	Parallel Storm Drain	18	200
P6.3	Jurgens Drive	UPRR	Jurgens Pump Station	New Storm Drain	48	500
P6.4	UPRR	North Milpitas Blvd.	UPRR Ditch E of RR	Replacement Storm Drain	66	600
P6.5	Wilson Way			Parallel Storm Drain	24	175
P6.6	Wilson Way	Apartments	Dixon Landing Road	Replacement Storm Drain	42	400
P6.7	Washington Drive/Arizona Ave.	Coelho Street	North Milpitas Blvd.	New Storm Drain	36	2000
C1.2	Sycamore Drive	Buckeye Drive	Off street drain	Parallel Storm Drain	42	820
C1.3	Buckeye Drive	Buckeye Court	Sycamore Drive	Parallel Storm Drain	24	600

Project ID	*Location*	*From*	*To*	*Description*	*Size*	*Lineal Feet*
C1.4	Off street drain	Buckeye Court	Sycamore Drive	Replacement Storm Drain	36	1150
C1.5	Cottonwood Drive	Barber Lane	McCarthy Boulevard	Parallel Storm Drain	30	1820
C1.6	Barber Lane	Street sag	McCarthy Boulevard	Parallel Storm Drain	30	800
C1.7	McCarthy Boulevard	Street sag	Barber Lane	Parallel Storm Drain	24	490
C2.1	Alder Drive	Street sag	Tasman Drive	Parallel Storm Drain	36	1200
C3.1	Bellew Drive	McCarthy Boulevard	Bellew Pump Station	Parallel Storm Drain	42	2500
C3.2	Murphy Ranch Road	Sumac Drive	Bellew Drive	Parallel Storm Drain	42	1160
C3.3	Sumac Drive	Street sag	Murphy Ranch Road	Parallel Storm Drain	42	510
C3.4	Barber Lane	Cul-de-sac	Bellew Drive	Parallel Storm Drain	36	490
			PRORITY 3 PROJECTS			
PD1.8	Vista Way	Yosemite Drive	Piedmont Creek	Parallel Storm Drain	36	630
PD1.9	Dempsey Road	Landess Ave.	David Lane	Parallel Storm Drain	30	680
PD1.10	Dempsey Road	David Lane	Richter Court	Parallel Storm Drain	42	1620
PD1.11	South Park Victoria Dr.	Clear Lake	Mt. Shasta Ave.	Parallel Storm Drain	30	790
PD1.12	South Park Victoria Dr.	Mt. Shasta Ave.	Yosemite Dr.	Parallel Storm Drain	36	2390
PD1.13	South Park Victoria Dr.	Yosemite Drive	Piedmont Creek	Parallel Storm Drain	54	460
PD1.14	Sequoia Dr.	Yellowstone Ave.	Crater Lake Ave.	Parallel Storm Drain	36	940
PD1.15	Westridge Drive	Crescent Terrace	Yellowstone Ave.	Parallel Storm Drain	30	370
PD1.16	Piedmont Road			Debris Basins		
T1.3	Jacklin Road	Street sag	Off-street drain	Parallel Storm Drain	36	290
T1.4	Princess Place			Debris Basin		
T1.5	El Camino Higuera			Debris Basins		
T1.6	Creek Street			Debris Basin		

Project ID	*Location*	*From*	*To*	*Description*	*Size*	*Lineal Feet*
T1.7	Country Club Drive			Debris Basins		
BT1.12	Wool Drive	Kennedy Drive	Traughber Street	Parallel Storm Drain	42	1300
BT1.13	Park Hill Drive	Park Heights Drive	Park View Drive	Parallel Storm Drain	30	820
BT1.14	North Park Victoria Dr.	Ayer Street	Park Heights Drive	New Drain	30	1000
BT1.15	North Park Victoria Dr.	Park Heights Drive	Kennedy Drive	New Drain	36	1000
BT1.16	Kennedy Drive	Fanyon Street	Prada Drive	Parallel Storm Drain	36	600
BT1.17	Kennedy Drive	North Park Victoria	Printy Avenue	New Drain	36	660
BT1.18	Kennedy Drive	Printy Avenue	Wool Drive	Parallel Storm Drain	42	200
BT1.19	Prada Drive	Prada Court	Stemel Way	Parallel Storm Drain	42	450
BT1.20	Prada Drive	Kennedy Drive	Prada Court	Parallel Storm Drain	36	260
BT1.21	Stemel Way	Simas Drive	Prada Drive	Parallel Storm Drain	42	900
BT1.22	Simas Drive	Quail Drive	Stemel Way	Parallel Storm Drain	42	450
BT1.23	Evans Road					
CA2.5	Escuela Parkway	Cirolero Street	Calera Creek	Parallel Storm Drain	30	290
WTCA1.2	Meadowhaven Way	Beresford Court	Silverlake Drive	New Drain	36	440
PB1.4	Chestnut Avenue	Heath Street	Abbott Avenue	Parallel Storm Drain	24	1090
PB1.5	Redwood Avenue	End of drain	Abbott Avenue	Parallel Storm Drain	30	420
PB1.6	Abbott Avenue	Elm Avenue	Chestnut Avenue	Parallel Storm Drain	24	490
PB1.7	Abbott Avenue	Chestnut Avenue	Redwood Avenue	New Storm Drain	36	500
PB1.8	Off street	Lexington Street	North Abel Street	Replacement Storm Drain	36	650
PB1.9	North Abel Street	Penitencia Street	Off street drain	Parallel Storm Drain	36	1235
PB1.10	North Abel Street	Off street drain	Redwood Avenue	Parallel Storm Drain	42	950

Project ID	*Location*	*From*	*To*	*Description*	*Size*	*Lineal Feet*
PB1.11	Off street	Berryessa Street	North Abel Street	Replacement Storm Drain	30	620
P2.3	Timber Way	Blue Spruce Way	Starlite Drive	Parallel Storm Drain	18	260
			PRIORITY 4 PROJECTS			
CA2.6	Sudbury Drive		North Milpitas Boulevard	Replacement Storm Drain	36	250
WTCA1.3	Edgewater Drive	Beresford Meadows	Folsom Circle	Triple Bore under Berry-essa	48	220
WTCA1.4	Kevinaire Drive	Cul-de-sac	Jacklin Drive	Replacement Storm Drain	36	100
P3.3	Abbott Ave-nue	Street sag	Cross drain	Parallel Storm Drain	30	790
P4.2	Heath Street	Rudyard Drive	Off street drain	New Drain	24	75
P4.3	Smithwood Street	Rudyard Drive	Off street drain	New Drain	24	75
P4.4	Abbott Ave-nue	Rudyard Drive	Krismer Street	Parallel Storm Drain	42	325
P6.8	Milmont Drive	End of drain	Jurgens Drive	Parallel Storm Drain	24	650
P6.9	UPRR	Dixon Landing Road	Jurgens Drive	Widen Channel to 15’		1600