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1.0 Introduction and Purpose

The purpose of this report is to provide an overview of existing and planned utility infrastructure in the Mesa Gateway area in support of development of the strategic plan for the area. This overview includes a discussion of municipal utility services and features: water, wastewater, water resources, drainage, electric, gas, and fiber optic line.

It is important that utility infrastructure is considered as part of the strategic planning process to ensure sufficient support is in place or planned for proposed land use templates.

2.0 Water Resources and Infrastructure

2.1 Existing

Aside from a very small area south of the Phoenix-Mesa Gateway Airport, which is served by a private water company, the City of Mesa is the designated municipal provider of water service for the planning area. The Mesa Gateway area falls into the region designated as “Off Project” which refers to land outside of the boundaries which can be served by the Salt River Project (SRP). This zone receives an average of 45 million gallons of water per day (MGD) from the Central Arizona Project (CAP) Canal through the City’s Brown Road CAP water treatment plant. In addition, groundwater supplies from wells supplement the CAP water. In the last 10 years, the “Off Project” area demand has more than doubled.

The Mesa Gateway area is divided by two of the City’s distribution pressure zones. The western half is located in the Falcon Field Pressure Zone and the eastern half is located in the Desert Wells Pressure Zone. There are also wells located in the eastern portion of the area. (See water map following Section 2.)

2.2 Future

Mesa is currently designated by the Arizona Department of Water Resources as having a one-hundred year assured water supply. The City updated The City of Mesa Water Master Plan in 2004 to provide guidance for daily water usage and redundancy plans in anticipation of continuing usage and growth. The City’s 2004 Water Resources Strategic Plan shows adequate water supplies to meet demand as projected using land uses defined in the Mesa 2025 General Plan. However, given proposed development, changing densities of residential housing, and projected build out, existing plans may change. In fact, due to the way in which population projections were calculated with the use of U.S. Census Bureau data and Maricopa Association of Governments (MAG) projections, it is likely that development in this area will exceed the projected densities. This is not an uncommon planning situation and the City typically responds by adjusting its utilities master plans as General Plan amendments are approved. While the City anticipates being able to meet water demands associated with the 2025 land use plan, the Water Resources Division will perform an analysis to assess the ability to meet demands as proposed and actual land use changes occur.
The Mesa 2004 Water Resources Master Plan indicates that water demands for the off project (desert lands, which include the Mesa Gateway area) will be met with a diverse portfolio of renewable water supplies, including the exchange of reclaimed water for a significant amount of CAP water with the Gila River Indian Community. These supplies will become potable water delivered through the City’s distribution system to customers through a variety of mechanisms.

For example, reclaimed water that is not used for the above mentioned exchange for CAP water must be physically recharged or delivered to groundwater savings facilities to develop storage credits that can be pumped as groundwater for drinking water purposes. Also, several categories of Colorado River water will be delivered by the CAP Canal to the Brown Road Treatment Plant (or a future plant described below). Service reliability from these sources depends upon canal capacity availability and canal operation, as well as water treatment plant operation. It is anticipated that the CAP Canal will be out of service for maintenance purposes for a month in the winter every six years. When the canal is out of service, if demands on capacity by all CAP subcontractors require proportional deliveries to ensure all subcontractors can receive some portion of their subcontracted supply, or if Colorado River shortage conditions reduce or eliminate Mesa’s subcontract water availability, other water resources and physical delivery mechanisms will need to be employed.

The 2004 Master Plan indicates that 25% of Off Project annual demand in a normal year will need to be met physically through the provision of groundwater from wells. Groundwater in the Mesa Gateway area will be mainly reserved for production of potable supply. This groundwater will be accounted for as groundwater allowance and storage credits accumulated through physical and in-lieu recharge of CAP, reclaimed water, and other renewable water supplies. Therefore, it will be important for Mesa to be successful in the on-going development of recharge credits and the installation of wells of sufficient capacity to keep up with demand and maintain service levels. It will also be important for Mesa to consider redundancy strategies, or demand reduction strategies, for when the CAP canal is out of service or when Colorado River water availability is reduced.

The City does not anticipate the development of a separate reclaimed water distribution system for the Mesa Gateway area. A new, significant water demand for the area is represented by the former General Motors proving ground that has been purchased by DMB for a planned area development that will include residential and commercial development and golf courses. Because of the proximity of the CAP canal to this area, raw CAP water (with the legal designation of reclaimed water, through an exchange) will be used to irrigate the golf courses and provide for other related non-potable demands. This non-potable water delivery strategy will be affected by the every six year, month-long CAP canal outage, during which time water for the golf courses will need to come from an alternative source.

Existing pumping, storage, and distribution infrastructure is limited in the Mesa Gateway area. As stated above, the area is divided by two service zones with separate infrastructure. Service zones are delineated based on ground elevation changes of approximately 100 feet per zone. This results in a pressure range from approximately 45 psi to 110 psi in each zone. Higher pressures are at the lower elevations and lower pressures are at the higher elevations within each zone. Each zone that the City has is
served by a system of reservoir(s), pump stations, and dedicated pipelines. The approximate dividing line for the Mesa Gateway Area is Ellsworth Road. Each zone will be discussed separately because of the distinct and separate infrastructure issues.

The Desert Wells zone is generally east of Ellsworth Road to Meridian Road. A large reservoir and pump station project is under construction at Elliot Road and Signal Butte Road that will greatly enhance reliability and the ability to provide service, including fire flow, to the Desert Wells Zone. This facility is expected to come on-line the summer of 2009. This is a dump and repump facility, diverting flows from the distribution system during low demand periods and repumping to provide added capacity during peak demand times. There is a water treatment facility planned for this site, which will treat water from the CAP Canal to the east. Design has not started for this facility and construction will not be completed until at least 2012. The facility is planned for a 30 MGD capacity with the ability to expand to 45 MGD.

Current discussions with DMB indicate that the first development units will be built on the northern edge of the former GM Proving Grounds. This means that supporting pipelines can be built geographically adjacent to existing development and infrastructure. This interconnected network will provide adequate looping and redundancy to provide reliable fire flow with having to extend infrastructure to remote, geographically isolated areas. This provides an overall cost benefit to both the City and the developer.

Development at the southern edge of the Desert Wells zone will have adequate fire flow once the reservoir and pump station come on-line, but will still have limited pipeline reliability. There is a single 16” waterline loop that extends down Ellsworth Road from Elliot Road to Pecos Road, across Pecos to Mountain Road, and then back up to Elliot Road. No interior cross connecting pipelines exist east/west or north/south to provide a reliable network in the event of a waterline break due to material failure or contractor damage. Developers will be required to provide fire sprinkler systems adequate to handle reduced flow and pressure should one of the waterlines be out of service for repairs.

Existing pumping and distribution infrastructure is even more limited in the Falcon Field Zone side of the Mesa Gateway area. The City has initiated design on upgrades to a small pump station at Baseline, just west of Power Road, which transfers water to the southern portion of the zone. The upgrades to this facility are anticipated to be operational by the summer of 2010. While this will provide adequate pumping ability, there is only a single, 16” waterline in Power Road that serves all development south of Elliot Road. An additional north/south pipeline will be necessary to provide fire flow to development in the southern Falcon Field Zone. Because of the length of pipeline necessary, the City needs to maximize the benefit of investment of capital dollars in infrastructure by encouraging development in areas as far north as possible. Development north from Ray Road will require extending a pipeline from north of Elliot Road to Ray Road and acquiring right of way. The pipeline alignment would be in either Sossman or Hawes Road. If the line is constructed in Sossman Road first, the size may need to be increased over what is shown in the Water Master Plan to provide adequate capacity to southern areas, most notably ASU. The line size in Hawes Road could then be evaluated based on the size of what is placed in Sossman Road.

The City has design underway for a waterline, sewerline, and road improvements in Ray Road from Sossman to Ellsworth Roads with anticipated construction in 2009. In addition, design for infrastructure in Warner Road is being considered. The City has
begun design for additional infrastructure to support the ASU Polytechnic campus. These projects constitute major near term investments in infrastructure for the Williams Field/Loop 202 area.

Even with all the improvements discussed thus far for the Falcon Field Zone, the issue of providing fire flow to Pecos Road, west of Ellsworth Road, will not be solved. This area is geographically remote from existing facilities. The 20” line in Pecos was constructed as part of a road improvement project. The line is connected to a Pressure Release Valve (PRV) at Pecos and Ellsworth that was installed as a temporary low flow backfeed from the Desert Wells zone for water quality reasons to prevent the 20” line from becoming a dead end. It was never intended to be a permanent supply source for fire flow and peak day demands. The PRV has a pressure sustaining function set for the Desert Wells side and closes as flows and pressure drops occur. While the line size in Pecos is adequate, the loop from Pecos Road following Ellsworth Road to Ray Road still needs to be completed to provide adequate fire flow for commercial/industrial development. The financial challenge is the cumulative cost for infrastructure and pump station upgrades already identified in the near term to bring reliable service to the Williams Field/Loop 202 area including ASU. In order to have capacity and infrastructure to connect to, these projects will need to be funded and completed as a first priority.

When development occurs in a sequential manner, construction of water system infrastructure within subdivisions and in arterial frontages is typically paid for by the developer and the City pays for any upsizing of lines needed for “regional” transmission needs per the Water Master Plan. Funding for City costs associated with development comes from revenue-abated utility bonds programmed into the 5-year Capital Improvement Plan. Receipt of revenues from impact fees and other sources resulting from development generally keeps pace with infrastructure needs.

When development leapfrogs to areas remote from existing infrastructure and development, the City cannot always afford to construct the infrastructure to extend service. The issue for water is the ability to provide the volume of water necessary for fire flow for commercial and industrial development. This is not an incremental capacity issue like sewer capacity. The capacity/ability to provide fire flow is necessary for the very first building of the very first development in an area.
3.0 **Wastewater**

3.1 **Existing**

The City of Mesa is the provider for wastewater collection and treatment for the incorporated area of the City. The City has three facilities to treat wastewater to reclaimed water of suitable quality for a variety of reuse opportunities. These include the Northwest Water Reclamation Plant (NWWRP), Southeast Water Reclamation Plant (SEWRP), and the Greenfield Water Reclamation Plant (GWWRP). The Northwest Water Reclamation Plant is located in the northwest corner of the City of Mesa, north of 8th Street and west of Dobson Road. This facility has a treatment capacity of 18 MGD. The reclaimed water from this plant is delivered to either recharge basins, the Salt River, or the Granite Reef Underground Storage Project (GRUSP).

The Southeast Water Reclamation Plant is located north of Baseline Road and east of Recker Road. This facility has an 8 MGD treatment capacity. The physical characteristics of the site allow it to ultimately accommodate a 16 MGD facility. The reclaimed water from this plant is pumped to Leisure World and Superstition Springs for golf course irrigation. Water from this plant is also delivered to the Greenfield Water Reclamation Plant for subsequent delivery to the Gila River Indian Community and can also be discharged to the East Maricopa Floodway (EMF).

The Greenfield Water Reclamation Plant is located within the Town of Gilbert on the west side of Greenfield Road between Germann Road and Queen Creek Road. This 16 MGD facility was recently completed and is jointly owned by the City of Mesa and the Towns of Gilbert and Queen Creek. Mesa’s current ownership is 4 MGD. The ultimate capacity of this plant is projected to be 52 MGD, with Mesa’s ownership set at 24 MGD. Mesa’s reclaimed water from this plant is delivered to the Gila River Indian Community in exchange for CAP water. (See wastewater map following Section 3.)

The existing collection system serving the Mesa Gateway Area is shown on the above mentioned map. Existing development along Signal Butte Road, north of Ray Road and east of Ellsworth Road, is served by an existing gravity sewer, ranging in size between 12” and 21”. This sewer line discharges to the Mountain Horizons Lift Station at Ray and Ellsworth Roads and is pumped north for treatment at the SEWRP.

The area along Mountain Road, from Elliot Road to Pecos Road, and along Pecos Road, west to Power Road, is currently served by a sewer line ranging in size between 12” and 18” that discharges to an existing 24” interceptor in Power Road. This line originally discharged to the Pecos Road Lift Station, located at Ellsworth and Pecos Roads, where the wastewater was pumped north for treatment at the SEWRP. With the completion of the GWRP, this lift station was taken out of service and now all flow from the area east of Ellsworth continues west through the new Pecos Road line for treatment at the GWRP.

The Phoenix-Mesa Gateway Airport is served by a 12” line in Sossaman Road that flows north to Power Road, where it continues along Power Road for treatment at the SEWRP. Wastewater from the ASU Polytechnic Campus is collected and transported via an 18”
sewerline to the Williams Gateway Lift Station at Pecos and Power Roads. It is then pumped to the 24" interceptor in Power Road. This line continues south along Power to Germann Road, then west along Germann Road to the GWRP. It should be noted that the sewer line west of Power Road is jointly owned by Mesa and the Town of Queen Creek, with Mesa owning approximately 49% of the total capacity.

The 2003 Master Plan Update identified that the Pecos Road sewer would not have adequate capacity to handle the projected flows at buildout. A preliminary analysis made by the City of Mesa determined that the available capacity in the existing system is constrained by sections of sewer in Pecos Road between Hawes and Sossaman Roads and in Germann Road between Power and Greenfield Roads. A memo presenting available capacities is available in the Appendix of the 2003 City of Mesa Wastewater Master Plan Update.

3.2 Future

The City of Mesa Wastewater Master Plan Update (WWMP) was completed in 2003 to address the future needs in the area. An update to the 2003 plan is currently underway and is scheduled to be completed in April 2009. Two of the main purposes of the plan are to address aging infrastructure and the southeast area of Mesa (i.e. the Mesa Gateway area). The capacity of the City’s SEWRP and GWRP can be increased and this potential is included in the City’s WWMP. As previously mentioned, there is a portion of the Mesa Gateway area that is not incorporated. These areas, including the Mesa Proving Grounds, are expected to be annexed and will be connected to the Mesa system.

Recommendations presented in the 2003 Wastewater Master Plan Update included the construction of new interceptor sewers in Warner, Ray, and Williams Field Roads to serve the northern and central portions of the Mesa Gateway Area. The Plan also recommended diversion of flow from the existing Mountain Road sewer to the Ray Road and proposed Williams Field Road sewers, as well as, continued use of the Pecos Road Lift Station. While these recommendations did not address the long-term improvements for the Pecos Road sewer, they would delay the need for more significant improvements and were considered adequate at the time due to the limited short-term growth anticipated on the GM Proving Grounds. The sale of the Proving Grounds and proposed development within this area now accelerates the need for identifying a long-term solution.

Preliminary evaluations conducted as part of the ongoing Wastewater Master Plan Update has identified the need for a relief sewer along Pecos Road from Ellsworth to Power Road and the construction of a new sewer from Power Road to the East Mesa Interceptor along the Rittenhouse Road alignment. These projects would eliminate the major constraints in the existing system and provide the additional capacity required to meet the buildout flows now projected for this area. The on-site sewer systems proposed by the DMP and Paragon 600 developments will also be incorporated into the regional system and will help to provide the additional system capacity required to serve the Mesa Gateway Area. The proposed facilities required at buildout are shown on the Wastewater Facilities map following this section.
The timing of construction of the proposed facilities identified above will be dependant on the phasing and location of future development within the area. Some development may be served utilizing the available capacity in the existing system while other areas will require the construction of new facilities. Therefore, it is necessary to develop a standard procedure for committing the available capacity in the existing system and identifying when system expansions should be initiated.

Any significant development in the northern portion of the Mesa Gateway Area, north of Williams Field Road and west of Signal Butte Road, will require the installation of the Ray Road Interceptor before service can be provided. This interceptor will serve the area between Warner Road and Williams Field Road and can also serve initial development on the DMB property. However, when flows in the Ray Road Interceptor reach 75% of the design capacity, it will be necessary to construct the Warner Road Interceptor to serve the northern portions of DMB in accordance with their Wastewater Master Plan. The Warner Road Interceptor may be installed prior to this, however, if development occurs along Warner Road, west of Ellsworth Road, before DMB.

Some development along the Pecos Road corridor can be served by the existing Pecos Road Sewer, however, available capacity in this sewer line and the sewer west of Power Road is limited. Therefore, the additional improvements described above will be required when the flows in this line reach 75% of the total capacity.

The analysis of the existing system has identified two major constraints, the first being in the 18” sewer between Ellsworth and Power Roads and the second being in the joint Mesa/Queen Creek line between Power and Greenfield Roads. The first constraint would be alleviated by the construction of a parallel sewer along New Pecos Road between Ellsworth and Power Roads. The second would be addressed by the construction of a new 30” Interceptor from Power Road to the EMI. It is recommended that the improvements be initiated as follows: (1) construct the diversion structure at Mountain and Ray Roads to allow the diversion of flow from the Pecos Road sewer to the Ray Road sewer, (2) construct the new 30” Interceptor between Power Roads and the EMI to relieve the constraint west of Power and provide additional capacity for development on the ASU Polytechnic Campus and adjacent areas, (3) Construct the parallel Pecos Road sewer from Power Road to Ellsworth Road, (4) Install the Pecos Road Diversion at Pecos and Merrill Roads, Crismon, and Gateway Avenue, as development occurs in these areas, and sewer lines along Merrill and Gateway. This sequence may be modified, as necessary, as actual development occurs.

The City has also incorporated recharge facilities into its wastewater treatment program. Recharge is a critical element of the City’s 100-year water supply plan for continued development. The City’s 100-year water supply requirements ensure that water is available to residents for a 100-year period. To accomplish this goal, most treated wastewater must be stored underground and this is accomplished through recharge. See Water Resources discussion for more information.

Although recommendations to update existing facilities are dependent upon findings of the ongoing Wastewater Master Plan Update, it is anticipated that the bulk of flow from the Mesa Gateway area would be treated by the Greenfield Water Reclamation Plant, which will be expanded to accommodate growth.
4.0 Drainage

4.1 Overview

Storm drainage in the study area has been addressed in the East Mesa Area Drainage Master Plan, 1998. This plan was prepared for the Flood Control District of Maricopa County (FCDMC), who partners with the City to address drainage and flood control issues.

Storm flows in the project area generally flow from northeast to southwest. The Superstition Freeway (US 60), CAP canal, East Maricopa Floodway, and Rittenhouse Channel form major drainage boundaries to the north, east, west, and south, respectively. Runoff is concentrated upstream of the CAP canal and discharged over the canal in over-chutes. The Superstition Freeway has a system of collector channels and detention basins that collect runoff and discharge the detained flows under the freeway.

A system of channels and basins is used to capture, store, and convey flows within the project area. The Mesa Proving Grounds and the Phoenix-Mesa Gateway Airport occupy a substantial portion of the Mesa Gateway area and include significant drainage features. The Proving Grounds present a four-mile long barrier to runoff. Runoff reaching this area is diverted either around the north and south property boundaries, or through the site in the Powerline Floodway. The Phoenix-Mesa Gateway Airport handles off-site flows similarly; perimeter channels divert flows around the north and south boundaries to the East Maricopa Floodway. Sheet flow, ponding, and some flooding is still common in undeveloped portions of the study area, the result of the extremely flat topography.

4.2 Key Drainage Features

Key drainage features are highlighted on the Drainage Features graphic accompanying this section. (See map following Section 4.) Discussion of key features (existing and proposed) in the project area follows:

- **Sossaman Road Channel:** receives channelized flows from US 60 and conveys them south along Sossaman Road and west along Guadalupe Road to the East Maricopa Floodway.

- **Elliot Channel:** receives flows from north and east and conveys them along Elliot Road to the SR202L drainage system, thence west to the East Maricopa Floodway.

- **Powerline Floodway:** conveys flows from east of the Mesa Proving Grounds, west along the Williams Field Road alignment to the East Maricopa Floodway.

- **Pecos Road/Ellsworth Channels:** flows west from the Pinal County line along Pecos Road, thence north along Ellsworth Road to the Powerline Floodway.
Phoenix-Mesa Gateway Airport North and South Perimeter Channels: convey flows from the east around the airport and into the Powerline Floodway and Rittenhouse Channels, respectively.

East Maricopa Floodway: runs north-south along approximately the Power Road alignment, receives flows from the north and east including via the Sossaman Road, Elliot Road, Elliot Channels, and the Powerline Floodway and then conveys them to the Rittenhouse Channel at the southwest corner of the project area.

Rittenhouse Channel: the major regional floodway in the area - runs northwest-southeast along the extreme southwest corner of the Mesa Gateway area, receiving flows from the East Maricopa Floodway and other smaller channels including Rittenhouse Channel Extension along Queen Creek Road at the study area southern boundary.

Basins: are strategically located to moderate flows in several areas including along Elliot Road, Siphon Draw, and the extreme east end of the Pecos Road channel.

Existing and proposed drainage facilities are highlighted in the drainage features graphic. Funding for larger facilities is typically shared by the City and the FCDMC. Historically, the City has supported Storm Drain Bonds. These are backed by General Obligation funds. FCDMC must acquire their portion separately.

Developers are required to provide onsite retention for runoff from their properties and the half-street in front of their property. The City of Mesa compensates developers for any extra right-of-way required for area or regional drainage facilities.
5.0 **Electricity**

5.1 **Existing**

SRP is the certified provider for electric power to the planning area. Their facilities include generation plants, substations, and transmission and distribution lines. Electrical power is generated at the recently expanded 1,200 MW Santan Generating Station, located south of Warner Road on Val Vista Road in Gilbert. Power is transmitted via the Browning Power Receiving Station north of Elliott and Signal Butte Roads with scheduled additions of Dinosaur on Germann Road at the CAP canal and Moody south of Pecos and Recker Roads. SRP currently serves the planning area from five distribution substations.

5.2 **Future**

There are existing substations located adjacent to the planning area with four more currently planned. Additional facilities can be built to meet the demand of build out. SRP also has the capability of expanding facilities to accommodate growth in this area. A public process is generally necessary for right-or-way/easement acquisition particularly if new facilities are proposed in the area of existing transmission lines. The location of existing and planned major powerlines and substations are shown on the map. (See map following Section 5.)

Establishment of large industrial loads and data centers over approximately 10 megawatts require new lines and substations. SRP typically works with developers and the city to adequately prepare for anticipated electrical demand for projects such as the Mesa Proving Grounds and the Phoenix-Mesa Gateway Airport area. SRP’s proposed Morong-McPherson 69kV line and increased transformer capacity in surrounding substations will continue to provide reliable electricity in Mesa.

One of the main items is understanding the location, nature and timing of development in the area, so that the appropriate facilities can be provided in a timely manner. It is also important that SRP be provided with information regarding densities and the nature, phasing and timing of areas that are planned for greater densities. High density loads, such as large industrial customers and mid to high-rise buildings greater than 3 stories in height, may require additional electrical infrastructure. Finally, SRP plans to further explore their role regarding the concepts of sustainability and energy efficiency that will be considered in the development of this plan.
6.0 Natural gas

6.1 Existing

Southwest (SW) Gas is the natural gas provider for the majority of the Mesa Gateway area. The only area not served by SW Gas is within the Loop 202 area, which is served by the City of Mesa. Currently, the planning area is surrounded by both low and high pressure distribution lines. The high pressure line runs along Signal Butte Road in the northeast part of the area and then west on Elliott Road. At Ellsworth Road, the line runs from north of the planning area and to the southern edge of Germann Road. This line continues east and west along Germann Road beyond the west boundary of the planning area and east to Crismon Road. An additional high pressure line also runs along Pecos Road from Ellsworth Road east of Signal Butte Road. (See map at the end of Section 6.)

6.2 Future

With regard to future growth and development, SW Gas has the capability to accommodate future needs within the planning area without any interruptions to service.
7.0 Fiber Optic Information

7.1 Existing

Construction of the E-streets East Mesa Loop began in 2001 to build a professionally engineered carrier class conduit/vault system for both commercial and government uses. The designed loop contains a unique conduit bank design, large operational vaults at every major street crossing, access manholes to eliminate the need to cut the street and independent test points for the utility locators to access without exposing the fiber infrastructure.

The goal of the Loop is two fold: to further develop the broadband markets in three of Mesa’s growing employment centers and to meet the City’s needs. Additional conduit extensions (laterals) reach into Falcon Field, Phoenix-Mesa Gateway and the Arizona Health and Technology Park, along Elliot and Ellsworth Roads with the goal of providing conduit to deploy fiber optic connectivity quickly for commercial needs.

To date, a majority of the E-Streets East Mesa Loop has been constructed. The backbone route consists of over 36-miles of 12 two-inch conduits with access points at every major street crossing. 100 percent of the conduit system is buried, lowering chances of network interruptions. (See map following Section 7.)

7.2 Future

Although there is currently no fiber in place, the 12 conduits have been identified for the type of user to which they are available. As the City uses this infrastructure to meet municipal needs, private companies also can purchase conduits and access to vaults to deploy fiber optic connectivity quickly for commercial needs. The City offers this unique opportunity for commercial entities to acquire conduits at a cost that covers the City's expenses of installing the infrastructure.
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Revised 1/23/2007

Legend

East Loop Conduit Segments
- **Construction Complete**
- **Under Construction**
- **Future**

Freeway Crossings
- ◆ **Construction Complete**
- ◇ **Under Construction**
8.0 Summary of Findings

Key Findings of this effort are summarized below:

- The City of Mesa Utilities Department has prepared both a Water Master Plan and Wastewater Master Plan Update to meet the demand of the projected land uses defined in the Mesa 2025 General Plan.

- The City has identified that it will perform additional analysis regarding water resources and wastewater as proposed and actual land use changes occur.

- Storm drainage in the study area has been addressed in the East Mesa Area Drainage Master Plan, 1998.

- SRP is the certified provider for electric power to the planning area. They do not foresee any problems in providing service to the area, but will need to be kept involved as the area is built out, in order to provide service and facilities in a timely manner.

- Southwest Gas is the natural gas provider for the majority of the study area. They have the capability to accommodate future needs without interruptions to service. They also need to be kept involved as the area is planned and built out, so that they can do the appropriate planning and construction to provide service and facilities in a timely manner.

- The City of Mesa has constructed the infrastructure for fiber optic service in the area. There is currently no fiber in place, but conduits have been placed. The City will use some of the conduits to support City services; the remainder may be leased out to private operators.