

Section D DU Transportation Plan

In addition to the text of this section refer to “Mesa Proving Grounds Development Unit Master Transportation Plan for DU 7,” dated October 26, 2011 - prepared by AECOM.

In DU7, all of the perimeter streets and most all internal streets will be public roadways. The streets that are internal to the DU will generally be local neighborhood streets, and accessible to the public. The internal streets typically will provide access from Ray Road, Signal Butte Road, “Spine East,” “Spine West,” and “Warner South” into the DU. The internal streets will also provide access across the DU for local users. The internal streets will provide access to the parking lots, buildings, private driveways and potentially a few truck loading areas. Internal streets may be gated and/or secured to allow only users and guests to access the internal areas of the DU so long as the gates do not significantly interfere with cross DU access as determined by the City of Mesa Traffic Engineer. Streets inside private gates would be private streets.

D.1 Primary Public and Private Streets and Extended Access Ways

Refer to **Exhibit D.1 - Major Roadways** and **Exhibit D.2- DU7 Transportation Plan**

A. Ray Road

- South boundary of DU7
- Six Lane Perimeter Arterials
- 65' - 75' wide 1/2 street ROW (other half part of DU8)
- Raised and/or landscaped median
- Vertical Curb
- No Parking
- Very high volume vehicular traffic street
- Little pedestrian activity moving along the length of the street
- Neighborhood entries with full turning intersections are anticipated
- Not likely to have a tight urban cross-section because of the adjacent Powerline Floodway on the south and non-commercial uses on the north. A tight urban cross-section is encouraged with adjacent commercial, civic or religious uses when possible and may incorporate a liner street to provide access and parking.
- Bus stops may be located near the intersections with “Spine East” and “Spine West” to accommodate the Great Park users. If bus service is provided along the length of Ray Road, bus stops may also be located to align with neighborhood entries east and west of “DU7 Drive.” Bus service shall be as determined by the transit authority.

B. Signal Butte Road

- East boundary of DU7
- Six Lane Perimeter Arterials
- 65' - 75' wide 1/2 street ROW
- No raised or landscaped median required per City of Mesa
- Vertical Curb
- No Parking
- Very high volume vehicular traffic street
- Little pedestrian activity moving along the length of the street
- Not likely to have a tight urban cross-section because of the adjacent parallel linear arroyo
- Bus stops may be located at the intersection with “Warner South” to provide access to the neighborhoods as well as future potential neighborhood serving commercial, civic and/or religious facilities at this location Bus service shall be as determined by the transit authority.

C. “Warner South”

- North boundary of DU7
- Two-Way Four Lane District Street
- ROW will be located at back of curb (approximately 67’ back of curb to back of curb)
- 12’ Raised and/or landscaped median
- Vertical Curb
- No Parking
- 6’ Bike Lanes
- High volume, low speed vehicular traffic street
- Some pedestrian activity moving along the length of the street, typically from the Great Park to the commercial, civic or religious uses at the intersection with Signal Butte, and to the linear arroyo as a walking/jogging loop
- Several neighborhood and parcel entries with full turning intersections are anticipated
- Not likely to have a tight urban cross-section because of the uses on either side
- Bus stops may be located near the intersections with “Spine East” and “Spine West” to accommodate the Great Park users and near the intersection with Signal Butte to accommodate the potential commercial, civic and religious users. If bus service is provided along the length of “Warner South”, informal/“flag” bus stops may be located to align with neighborhood entries east and west of “DU7 Drive.” Bus service shall be as determined by the transit authority.

D. “Spine West”

- Western boundary of DU7
- Two-Way Four Lane District Street
- ROW will be located at back of curb (approximately 81’ back of curb to back of curb)
- 12’ Raised and/or landscaped median
- Vertical Curb
- 8’ Parallel Parking on both sides
- 5’ Bike Lanes - no striping except to denote edge of travel lane
- High volume, low speed vehicular traffic street
- High pedestrian activity moving along the length of the street adjacent to the Great Park as well as activity crossing the street between the Great Park and adjacent uses
- Several crossings to access the Great Park are anticipated
- Several neighborhood and parcel entries with full turning intersections are anticipated
- Not likely to have a tight urban cross-section because of the uses on either side - a tight urban cross-section is encouraged with adjacent commercial, civic or religious uses when possible and may incorporate a liner street to provide access and parking
- Bus stops may be located near the intersections with “Warner South” and Ray Road to accommodate the Great Park users. If bus service is provided along the length of “Spine West”, informal “flag” bus stops may also be located to align with neighborhood entries. Bus service shall be as determined by the transit authority.

E. “Spine East”

- Located in the western portion of DU7 - generally parallel to “Spine West”
- Two-Way Four Lane District Street
- ROW will be located at back of curb (approximately 81’ back of curb to back of curb)
- 12’ Raised and/or landscaped median
- Vertical Curb
- 8’ Parallel Parking on both sides
- 5’ Bike Lanes - no striping except to denote edge of travel lane
- High volume, low speed vehicular traffic street
- High pedestrian activity moving along the length of the street adjacent to the Great Park as well as activity crossing the street between the Great Park and adjacent uses
- Several crossings to access the Great Park are anticipated
- Several neighborhood and parcel entries with full turning intersections are anticipated
- Not likely to have a tight urban cross-section because of the uses on either side- a tight urban cross-section is encouraged with adjacent commercial, civic or religious uses when possible and may incorporate a liner street to provide access and parking
- Bus stops may be located near the intersections with “Warner South” and Ray Road to accommodate the Great Park users. Bus service should be provided along the length of “Spine East” with bus stops typically located to align with neighborhood entries and adjacent Great Park uses. Bus service shall be as determined by the transit authority.

F. Internal Streets

- Neighborhood Streets and potential Service Lanes
- ROW typically at back of curb (when provided)
- Various road sections
- Potentially gated (gated streets will be private streets)
- Generally public
- Through access generally provided

1. Internal Streets - “DU7 Drive”

- In the middle of DU7 - east of and parallel to “Spine East” - provides “the back way in”
- Two-Way Neighborhood Street
- ROW will be located at back of curb (approximately 23’ back of curb to back of curb)
- No Median
- Ribbon Curb
- No Parking
- Medium volume, low speed vehicular traffic street
- Little pedestrian activity moving along the length of the street - Several crossings for pedestrian access are anticipated, sidewalks will be provided as requested by the City on both sides of the road, and all other pedestrian activity will be accommodated in adjacent neighborhoods.
- Several neighborhood entries are anticipated
- No bus stops - Bus service shall be as determined by the transit authority

2. Internal Streets - Entry Drives

- Provide access to neighborhoods from perimeter streets and “DU7 Drive”
- Two-Way Neighborhood Street
- ROW will be located at back of curb (approximately 23’ back of curb to back of curb)
- No Median
- Vertical Curb
- No Parking
- No Bike Lanes
- Medium volume, low speed vehicular traffic street
- Pedestrian activity moving along the length of the street varies based on location – east-west Entry Drives providing access between neighborhoods and to the Great Park are anticipated to have high pedestrian activity – Entry Drives connecting to arterial streets are anticipated to have very low if any pedestrian activity
- Roadways often tee into cross traffic on the neighborhood end or transition to standard neighborhoods streets after crossing a neighborhood park
- Bus stops may be located at intersections with major streets - Bus service shall be as determined by the transit authority

3. Internal Streets – Standard Neighborhood Streets

- Standard Neighborhood Street section in DU7
- Two-Way Neighborhood Street
- ROW will be located at back of curb (approximately 35’ back of curb to back of curb)
- No Median
- Rolled Curb
- 7’ Parallel Parking on both sides
- No parking at intersections where “chicanes” or “neck downs” are desired
- No Bike Lanes
- Medium to low volume, low speed vehicular traffic street
- Pedestrian activity moving along the length of the street varies based on location
- No bus stops - Bus service shall be as determined by the transit authority

4. Internal Streets – Park Side Streets

- Provide access to along and around neighborhood parks
- Two-Way Neighborhood Street
- ROW will be located at back of curb (approximately 29’ back of curb to back of curb)
- No Median
- Rolled Curb on side opposite the park, Vertical Curb along park
- 7’ Parallel Parking on side opposite the park
- No parking at intersections where “chicanes” or “neck downs” are desired
- No Bike Lanes
- Medium to low volume, very low speed vehicular traffic street
- High Pedestrian activity moving along the length of the street and crossing the streets to access the park
- Roadways often transition to standard neighborhoods streets at intersections
- No Bus stops anticipated – if neighborhood circulator provided, informal/“flag” bus stop in close proximity to the built shade structure (when present) would be desired - Bus service shall be as determined by the transit authority

5. Internal Streets - Necklace Drives

- Strong east-west pedestrian connectivity (un broken) from the Linear Arroyo (on the east) to the Great Park (on the west)
- Two-Way Neighborhood Street
- ROW will be located at back of curb (approximately 35' back of curb to back of curb)
- No Median
- Rolled Curb
- 7' Parallel Parking on both sides with mid-block planted, parking islands
- No parking at intersections where "chicanes" or "neck downs" are desired
- No parking at mid-block locations where "chicanes", parking islands or "neck downs" are desired
- No Bike Lanes
- Medium to low volume, very low speed vehicular traffic street
- High Pedestrian activity moving along the length of the street from the neighborhoods to both the Great Park (on the west) and the Linear Arroyo (on the east)
- Roadways often tee into neighborhood parks (only through pedestrian traffic is provided across the park) or transitions into an Entry Drive at neighborhood entries.
- No Bus stops anticipated - Bus service shall be as determined by the transit authority

6. Internal Streets - Block End Streets

- Provide connections between blocks in DU7, used to visually neighborhoods to perimeter roadways and landscape areas, used to provide pedestrian connectivity without providing automobile connectivity
- Two-Way Neighborhood Street
- ROW will be located at back of curb (approximately 23'-35' back of curb to back of curb)
- No Median
- Rolled Curb
- No Parking required, 7' Parallel Parking on may be provided on one or both sides
- No Bike Lanes
- Medium to low volume, low speed vehicular traffic street
- Pedestrian activity moving along the length of the street varies based on location but is often low when Block End Streets are used to visually open up the neighborhood to perimeter streets or to provide through pedestrian only access.
- Roadways are often short and typically have limited driveway conflicts
- No Bus stops anticipated - Bus service shall be as determined by the transit authority

D.2 Intersections

DU7 shall be accessed primarily from the Perimeter Roadways as shown on **Exhibit D.2 - DU7 Transportation Plan**. Several separate entry drives/intersections to access DU7 may be provided for various vehicle types and users and may be signed appropriately. Drives/intersections accessing the interior of DU7 may be secured and/or gated in one or more locations but typically should not limit through access within the DU. Streets inside private gates would be private streets. It is anticipated that:

- at least three (3) drives will access DU7 from Ray Road
- at least one (1) drive will access DU7 from Signal Butte Road
- at least five (5) drives will access DU7 from “Warner South”
- at least three (3) drives will access DU7 from “Spine East”
- the Great Park and uses in DU3 will be accessed in several locations from “Spine West”

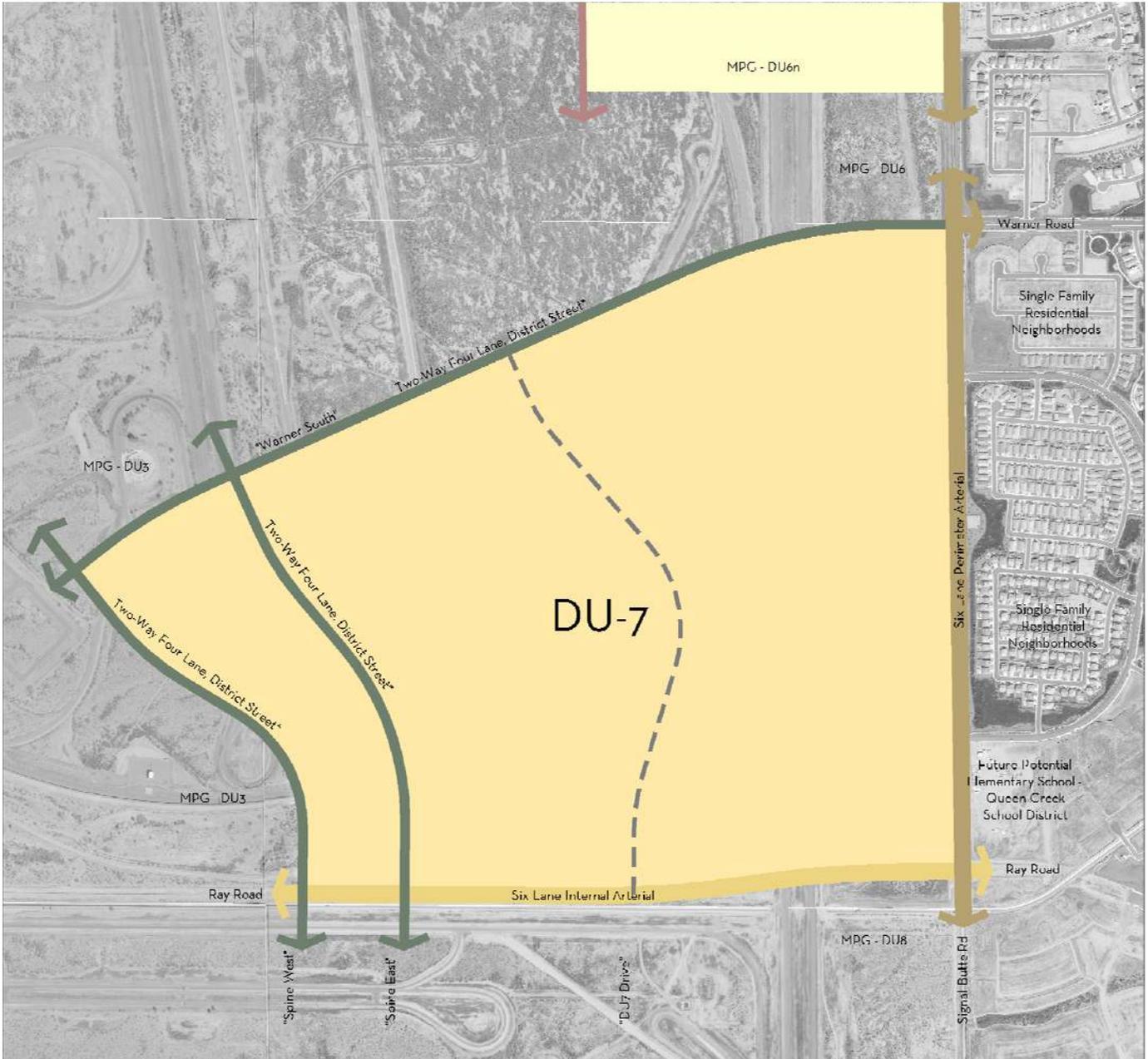
If the traffic counts warrant a traffic signal at these intersections, they shall be provided to ease access to the DU as shown on **Exhibit D.2 - Transportation Plan**.

D.3 Street and Circulation Phasing

Street and circulation improvements shall be phased and developed with adjacent development as shown on **Exhibit D.3 - Street and Circulation Phasing**. It is anticipated that the “Spine West” road improvements will not be necessary to accommodate the use anticipated in DU7 except for some minor uses along the Great Park and that “Spine West” will be developed with the adjacent development in DU3 and may be addressed in the DU3 DUP.



Exhibit D.1 - Major Roadways



Note: The areas, connections, shapes, quantities, sizes and locations shown are conceptual representations of the future potential development. Actual areas, connections, shapes, quantities, sizes and locations may differ from those shown.

- Six Lane Perimeter Arterial
- Six Lane Internal Arterial
- Two-Way Two Lane, District Street with Raised Median*
- Two-Way Four Lane, District Street with Raised Median*

*raised and/or landscaped median optional; on-street parking, bike lanes or other options at perimeter of roadway permitted



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Exhibit D.2 - DU7 Transportation Plan



Note: The areas, connections, shapes, quantities, sizes and locations shown are conceptual representations of the future potential development. Actual areas, connections, shapes, quantities, sizes and locations may differ from those shown.



Perimeter Roadways



Interior Roadways, Driveways and Access*



Potential Signalized Intersection



Potential Bus / Transit Stop

*Public, interior circulation shown here conceptually for reference - additional streets may be provided



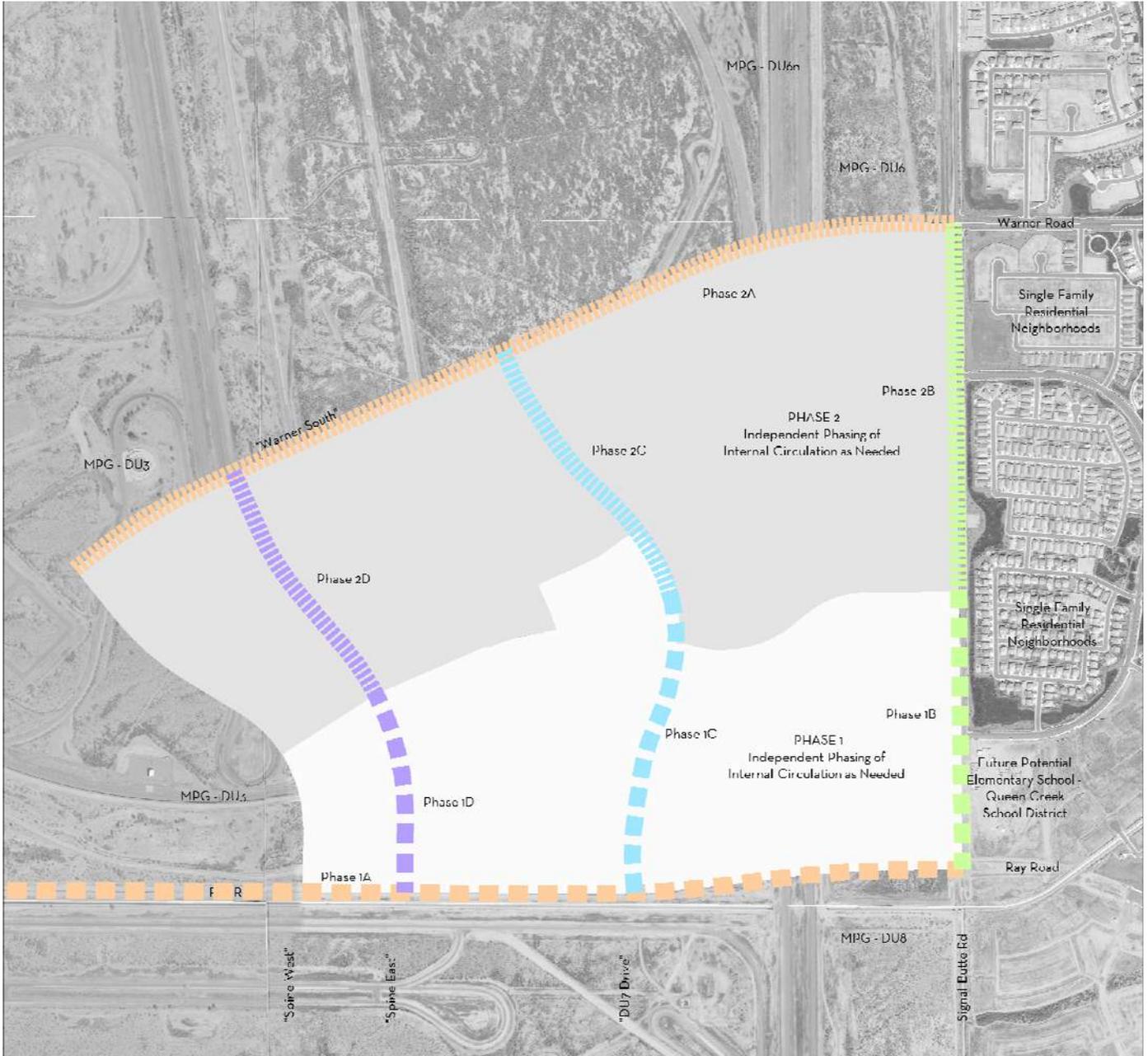
1500'



NORTH

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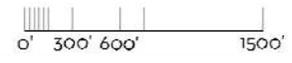
Exhibit D.3 - Street and Circulation Phasing



Note: The areas, connections, shapes, quantities, sizes and locations shown are conceptual representations of the future potential development. Actual areas, connections, shapes, quantities, sizes and locations may differ from those shown.

 Phase 1A - Ray Road - north half	 Phase 2A - "Warner South"
 Phase 1B - Signal Butte Road - west half	 Phase 2B - Signal Butte Road - west half
 Phase 1C - "DU7 Drive"	 Phase 2C - "DU7 Drive"
 Phase 1D - "Spine East"	 Phase 2D - "Spine East"

"Spine West" will be developed with the adjacent development in DU3







D U 7 D U P

Section E DU Drainage Plan

The DU7 area will be designed to self retain. Drainage may be taken across parcel lines and/or collected in common retention basins, but the retention requirements for DU7 shall be accommodated within the DU. The Great Park was previously planned to be a regional retention facility. The Great Park will now only retain runoff from the Great Park and will not provide additional storage for other parcels.

Refer to "Master Drainage Report for Mesa Proving Grounds," dated December 20, 2011 - prepared by Wood, Patel & Associates, Inc.

Refer to "Master Drainage Report for Development Unit 7 at Mesa Proving Grounds," dated December 20, 2011 - prepared by Wood, Patel & Associates, Inc.

D U 7 D U P

Section F DU Potable Water Plan

Refer to "Master Water Report Update for Mesa Proving Grounds," revised December 20, 2011, revised September 15, 2011, dated April 22, 2011 - prepared by Wood, Patel & Associates, Inc.

Refer to "Master Water Report for Development Unit 7 at Mesa Proving Grounds," dated December 20, 2011 - prepared by Wood, Patel & Associates, Inc.

D U 7 D U P

Section G DU Wastewater Plan

Refer to "Master Wastewater Report Update for Mesa Proving Grounds," revised December 20, 2011, revised September 15, 2011, dated April 22, 2011 - prepared by Wood, Patel & Associates, Inc.

Refer to "Master Wastewater Report for Development Unit 7 at Mesa Proving Grounds," dated December 20, 2011 - prepared by Wood, Patel & Associates, Inc.

D U 7 D U P

Section H Master Non-potable Water Plan

The use of non-potable water is currently contemplated in the Great Park portion of DU7 at this time. The use of non-potable water for landscape irrigation is encouraged whenever it can practically be used.

Refer to "Final Master Non-potable Water Report for Mesa Proving Grounds," dated June 12, 2009 - prepared by Wood, Patel & Associates, Inc.