*Town of*

# QUEEN CREEK

## Design Standards and Procedures Manual

**Adopted September 5, 2007**
**Effective October 5, 2007**
**Updated August 2008**
**Modified March 2014**
**Revised August 2014**
**Revised March 2015**
**Updated Jan 2016**

# DESIGN STANDARDS AND PROCEDURES MANUAL
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# DESIGN STANDARDS AND PROCEDURES MANUAL

## PURPOSE

**A.** The purpose of this Design Standards and Procedures Manual is to assist with the understanding and implementation of the Town of Queen Creek Subdivision Ordinance. This Manual, in conjunction with the Subdivision Ordinance, is intended to provide for orderly and coordinated growth and development in the Town of Queen Creek; to ensure development of safe and efficient vehicular, pedestrian and equestrian traffic circulation through a coordinated system of arterial, collector and local streets serving adjoining subdivision and public facilities; to ensure development of individual lots and parcels with reasonable utility and safety; to anticipate and provide adequate provisions for water supply, drainage, flood protection, sanitary sewer and other health and safety requirements; and to ensure consideration of the future infrastructure needs of the community

## INTENT

**A.** The intent of this Design Standards and Procedures Manual is to provide detailed information on the Town's design and development standards and to clarify the more general policy and development standards provided in the Subdivision Ordinance. This manual is intended to provide the project engineer or developer a better understanding of the technical aspects of the land development process, and the Town standards which will be incorporated into projects as they proceed through the development process. The goal of this Manual is to assist with, and promote, the expeditious approval and development of subdivisions and new developments which take place within the Town and provide an understanding of the Town's development criterion which was inherent in the zoning or preliminary plat approval.

## ADOPTION OF EXHIBITS & STANDARD DETAILS

**A.** All exhibits, design details, design standards, tables, charts, descriptions and explanations contained in this Manual have been reviewed with, and approved by, the Town Council as part of the adoption of Ordinance Number 406-07 on September 5, 2007.

## APPLICABILITY

**A.** The exhibits, design details and standards, tables, charts, descriptions and explanations contained in this Manual are effective as of October 5, 2007.

## MODIFICATION

**A.** Section 1.4 of the Subdivision Ordinance 406-07, approved by the Town Council on September 5, 2007, empowers the Town Engineering Manager to update the provisions of this Design Specifications and Procedures Manual as needed to incorporate new details and standards as may be needed, without further action of the Town Council being required.

# TABLES

## TABLE 1
## QUEEN CREEK STREET TREE PROGRAM
## (Mile Streets)

| ROADWAY | SPECIES |
|---|---|
| Ellsworth Road | ~~Fan Tex Ash~~, Citrus |
| Hawes Road | Sweet Acacia, Honey Mesquite |
| Sossaman Road | ~~Shamel Ash~~, |
| Power Road | Chilean Mesquite, |
| Crismon Road | |
| Signal Butte Road | |
| Meridian Road | |
| Ocotillo Road | Blue Palo Verde, Chinese Pistache |
| Germann Road | |
| Queen Creek Road | |
| Chandler Heights Road | Pecan |
| Riggs Road | Aleppo Pine, Mondel Pine |
| Rittenhouse Road | |

Contact TOQC Engineering Division for current information. 480-358-3003.

## TABLE 2
## STREET CROSS SECTION DESIGN

| Roadway Cross Section & (Std. Detail Number) | R.O.W. Width | Pavement Width F.O.C. to F.O.C. | # Lanes Each Direction & Width | Sidewalk Width | Bike Lane Width Striped |
|---|---|---|---|---|---|
| Principal Arterial (R-101) | 140’ | (2) @ 43’ | (3) @ 13’, 12’, 12’ | 6’ Both Sides | 6’ Both Sides |
| Major Arterial (R-102) | 110’ | (2) @ 30’ | (2) @ 12’, 12’ | 6’ Both Sides | 6’ Both Sides |
| Major Collector (R-103) | 80’ | (2) @ 20’ | (1) @ 12’ | 6’ Both Sides | 6’ Both Sides |
| Rural Residential Collector (R-104) | 80’ | 36’ | (1) @ 12’ (6’ Shoulder) | N/A | N/A |
| Urban Residential Collector (R-105) | 60’ | 36’ | (1) @ 12’ | 6’ Both Sides | 6’ Both Sides |
| Industrial Collector (R-106) | 60’ | 36’ | (1) @ 12’ (w/12’ Center Turn Lane) | N/A | N/A |
| Urban Local (R-107) | 50’ | 30’ | (1) @ 15’ | 5’ Both Sides | N/A |
| Rural, Estate, & Suburban Dev. Type ‘A’ Local (R-108) | 50’ | 24’ | (1) @ 12’ | N/A | N/A |
| Suburban Dev. Type ‘B’ Local (R-109) | 50’ | 30’ | (1) @ 15’ | 5’ One Side | N/A |
| Hillside Development - Local (R-110) | 40’ | 24’ | (1) @ 12’ | 5’ One Side *(See Standard Detail R-110) | N/A |
| Frontage Road (R-111) | 50’ | 28’ | (1) @ 14’ | 5’ One Side *(See Standard Detail R-111) | N/A |

(a) Open Space credit will be given from B.O.C. if landscape strip is maintained by Homeowners Association or a Property Owners Association

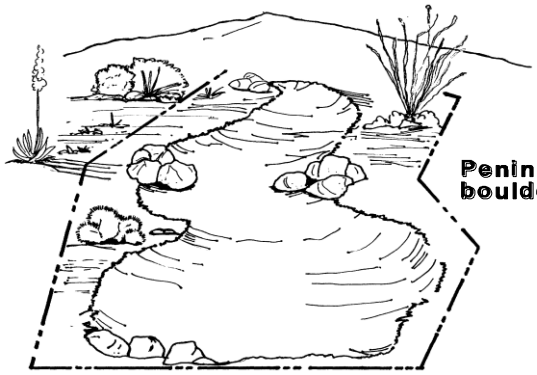
## TABLE 3
## ROAD DESIGN STANDARDS

| Roadway Cross Section Detail Number | R-101 | R-102 | R-103 | R-104 | R-105 | R-106 | R-107 | R-108 | R-109 | R-110 | R-111 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Design Speed (mph) | 55 | 55 | 35 | 35 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| Minimum Radius of Horizontal Curves w/o Superelevation (ft) | **See Notes Below | | | | | | | | | | |
| Minimum Length of Tangent Between Reverse Curves (ft) | 300 | 300 | 200 | 200 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| Minimum Length of Tangent Between Curves –Same Direction (ft) | 550 | 550 | 400 | 400 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| Maximum Horizontal Curve Length (ft) | **See Notes Below | | | | | | | | | | |
| Stopping sight distance (ft) | **See Notes Below | | | | | | | | | | |
| Passing Sight Distance (ft) | **See Notes Below | | | | | | | | | | |
| Right Angle Intersection Sight Distance (ft) | See Queen Creek Intersection Sight Distance Standard Detail R-125 | | | | | | | | | | |
| Minimum Tangent Length Approaching Intersections (ft) | 300 | 300 | 200 | 200 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |

** NOTE – These design parameters shall be determined by using the AASHTO Design Guidelines and shall be approved by the Town Engineering Manager and/or Town Traffic Engineer.

*** The Town Standards in these areas are based on the current edition of A Policy of Geometric Design of Highways and Streets, as published by the American Association of State Highway and Transportation Officials (AASHTO) and shall be approved by the Town Engineering Manager and/or Town Traffic Engineer.*

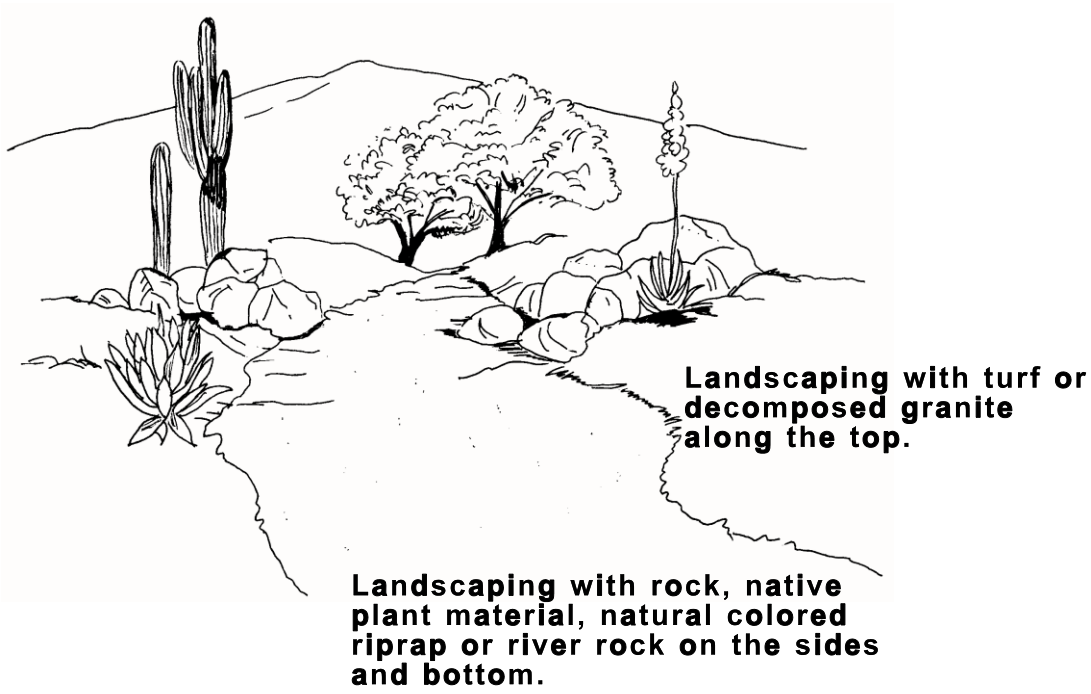
# EXHIBITS




6:1 Maximum Side Slope

**EXHIBIT 1**
**BASIN CONSTRUCTION AND SLOPES**

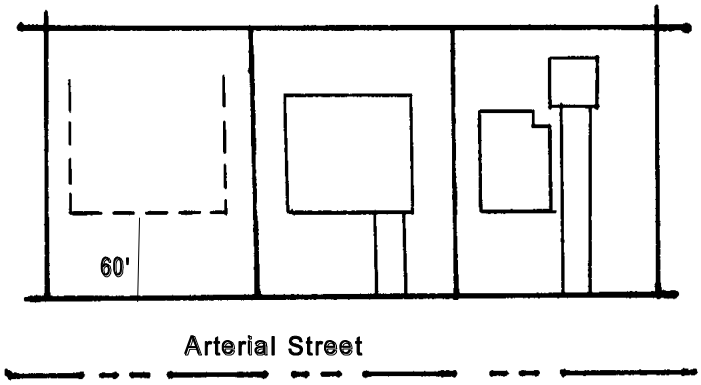
**EXHIBIT 2**
**NATURAL DESERT CHARACTER FOR DRAINAGE CHANNELS**



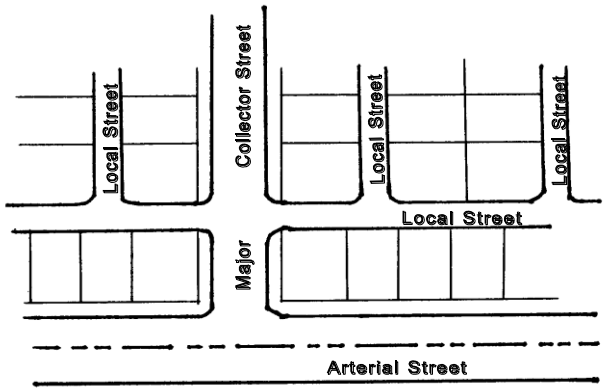
## EXHIBIT 3

## ACCESS REQUIREMENTS FOR ARTERIAL AND MAJOR COLLECTOR ROADS

## RURAL AND ESTATE DEVELOPMENTS




Lots the front on Arterial and Collector Roads shall have an increased front yard setback by 25% or a 60 feet total, whichever is greater




## SUBURBAN AND ESTATE DEVELOPMENTS

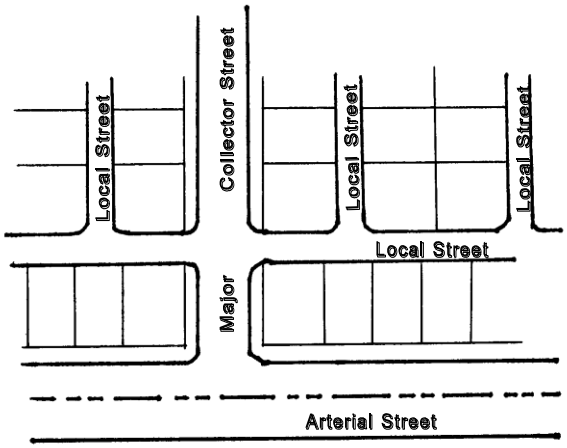
Open space/no buildings in landscaped areas between rear and side street lot lines adjoining arterial and major collector rights-of-way to a depth equal to the streetside yard setback of the subdivision zoning, or 30 feet, whichever is greater.

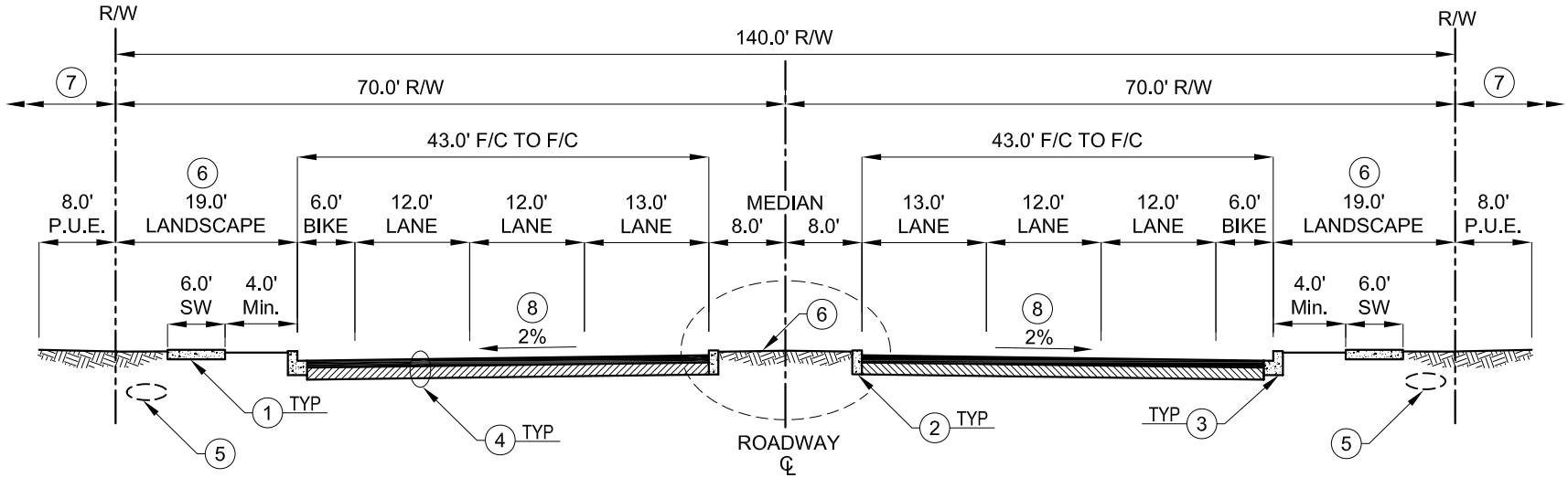
## EXHIBIT 4

## LOT ACCESS REQUIREMENTS

Vehicular easements to rear parcels do not qualify as legal frontage.

Note: Every lot shall have frontage on a fully dedicated public street, or private street with a public roadway easement, meeting all Town Standards. The zoning district determines the minimum frontage.

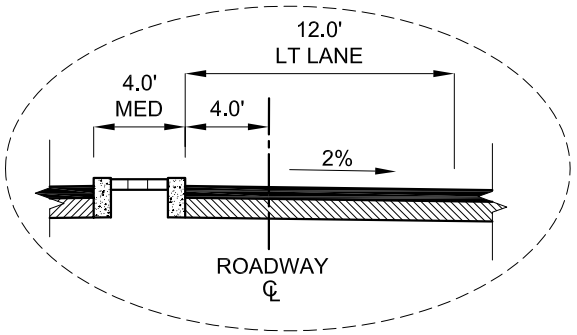





NOT TO SCALE

◯ KEYED NOTES:
(Not all keyed notes used on all details)

1. 6' MEANDERING SIDEWALK, M.A.G. STD. DET. 230, CLASS "B" CONCRETE
2. 6" VERTICAL CURB, M.A.G. STD. DET. 222, TYPE "A"
3. 6" VERTICAL CURB & GUTTER, M.A.G. STD. DET. 220-1, TYPE "A"
4. PAVEMENT STRUCTURAL SECTION PER QUEEN CREEK STANDARD DETAIL R-120
5. TELECOMMUNICATIONS CONDUIT PER QUEEN CREEK STANDARDS
6. LANDSCAPE AREA - PER QUEEN CREEK ZONING ORDINANCE, ARTICLE 5.3, "LANDSCAPING, SCREENING AND BUFFER YARD STANDARDS"
7. TRAIL SYSTEM PER PARKS & REC. DEPT. CURRENT STANDARDS, DETAILS, & REQUIREMENTS
8. 2% CROSS SLOPE (ABSOLUTE MIN. 1.5% / MAX. 2.5% )
9. RIBBON CURB, M.A.G. STD. DET 220-1, TYPE "B" (MODIFIED PER DETAIL THIS SHEET)
10. 5' SIDEWALK, M.A.G. STD. DET. 230, CLASS "B" CONCRETE
11. THICKENED PAVEMENT SECTION AT TERMINATION, M.A.G. STD. DET 201, TYPE 'A'



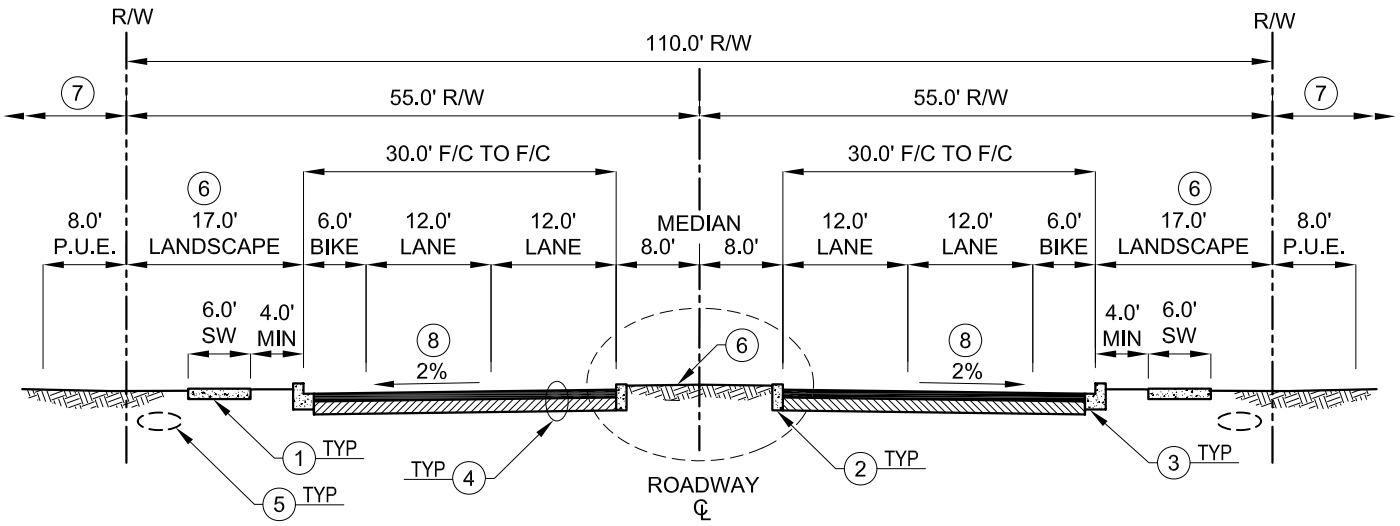

MEDIAN INTERSECTION DETAIL
WITH 12' LEFT TURN LANE

GENERAL NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

REV. 08/2008

| TOWN OF QUEEN CREEK | ROADWAY CROSS SECTION PRINCIPAL ARTERIAL | STANDARD DETAIL | DETAIL NO. R-101 |
|---|---|---|---|

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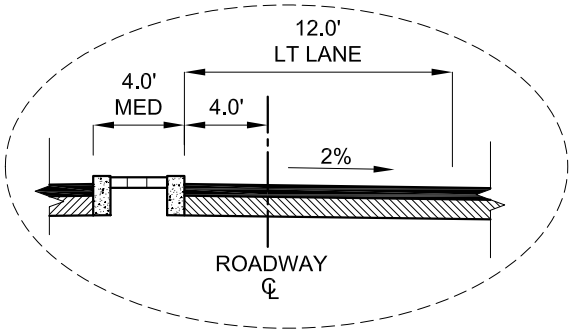


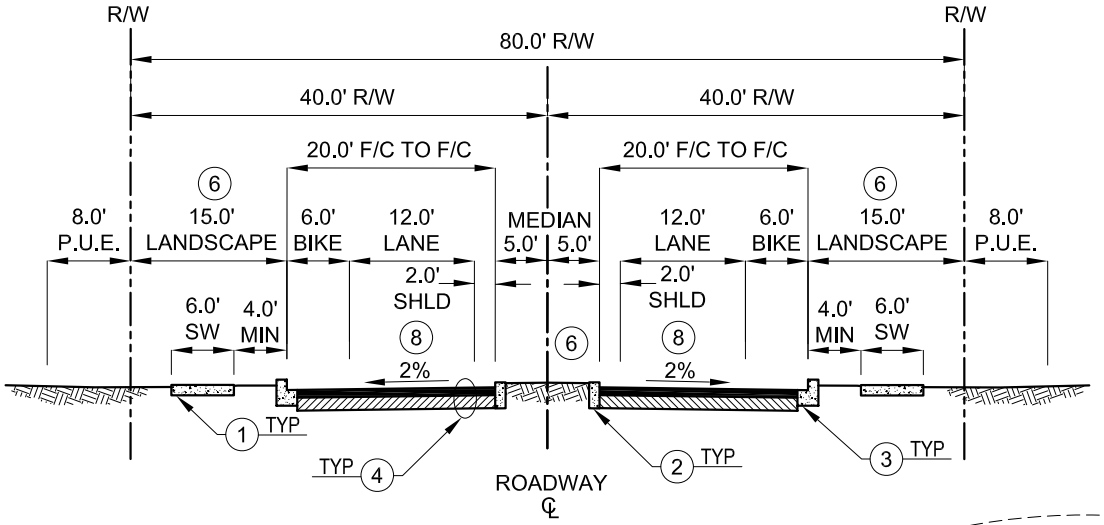

MEDIAN INTERSECTION DETAIL
WITH 12' LEFT TURN LANE

GENERAL NOTES:

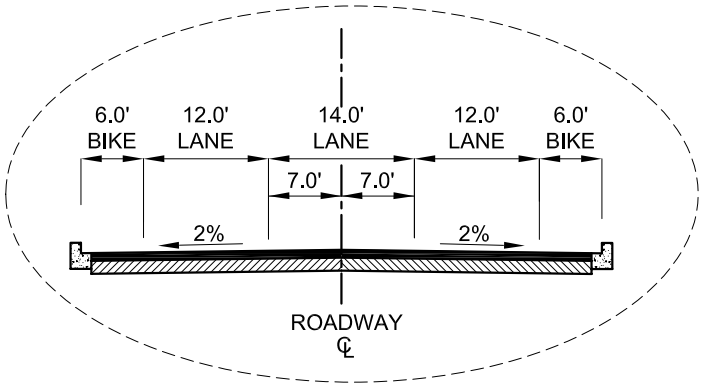
1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

REV. 08/2008

| TOWN OF QUEEN CREEK | ROADWAY CROSS SECTION MAJOR ARTERIAL | STANDARD DETAIL | DETAIL NO. R-102 |
|---|---|---|---|




NOT TO SCALE




LANE CONFIGURATION FOR FLUSH MEDIAN CONDITION

KEYED NOTES:
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GENERAL NOTES:

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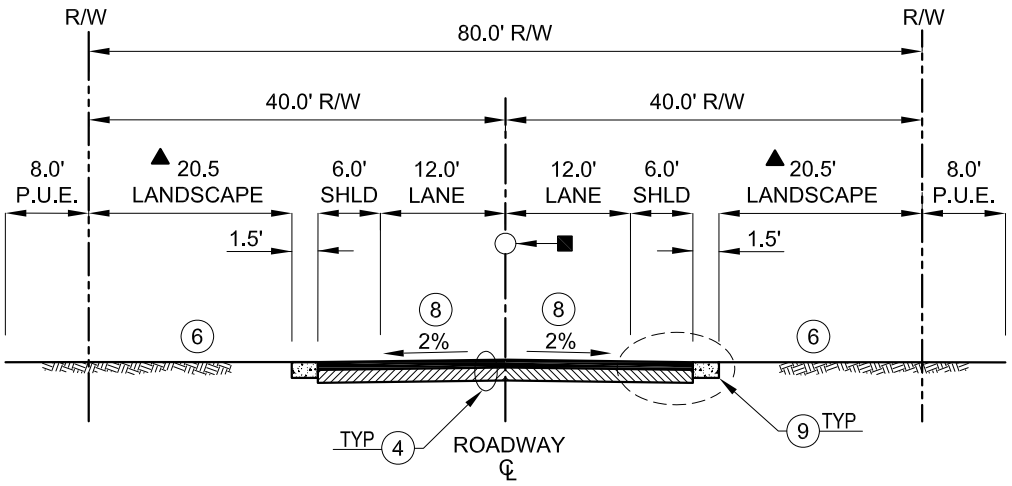
REV. 08/2008

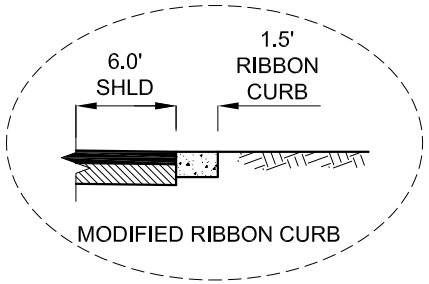
| | | | |
|---|---|---|---|
| TOWN OF QUEEN CREEK | ROADWAY CROSS SECTION MAJOR COLLECTOR | STANDARD DETAIL | DETAIL NO. R-103 |




■ OPTIONAL 14' MEDIAN TURN LANE WHEN WARRANTED BY TRAFFIC ANALYSIS.

▲ REDUCE LANDSCAPE WIDTH TO 13.5' WHEN MEDIAN TURN LANE USED.

NOT TO SCALE

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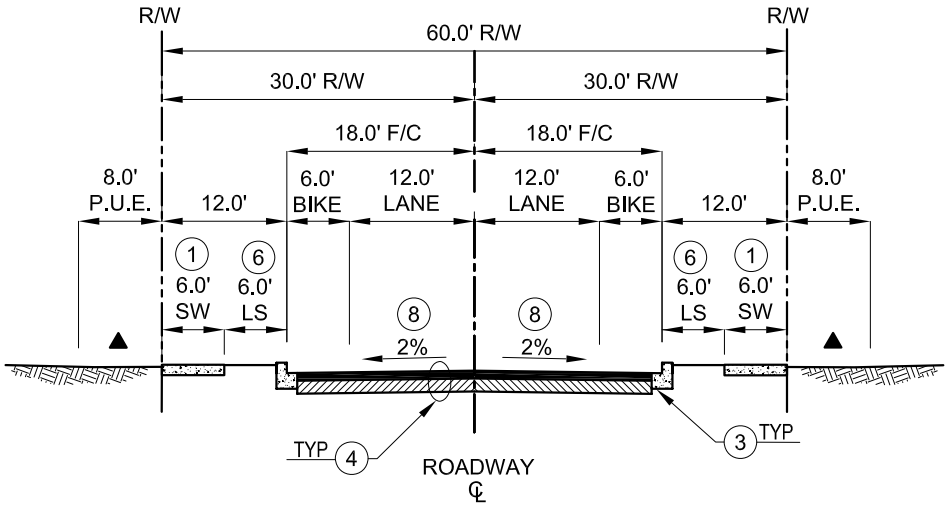
10. 5' SIDEWALK, M.A.G. STD. DET. 230, CLASS "B" CONCRETE

GENERAL NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
2. THE INTENT OF THIS STREET DESIGN IS FOR USE AS A BACKBONE OR SPINE ROAD IN A RURAL OR ESTATE RESIDENTIAL DEVELOPMENT WITH LOW SPEEDS AND TRAFFIC VOLUMES.

REV. 08/2008

| TOWN OF QUEEN CREEK | ROADWAY CROSS SECTION RURAL RESIDENTIAL COLLECTOR | STANDARD DETAIL | DETAIL NO. R-104 |
|---|---|---|---|




NOT TO SCALE

KEYED NOTES:
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11. THICKENED PAVEMENT SECTION AT TERMINATION, M.A.G. STD. DET 201, TYPE 'A'

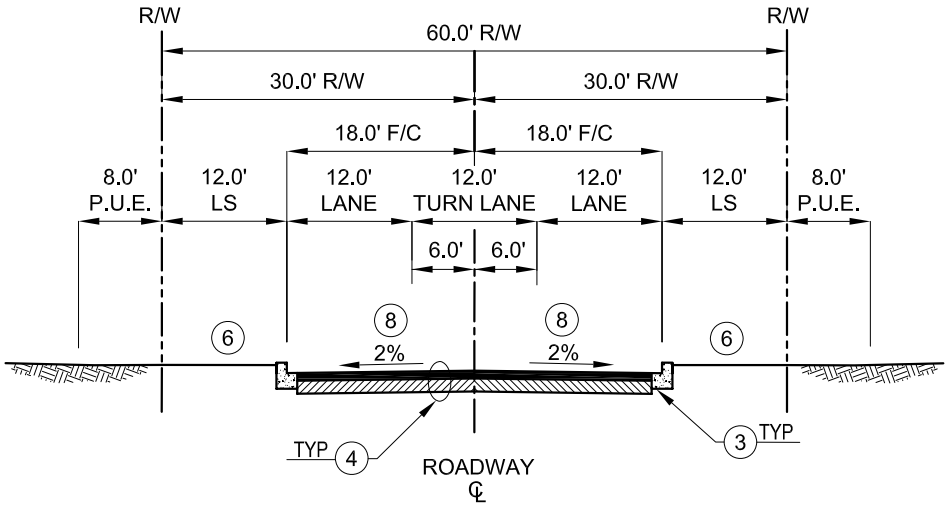
▲ A SIDEWALK EASEMENT REQUIRES ENGINEERING MANAGER'S APPROVAL.

GENERAL NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
2. USE OF THIS SECTION WILL REQUIRE THE ENGINEERING MANAGER'S APPROVAL.
3. ADDITIONAL WIDENING OF RIGHT-OF-WAY MAY BE REQUIRED AT INTERSECTIONS.

REV. 08/2008

| TOWN OF QUEEN CREEK | ROADWAY CROSS SECTION URBAN RESIDENTIAL COLLECTOR | STANDARD DETAIL | DETAIL NO. R-105 |
|---|---|---|---|




NOT TO SCALE

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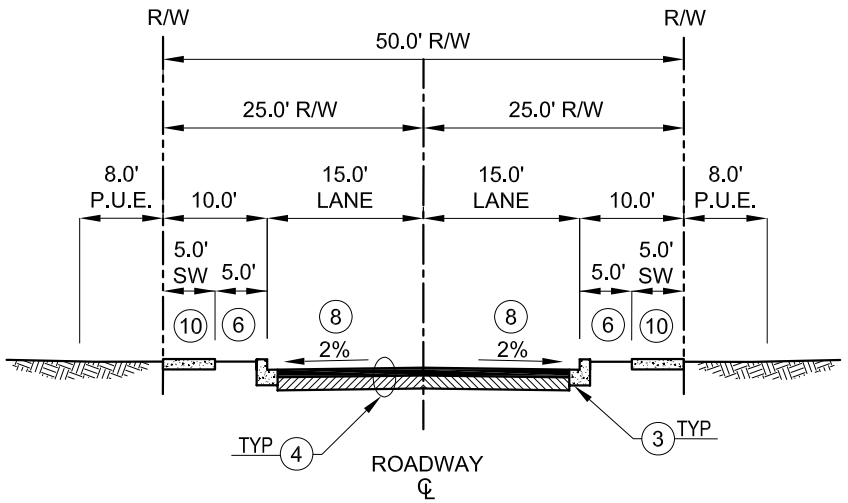
3. ADDITIONAL WIDENING OF RIGHT-OF-WAY MAY BE REQUIRED AT INTERSECTIONS.

REV. 08/2008

| TOWN OF QUEEN CREEK | ROADWAY CROSS SECTION INDUSTRIAL COLLECTOR | STANDARD DETAIL | DETAIL NO. R-106 |
|---|---|---|---|




NOT TO SCALE

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GENERAL NOTES:

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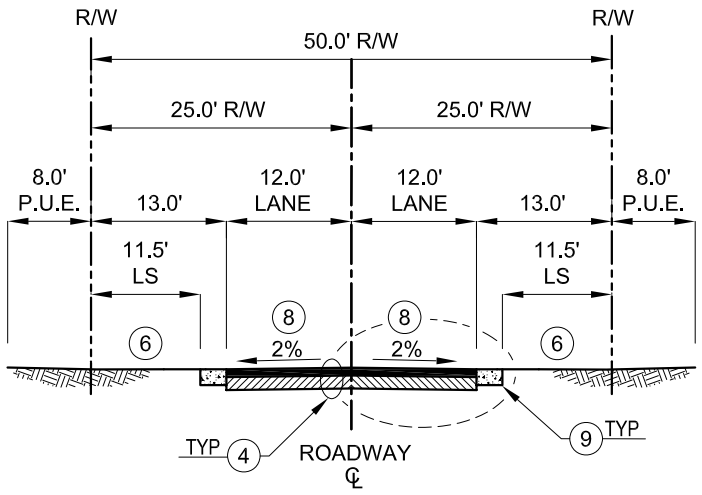
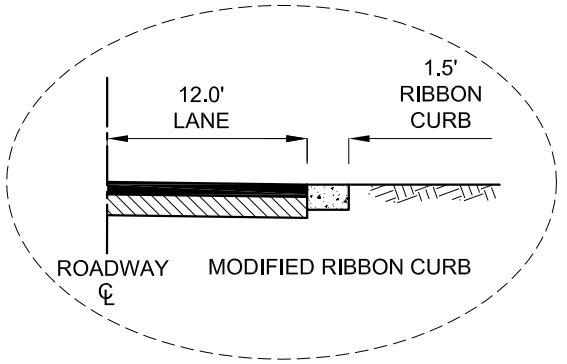
REV. 08/2008

| TOWN OF QUEEN CREEK | ROADWAY CROSS SECTION URBAN LOCAL | STANDARD DETAIL | DETAIL NO. R-107 |
|---|---|---|---|




NOT TO SCALE

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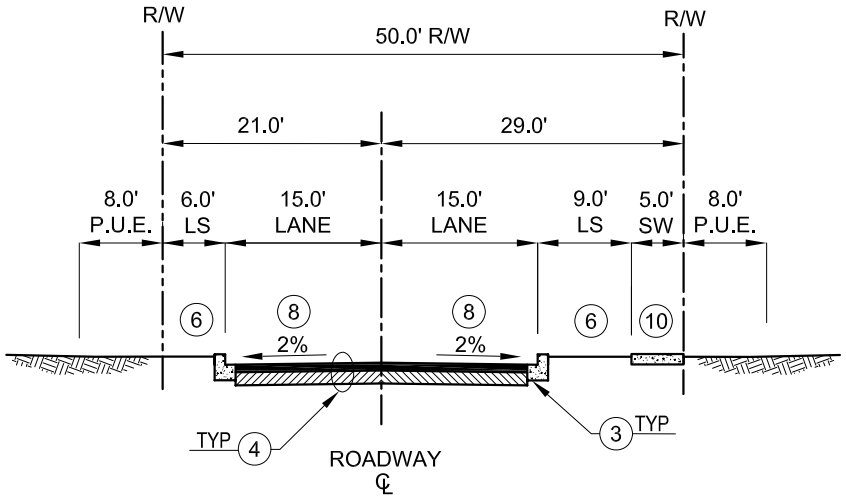
2. 6" VERTICAL CURB, M.A.G. STD. DET. 222, TYPE "A"
3. 6" VERTICAL CURB & GUTTER, M.A.G. STD. DET. 220-1, TYPE "A"
4. PAVEMENT STRUCTURAL SECTION PER QUEEN CREEK STANDARD DETAIL R-120
5. TELECOMMUNICATIONS CONDUIT PER QUEEN CREEK STANDARDS
6. LANDSCAPE AREA - PER QUEEN CREEK ZONING ORDINANCE, ARTICLE 5.3, "LANDSCAPING, SCREENING AND BUFFER YARD STANDARDS"
7. TRAIL SYSTEM PER PARKS & REC. DEPT. CURRENT STANDARDS, DETAILS, & REQUIREMENTS
8. 2% CROSS SLOPE (ABSOLUTE MIN. 1.5% / MAX. 2.5% )
9. RIBBON CURB, M.A.G. STD. DET 220-1, TYPE "B" (MODIFIED PER DETAIL THIS SHEET)
10. 5' SIDEWALK, M.A.G. STD. DET. 230, CLASS "B" CONCRETE
11. THICKENED PAVEMENT SECTION AT TERMINATION, M.A.G. STD. DET 201, TYPE 'A'

GENERAL NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

REV. 08/2008

| TOWN OF QUEEN CREEK | ROADWAY CROSS SECTION<br>RURAL, ESTATE, & SUBURBAN DEV. TYPE 'A' LOCAL | STANDARD DETAIL | DETAIL NO.<br>R-108 |
|---|---|---|---|




NOT TO SCALE

KEYED NOTES:
(Not all keyed notes used on all details)

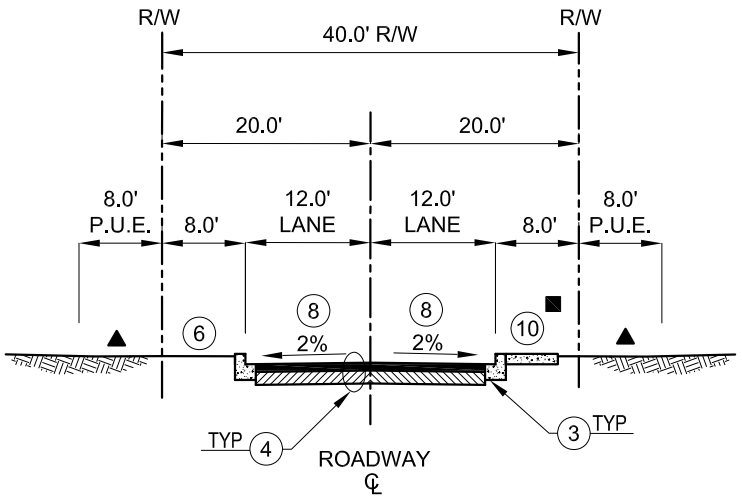
1. 6' MEANDERING SIDEWALK, M.A.G. STD. DET. 230, CLASS "B" CONCRETE
2. 6" VERTICAL CURB, M.A.G. STD. DET. 222, TYPE "A"
3. 6" VERTICAL CURB & GUTTER, M.A.G. STD. DET. 220-1, TYPE "A"
4. PAVEMENT STRUCTURAL SECTION PER QUEEN CREEK STANDARD DETAIL R-120
5. TELECOMMUNICATIONS CONDUIT PER QUEEN CREEK STANDARDS
6. LANDSCAPE AREA - PER QUEEN CREEK ZONING ORDINANCE, ARTICLE 5.3, "LANDSCAPING, SCREENING AND BUFFER YARD STANDARDS"
7. TRAIL SYSTEM PER PARKS & REC. DEPT. CURRENT STANDARDS, DETAILS & REQUIREMENTS
8. 2% CROSS SLOPE (ABSOLUTE MIN. 1.5% / MAX. 2.5% )
9. RIBBON CURB, M.A.G. STD. DET 220-1, TYPE "B" (MODIFIED PER DETAIL THIS SHEET)
10. 5' SIDEWALK, M.A.G. STD. DET. 230, CLASS "B" CONCRETE
11. THICKENED PAVEMENT SECTION AT TERMINATION, M.A.G. STD. DET 201, TYPE 'A'

GENERAL NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

REV. 08/2008

| | | | |
|---|---|---|---|
| TOWN OF QUEEN CREEK | ROADWAY CROSS SECTION SUBURBAN DEV. TYPE 'B' LOCAL | STANDARD DETAIL | DETAIL NO. R-109 |




NOT TO SCALE

KEYED NOTES:
(Not all keyed notes used on all details)

1. 6' MEANDERING SIDEWALK, M.A.G. STD. DET. 230, CLASS "B" CONCRETE
2. 6" VERTICAL CURB, M.A.G. STD. DET. 222, TYPE "A"
3. 6" VERTICAL CURB & GUTTER, M.A.G. STD. DET. 220-1, TYPE "A"
4. PAVEMENT STRUCTURAL SECTION PER QUEEN CREEK STANDARD DETAIL R-120
5. TELECOMMUNICATIONS CONDUIT PER QUEEN CREEK STANDARDS
6. LANDSCAPE AREA - PER QUEEN CREEK ZONING ORDINANCE, ARTICLE 5.3, "LANDSCAPING, SCREENING AND BUFFER YARD STANDARDS"
7. TRAIL SYSTEM PER PARKS & REC. DEPT. CURRENT STANDARDS, DETAILS, & REQUIREMENTS
8. 2% CROSS SLOPE (ABSOLUTE MIN. 1.5% / MAX. 2.5% )
9. RIBBON CURB, M.A.G. STD. DET 220-1, TYPE "B" (MODIFIED PER DETAIL THIS SHEET)
10. 5' SIDEWALK, M.A.G. STD. DET. 230, CLASS "B" CONCRETE
11. THICKENED PAVEMENT SECTION AT TERMINATION, M.A.G. STD. DET 201, TYPE 'A'

■ OPTION FOR SIDEWALK ON ONE SIDE OF STREET OR NO SIDEWALK. APPLICABILITY DETERMINED UPON INDIVIDUAL PROJECT REQUIREMENTS AND CONDITIONS.

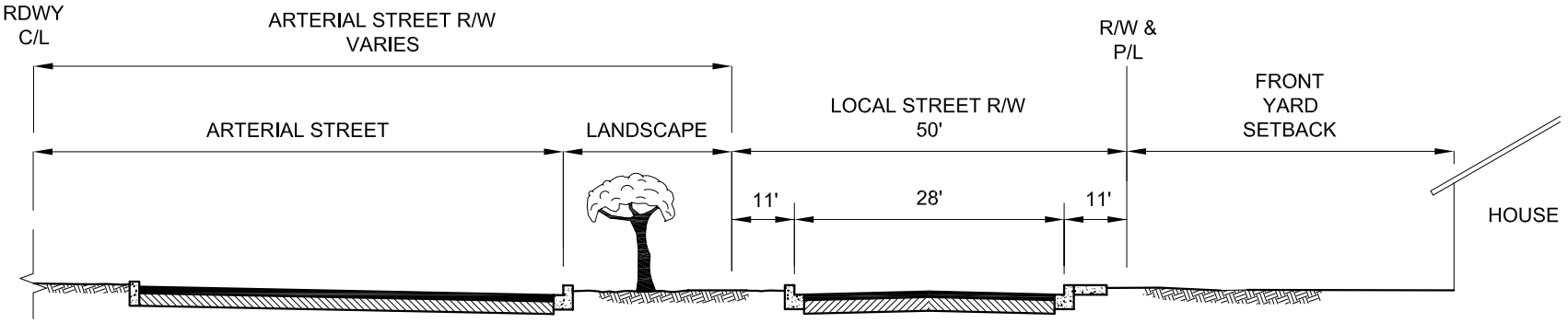
▲ OPTIONAL SIDEWALK EASEMENT. APPLICABILITY DETERMINED UPON INDIVIDUAL PROJECT REQUIREMENTS AND SITE TOPOGRAPHIC CONDITIONS.

GENERAL NOTES:

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.
2. USE OF THIS SECTION WILL REQUIRE THE ENGINEERING MANAGER'S APPROVAL.

REV. 08/2008

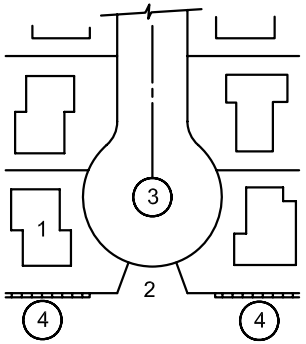
| TOWN OF QUEEN CREEK | ROADWAY CROSS SECTION HILLSIDE DEVELOPMENT - LOCAL | STANDARD DETAIL | DETAIL NO. R-110 |
|---|---|---|---|




NOT TO SCALE

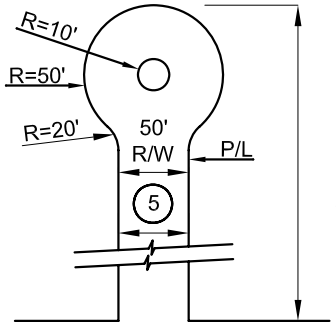
REV. 08/2008

| TOWN OF QUEEN CREEK | FRONTAGE ROAD DESIGN | STANDARD DETAIL | DETAIL NO. R-111 |
|---|---|---|---|




ARTERIAL AND/OR COLLECTOR ROAD

1. CORNER AND END LOTS SHOULD BE MADE LARGER TO ALLOW FOR SPECIAL UNIT DESIGN AND INCREASED SETBACKS.
2. PROVIDE OPEN SPACE RELIEF AT THE END OF THE CUL-DE-SAC WHEN ADJACENT TO ARTERIAL AND COLLECTOR ROADS.
3. ALLOW FOR LANDSCAPE ISLANDS IN CUL-DE-SAC BULB.
4. SUBDIVISION PERIMETER WALLS SHOULD OPEN UP TO THE ARTERIAL AND COLLECTOR ROADS AT THE ENDS OF THE CUL-DE-SAC.
5. USE STREET CROSS SECTION STANDARD DETAIL DESIGN (R-107, R-108, OR R-109) PER STAFF RECOMMENDATION.




600' MAX. LENGTH
OR 1500' MAX. LENGTH IF
ALL LOTS FIRE SPRINKLED

STREET

REV. 08/2008

| TOWN OF QUEEN CREEK | CUL-DE-SAC ROAD DESIGN REQUIREMENTS | STANDARD DETAIL | DETAIL NO. R-112 |
|---|---|---|---|

| TOQC STANDARD DETAIL | STREET CLASSIFICATION | PAVEMENT STRUCTURAL SECTION (SEE NOTE 2) | | |
|---|---|---|---|---|
| | | SURFACE COURSE (DEPTH) (TYPE) | BASE COURSE (DEPTH) (TYPE) | UNTREATED BASE (MINIMUM) |
| R-101 | PRINCIPAL ARTERIAL | 2" A-12.5 (SEE NOTE 1) | 3" A-19 | 12" |
| R-102 | MAJOR ARTERIAL | 2" A-12.5 (SEE NOTE 1) | 3" A-19 | 12" |
| R-103 | MAJOR COLLECTOR | 1.5" A-12.5 | 2.5" A-19 | 10" |
| R-104 | RURAL RESIDENTIAL COLLECTOR | 1.5" A-12.5 | 2.5" A-19 | 10" |
| R-105 | URBAN RESIDENTIAL COLLECTOR | 1.5" A-12.5 | 2.5" A-19 | 10" |
| R-106 | INDUSTRIAL COLLECTOR | 1.5" A-12.5 | 2.5" A-19 | 10" |
| R-107 | URBAN LOCAL | 3" R-19 | | 6" |
| R-108 | RURAL, ESTATE, & SUBURBAN DEV. TYPE 'A' LOCAL | 3" R-19 | | 6" |
| R-109 | SUBURBAN DEV. TYPE 'B' LOCAL | 3" R-19 | | 6" |
| R-110 | HILLSIDE DEVELOPMENT LOCAL | 3" R-19 | | 6" |
| R-111 | FRONTAGE ROAD | 3" R-19 | | 6" |

NOTES:

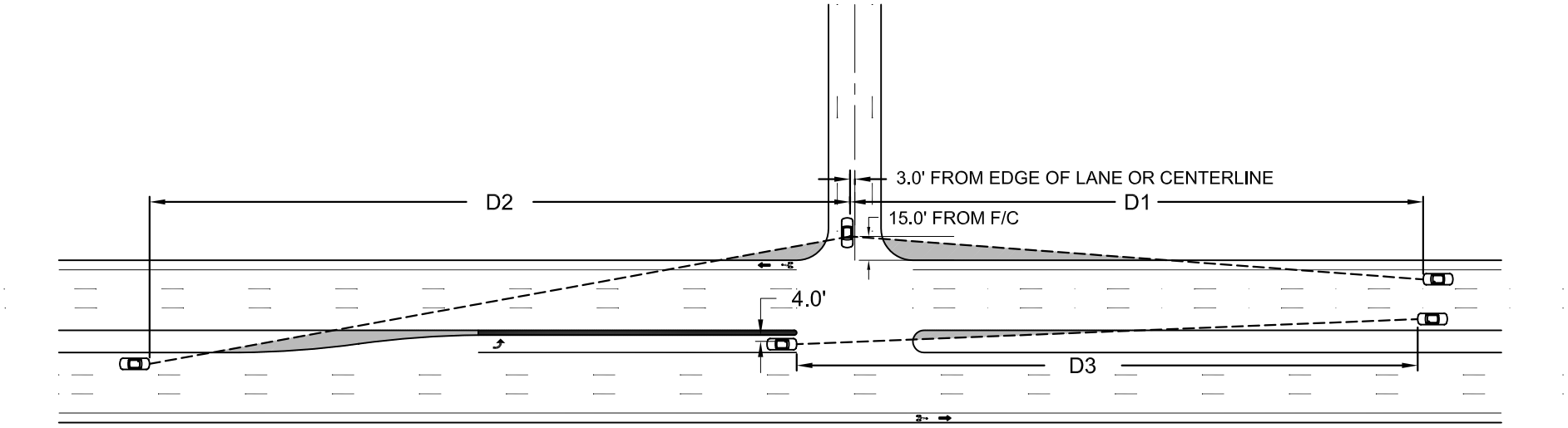
1. OPTIONAL SECTION OF 1" RAC OVER 3" A-19. APPLICABILITY AND RUBBERIZED ASPHALT SPECFICATIONS DETERMINED BY THE ENGINEERING MANAGER AND/OR PUBLIC WORKS DIRECTOR.

2. VALUES LISTED IN TABLE REFLECT THE MINIMUM TOWN REQUIREMENTS. TOWN APPROVAL OF PROPOSED STREET SECTIONS WILL ALSO BE BASED ON A PROJECTS GEOTECHNICAL REPORT FINDINGS AND RECOMMENDATIONS WHICH MAY REQUIRE ADDITIONAL THICKNESS.

March 2014:
Contact TOQC Engineering Division for additional information. 480-358-3003

REV. 08/2008

| TOWN OF QUEEN CREEK | ROADWAY CROSS SECTION PAVEMENT STRUCTURAL SECTIONS | STANDARD DETAIL | DETAIL NO. R-120 |
|---|---|---|---|




NO VEGETATION OF ANY KIND, BOULDERS, OR STRUCTURES ALLOWED IN THIS AREA.

GRANITE, GROUND COVER, AND VEGETATION LESS THAN 24" (MATURE) IN HEIGHT ALLOWED IN THIS AREA.

NOTES:

1. SIGHT DISTANCE VALUES ASSUME GRADES DO NOT EXCEED ±3%. FOR STEEPER GRADES, ADJUST PER EXHIBIT 9-53 OF AASHTO's "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS (2004 EDITION)."
2. SIGHT DISTANCE VALUES ARE CALCULATED USING THE FOLLOWING ASSUMPTIONS:
   - 2.1. DESIGN VEHICLE IS A SINGLE UNIT TRUCK.
   - 2.2. CATEGORY 'A' ROADWAYS HAVE ONE LANE TO BE CROSSED.
   - 2.2. CATEGORY 'B' ROADWAYS HAVE TWO LANES TO BE CROSSED.
   - 2.2. CATEGORY 'C' ROADWAYS HAVE THREE LANES TO BE CROSSED.
3. THE SIGHT DISTANCE TARGET SHALL BE THE CENTER OF THE NEAREST APPROACHING LANE.

| CATEGORY | POSTED SPEED (MPH) | DESIGN SPEED (MPH) | RIGHT TURN ONLY DRIVEWAY OPPOSITE RAISED MEDIAN (D1) FT | FULL ACCESS STREET/DWY (D1) FT | FULL ACCESS STREET/DWY (D2) FT | LEFT TURN MEDIAN BREAK (D3) FT |
|---|---|---|---|---|---|---|
| A | 25 | 30 | 290 | 375 | 420 | 290 |
| B | 30 | 35 | 335 | 510 | 565 | 410 |
| B | 35 | 40 | 385 | 585 | 645 | 465 |
| C | 40 | 45 | 430 | 705 | 770 | 570 |
| C | 45 | 50 | 480 | 780 | 855 | 635 |

REV. 08/2008

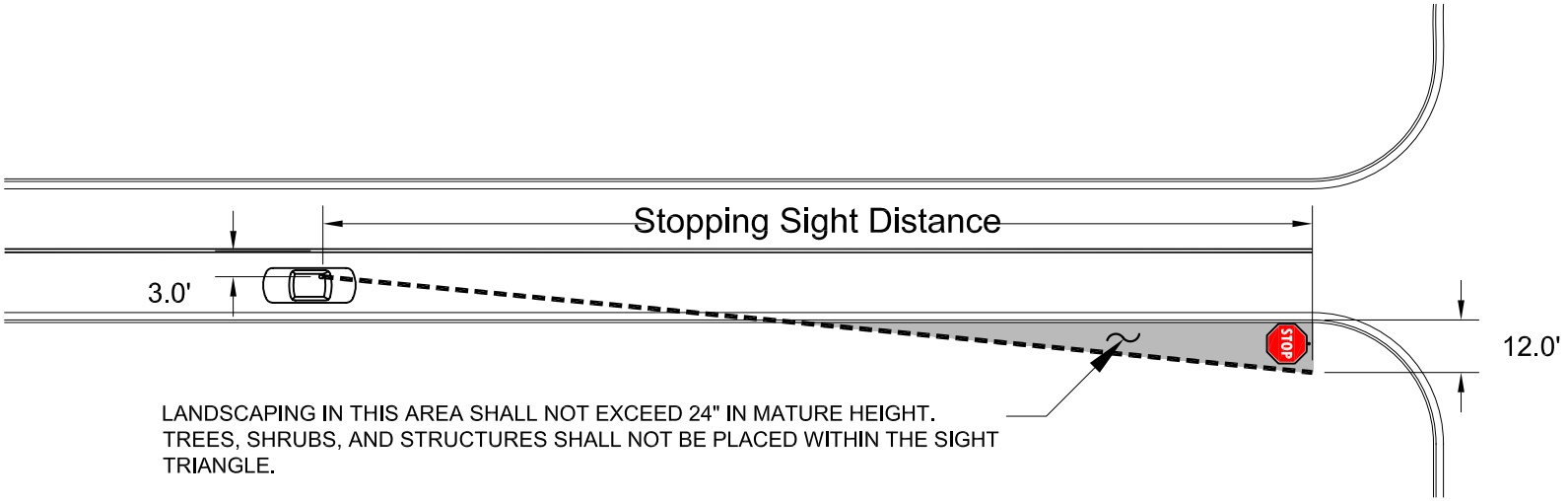
**TOWN OF QUEEN CREEK**

# INTERSECTION SIGHT DISTANCE

## STANDARD DETAIL

DETAIL NO.

**R-125**



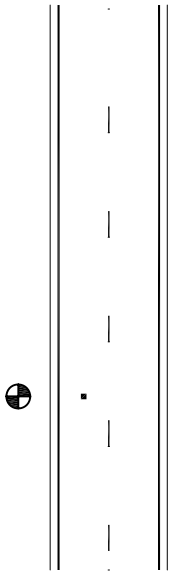

LANDSCAPING IN THIS AREA SHALL NOT EXCEED 24" IN MATURE HEIGHT. TREES, SHRUBS, AND STRUCTURES SHALL NOT BE PLACED WITHIN THE SIGHT TRIANGLE.

| POSTED SPEED (MPH) | DESIGN SPEED (MPH) | RIGHT TURN ONLY DRIVEWAY OPPOSITE RAISED MEDIAN (D1) FT |
|---|---|---|
| 25 | 30 | 200 |
| 30 | 35 | 250 |
| 35 | 40 | 305 |
| 40 | 45 | 360 |
| 45 | 50 | 425 |

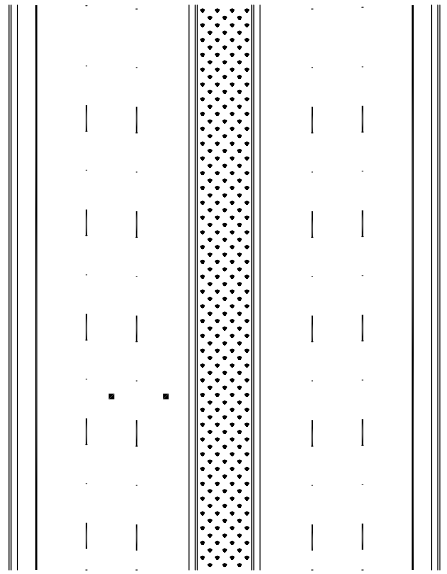
REV. 08/2008

| TOWN OF QUEEN CREEK | STOPPING SIGHT DISTANCE<br>STOP SIGNS, RAILROAD SIGNALS, HOR. CURVE | STANDARD DETAIL | DETAIL NO.<br>R-126 |
|---|---|---|---|

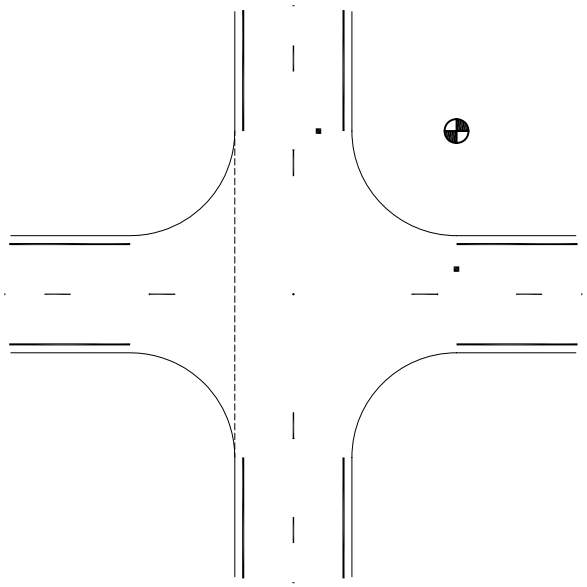
## 2 - LANE



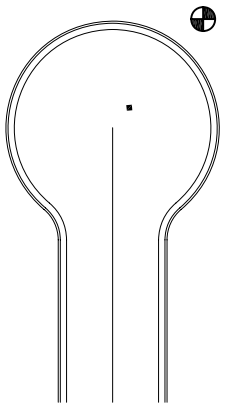
## MULTI - LANE



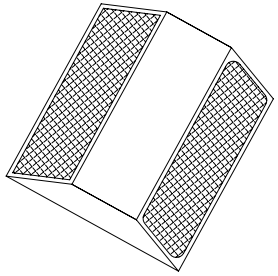
## 2-LANE INTERSECTION / 2-LANE T-INTERSECTION



## CUL-DE-SAC



## STIMPSONITE OR APPROVED EQUAL

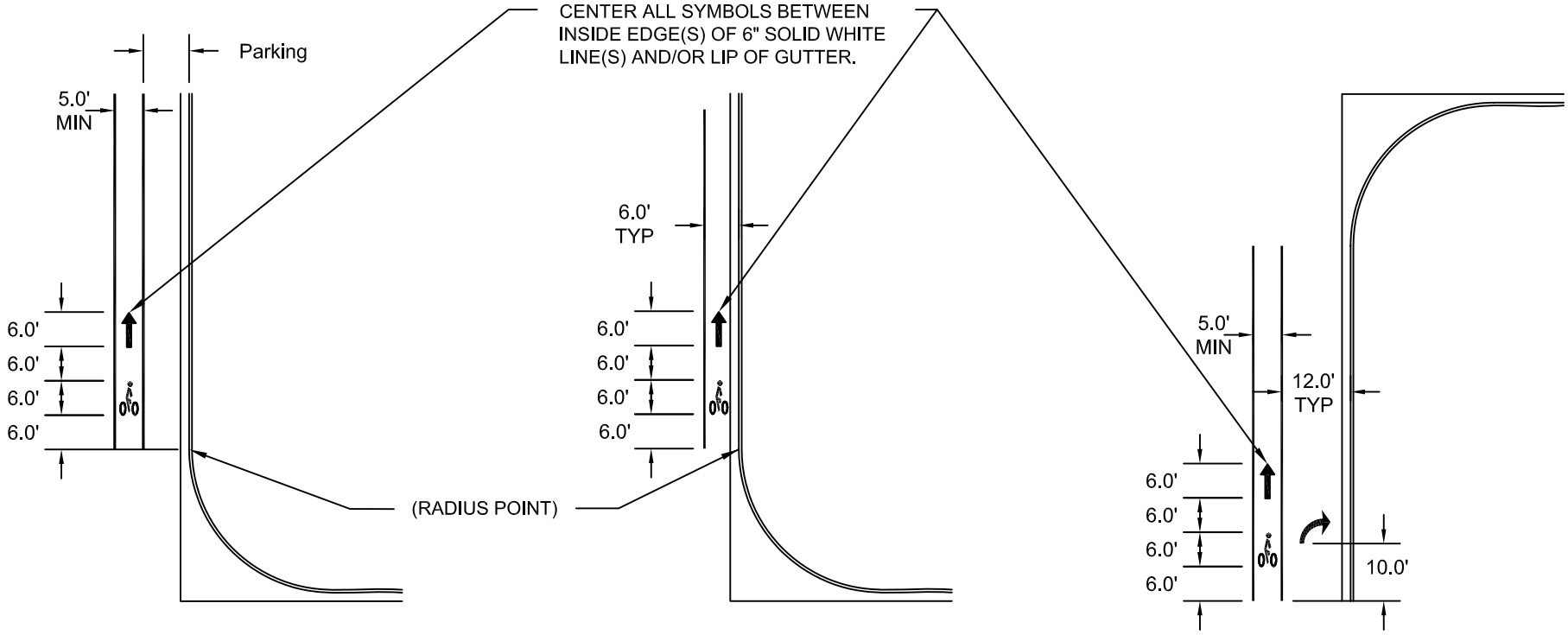


NOTES

1. MARKERS FOR FIRE HYDRANTS SHALL BE STIMPSONITE FIRE-LITE® BLUE REFLECTIVE HYDRANT SPOTTER OR APPROVED EQUAL.
2. MARKERS SHALL BE LOCATED CENTERED IN THE TRAFFIC LANE.
3. MARKERS SHALL BE PLACED ON HYDRANT SIDE OF STREET ONLY.
4. MARKERS ARE NOT REQUIRED IN CUL-DE-SACS LESS THAN 150' DEEP.

REV. 08/2008

| TOWN OF QUEEN CREEK | FIRE HYDRANT PAVEMENT MARKERS | STANDARD DETAIL | DETAIL NO. R-130 |
|---|---|---|---|

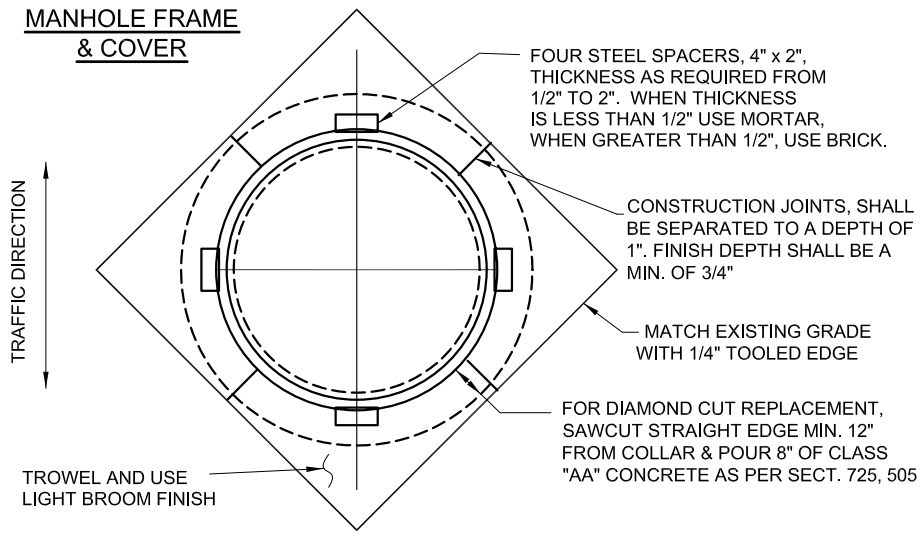


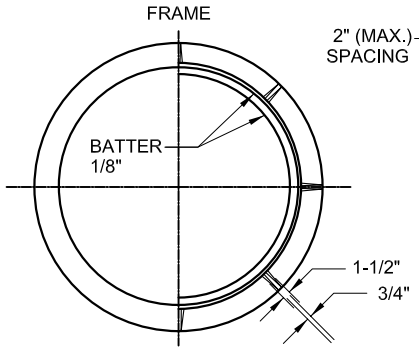

NOTES:

1. ALL BIKE SYMBOLS SHALL FACE THE CURB/EDGE OF PAVEMENT.
2. ALL BIKE SYMBOLS SHALL BE APPLIED IN PAINT.
3. ALL LINEAR STRIPING SHALL BE 6" WIDE AND APPLIED IN PAINT.

REV. 08/2008

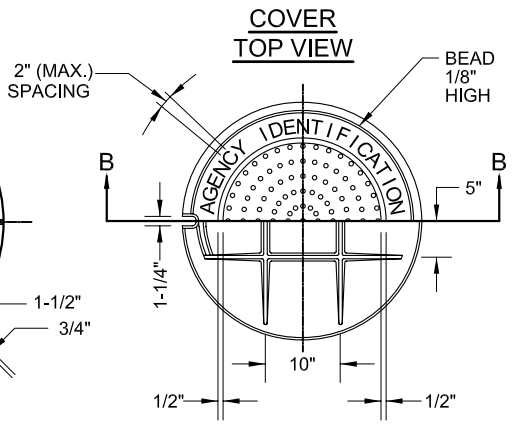
| TOWN OF QUEEN CREEK | BIKE LANE STRIPING | STANDARD DETAIL | DETAIL NO. R-131 |
|---|---|---|---|




BOTTOM VIEW - TOP VIEW

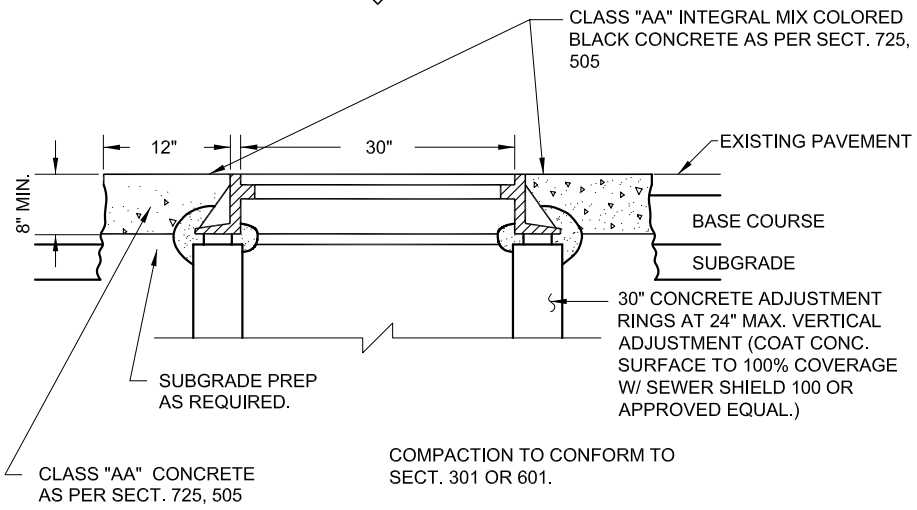
WT. (CL. 30) - 224 LBS
WT. (CL. 35) - 219 LBS

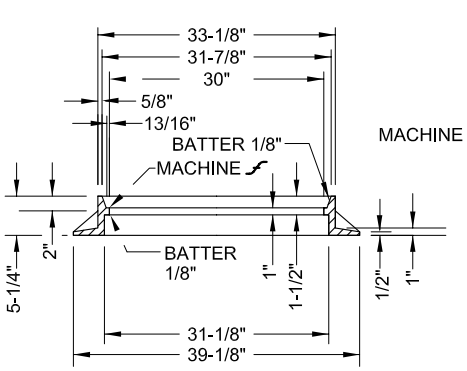



BOTTOM VIEW

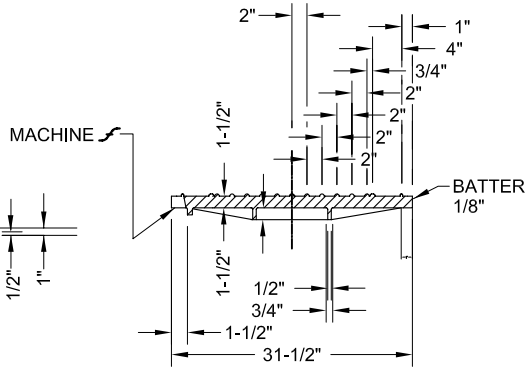
WT. (CL. 30) - 324 LBS
WT. (CL. 35) - 207 LBS

## 30" MANHOLE FRAME AND COVER




SECTION OF FRAME




SECTION 'B-B' OF COVER

NOTE:
LETTERING ON MANHOLE COVER TO CONTAIN NAME OF AGENCY AND UTILITY FOR WHICH MANHOLE IS NEEDED, (I.E. "QUEEN CREEK SANITARY SEWER"), OR AS DIRECTED. THE TOTAL WIDTH OF INDIVIDUAL LETTERS TO BE SUCH THAT LETTERS AND WORDS ARE EQUALLY SPACED AND BALANCED TO FORM A COMPLETE CIRCLE WITH SPACERS BEFORE AND AFTER THE WORD IDENTIFYING THE AGENCY INVOLVED. LETTERS TO BE 2" IN HEIGHT AND RAISED 1/8" ABOVE LEVEL OF COVER. TYPE OF LETTERS TO BE SUBMITTED FOR APPROVAL. WEIGHT OF CASTINGS SHALL BE NO MORE THAN 2% LESS THAN THE APPROXIMATE WEIGHT SPECIFIED. CASTINGS SHALL CONFORM TO SECTION 787.

REV. 08/2008

| | | | |
|---|---|---|---|
| **TOWN OF QUEEN CREEK** | **5 FT. SEWER MANHOLE WITH 30" FRAME AND COVER** | **STANDARD DETAIL** | DETAIL NO. **U-201** |

**TOWN OF QUEEN CREEK**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**

## PRE-APPLICATION REVIEW CHECKLIST

**PROJECT:** _____

**LOCATION:** _____

**LEGEND:** **REVIEW BY:** **DATE:**

√ = **Compliant**

☐ = **Non-Compliant**

**N/A = Not Applicable**

**DISCLAIMER:**

ALL ENGINEERING PRE-APPLICATION PROJECT COMMENTS, ARE **PRELIMINARY** AND, MAY BE REVISED AND/OR DELETED PER REVIEW OF ADDITIONAL PROJECT SUBMITTALS. ADDITIONAL ENGINEERING COMMENTS SHALL BE PROVIDED FOR ALL OTHER RELATED ENGINEERING PLANS, REPORTS, AND ANY OTHER DOCUMENTS RELATED TO ENGINEERING, UPON COMPLETION OF REVIEW

SITE PLAN - ENGINEERING COMMENTS:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Utilities

SRP Electric – Contact SRP for specific requirements that they may have in addition to the Town requirements. Town requires all poles 69Kv and less to be relocated underground. SRP may require easements outside of Public Right of Way.

Water - Queen Creek Water Co. - Paul Gardner - 987-3240/H2O - 491-6971

1. Call out provisions for water service.
2. The Applicant is responsible for obtaining a Certificate of Assured Water Supply and/or any other documentation pertaining to the assurance of water. Documentation shall be submitted to the Town prior to recording of the Final Plat.

Sewer – Call out provisions for sewer service.
Town of Queen Creek Public Works Department - 480-358-3003

**TOWN OF QUEEN CREEK**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**

Site Plan - General Requirements

Residential Site Plan

All site plans shall provide the following information:

- ☐ Streets shall have a minimum of .25% gutter slope.
- ☐ Retention basins shall be designed per the Towns design standards. (6:1 maximum side slope and 3' maximum depth from adjacent Top of Curb.)
- ☐ All existing features shall be shown. (wells, basins, power lines etc…)
- ☐ All existing and proposed easements shall be shown on plan(s).
- ☐ All existing and proposed rights of way shall be shown on plan(s).
- ☐ Roadway cross sections shall be designed per the current Town Standards.

Commercial/Industrial Site Plan

All commercial/Industrial site plans shall also include the following in addition to the above required information:

- ☐ Parking areas shall have a minimum of 1% pavement slope or a concrete valley gutter shall be used to convey water to the drainage inlets and/or retention basins.
- ☐ Vertical curb and gutter, per MAG standards, shall be required when conveying water. Single curbing, per MAG Standards, shall be required. (Extruded curbing is not permitted within Town limits.)
- ☐ Provide both a north - south and east - west cross section of the entire parcel. Sections to include Grading and pavement slopes and accurate dimensioning.
- ☐ Site plan shall include off-site improvements.

**ITEMS REQUIRED AT TIME OF FORMAL SUBMITTAL:**

Drainage Report

At minimum the Drainage Report shall include the following:

- Include an exhibit showing FEMA Flood Zone designation.
- Include a map showing location and volume of flows for onsite and offsite. Designate flow directions with arrows and include volumes.
- Provide provisions for on and offsite retention and calculate all retention volumes.
- Provide the Town with all information relating to the Queen Creek or Sonoqui Wash and indicate how this development may affect the wash, if applicable.
- Provide any reference data to any additional flows that enter the project site.
- Provide both a pre and post development drainage maps on 24" X 36" sheets.

☐ Preliminary Drainage Report. (Per T.O.Q.C. Subdivision Ordinance Requirements.)

☐ Final Drainage Report per TOQC Final Drainage Report checklist and all other comments. (Due to the complexity of the Project a Final Drainage Report is required with next submittal.)

Phase I Environmental Report

☐ Submit the Phase I Environmental Report, for Towns review.

**TOWN OF QUEEN CREEK**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**

Geotechnical Report

☐ Provide a Geotechnical Report, Prepared and sealed by an Arizona Registered Geotechnical Engineer. Report shall include borings on all arterial and collector streets and for both light and heavy load traffic lanes within the site. Report shall provide recommended pavement sections for all on and offsite streets. Report shall also establish building foundation, drainage recommendations including percolation test results, and may also include retaining wall recommended design criteria.

Wastewater Report

☐ Provide a Wastewater Report. At a minimum, the Report shall include a description of the project site, description of the existing and proposed sewer facilities, wastewater generation calculations, applicable design criteria and references. A Wastewater Exhibit shall be included with the Report and shall illustrate the layout of the proposed system, line sizes, gravity sewer flow directions, manhole locations, and all connection points to existing facilities.

Water Report

☐ Provide a Water Report. At a minimum the Report should include a description of the project site, identify the appropriate water service provider and applicable design criteria, description of the existing and proposed water facilities, demand calculations, pressure and fire flow requirements. A Water Exhibit shall be included with the Report and shall illustrate the layout of the proposed system, line sizes, hydrant and valve locations, and all connection points to existing facilities.

Water and Sewer Plan

☐ Provide Preliminary Layout for Proposed Water and Sewer System. At a minimum, include line sizes, gravity sewer flow directions, manhole locations, valve and hydrant locations, and all connection points to the existing facilities.

Alta Survey

☐ Shall be required at time of formal submittal.

Traffic Report

☐ Preliminary Traffic Report.

☐ Final Traffic Report. (Due to the complexity and layout of the Project a Final Traffic Report is required with next submittal.)

Grading & Drainage Plan

☐ Preliminary Plans: shall be required with next submittal. At a minimum the plans shall provide the proposed locations of all retention basins, easements and/or tracts and flow arrows designating the proposed direction of water flows within streets, swales, etc.

☐ Final Grading & Drainage Plans: shall be required with next submittal. (Due to the complexity and layout of the Project a Final Grading and Drainage Plan is required with next submittal. The plans shall comply w/ the Final Drainage Report recommendations and criteria.)

**TOWN OF QUEEN CREEK**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**

Title Report

- ☐ Not required at this time.
- ☐ Required with next submittal.

Preliminary Plat

- ☐ Shall comply with the Preliminary Plat Review Check List.

Additional Requirements/Notes

- ☐ All plans submitted shall be on 24" x 36" sheets.
- ☐ All plans shall reference an approved Maricopa or Pinal County Datum.
- ☐ All plans shall utilize the NAVD 88 Datum.
- ☐ Engineering comments may be revised and/or deleted upon review of additional project submittals. Additional engineering comments shall be provided for all other related engineering plans, reports and any other documents related to engineering, upon completion of review.
- ☐ All questions or comments shall be submitted to the Case Engineer via email. All correspondences shall be filed with the case file for future reference.

**TOWN OF QUEEN CREEK**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**

# PRELIMINARY PLAT REVIEW CHECKLIST

**March 20, 2007**

PROJECT: _____

LOCATION: _____

| LEGEND | REVIEW BY | DATE |
|---|---|---|

✓ = Compliance

○ = Non-Compliant

N/A = Not Applicable

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|
| ☐ | 1. The maximum allowable drawing size is 24" x 36". Please resubmit the plat on the correct size sheets. | |
| ☐ | 2. The maximum allowable scale is 1" = 100'. The scale must also be noted on each sheet. | |
| ☐ | 3. The subdivision's name must be shown on the preliminary plat. | |
| ☐ | 4. A vicinity, or site location map, is needed. | |
| ☐ | 5. The subdivision's location as defined by its section, township, range, and county must be given. If the subdivision overlays a previously recorded plat, it must be indicated on the plat with record references. | |
| ☐ | 6. Two separate survey ties to two section corners, or quarter section corners, are needed. The type of documentation must be defined. | |

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 7. North arrows must be shown on each sheet.

☐ 8. The developer's name, address, and phone number must be shown on the cover sheet.

☐ 9. The design professional's name, address, and phone number must be shown on the cover sheet.

☐ 10. Each sheet of the preliminary plat must be sealed and signed by the design professional preparing the plat.

☐ 11. All elevations shown in the preliminary plat must be referenced to an approved Maricopa County benchmark.

☐ 12. The subdivision is within an Airport Impact Overlay District.

☐ 13. A typical lot with minimum dimensions and easements must be shown on the cover sheet.

☐ 14. The total number of lots must be shown on the cover sheet.

☐ 15. Maximum, minimum and average lot areas must be shown on the cover sheet.

☐ 16. The model home site shall be clearly delineated and labeled on the preliminary plat and shall include all adjacent street water, sewer, and drainage improvements to be constructed concurrently with model site.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 17. The overhead utility 69KV lines on or adjacent to this site must be relocated. All utility lines less than 69KV shall be undergrounded. Please add the following note to the cover sheet:

**The improvements shown on this plat will not be fully approved by the Town and the Certification of Occupancy or Acceptance will not be issued until the utility line undergrounding requirement has been satisfied.**

☐ 18. The existing irrigation facilities on or adjacent to this site must be abandoned, relocated or undergrounded. Please check and coordinate with the Irrigation District.

☐ 19. Add note to the preliminary plat:

**This subdivision shall comply with the Zoning Ordinance Guidelines for Planned Area Developments.**

☐ 20. On lot retention may be allowed on residential lots per the following guidelines. Add note to the preliminary plat, if required:

- Subdivisions with residential lots 1 acre or larger can use on-lot retention to meet the subdivision retention requirements
- Subdivisions with an individual residential lot or lots less than 1 full acre (but at least 35,000 square foot) can use on-lot retention to meet 100 percent of their required retention, and shall in addition provide a basin or basins to retain 50 percent of the subdivision retention requirement. The storage basin(s) must be located so as to be able to collect flows that would leave the subdivision .
- Subdivisions with an individual residential lot or lots less than 35,000 square feet shall meet the entire 100 percent retention requirements for the subdivision as defined in Maricopa County drainage standards.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 21. The existing topography must be shown by contours. Spot elevations are required when the subdivision's topography cannot be clearly defined by contours.

☐ 22. All existing buildings and significant structures must be shown. Any modifications must be noted.

☐ 23. All wells, streams, canals, irrigation laterals and ditches, lakes, and other water features must be shown on the preliminary plat. Any modifications must also be noted.

☐ 24. All existing water wells and their Department of Water Resources registration number must be shown on the plans. If not registered, so note on the plans. Wells must be registered prior to disposition and documentation provided to the Town. Contact the Town Public Works Department at (480) 358-3000 to coordinate well registration and disposition .

☐ 25. All retention areas must be noted on the preliminary plat.

☐ 26. All portions of the development within the FEMA 100-year flood zones must be identified. If any such areas exist submit preliminary plat to the Flood Control District of Maricopa County. FCDMC approval is required.

☐ 27. Existing and proposed right-of-way widths must be shown on the preliminary plat. In addition, utility and railroad Rights-of-way must be shown.

☐ 28. All existing easements and rights-of-way must be shown and any abandonment must be noted on the preliminary plat.

☐ 29. An ALTA Survey Map must be provided .

☐ 30. Show the sizes and types of all existing utility lines within and adjacent to or near the subdivision.

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| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|
| ☐ | 31. Town limit lines must be shown when they are adjacent to or near the subdivision | |
| ☐ | 32. The names of all subdivisions adjacent to the subject property must be shown along with recording information | |
| ☐ | 33. The subject subdivision's net and gross areas must be shown on the cover sheet. | |
| ☐ | 34. The existing zoning classification of the subject and adjacent tracts must be shown by note. | |
| ☐ | 35. Perimeter traverse data is required for the entire subdivision boundary. For tangents this consists of bearings and distances. For curves this consists of radii, delta angles, and curve lengths. On non-tangent curves, show radial bearings. | |
| ☐ | 36. Curvilinear back lot lines are not allowed. | |
| ☐ | 37. The street layout must be shown. This includes public streets, private streets, and easements. | |
| ☐ | 38. Local, collector, and arterial right-of-way widths, street cross-sections and alley cross-sections must comply with town standards. | |
| ☐ | 39. The street construction centerline and the monument line are not the same. Verify that the proposed dedication is in accordance with the approved Town circulation plan and is adequate to accommodate all necessary utilities. | |
| ☐ | 40. Street geometrics shall comply with the standards presented within the Town's Subdivision Ordinance | |
| ☐ | 41. Curve radius for all rights-of-way on bubbles and cul-de-sacs and for street monument line shall be shown on the plat. | |

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 42. Proper turn-around facilities are required on dead-end streets and alleys.

☐ 43. Triangular corner cutoffs are required at all street intersection corners per Town Subdivision Ordinance

☐ 44. Street connectivity/continuity is acceptable per zoning ordinance.

☐ 45. Any proposed phasing must be shown.

☐ 46. Half-street cross-sections must comply with town standards, as depicted in subdivision ordinance.

☐ 47. Provide lot numbers and tract/parcel labels.

☐ 48. Show front, rear and side yard setbacks.

☐ 49. Tracts or parcels that will be dedicated to the town must be noted. The use must also be noted along with their appropriate areas.

☐ 50. The sanitary sewer system must comply with the Town's Public Work Department and/or MAG standards

A) Show all existing and proposed sewer lines.
B) Flow arrows must be shown on all sewer lines.
C) The sizes of all sewer lines must be shown.

☐ 51. The potable water system must comply with the private water company's guidelines and standards

A) Show all existing and proposed water lines including valves and hydrants.
B) The sizes of all water lines must be shown.

☐ 52. The storm drainage system must comply with the standards Presented within the Maricopa County Flood Control Districts design manuals and the Town's Subdivision Ordinance requirements.

A) Flow arrows must be shown for all flows in streets.
B) Flow arrows must be shown for all storm drains.
C) The 100—year water surface limit boundary lines shall be shown within all washes and /or significant drainage easement tracts.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 53. Submit a preliminary drainage report. Enough detail is required to demonstrate layout feasibility.

☐ 54. Plans must be coordinated with any Town Improvement District.

☐ 55. Submit a current title report, 6 months old maximum. The legal description for the title report shall match boundary survey information

☐ 56. Approved street names must be shown.

☐ 57. Submit a transparency or Mylar of the preliminary plat at a scale of 1"= 200' showing only the subdivision boundary and boundary lines of all tracts, lots, and rights-of-way.

☐ 58. A detailed infrastructure analysis is required and shall include water and wastewater.

☐ 59. Provide for review a Phase I Environmental Site Assessment in compliance with the Town of Queen Creek criteria and ASTM E 1527 (current form) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.*

**TOWN OF QUEEN CREEK**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**

# FINAL PLAT REVIEW CHECKLIST

**March 20, 2007**

PROJECT: _____

LOCATION: _____

| LEGEND | REVIEW BY | DATE |
|---|---|---|

✓ = Compliance

◯ = Non-Compliant

**N/A** = Non Applicable

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 1. Substitute " community association", "property owners association" or "unit owners association" for "homeowners association" where appropriate throughout this checklist, including those items that must appear on the final plat. Homeowners association and community association usually apply to a residential development. Property owners association usually applies to a commercial or industrial development. Unit owners association usually applies to a condominium development whether residential, commercial or industrial in keeping with *Arizona Revised Statutes, Title 33– Property, Chapter 9—Condominiums.*

☐ 2. The substitutions noted in item 1 also apply to the Covenants, Conditions and Restrictions (CC&R's) and the document that establishes the association.

☐ 3. The final plat must be submitted on 24' x 36' sheets.

☐ 4. The minimum allowable scale is 1" = 100'. The scale must be noted on each sheet.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 5. The minimum height of all text symbols must be 0.1" (one tenth of one inch) and must be in full density black ink.

☐ 6. All official seals and stamps affixed to the final plat must be in black ink as required by the Maricopa County Recorder's Office. All signatures must be in black ink.

☐ 7. A Key Map is required on the cover sheet and must show all tracts, parcels, and lots by number or letter. When the plat contains more than two (2) sheets, the Key Map must define the area covered by each sheet and indicate the sheet number.

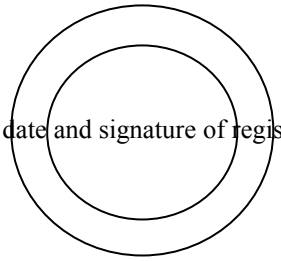
☐ 8. The subdivision name must be shown on all sheets of the final plat.

☐ 9. The following note, if applicable, must be shown on the cover sheet:

**These private streets will remain private and will never convert to public ownership.**

☐ 10. The following certification and the name, address, and registration number of the registered land surveyor preparing the final plat must be shown on the cover sheet:

**THIS IS TO CERTIFY THAT THIS PLAT IS CORRECT AND ACCURATE AND THE MONUMENTS DECSRIBED HEREIN HAVE EITHER BEEN SET OR LOCATED AS DESCRIBED TO THE BEST OF MY KNOWLEDGE AND BELIEF.**



(need seal, date and signature of registered land surveyor)

(name of registered land surveyor)
**REGISTERED LAND SURVEYOR NO.** ( number)
(street address)
(city, state zip code)

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 11. The subdivision location as defined by its section, township, range, principal meridian, county and state must be shown on the cover sheet.

☐ 12. A North arrow must be shown on each sheet.

☐ 13. Provide a vicinity map on the cover sheet. Town limits must be shown if applicable. Town of Queen Creek and other agencies (Town of Gilbert, Maricopa County, Pinal County, and Gila River Indian Reservation) must be labeled, if applicable, wherever the project site abuts land that has not been incorporated by the Town of Queen Creek.

☐ 14. Show the gross area on the cover sheet.

☐ 15. Provide a legend on the cover sheet.

☐ 16. Tract and parcel areas must be provided on the cover sheet.

☐ 17. All lots must be numbered consecutively beginning with lot number 1. All tracts and parcels must be lettered consecutively beginning with tract/parcel "A". Exception parcels must also be labeled.

☐ 18. Tracts or parcels being dedicated to the Town with this plat must be noted as such . Their uses also must be noted.

☐ 19. Tracts are not allowed within Town Rights-of-Way. Add the following note to the final plat:

**The H.O.A./P.O.A. shall be responsible for maintenance of all landscaped islands and medians with the exception of those located within arterial roadways.**

☐ 20. Add the following note to the final plat:

**Construction within utility easements shall be limited to utilities and driveways.**

☐ 21. Add the following note to the final plat:

**No structures of any kind may be constructed, nor any vegetation planted nor allowed to grow within drainage easements which would impede the flow of water through the easements.**

☐ 22. An easement is dedicated for the exclusive use of water, sanitary sewer, or a combination thereof. The following note must be included on the plat cover sheet or in the easement by separate instrument:

**In easements for the exclusive use of water, sanitary sewer, or a combination thereof, only ground cover and bushes are allowed to be planted within the easement area. No trees are allowed.**

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 22. Coordination is required with the Town of Queen Creek Parks Department for property that will reserved as a park site or for property other than street right –of-way that will be conveyed to the Town of Queen Creek either by the final plat or separate instrument.

☐ 23. A dedication statement is required on the cover sheet. The dedication must included the following:

A) The subdivision location is defined by its section, township, range, county and state.
B) Statement about all easements shown on the plat:

**Easements are dedicated as shown on this plat.**

C) Mention of the rights-of-way dedicated.
D) Maintenance of landscaping statement:

**The maintenance of landscaping within the public right-of-way to back of curb shall be the responsibility of the homeowners association or abutting property owner.**

E) If items are platted as common property with an undivided interest owned in common by each lot owner, a statement about items maintained by the homeowners association:

**All property, amenities and facilities proposed to be maintained by the homeowners association are herewith platted as common property with an undivided interest owned in common by each lot owner.**

☐ 24. The homeowners association ratification must be signed by the person authorized to act on behalf of the homeowners association**.**

☐ 25. All individuals, with the exception of Town of Queen Creek representatives, signing the plat must have documentation authorizing them to do so.

Any person signing the plat who is not an individual owner signing for oneself, must have authorization to act on behalf of the owner, whether the owner is a partnership, corporation or other entity. Submit a certified copy of a resolution by the Board of Directors authorizing the individuals signing the plat to act on its behalf, or submit other signatory evidence. Signatory evidence is often contained in the Bylaws of the entity.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 26. Add the following note to the cover sheet:

A) If the common property is deeded to a homeowners association:

**All tracts that will not be conveyed to the Town of Queen Creek and all common property shall be improved in accordance with plans approved by the Town of Queen Creek and shall be conveyed by warranty (or special warranty) deed to the homeowners association. The homeowners association shall be responsible for the maintenance of the common property.**

B) If the common property is owned in common, with an undivided interest by all lot owners:

**All tracts that will not be conveyed to the Town of Q u e e n Creek and all common property shall be improved in accordance with plans approved by the Town of Queen Creek and shall be owned in common, with an undivided interest, by all lot owners of this subdivision. The common property shall be included with in the scope of the deeds transferring ownership of lots in this subdivision. The lot owners shall be responsible for the maintenance of the common property.**

☐ 27. The following statement must appear in the dedication:

A) If the common property is deeded to a homeowners association:

**Tracts _____, _____ and _____,** (fill in blanks and include all applicable tracts) **are not dedicated to the public, but are platted as common property for the use and enjoyment of** (add name of homeowners association) **as more fully set forth in the Declaration of Covenants, Conditions and Restrictions.**

B) If the common property is owned in common, with an undivided interest by all lot owners:

**Tracts _____, _____ and _____,** (fill in blanks and include all applicable tracts) **are not dedicated to the public, but are platted as common property with an undivided interest owned in common by each lot owner for lot owner use and enjoyment as more fully set forth in the Declaration of Covenants, conditions and Restrictions.**

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 28. The basis of bearings given on the plat must be Maricopa County recorder (MCR) record data and the appropriate MCR recordation information; i.e., book and page numbers or document, docket or instrument number; must be shown.

☐ 29. Separate survey ties to two section corners, or quarter section corners, are required. The type of monumentation at each tie must be defined.

☐ 30. The subdivision boundary must extend to the monument lines of adjacent streets, except where the ultimate street right-of-way has been previously dedicated on another plat and that plat has been recorded.

☐ 31. Perimeter traverse data is required for the entire subdivision boundary.
A) For tangents this consists of:
(1) Bearing.
(2) Distance.
B) For curves this consists of:
(1) Radius.
(2) Central angle.
(3) Curve length.
(4) Radial bearings on non-tangent curves.

☐ 32. The boundary described in the title report must match the subdivision boundary on the plat.

☐ 33. Boundary closure calculations are required with error of closure.

☐ 34. Lot and tract closure calculations are required. Each closure must show lot number, error of closure and area. The minimum, maximum and average lot area must be provided.

☐ 35. A typical lot with minimum dimensions, setbacks and easements must be shown.

☐ 36. The subdivision is with in an Airport Impact Overlay district. An aviation easement is required on the plat. Specific language is attached.

☐ 37. Street geometrics must match those shown on the approved preliminary plat.

☐ 38. Cul-de-sac/turn around geometrics must meet Town, MAG, or other agency standards as approved by Engineering Manager.

☐ 39. Triangular property line corner cutoffs are required at all street intersections. A 20’x20’ triangular cutoff is required along arterial streets and where a major or primary collector street intersects another major or primary collector street.

| ITEM | REQUIREMENT | COMMENT |
|---|---|---|

☐ 40. Visibility easements based on AASTO Engineering Standards must be shown on the plat. Visibility easements with or located by bearings, distances, and curve date, as applicable, must be shown on the plat.

☐ 41. A 1' vehicular non-access easement (VNAE) must be shown on the plat at the following locations:
- A) Lot abutting a retention basin.
- B) Lot abutting perimeter street right-of-way
- C) Lot abutting a tract
- D) Lot abutting sight visibility easement

☐ 42. All street centerline and property (parcel, tract, lot) line survey data must be shown.
- A) For tangents this consists of:
  - (1) Bearing.
  - (2) Distance.
  - (3) Total block length
- B) For curves this consists of:
  - (1) Radius.
  - (2) Central angle.
  - (3) Arc length
  - (4) Radial bearings on non-tangent curves for street centerlines
  - (5) Radial bearings on non-tangent curves or curve data for sub-arc measured to the intersecting line for parcel or tract boundary line. Only the sub-arc length is required where a lot line intersects a street right-of-way line.

☐ 43. Curvilinear back lot lines are not allowed.

☐ 44. The names of all adjacent subdivisions and other land divisions, along with the corresponding MCR recordation information, and the property lines that intersect the subdivision boundary must be shown on the plat. Unsubdivided property must be noted as such.

☐ 45. Street names must match those shown on the approved preliminary plat. Unless street name changes have been approved by the Town Engineering Division
- A) Name
- B) Spelling
- C) Check Mylar.

Street names must be correct on mylars to be submitted for final approval. Incorrect street names will be cause for rejection of the final submittal.

☐ 46. All easements, i.e., drainage, utility , vehicular non-access, etc., being dedicated with this plat must be shown and labeled on the plat.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 47. Existing rights-of-way and all rights-of-way being dedicated must be clearly shown, labeled (e.g., R/W) and dimensioned. All rights-of-way that expand on existing dedicated rights-of-way, as well as the existing rights-of-way to the monument lines of adjacent streets, must be included within the subdivision boundary.

☐ 48. Additional right-of-way is required.

☐ 49. The street construction centerline and the monument line are not the same. The proposed right-of-way dedication must be in accordance with the approved transportation plan.

☐ 50. All existing easements and rights-of-way within the plat boundary, as well as the existing easements and rights-of-way to the monument lines of adjacent streets, must be shown and labeled on the plat along with the corresponding MCR recordation information.

☐ 51. Easements must be abandoned and the following items apply:
- A) A letter from the utility companies agreeing to the abandonment is required.
- B) A legal description and MCR recordation information is required.

☐ 52. Existing right-of-way must be abandoned and the following items apply:
- A) The Town Engineering Manager must approve the abandonment.
- B) The Town Attorney must approve the abandonment.
- C) A vacation plat must be prepared by an RLS for approval by Town Council by Ordinance.

☐ 53. An easement or right-of-way dedication is required by separate instrument. Please provide the following exhibits and information along with the easement document:
- A) Subdivision name
- B) Type of easement or right-or-way
- C) Reason or purpose of the easement or right-of-way and why it is required.
- D) Vicinity map showing major cross streets
- E) Legal description with RLS certification
- F) Detail map showing the easement or right-of-way alignment with dimensions and bearings, true point of beginning, section, township and range.
- G) Title report

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 57. An ALTA survey map must be provided.

☐ 58. At the time the final plat is approved, provide a compact disk containing the drawing (DFX or DWG format) of the final plat.

☐ 54. The improvement plans must be fully approved before final plat approval.

☐ 55. Provide an 8 1/2" x 11" PMT reduction for submittal to Town Council for plat approval. This may normally be done after the first review.

☐ 56. The plat must provide private cross access easements for:
- A) Potable water
- B) Sanitary sewer
- C) Fire Line
- D) Pedestrian access
- E) Vehicular access
- F) Drainage

☐ 57. The plat must provide for emergency vehicular access.

**TOWN OF QUEEN CREEK**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**

## SEWER PLAN REVIEW CHECKLIST

PROJECT: _____

LOCATION: _____

| LEGEND | REVIEW BY | DATE |
|---|---|---|

✓ = Compliance

○ = Non-Compliant

**N/A =** Non Applicable

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|
| ☐ | 1. The First Submittal of the Sewer Plans shall include, at a minimum, sewer plan sheets, details, and an Engineer's Sewer Design Report. | |
| ☐ | 2. The Sewer Plans shall be submitted on 24" x 36" sheets bound or stapled in sets. | |
| ☐ | 3. Each sheet of the Sewer Plans must be signed and sealed by the Engineer preparing the plans. | |
| ☐ | 4. The minimum height of all text, numbering, and lettering shall be 0.1" (one-tenth of one inch) | |

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 5. If an easement or right-of-way (ROW) dedication or abandonment is required by separate instrument, the following exhibits and/or information must be provided with the easement document.
- The subdivision name
- The type of easement
- The reason or purpose of the easement or ROW and why it is required
- A Vicinity Map showing the major cross streets
- The legal description sealed by an R.L.S.
- A Detail or Plot Map showing the easement or ROW location and alignment with dimensions and bearings, true Point of Beginning, Section, Township, and Range.
- Current Title Report.

☐ 6. Include an approval block for the Town Engineering Manager and Maricopa County Environmental Services (or ADEQ if in Pinal County). County approval and signature is required prior to the Town's Engineer's signature.

☐ 7. Sewer Payback Fees are required. (Queenland Manor Subdivision & High School)

☐ 8. Show the required Town of Queen Creek sewer specifications with general notes and construction notes.

☐ 9. Note the type of sewer pipe used.

☐ 10. Note that all materials used and installation shall conform to Maricopa County MAG Standards and Specifications.

☐ 11. Provide a detail that show the separation requirements between sewer and waterlines which conform to State Health Code Standards.

☐ 12. Include a sewer trench detail showing at a minimum the following information: width of trench, depth of bedding below and above pipe, type of bedding (conform to MAG Stds. & Specs.), bedding compaction requirements, backfill type, minimum backfill density, position of locator tape, and type of proposed pipe.

☐ 13. If sewer trench exceeds a 10 ft. depth, provide notes on the trench detail that the contractor shall excavate and backfill to comply with OSHA Standards and Guidelines.

☐ 14. Note that the sewer laterals shall be installed per County Standards or the Serving Agency Standards, whichever is most restrictive.

☐ 15. Index map with sheet layout and numbers, street names, flow arrows, phase limits and numbers, existing and proposed sewer systems including pipe sized, manhole and cleanout locations.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|
| ☐ | 16. A Vicinity or Site Location Map. | |
| ☐ | 17. A "Utility Coordination Block" shall be included on the cover sheet showing the names of the utility companies servicing the area of development and the dates plan were submitted to them. | |
| ☐ | 18. Provide a Quantities Table of estimated construction materials. A completed Certificate of Quantities Form, signed and sealed by the Engineer, shall be submitted for final approval. | |
| ☐ | 19. The name of the proposed development; the Developer's and Engineer's name, address, and phone. | |
| ☐ | 20. Provide or reference a Sewer Service Tap Detail and a Sewer Lateral Detail. | |
| ☐ | 21. A North arrow and 4 inch graphic scale must be shown on each plan sheet. Horizontal and vertical scales must be shown on both plan and profile views. | |
| ☐ | 22. Match lines, with stationing and sheet references, must be shown on each sheet as applicable. | |
| ☐ | 23. Phase limits and numbers, if applicable, must be shown on each sheet as applicable sheet. | |
| ☐ | 24. Existing storm drainage facilities such as retention basins, catch basin, scuppers, and storm drain pipes must be shown on plans. | |
| ☐ | 25. Existing buildings and other significant structures must be shown on the plans. | |
| ☐ | 26. All existing and proposed sewer lines must be shown in both plan and profile views. The proposed finish grade shall be shown on the profiles with elevations and with the existing ground line. | |
| ☐ | 27. Dimensional ties, station and offset from the street centerline, must be provided for all existing sewer lines being tied to. | |
| ☐ | 28. Service stubs to platted lots within the subdivision for underground utilities shall be placed to the right-of-way line or the public utility easement whichever is greater. | |
| ☐ | 29. Sanitary sewer lines shall be extended to the boundaries of the plat to provide service connections to abutting unsubdivided land. A sewer stub-out must be shown at each manhole adjacent to undeveloped property, unless otherwise justified. | |

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 30. All sewer lines shall be parallel to property lines or center line or as close to parallel as possible. They shall be located 6 ft. From centerline, as a guideline, and shall not cross the street centerline except in special cases approved by the Town Engineer.

☐ 31. All sewer lines shall have a minimum of 4 ft of cover

☐ 32. All sewer lines shall not be placed in less than a 20 foot easement

☐ 33. Unless otherwise specified, all gravity sewer lines shall be constructed of SDR 35 PVC pipe conforming to ASTMD 3034.

☐ 34. A sewer line shall be constructed of an unbroken length of ductile iron pipe or concrete encasement for a distance of at least 6 ft. in each direction when the sewer line crosses a water pipe that is less than 2 ft above the sewer line. See MAG Std. Detail 404 for applicability .

☐ 35. Manholes shall be constructed as follows:
- At all changes in grade
- At all changes in alignment
- At all connections from Private Sewers
- At lateral connections from some commercial buildings (at Town Engineer's discretion)
- At all connections where the sewer line size changes.

☐ 36. The maximum manhole spacing for all sewers (8' - 15") is 500 ft. Manholes shall be numbered consecutively and the numbers indicated on the plans.

☐ 37. Manhole elevation drops shall be at a minimum the following:
- 0.00 ft drop across manholes
- 0.10 ft. drop on angles

☐ 38. Manhole size to be as follows:
- All sewer main lines— (8" and larger) require a 5 ft. diameter manhole with a 30" frame and cover per MAG STDs.

☐ 39. Connecting sewers in a manhole may have a maximum of a 12 inch drop (flow line to flow line).

☐ 40. Manholes shall never be located in retention basins.

☐ 41. All manholes in washes shall be a minimum of 6 inches above finished grade but shall not exceed 2 ft. The actual wash topography and flow characteristics will dictate this height.

☐ 42. Watertight manhole covers conforming to MAG Standard Detail 423 shall be provided for all manholes in washes, unpaved areas, and for those manholes in a direct path of surface runoff or ponding.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 43. A cleanout shall be put on the end of a line that will not be extended. The spacing to the cleanout shall not be more than 100 feet. If the spacing from the manhole exceeds 100 feet, a manhole shall be required.

☐ 44. Sewer taps in manholes shall be constructed with the tap invert 4 inches above the highest sewer invert at the manhole.

☐ 45. When sewer lines of different sizes enter the same manhole, the smaller pipe shall not have its crown lower than the crown of the larger pipe (same level of higher).

☐ 46. All sewer laterals shall be constructed to the lot line. A plug or a cap must be installed at the end of each lateral with a 2x4 installed vertically from the plug of cap up to 2 ft. above grade and identified per MAG Stds.

☐ 47. No sewer tap shall have less than 3 feet of cover over its crown at the property line or easement line.

☐ 48. Proposed sewer tap locations with stations are to be shown for each lot on all plans, but may be changed in the field with Town Engineer approval.

☐ 49. All abandoned sewer taps must be capped.

☐ 50. All crossing of the following existing and proposed utility lines must be shown in both plan and profile views. The outside pipe elevations should be shown to indicate available clearances.

- Water and sewer
- Reclaimed water (4’ or larger)
- Telephone, electric, gas, cable, and other buried utilities where appropriate.

☐ 51. The sewer line slope must be shown and shall meet the minimum state (ADEQ) requirements.

☐ 52. The following general information is required on profiles:

- Scale: horizontal and vertical
- Profile of proposed sewer with slopes
- Profile of existing ground (dashed) and finished grade (solid) at location in which the sewer line is to be constructed
- Stationing at bottom of profile
- Profile of waterline and slopes with encasement limits
- Manholes with stations and elevations at centerlines of manhole

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|
| ☐ | 53. The following statement shall be a standard Engineering Stipulation for projects not abutting to an existing Town Sewer Main:<br><br>If Developer wishes to proceed with development prior to the time that adequate funding is available to Town to complete the design and construction of the Sewer Collection System, Developer may elect to design and construct the Sewer Collection System at Developer's sole cost, and request to enter into a reimbursement agreement pursuant to Article 16-3 of the Town Code. | |

***PLEASE RETURN THIS CHECKLIST WITH THE NEXT SUBMITTAL***

**TOWN OF QUEEN CREEK**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**

## PAVING PLAN REVIEW CHECKLIST

PROJECT: _____

LOCATION: _____

| LEGEND | REVIEW BY | DATE |
|---|---|---|

✓ = Compliance

○ = Non-Compliant

**N/A =** Non Applicable

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|
| ☐ | 1. The improvement plans must be submitted on 24" x 36" sheets. | |
| ☐ | 2. The name on the proposed development must be shown on the cover sheet. | |
| ☐ | 3. The developer's name, address, and phone number must be shown on the cover sheet. | |
| ☐ | 4. The engineer's name, address, and phone number must be shown on the cover sheet. | |
| ☐ | 5. A vicinity or site location map is needed on the cover sheet. | |
| ☐ | 6. Add the following approval block to the cover sheet: | |

**APPROVED:**

_____

**TOWN ENGINEERING MANAGER DATE**

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 7. The following current Town Standard notes must be shown, or corrected, on the cover or detail sheet.
   A) General notes
   B) Paving notes
   C) Signing and Striping notes

☐ 8. All elevations shown on the plans must be referenced to an approved Maricopa County benchmark (NAVD 88 datum).

☐ 9. Please coordinate the plans with all of the appropriate utility companies . Place a "utility coordination block" on the cover sheet. Show the names of the utility companies and the date plans were submitted to them.

☐ 10. All portions of the development within the FEMA 100-year flood zones (Zone A) and adjacent to the Sonoqui Wash or Queen Creek Wash must be identified. If any such areas are identified, submit plans to Flood Control District of Maricopa/Pinal County for their approval.

_____

**FLOOD CONTROL DISTRICT OF MARICOPA/PINAL COUNTY** **DATE**

☐ 11. The development is adjacent to a current Town Project/Improvement District. These plans shall be coordinated with the improvement district.

☐ 12. A portion of the improvements shown on plans is within the jurisdiction of the State/County. Acquire the appropriate permit. Indicate the permit number on the cover sheet.

☐ 13. The overhead utility lines on, or adjacent to , this site must be undergrounded. Please add the following note to the cover sheet:

**The improvements shown on this set of plans will not be fully approved by the Town, and the Certificate of Occupancy will not be issued, until the overhead utility line undergrounding and/or 69KV pole relocation requirement has been satisfied.**

☐ 14. The existing irrigation facilities on or adjacent to this site must be undergrounded.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 15. Please add the following note to the cover sheet:

**The existing retention and drainage facilities on this site will not be removed from service until the permanent retention and drainage facilities are functional.**

☐ 16. The minimum height of all text and symbols on the plans must be 0.1" (one tenth of one inch).

☐ 17. Each sheet of the improvement plans must be sealed, including signature and date, by the engineer preparing the plans.

☐ 18. This project includes arterial frontage. In addition to the design of the arterial frontage adjacent to the project, provide conceptual design of the arterial from the project boundaries to 1/4 mile to each direction or to the nearest arterial intersection; whichever is the lesser distance. Provide cash in lieu for ultimate half street improvements if they cannot be constructed with the project.

☐ 19. A soils report containing the following items must be submitted.
- A) Soil Classification
- B) Atterburg Limits test results.
- C) Sieve analysis, gradation, test results.
- D) Swell test results per Town standards.
- E) "Fissure" Evaluation and analysis, if required by the Town Engineering Manager
- F) Pavement & sub base analysis & recommendations.
- G) Percolation test for retention basins.

☐ 20. The swell test results and compaction density requirements for all areas under concrete must be noted on the Town paving notes.

☐ 21. Typical sections for each street to be improved must be shown on the detail sheet. The sections must include the following items:
- A) Right-of-Way width
- B) Width of sidewalk
- C) Width of improved surface
- D) Type of curb and gutter (vertical or ribbon)
- E) Minimum allowable pavement cross-slope. Inverted crowns are not allowed under any circumstances.
- F) Pavement structural sections—must conform to soils report test results and Town standards.

ITEM REQUIREMENT COMMENTS

☐ 22. An index map with the following information is needed on the cover sheet:
- A) Street names
- B) Sheet numbers and limits
- C) Town limits where applicable
- D) Phase limits and numbers if applicable
- E) Model home area.

☐ 23. If a model home area is part of the project, an all-weather fire apparatus access roadway must be provided prior to constructing any structure or bringing combustibles on-site. The roadway must be a minimum of 20 feet unobstructed width. The surface must consist of a minimum of 6 inch ABC at 100% compaction, on sub grade compacted to 95%.

☐ 24. Bus bays or deceleration lanes are required,

☐ 25. The following layout items must be shown on each sheet:
- A) North arrows
- B) Scale, plan and profile
- C) Phase limits and numbers

☐ 26. The following utility reference items must be shown on each sheet.
- A) All existing utilities must be shown in plan view
- B) All proposed utilities must be shown in plan view
- C) Utility crossings must be shown in profile view when the crossings are not shown on utility plan sheets.
- D) All existing and proposed manholes under new pavement must be adjusted to grade per TOQC 422M Standard Detail
- E) All existing and proposed valve boxes and covers affected by construction must be adjusted to grade per M.A.G. Standard Details

☐ 27. The following design items must be shown on each sheet in plan view:
- A) Existing pavement, curbs, sidewalk, right-of-way, with width dimensioned
- B) Existing sidewalk ramps.
- C) Proposed right-of-way, pavement, curbs, sidewalk with width dimensioned
- D) Proposed sidewalk ramps (MAG Standard Details)
- E) Existing items “to be protected in place” must be noted
- F) All existing water wells within the right-of-way must be shown on the plans with their Department of Water Resources registration number. If not registered, so note on the plans.

ITEM REQUIREMENT COMMENTS

☐ 28. The following design items must be shown on each sheet in profile view:
- A) Existing grade at right, left curb line, and centerline
- B) Proposed grade at right, left curb line, left, right median curb and centerline
- C) Proposed centerline elevation at curb return station on crown run-outs. Inverted crowns are not allowed.
- D) The proposed longitudinal grades must be labeled. Longitudinal grades on curves must be computed based on their true lengths. The longitudinal grades must comply with Town standards, 0.25% min.
- E) Storm drain crossings
- F) Utility crossings and other crossings having minimal cover (1' or less below sub grade)

☐ 29. The following additional items must be shown on each sheet in plan view:
- A) Valley gutters at all locations where storm water will cross the street, with width and standard detail number called out or detailed. Valley gutters shall not be allowed to cross Arterial or Collector streets. Catch basins should be provided to collect drainage (100% of Q-10 storm event) and prevent it from crossing a street or intersection.
- B) Curb transitions, with standard MAG detail number call-out.
- C) Curb joint spacing at 5 ft.
- D) Curb return radii per Town standards
- E) The Town requires use of MAG Standard Detail 231, with a minimum of the bottom 2 ft. of the ramp being the truncated dome design. The Town requires the use of 2'x 2' Truncated Dome Tiles with 2"x 2" inch spacing and the color shall be Terracotta.
- F) Curb radii at cul-de-sacs and "bubbles" per Town Standards or as approved by Engineering Manager
- G) Vertical Curb & Gutter shall be required on all median and island designs.
- H) Town requires an ADA compliant ramp and/or signing at all sidewalk terminations.
- H) Survey monuments, with standard detail number called out.
- I) Town limits, where applicable.

☐ 30. The following traffic engineering items must be shown in plan view:
- A) Street sign base per Town of Queen Creek Standard Details and/or MAG detail or as approved by the Engineering Manager
- B) Traffic control devices.
- C) Signing and striping plans for arterials and /or special conditions
- D) Signal conduit, 3" diameter schedule 40 P.V.C. with ADOT # 7 pull boxes at future signalized intersections (four-way)

☐ 31. The following survey design items must be shown on each sheet:
- A) Station numbers with sheet reference at all matchlines in plan or profile
- B) Centerline survey data.
- C) Station numbers at all changes in street alignment, intersections, curb returns, and grade breaks in profile.
- D) Gutter and centerline spot elevations at all grade breaks.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 32. Street geometrics must meet Town standards as indicated in the Subdivision Ordinance

☐ 33. Sufficient existing off-site elevations required to determine grade and direction of slope.

☐ 34. Complete and submit the Certificate of Quantities, sealed, including signature and date, by the Civil Engineer.

☐ 35. An easement or right-of-way dedication is required by separate instrument. Please provide the following exhibits and/or information along with the Easement Document:

A) Subdivision name
B) Type of easement/R.O.W.
C) Reason or purpose of the easement/R.O.W. and why required
D) Vicinity Map showing major cross street
E) Legal description with RLS certification
F) Detail map showing the easement/R.O.W. and why required
G) A current title report

☐ 36. The following statement shall be a standard Engineering Stipulation for projects abutting to an SRP site:

Should the project abut with an SRP site, the applicant shall be required to participate with SRP in providing aesthetic block fencing for the SRP substation site. The decorative screening walls for the areas are to be coordinated with staff and match design elements of the overall development. Details shall be coordinated by the applicant with SRP, and reviewed and considered by staff for approval as part of the final plat process. Applicant may apply for aesthetic funds from the Town of Queen Creek for finding of the wall, if that has been the precedent set.

**TOWN OF QUEEN CREEK**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**

## GRADING AND DRAINAGE PLAN REVIEW CHECKLIST

PROJECT: _____

LOCATION: _____

| LEGEND | REVIEW BY | DATE |
|---|---|---|

✓ = Compliance

◯ = Non-Compliant

**N/A =** Non Applicable

**Reference-Maricopa County & Pinal County Flood Control District Guidelines**

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|
| ☐ | 1. The improvement plans must be submitted on 24" x 36" sheets. Please resubmit the plan on the correct size sheets. | |
| ☐ | 2. The name of the proposed development must be shown on the cover sheet. | |
| ☐ | 3. The developer's name, address, and phone number must be shown on the cover sheet. | |
| ☐ | 4. The engineer's name, address, and phone number must be shown on the cover sheet. | |
| ☐ | 5. The following Town standard notes must be shown, or corrected, on the cover sheet:<br>A) General Notes<br>B) Grading Notes | |
| ☐ | 6. All elevations on the plans must be referenced to an approved Maricopa (NAVD 88) benchmark. | |
| ☐ | 7. Submit a SWPPP in accordance with the Town of Queen Creek, County and State requirements. | |

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 8. Please coordinate the plans with all of the appropriate utility companies on the list below. Place a "Utility Coordination Block" on the cover sheet. Show the names of the utility companies and the date plans were submitted to them.

Salt River Project (Power)
Qwest Communications
COX Cable
Southwest Gas
Queen Creek Irrigation
& Others

☐ 9. Provide an index map with the following information:

A) Street Names
B) Lot, Tract and Parcel Numbers
C) Sheet Numbers
D) Phase limits and numbers if applicable
E) Model Home area.

☐ 10. A legend identifying the symbols used for the following items must be shown on the cover, or detail sheet.

A) Existing top-of-curb elevations.
B) Existing ground elevations.
C) Proposed top-of-curb elevations.
D) Proposed ground elevations.
E) Proposed finished floor and pad elevations.
F) Existing contour lines.
G) Proposed contour lines.
H) Arrows designating direction of drainage flow.
I) Drainage structures.
J) Grade breaks.

☐ 11. When temporary retention basins, or storm drainage facilities are present, the following note must be shown on the cover sheet:

**"The existing retention and drainage facilities within this development will not be removed from service until the permanent retention and drainage facilities are functional."**

☐ 12. All portions of the development within the FEMA 100-year flood zones (A, AE, A1-A30,AH,AO,AH,AR,A99,D,V,VE) must be identified. If any such areas exist, submit Plans and Drainage Report to Maricopa/ Pinal County Flood Control Districts. MCFCD/PCFCD approval and signature is required.

_____

**FLOOD CONTROL DISTRICT OF MARICOPA COUNTY/PINAL COUNTY** **DATE**

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 13. Add the following note to the cover sheet:
**"A RETAINING WALL WILL BE REQUIRED IF AT THE COMPLETION OF GRADING THERE EXISTS MORE THAN ONE FOOT OF DIFFERENCE IN ELEVATION AT THE LOT LINES BETWEEN THIS PROPERTY AND ADJACENT PROPERTIES."**

☐ 14. The following certifications are required on the cover sheet:

A) **GRADE CERTIFICATION:**

**This is to certify that this grading plan is in compliance with the grading requirements of the soils report prepared by: _____**
**DATE: _____.**

**_____**
**REGISTERED CIVIL ENGINEER**

**DATE: _____**

B) **FINISH GRADE CERTIFICATION:**

**This is to certify that the finish grades shown or As-Built on this grading plan are in compliance with the Soils Report prepared by: _____**
**DATE: _____.**

**_____**
**REGISTERED CIVIL ENGINEER**
**(OR REGISTERED LAND SURVEYOR)**

**DATE: _____**

☐ 15. Each sheet of the improvement plans must be sealed, with date and signature, by the engineer preparing the plans.

☐ 16. The minimum height of all text and lettering shall be 0.1" (one tenth of one inch).

☐ 17. A vicinity or site location map is needed on the cover sheet.

☐ 18. The grading and drainage plans must encompass the entire development. The plans must also include 100ft outside the development boundary. All lots, tracts, and parcels must be shown in their entirety.

☐ 19. Show the limits of the model home area, including parking areas, on the plans.

☐ 20. Provide a quantity tabulation on the cover sheet, see the Certificate of Quantities list for the required items.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 21. North arrow must be shown on each sheet.

☐ 22. Phase limits and numbers must be shown on each applicable sheet.

☐ 23. The scale must be shown on the plans.

☐ 24. The existing topography must be shown by contours. Spot elevations and/or contours are required when the subdivision's topography cannot be clearly defined by contours. Spot elevations are required immediately off-site adjacent to the subdivision boundary sufficient to permit analysis of grade differentials and drainage.

☐ 25. Existing and proposed storm drainage facilities such as retention basins, catch basins, scuppers, and storm drain pipes must be shown and identified by type on plans.

☐ 26. Existing buildings and other significant structures must be shown. The removal of these items must be noted if appropriate.

☐ 27. Existing trees within the Town's Right-of-Way are to be protected in place or replaced in kind.

☐ 28. All wells, streams, canals, irrigation laterals and ditches, lakes and other water features must be shown. Any modifications must also be noted.

☐ 29. Existing spot elevations must be shown for all existing curb and gutter adjacent to the development. Elevations must be shown adjacent to each property corner, at all grade breaks, and at all scuppers/catch basins.

☐ 30. A typical lot grading detail must be shown on the detail sheet. The requirements that this detail must satisfy are as follows:

A) The building's finished floor elevation must be shown to be at least 14" above the lot's low outfall elevation.

B) The lot grading must be shown to be sufficiently sloped to prevent storm water from ponding on the lot (exclusive of lots greater than 35,000 sf).

C) The maximum allowable elevation difference between adjacent yard elevations must be shown to be less than, or equal to, one foot.

D) Typical swale location, cross section detail, design calculations, and % slope.

☐ 31. Cross-sections must be shown across the development's property line boundaries. The maximum allowable elevation difference between adjacent properties is one foot.

☐ 32. Cross-sections must be shown for all retention basins. The maximum allowable side slope requirements are 6:1.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 33. The depth of ponding due to the 100 year 2 hour design storm for retention facilities must be shown on the retention basin cross-sections and the HW contour line must be shown on the plans. The maximum allowable retention basin depth is 4 ft as measured to the nearest top of bank elevation.

☐ 34. Construction details, plan and profile view, must be shown for all proposed drainage facilities such as:
- A) Storm drains
- B) Scuppers and catch basins
- C) Hydraulic profile must be shown
- D) Scupper and chute elevations are required
- E) Access barrier with hinges on bottom required at all open ends of pipe more than 12" in diameter.

☐ 35. The following information must be shown for each lot:
- A) Proposed elevations at front lot corners, typically top-of-curb elevations.
- B) Proposed elevations at rear lot corners.
- C) Proposed finished pad elevations
- D) Proposed finished floor elevations
- E) Top and bottom elevations on retaining walls
- F) All existing and proposed block walls on subdivision boundaries and retention basin perimeters must be shown, with top of wall elevations.
- G) Basement homes with window wells; show type and location of window well protector.

☐ 36. Water lines, sewer lines, fire lines and water service lines are not allowed to pass under retention basins. This does not apply to irrigation lines downstream of the backflow preventor.

☐ 37. Submit a completed Certificate of Quantities form, signed and sealed by the Civil Engineer.

☐ 38. All proposed drywells must be registered with the Arizona Department of Environmental Quality (ADEQ) and a copy of the application submitted to the Town for inclusion in the file. The following requirements also apply:
- A) The drywell detail must be shown on the plans
- B) All drywells receiving storm runoff directly from paved areas must have a separate interceptor chamber installed on them. The drywell design drainage rate cannot exceed 0.1 cfs until percolation tests are performed on drywell.
- C) Large retention basins typically large enough for a soccer field, must have all drywells installed along the perimeter.

☐ 39. A drainage report shall be required and shall comply with the Town of Queen Creek "Final Drainage Report Checklist", and MCFCD or PCFCD Guidlines.

☐ 40. Structural design calculations are required for storm drains and/or equalizing pipes subject to wheel loading.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 41. The following statement shall be a standard Engineering Stipulation for projects abutting to an SRP site:

Should the project abut with an SRP site, the applicant shall be required to participate with SRP in providing aesthetic block fencing for the SRP substation site. The decorative screening walls for the areas are to be coordinated with staff and match design elements of the overall development. Details shall be coordinated by the applicant with SRP, and reviewed and considered by staff for approval as part of the final plat process. Applicant may apply for aesthetic funds from the Town of Queen Creek for funding of the wall, if that has been the precedent set.

☐ 42. When underground storage tanks/underground retention pipes are to be constructed within a close proximity to a building foundation, the geotechnical report shall include recommendations for minimum horizontal and vertical spacing between the building foundation and the underground storage tanks/underground retention pipes. These recommendations shall include measures to adequately assure the structural integrity of both the building foundation and underground tanks & pipes.

**TOWN OF QUEEN CREEK**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**

# FINAL DRAINAGE REPORT REVIEW CHECKLIST

**March 20, 2007**

PROJECT: _____

LOCATION: _____

| LEGEND | REVIEW BY | DATE |
|---|---|---|

✓ = Compliance

◯ = Non-Compliant

**N/A =** Non Applicable

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## Final Drainage Report

A Final Drainage Report is required to be submitted with the First Submittal of the Final Plat documents and plans and/or with any Commercial of Multi-family development. The Town Engineer may, at his discretion, require a drainage report for any other project as deemed necessary. The Final Drainage Report shall comply with all requirements of the Subdivision Ordinance and the Preliminary Drainage Report comments and stipulations and shall also provide the following data and information, as a minimum. Depending on the proposed facilities, the report may be required to be reviewed and approved by the responsible County Flood Control District.

## I. General Drainage Report Requirements and Guidelines

** The Drainage Report shall be signed and sealed by a Professional Engineer (P.E)

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ A. For all Projects located within Flood Zone "A"

- Pinal County requires that they receive and approve a 30% Concept Drainage Plan. Town Engineering Staff is to assure that Pinal County Public Works Department (Elise Moore) receives the very FIRST drainage report submitted for review. Engineering staff is to monitor and assure that TOQC receives a written approval response for the Drainage Report from Pinal County prior to proceeding with a Staff Report to Council or P&Z Commission.
- Pinal County requires that the Developer meet with them before they submit for a CLOMR. Engineering Staff is to attend this meeting but at a minimum include the meeting minutes and/or recommendations resulting from the meeting in the Project File and staff reports, it needed.
- Pinal County estimates that it may take about 1 year to process a CLOMR.

☐ B. The drainage report shall include the following:

- project description
- project setting including discussion of existing and proposed conditions and drainage issues related to the site
- offsite hydrology
- onsite hydrology
- hydraulic calculations
- hydrology maps and drainage exhibits and diagrams
- summary of findings and conclusions

☐ C. Use of Rational Method for hydrology calculations for study areas (Onsite and Offsite) of less than 160 acres. For larger areas and for routing drainage through detention or into retention basins, use engineering approved software that utilized the Synthetic Unit Hydrograph method which provides the supporting calculations and hydrographs for both the inflow and outflow conditions.

☐ D. All facilities that convey drainage must have hydraulic calculations to support their use. These facilities include streets, culverts, storm drains, channels, inlets, connector pipes box culverts, and others. When practical or required by the Town Engineer, street intersections shall be designed to be dry.

☐ E. Culverts must include inlet and outlet control calculations.

☐ F. Storm drains require calculations of the hydraulic grade line that must be shown on the storm drain profile(s).

☐ G. Open channels and open flow pipes can be sized with the Manning's Equation.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ H. Inlets and catch basins shall be sized to intercept the Q-10 year storm event. Granted catch basins are discouraged.

## II. Hydrology and Hydraulics

☐ 1. Both a Pre and Post Development (PD) Hydrology Map shall be included in the Drainage Report delineating each (drainage basin of sub-basin) area with the corresponding Q-10 and Q-100 flow rates. The Map Requirements are listed below for both maps with a (PD) designation for those items related only to the Post Development Map.

- Shall be clear and legible — 0.10"min. text height
- Preferred sheet size is 24" x 36"
- Show contours at 1 ft. maximum increments.
- Show proposed and existing topography slopes.
- Provide a legend, north arrow and scale, vicinity map, title block, date, and Engineer's stamp.
- (**PD**) Show proposed and existing street layout including high points and sumps, lots and lot numbers, concentration points, drainage easements, and drainage facilities including catch basins, culverts, ditches, retention basins, channels, curb openings, storm drains, scuppers, etc.
- Show watershed basin and sub-basin boundaries, flow path direction and lengths, node elevations, all basin areas, and 10 year and 100 year flows at all concentration or confluence points.
- (**PD**) Show location of detention/retention basins and provide volumes for both inflow and outflow, if any for the 10 year and 100 year events at each basin. Also, provide top, bottom, and high water elevations (depth).

☐ 2. Provide discussion, calculations, and map/exhibit(s) showing all **Off-Site** Q-10 and Q-100 offsite drainage flows and patterns that affect the site, including FEMA drainage flow rates and flood zone classifications. The locations of all off-site drainage flow entrance points shall be shown on the **Off-site Drainage Map.**

☐ 3. Flow arrows must be shown on all Drainage Maps indicating drainage flow directions and grade breaks.

☐ 4. The locations of the percolation tests (boring and test pits) must be shown on the Post Development Hydrology Map or a separate map. Shallow pit percolation test results shall also be included in the Drainage Report.

☐ 5. Provide calculations showing the volume of retention required for each drainage area and the calculated basin depth.

| ITEM | REQUIREMENT | COMMENTS |
|---|---|---|

☐ 6. Provide calculations showing the retention basin drain or dry-up time. If that time exceeds the 36—hour dry-up requirement, drywell(s) are required. Calculations shall be provided to determine the required number of drywells.

☐ 7. Retention basin design criteria:
- Maximum slopes = 6' HZ to 1' VERT
- Designed such that all tot lots, play courts, pedestrian & bicycle paths are above the 2-yr 6-hr storm water level.
- Maximum depth of 3 ft. (measured from adjacent street top of curb) within buffer area tracts.

☐ 8. Required drainage hydraulic guidelines, calculations, & conditions:
- Street calculations showing that the 10-yr.storm runoff is contained with in the curbs and the 100-yr storm runoff is contained within the R.O.W.
- Justify the <u>used</u> runoff coefficient factors. Show any weighted 'C' factor calculations.
- Provide street cross sections with Q-10 and Q-100 volume capacity calculations at the <u>project designed</u> street grades.
- Place inlets wherever the flow exceeds the street Q-10 capacity. Submit design computations and data. Provide Q-10 and Q-100 intercepted and flow-by values at all inlet concentration points. Provide a table showing these values with inlet type (catch basin, scupper, curb opening, etc.) and inlet opening length. <u>Include this table on the Post Development Drainage Map.</u>
- Size all storm drains and culverts and submit design computations.
- Culverts located under collector and arterial streets are to be designed to convey at least the 50-yr. peak discharge with no flow crossing over these roadways. Additionally the flow depth over these roadways shall be limited to 0.5 ft for the 100-yr. peak discharge.
- Maintain a minimum of one dry traffic lane in each direction on any collector or arterial street for a Q-100 storm event.
- Provide a **flow routing diagram** showing the Q-10 flow intercepted and flow-by, if any, at <u>all</u> drainage structures.

☐ 9. Provide channels designed for the Q-100 storm event. Maximum channel side slopes to be 4 ft. horizontal to 1 ft. vertical.

☐ 10. Provide copies of all calculations, formulas, charts, and prior reference material and/or reports used in the analysis.

***PLEASE RETURN THIS CHECKLIST WITH THE NEXT SUBMITTAL***

**TOWN OF QUEEN CREEK**
**COMMUNITY DEVELOPMENT DEPARTMENT**
**ENGINEERING DIVISION**

# SWPPP PLAN REVIEW GUIDELINES

**Project:**_____

**Location:**_____

The Town of Queen Creek has adopted the Arizona Department of Environmental Quality (ADEQ) guidelines and the applicant shall comply with all relevant permit citation categories contained in the ADEQ Construction SWPPP Checklist.

Although our guidelines are intended to reflect the Town of Queen Creek's requirements for an acceptable SWPPP, **all responsibility for a complete SWPPP remains with the permittee.**

Contact ADEQ or visit their website at www.adeq.az.us for more information.

Legend:

☒ Items marked with an **'X'** are compliant
☐ Un-marked Items are Non-compliant

## 1. SWPPP requirements:

- ☐ The SWPPP Plans shall be submitted on 24" x 36" sheets bound or stapled in sets.
- ☐ Each sheet of the SWPPP Plans must be signed and sealed by the Engineer preparing the plans.
- ☐ The minimum height of all text, numbering, and lettering shall be 0.1" (one-tenth of one inch).
- ☐ Provide the Town with a copy of the NOI prior to issuance of building permits.

☐ Provide the Town with a copy of the NOT after completion of construction and placement of final landscape materials.

**2. ADEQ requirements:**

☐ From ADEQ's Construction SWPPP Checklist, each applicable Permit Citation described under Project Description and Site Map shall be addressed on the SWPPP.

**3. Minimum permit citation categories:**

The permit citation categories described below shall be included, at a minimum, on the SWPPP. Specific project grading and topography may necessitate the use of other permit citation categories listed in ADEQ's Construction SWPPP Checklist.

☐ Part IV.D.1 – Describe all pollution control measures (BMPs).

☐ Part IV.D.2.a – Describe the erosion and sediment controls designed to retain sediment on site to the extent practicable.

☐ Part IV.D.4.a – Describe and identify interim and permanent stabilization practices for the site. Document where existing vegetation will be preserved.

☐ Part IV.D.5 – Describe structural practices used to divert flows from exposed soils, store flows and limit runoff and the discharge of pollutants from exposed areas to degree attainable. (Combination of sediment and erosion controls must be used).

☐ Part IV.D.5.a.i - Describe the location, size and retention capacity of the drainage basin(s) and the areas that drain into them.

☐ Part IV.D.5.b – Describe where and what type of velocity dissipation devises will be used at discharge locations and along outfall channel.

☐ Part IV.D.8.b - Describe measures to be used to minimize off-site vehicle tracking of sediments and the generation of on-site dust.

***RESIDENTIAL SITE PLAN REQUIREMENTS***

***CUSTOM LOTS ONLY***

***Bldg. Permit Tracking No. _____***

**THE FOLLOWING INFORMATION IS REQUIRED ON RESIDENTIAL PLOT AND/OR SITE PLANS FOR CUSTOM AND SEMI-CUSTOM HOME PROJECTS**

**SITE PLAN (provided on 24" x 36" sheet):**

## General Requirements

____ 1. Applicant and/or Owners name, address and phone number
____ 2. Legal description and street address. *Title report and warranty deed may be required to clarify ownership.*
____ 3. North arrow and scaled drawings; Minimum scale is 1"= 20'
____ 4. Prepared by a Designer. Town Engineer, at his discretion, may require AZ Licensed Engineer, Architect, or Surveyor.
____ 5. Lot boundary dimensions, bearings, and curve data. Town Engineer may require that a "meets and bounds" legal description and survey be done by an Arizona Registered Land Surveyor
____ 6. Existing street right-of-ways adjacent to the property and the distances from the edge of the pavement, curb, or sidewalk to the property line
____ 7. All easements including: public utility (PUE), irrigation, landscape, sidewalk, 1' VNAE, equestrian easements, drainage, etc.
____ 8. Show existing and proposed structures, if any, and indicate the dimensions and setbacks (the closest distance between the structure and corresponding property lines and between structures).
____ 9. Locations of septic system (front yard), any dry sewer service stub-outs, and water service line and meter. Show service line(s).
____ 10. Locations of any existing or proposed Utility boxes (SRP, water meter, etc.)
____ 11. Building setback distances
____ 12. Finish floor elevations, berm elevations (if applicable), top of curb elevations at property corners, and at outfall of lot
____ 13. If fencing, mailbox, or lighting structures are to be constructed in the right-of-way as part of a building project, provide details including dimensions and type of materials. A separate Dept. of Public Works "Encroachment Permit" shall be required for all work/construction within the Public Right of Way.
____ 14. Amount of total lot area and building area in square feet, and the percentage of lot coverage
____ 15. Proposed driveway elevations at garage and street, & also show driveway width, slope percent, and material thickness.
____ 16. Driveways to be located a min. of 2 ft. from any fire hydrant, utility pole, drop inlet, light standard, wall, fence, or other utility structure.
____ 18. Provide Intersection Sight Triangle and/or Vehicular Sight Line clearance.
____ 19. Provide grading and drainage construction notes.

**NOTE: Pad Certification (elevation & compaction results) by a Professional Engineer ( P. E.) is required to be submitted to the field inspector @ footing inspection.**

## Drainage Requirements

____ 20. Require finish grade (FG) elevations at all property corners and include adjacent top of curb (TC) or sidewalk elevations at the street frontage.

____ 21. Provide yard (front, sides, rear) slopes with grade break elevations, if any. Slopes are to be a minimum of 1.0 %, where possible, but no less than .3%.

____ 22. Drainage flow directed to street or approved drainage easements and indicated by arrows

____ 23. For flooding situations due to curb overtopping or drainage channel constraints: Building foundation shall be located 1' above delineated FEMA floodplain water surface elevation and the finish floor elevation shall be 14 inches above lowest outfall point. **(FF elevation certification –by P.E.), where required)**

____ 24. If required, provide retention basins. Design the basins per the following guidelines and provide calculations as shown below.

- The required on-site retention may be computed as follows
  - $V = \frac{A*D*C}{12}$

  A = Area of (Lot/Parcel + 1/2 of street) in S.F.
  D = Depth of rainfall in inches (100 yr.-2 hr. peak = 2.6")
  C = Weighted Runoff coefficient
- Basin slopes shall be designed at 6'HZ: 1'VERT.
- Basins shall have a maximum depth of 3.0 ft.
- Show length, width, and depth of each basin.

## Soils Requirements

____ 25. Provide a soils report prepared by an Arizona Registered Professional Geotechnical Engineer for custom lots (not part of a subdivision). (See below for the basic requirements/typical report outline.)

Geotechnical Report---Table of Contents.

1.0 **General:** Introduction, purpose, terms and conditions, proposed construction, field investigation, laboratory testing, and site description and conditions.

2.0 **Geologic Conditions:** Soil profile, settlement potential, swell potential, water soluble sulfates in soils, excavation techniques, ground subsidence, or seismic site categorization

3.0 **Recommendations:** Foundations (conventional slab on grade or post-tensioned concrete, backfill, lateral loadings, retaining walls, drainage, drainage inspection, slope stability, and erosion protection.

4.0 **Conclusions**

5.0 **Limitations**

6.0 **Earthwork:** Specifications for grading for conventional concrete foundation/floor systems, and specifications for grading for post-tensioned concrete foundation/floor systems.

It is at the Building Safety and/or Engineering Manager's discretion whether additional testing, evaluation/analysis, and/or other professional reports will be required because of site specific conditions (such as drainage, existing fissures, & etc.

# General Notes

"All improvements shall conform to the latest MAG standards and specifications or the latest standards and specification adopted by the Town."

"The Town Public Works Director shall be notified 48 hours prior to any construction on the project site."

"All improvements shall be constructed with the inspection and approval of the Town Public Works Department and will require a Town construction permit. Construction will not begin until a permit has been issued. If the work is discontinued, it shall not resume until after notifying the Town Public Works Director."

"Utilities must be installed either in dedicated public right-of-ways or in public utility easements dedicated by the land owner for such usage and maintenance. The developer/owner is responsible for the coordination of the relocation of utilities on site."

"All underground utility installation in streets or public access ways shall be constructed prior to surfacing such street or public access way."

"The developer shall provide for an Arizona Registered Engineer to be present on the site for sufficient time to assess compliance with the plans and specifications for each element of construction and no less than once a day when construction is in progress."

"The Town Public Works Director shall be notified upon completion of all underground utilities within the street right-of-ways and prior to any street preparation work. Interim as-built plans of the utilities and all passing test results will be submitted for review. Upon review and approval of the supplied information, the developer may proceed with the installation of street improvements."

"The developer's engineer shall request the Town Public Works Director perform inspection of the sub grade base prior to placement of the overlaying materials. In addition, the Town Public Works Director shall perform periodic inspections throughout the course of construction. These inspections or approvals do not signify that the Town has accepted any of the improvements for maintenance."

"The developer's engineer shall submit weekly progress reports to the Town Public Works Director throughout the construction. The weekly progress reports will include the results of all tests taken during the week."

"Construction materials testing shall be performed at the direction of the Town Public Works Director or his representative and at the expense of the owner/developer."

"The contractor is responsible for notifying individual utility companies for utility location, or for calling Blue Stake to coordinate utility location, at least 48 hours prior to excavation of all underground utilities."

"The Engineer certifies that he has contacted all applicable utility companies and has shown all existing and/or proposed utility lines and pertinent information to these plans, and has plotted correctly the existing and proposed utility right-of-way and/or easement lines on the plans."

**TOWN OF QUEEN CREEK**
**DEVELOPMENT & COMMUNITY SERVICES DEPARTMENT**
**DEVELOPMENT SERVICES DIVISION**

# SEWER, WATER AND UTILITY NOTES

**Refer to Section 1.7 of the Utility Services Department Manual**

**TOWN OF QUEEN CREEK**
**DEVELOPMENT & COMMUNITY SERVICES DEPARTMENT**
**DEVELOPMENT SERVICES DIVISION**

## PAVING NOTES

1. THE BASE COURSE WILL NOT BE PLACED ON SUBGRADE UNTIL BASE REQUIREMENTS HAVE BEEN COMPLETED AND ACCEPTED BY THE ENGINEERING MANAGER AND/OR HIS REPRESENTATION

2. BLUE REFLECTIVE SPOTTERS SHALL BE INSTALLED ON THE STREET PAVEMENT AT FIRE HYDRANT LOCATION IN ACCORDANCE WITH MAG STANDARDS.

3. STREET NAME SIGNS WILL BE INSTALLED AT THE DEVELOPERS' EXPENSE.

4. ALL WORK UNDER THE ENCROACHMENT PERMITS SHALL BE DONE IN ACCORDANCE WITH LATEST REVISIONS OF THE MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM STANDARD SPECIFICATION AND DETAILS (MAG SPECIFICATION AND DETAILS), TOWN OF QUEEN CREEK SUPPLEMENT TO THE MAG SPECIFICATION AND DETAILS, AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

5. A RIGHT-OF-WAY ENCROCHMENT PERMIT ISSUED BY THE TOWN ENGINEERING DIVI SION SHALL BE REQUIRED FOR ALL WORK IN THE TOWN OF QUEEN CREEK RIGHT-OF-WAYS.

6. THE PUBLIC WORKS DEPARTMENT (480-358-3003) SHALL BE NOTIFIED 24 HOURS PRIOR TO STARTING THE DIFFERENT PHASES OF CONSTRUCTION FOR SCHEDULING INSPECTIONS.

7. ACCEPTANCE OF THE COMPLETED RIGHT-OF-WAY IMPROVEMENTS WILL NOT BE GIVEN UNTIL 4 MIL MYLAR REPRODUCIBLE AS-BUILTS AND CD IN PDF FORMAT HAVE BEEN SUBMITTED TO AND APPOVED BY THE TOWN'S ENGINEERING DIVISION.

8. LOCATION OF ALL WATER VALVES, MANHOLES AND CLEANOUTS MUST BE REFERENCED AT ALL TIMES DURING CONSTRUCTION AND ACCES MADE AVAILABLE TO THE PRIVATE WATER COMPANYS AND THE TOWN PUBLIC WORKS DEPARTMENT.

9. NO PAVING CONSTRUCTION SHALL BE STARTED UNTIL ALL UNDERGROUND UTILITIES WITHIN THE ROADWAY PRISM AND ON-SITE ARE COMPLETED.

10. STAKING SHALL INCLUDE:
    A. RIGHT-OF-WAY LINES AT 100'
    B. PRE-GRADE AND REFERENCE CONTROL –AS NECESSARY
    C. CULVERT, STORM DRAIN AND DITCH INVERTS AT 50' INTERVALS AND BREAKS IN GRADE
    D. BLUETOP SUBGRADE AT CENTERLINE AND UNCURBED EDGE OF PAVEMENT AT 50' INTERVALS
    E. BLUETOP ABC AT CENTERLINE, UNCURBED EDGE OF PAVEMENT AND 1/4 POINTS AT 50' INTERVALS.
    F. STRADDLE POINTS FOR PERMANENT MONUMENTS. PUNCH THE MONUMENT CAP AFTER SETTING.
    G. STRUCTURE LOCATION AND GRADES.

STAKING CONTINUED:

H. CONCRETE CURB AND GUTTER AT 50' INTERVALS MAXIMUM. ON HORIZONTAL OR VERTICAL CURVES, AND ON GRADES LESS THAN 05%, STAKE AT 25' MAXIMUM INTERVALS. STAKE ALL CURB RETURNS AT THE P.C. AND THE 1/4 POINTS OF RETURN.

11. GUTTERS SHALL BE WATER TESTED IN THE PRESENCE OF THE PUBLIC WORKS DEPARTMENT TO INSURE PROPER DRAINAGE PRIOR TO THE FINAL APPROVAL BY THE TOWN ENGINEERING DIVISION AND PUBLIC WORKS DEPARTMENT.

12. EXACT POINT OF MATCHING, TERMINATION AND OVERLAY, IF NECESSARY, MAY BE DETERMINED IN THE FIELD BY THE TOWN ENGINEERING DIVISION AND/OR THE PUBLIC WORKS DEPARTMENT.

13. NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, PAVEMENT AND SIDE WALKS HAVE BEEN SWEPT CLEAN OF ALL DIRT AND DEBRIS AND ALL SURVEY MONUMENTS ARE INSTALLED ACCORDING TO THE PLANS.

14. THE TOWN WILL NOT PARTICIPATE IN THE COST OF CONSTRUCTION OR UTILITY RELOCATION UNLESS OTHERWISE SPECIFIED ON THESE PLANS.

15. THE CONTRACTOR SHALL UNCOVER ALL EXISTING LINES BEING TIED INTO TO VERIFY THEIR LOCATIONS. THE CONTRACTOR SHALL LOCATE OR HAVE LOCATED ALL EXISTING UNDERGROUND PIPELINES, TELEPHONE AND ELECTRICAL CONDUITS, AND STRUCTURES IN ADVANCE OF CONTRUCTION AND WILL OBSERVE ALL POSSIBLE PRE CAUTIONS TO AVOID DAMAGE TO SAME. CALL BLUE STAKE AT 1-800-STAKE-IT.

16. FACILITIES WHICH ARE NOT SPECIFICALLY LOCATED WITH ACTUAL VERTICAL AND HORIZONTAL CONTROLS, ARE LOCATED ONLY APPROXIMATELY AND TO THE BEST AVAILABLE KNOWLEDGE.

17. CONSTRUCTION LIMITS– ADEQUATELY STAKE, FENCE, AND SIGN THE CONSTRUCTION LIMITS. THE CONSTRUCTION LIMITS SHALL REMAIN MARKED THROUGHOUT THE CONSTRUCTION PERIOD.

18. EARTHWORK SHALL BE PERFORMED ACCORDING TO THE GEOTECHNICAL REPORT DONE BY _____ DATED _____. ALL COMPACTION UNDER PAVEMENT AREAS SHALL BE PREFORMED ACCORDING TO MAG SPECIFICATIONS AND/OR THE SOILS REPORT RECOMMANDATIONS.

19. PRIOR TO CONSTRUCTION:
    - A TRAFFIC CONTROL PLAN FOR WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE PROVIDED TO THE TOWN PUBLIC WORKS DEPARTMENT FOR REVIEW AND APPROVAL.
    - PAD COMPACTION CERTIFICATION SHALL BE SUBMITTED TO THE PUBLIC WORKS DESIGNATED INSPECTOR PRIOR TO ANY BUILDING CONSTRUCTION.
    - SCHEDULE ALL PRECONSTRUCTION MEETINGS THROUGH THE TOWN PUBLIC WORKS DESIGNATED INSPECTOR.

20. AN APPROVED (SIGNED-OFF) GRADING, DRAINAGE AND PAVING PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLANS MUST BE PRECEDED BY AN APPROVED PLAN REVISION, OR SUBJECT TO "WORK STOP ORDER" BY THE TOWN PUBLIC WORKS DEPARTMENT INSPECTOR TO REMOVE ANY WORK THAT DOES NOT REFLECT THE APPROVED IMPROVEMENT PLANS.

**PLANNING AND DVELOPMENT DEPARTMENT**
**DEVELOPMENT SERVICE DIVISION**

## GRADING & DRAINAGE NOTES

1. A GRADING PERMIT SHALL BE REQUIRED.

2. CONTRACTOR SHALL PROVIDE GRADING FOR POSITIVE DRAINAGE IN ALL RETENTION BASINS AT ELEVATIONS AS SHOWN ON THE PLANS. BOTTOM OF BASIN SHALL BE GRADED TO DRAIN TOWARD DRYWELLS (WHEN USED). MAXIMUM SIDE SLOPES SHALL BE 6:1
   - DRYWELLS INLET GRATE SHALL BE AT FINISH GRADE AT BOTTOM OF THE RETENTION BASIN.
   - DRILLING LOGS FOR DRYWELLS WILL BE FURNISHED TO THE TOWN INSPECTOR PRIOR TO FINAL ACCEPTANCE.
   - A PERCOLATION TEST WILL BE REQUIRED OF COMPLETED DRYWELLS PRIOR TO ACCEPTANCE. SHOULD EXISTING SOIL CONDITIONS BE ENCOUNTERED WHICH LACK SUFFICEIENT PERCOLATION RATES, ADDITIONAL DRYWELLS OR AN ATLERNATIVE METHOD OF STORM WATER RUN-OFF DISPOSAL WILL BE REQUIRED.
   - DRYWELL CONSTRUCTION SHALL BE DONE ONLY BY CONTRACTORS LICENSED BY THE ARIZONA DEPARTMENT OF ENVIRONMENTAL
   - QUALITY.
   - ALL DRYWELLS ARE REQUIRED TO BE REGISTERED WITH THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY.
   - THE APPROVED DRYWELL REGISTRATION SHALL BE SUMITTED TO THE TOWN BY THE DEVELOPER OR HIS ENGINEER AT THE TIME AS-BUILTS ARE SUBMITTED.
   - A PRIVATE MAINTENANCE PLAN SHALL BE PREPARED THAT PROVIDES FOR ROUTINE INSPECTION AND MAINTENANCE TO THE APPROVAL OF THE TOWN ENGINEERING MANAGER.

3. CERTIFICATION OF FINISH FLOORS OR BUILDING PADS IS THE RESPONSIBILITY OF THE DEVELOPER/BUILDER, ENGINEERS, OR OWNER AND SHALL BE SUBMITTED PRIOR TO PLACING CONCRETE FLOORS.

4. AN APPROVED GRADING AND DRAINAGE PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY A TOWN OF QUEEN CREEK APPROVED PLAN REVISION.

5. ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, PIPES, OR OTHER MEASURES DESIGNED TO PROTECT BUILDINGS OR PROPERTY FROM STORM RUNOFF MUST BE COMPLETED PRIOR TO ANY STRUCTURE BEING BUILT.

## GRADING & DRAINAGE NOTES

6. PREPARATION OF GROUND: THE AREA OVER WHICH FILLS ARE TO BE MADE SHALL BE CLEARED OF ALL TRASH, TREES, STUMPS, DEBRIS OR OTHER MATERIAL NOT SUITABLE AS A FOUNDATION FOR FILL.

7. LOCATION OF ALL UTILITIES SHOWN ON THIS PLAN ARE BASED ON INFORMATION SUPPLIED TO THE ENGINEER BY THE APPROPRIATE UTILITY COMPANIES, NO GUARANTEE ON LOCATIONS OR ACCURACY IS IMPLIED OR GIVEN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT BLUE STAKE (602)263-1100 AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.

8. DISTURBED AREAS SHALL BE (RE)VEGETATED WITH TOWN APPROVED DESERT PLANTS OR DROUGHT RESISTANT PLANS. EXISTING VEGETION SHALL BE RELOCATED IF DISTURBED BY CONSTRUCTION.

9. SWALES SHALL BE LINED WITH 6" MINIMUM DIAMETER ROCK SIZE AND THE DEPTH SHALL MATCH THE APPROVED SWALE DETAIL.

10. CONTRACTOR/BUILDER SHALL NOTIFY THE ENGINEER OF ANY VARIANCES BETWEEN THESE PLANS NOTIFY THE ENGINEER OF ANY VARIANCES BETWEEN THESE PLANS AND ON-SITE CONDITIONS.

11. ALL DRAINAGE SWALES SHALL BE FREE OF TRASH, DELETROUS MATERIAL, SILT, VEGATION, AND DEBRIS. MAINTAINENCE SHALL BE BY THE HOMEOWNERS ASSOCIATION.

12. DROPS IN GRADE OF 30" OR MORE IN OR ADJACENT TO TRAILS, SIDEWALKS ETC. SHALL BE PROTECTED BY SAFETY RAIL THAT IS OSHA COMPLIANT.

13. CONTRACTOR SHALL VERIFY PROPERTY LINE LOCATIONS PRIOR TO PROCEEDING WITH WORK.

14. FINISHED GRADE SHALL SLOPE AWAY FROM RESIDENCE AT 5% FOR A MINIMUM DISTANCE OF 5' TO AN APPROVED WATER DISPOSAL AREA.

15. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT MAG SPECIFICATIONS AND/OR TOWN OF QUEEN CREEK STANDARD DETAILS .

16. CONTRACTORS SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO STARTING CONSTRUCTION.

17. CONTRACTOR SHALL UNCOVER ALL UTILITIES BEING TIED INTO TO VERIFY THEIR LOCATION PRIOR TO STARTING NEW LINES.

18. CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE APPROVED PROJECT SOIL INVESTIGATION REPORT.

## SWPPP Notes

1. A copy of the approved Grading and Drainage plan for this project, together with a copy of the Notice of Intent (NOI) and the Storm Water Pollution Prevention Plan (SWPPP) shall be maintained on the site and available for review. Those elements of the grading and drainage plan pertinent to or referenced on the SWPPP shall be considered part of the SWPPP.

2. The Contractor shall notify the Town of Queen Creek Public Works Department at least 24 hours in advance of any inspections.

3. The operator shall obtain a dust control permit from the County and perform measures as required by the permit to prevent excess dust.

4. The operator shall perform, at a minimum, a visual inspection of the construction site once every month and within 24 hours of rainfall greater than or equal to one half inch or more. The operator shall prepare a report documenting his/her findings on the conditions of the SWPPP controls and note any erosion problem areas. The operators report is to be submitted to the Public Works Department for review and approval. Facilities shall be maintained as necessary to ensure there continued functioning. In addition, all temporary siltation controls shall be maintained in a satisfactory condition until such time that clearing and/or construction is completed, and the potential for erosion has passed.

5. The operator shall amend this plan as necessary during the coarse or construction to resolve any problem areas that become evident during the construction and/or during rainfalls.

6. The permittee shall file a Notice of Termination (NOT) after completion of construction and placement of final landscape materials. The NOT is to be submitted to the Public Works Department to final the SWPPP permit.

7. The permittee shall save all records, including the NOI, SWPPP, NOT, and the inspection reports, on file for a minimum of three years from the date of filing the NOT.

8. The implementation of these plans and the construction, maintenance, replacement, and upgrading of these facilities is the responsibility of the permittee/contractor until all construction is approved and the NOT is submitted to the Public Works Department.

9. The facilities shown on this plan must be constructed in conjunction with all clearing and grading activities in such a manner as to insure that sediment-laden water does not enter the drainage system or violate applicable water standards, and must be installed and in operation prior to any grading or land clearing. Wherever possible, maintain natural vegetation for silt control.

10. The Contractor's NOI must be received prior to the SWPPP permit being issued. The Contractor that will be pulling the G&D permit must have the SWPPP permit in their name.

**TOWN OF QUEEN CREEK**
Development Services Department
Traffic Engineering Program
22358 S. Ellsworth Road
Queen Creek, Arizona 85142

# TRAFFIC SIGNING AND PAVEMENT MARKINGS GENERAL NOTES

## Signing Plan General Notes

1. The Town Traffic Engineer shall be notified at 480-358-3132 at least five business days prior to beginning any signing work associated with these plans.
2. The Town Traffic Engineer may require the Contractor to adjust signing locations, off-sets and types of signs at the time of installation.
3. All signing materials and installation shall conform to Town requirements, the Arizona Department of Transportation Standard Drawings and Specifications, the Manual on Uniform Traffic Control Devices (latest ADOT approved edition) and direction from the Town Traffic Engineer at time of installation.
4. The Contractor shall coordinate with the Town Traffic Engineering Division prior to ordering any materials to obtain the latest signing requirements and specifications.
5. The Contractor shall notify the Traffic Engineering Division at 480-358-3132 upon completion of all signing work to schedule a final inspection. The Contractor shall supply all required warranty documents to the Town Traffic Engineering Division prior to final job acceptance.
6. All existing signs temporarily removed by the contractor shall be salvaged for reinstallation by the Contractor. All signs permanently removed by the Contractor shall be salvaged and returned to the Town. The Contractor shall be solely responsible for maintaining each sign that is removed, ensuring that the signs integrity is maintained. In the event the sign is damaged, the Contractor shall be responsible for its replacement.
7. All signs and sign posts shall be installed per ADOT Standard Drawing S-3.
8. Final acceptance of all signing shall be provided by the Traffic Engineering Division.

## Requirements for Sign Design

1. All signs shall be faced on new .080 aluminium blanks.
2. Sheeting shall be ASTM Type XI for all permanent Regulatory, Warning, Guide, Information, and Object Marker Signs (including sign legends and borders).
3. All Warning signs (yellow series) shall be manufactured with ASTM Type XI 3M Fluorescent Yellow 4081 diamond grade reflective sheeting or approved equal.
4. All School signs shall be manufactured with ASTM Type XI 3M Fluorescent Yellow Green 4083 diamond grade reflective sheeting or approved equal.
5. Sheeting shall be manufactured by 3M Corporation or an approved equal with equal or greater warranty periods. All signs shall be manufactured using matching components approved by the sheeting manufacturer.

### Street Name Signs

1. All reflective sheeting materials shall be pressure sensitive ASTM Type XI 3M white 4090 diamond grade reflective sheeting or approved equal.

2. All transparent acrylic, pressure sensitive film shall be 3M Series 1177 Green Electro Cut Film (or 3M Series 1175 Blue Electro Cut film) or approved equal.
3. Signs shall be manufactured by applying white sheeting to the entire aluminum blank, then a green (or blue as required) translucent pressure sensitive film containing the cut out street name. This method results in a white legend on a green (or blue) background.
4. Lettering shall be Clearview 2-W font (upper/lower case).
5. 8" letter heights shall be used for all intersections along an arterial street with 45 mph or higher – these signs shall use a 16" high blade and shall not exceed 42" in width without prior approval from the Town Traffic Engineer.
6. 6" letter heights shall be used for all intersections along an arterial or collector street with 30 mph to 40 mph – these signs shall use a 12" high blade and shall not exceed 42" in width without prior approval from the Town Traffic Engineer.
7. 4" letter heights shall be used for all intersections along residential streets with 25 mph or less – these signs shall use an 8" high blade and shall not exceed 42" in width without prior approval from the Town Traffic Engineer.

**Street Name Signs – No Outlet/Dead End**

1. All reflective sheeting materials shall be pressure sensitive ASTM Type XI Series 4090 white and Series 4091 yellow diamond grade reflective sheeting or approved equal.
2. All acrylic, pressure sensitive film shall be 3M Series 1177 Green Electro Cut Film (or 3M Series 1175 Blue Electro Cut Film) and 3M 1178 Black EC film or approved equal.
3. These signs are constructed by applying white sheeting to the upper half of the sign blank and yellow sheeting to the lower half of the sign blank. On top of the white sheeting, a green (or blue) translucent pressure sensitive film containing the cut out street name is applied. On top of the yellow sheeting, the black "DEAD END" or "NO OUTLET" and black arrow are applied.
4. Lettering for the street name shall be Clearview 2-W font (upper/lower case) either 4", 6", or 8" lettering height depending upon the location.
5. Lettering for the "DEAD END" or "NO OUTLET" shall be Highway Gothic Series C font.
6. Sign heights shall be 16" or 24" and shall not exceed 42" in width without prior approval from the Town Traffic Engineer.

***NOTE: The Contractor may be required to submit signing proofs to the Town Traffic Engineer for approval prior to manufacturing.***

**Warranty Documents**

The manufacturer of the signing shall provide warranty documents covering materials and manufacturing defects up to 10 years. These documents shall be addressed to the Town of Queen Creek and shall provide the name of the sheeting manufacturer, type of sheeting (brand and type), type of overlay film (brand, type), name and contact information of the company responsible party manufacturing the signs that shall be responsible for any warranty claims.

## Pavement Marking Plan General Notes

1. The Contractor shall coordinate with the Town Traffic Engineering Division at 480-358-3132 for an inspection prior to the application of any paint.
2. After meeting with the Town Traffic Engineer, the Contractor shall spot mark the entire project and have the layout approved by the Town Traffic Engineer prior to the application of any paint. Once all pavement markings have been installed, the Contractor shall notify the Town Traffic Engineer for a final inspection. At completion of the final inspection, the Contractor shall supply all required warranty documents to the Town Traffic Engineer prior to final job acceptance.
3. The Town Traffic Engineer may require the Contractor to adjust pavement marking locations, off-sets and types of markings prior to installation.
4. Any pavement markings applied prior to inspection and approval by the Town Traffic Engineering Division shall be obliterated, sealed and restriped at the Contractor's expense.
5. All conflicting pavement markings shall be obliterated by means of water blasting to be completed by the Contractor.
6. A sealant approved by the Town shall be applied by the Contractor to all areas of pavement marking obliteration.
7. All pavement marking materials and installation shall conform to Town requirements, the Arizona Department of Transportation Standard Drawings and Specifications, the Manual on Uniform Traffic Control Devices (latest ADOT approved edition), and direction from the Town Traffic Engineer at time of installation.
8. Pavement markings shall require two (2) separate applications. The initial application shall be entirely in paint to include all lane lines, holding bars, cross walks, and stop bars. All legends shall be applied with an approved tape product at this time. Raised Pavement Markers (RPM's) shall be installed with the initial paint installation. The Contractor shall return 30-45 days following the initial paint installation and restripe the entire project in thermoplastic or as directed by the Town Traffic Engineer.
9. All permanent pavement marking materials on major arterials shall be extruded thermoplastic. All other roadways shall require spray thermoplastic for permanent pavement markings, unless otherwise specified by the Town Traffic Engineer.
10. All pavement marking symbols and legends shall be 3M Series 380 tape or approved equivalent. The Town Traffic Engineer has the right to modify the pavement marking material to 3M Series 270 tape or an approved equivalent.
11. All Raised Pavement Markers shall be installed with Crafco Pavement Reflector Adhesive, or an approved equivalent.
12. All median ends shall be painted per Maricopa County Department of Transportation Standard Details 4-15 and 4-16.

**Notes:**

1. The Town reserves the right to modify this list, to reject items included on the list, or to accept items not included on the list, at any time, without prior notice, if determined necessary in the best interests of the Town.
2. Products not covered by this list shall be submitted to the Town Traffic Engineering Division for review and approval prior to ordering.
3. Brand names listed may be registered trademarks of their respective manufacturers.

**FEE PAID: _____ DATE: _____ RECEIPT #: _____ CASE NO.: SD _____ - _____**
REFERENCE NO.: **PA _____ - _____**

# SUBDIVISION REVIEW CHECKLIST AND APPLICATION FORM

(Filled out by applicant - shall be typed or clearly printed)

***Please note: All submittals must be received before 5 p.m. Monday through Thursday. Incomplete submittals will not be accepted.***

**SUBDIVISION NAME: _____**

(Name Changes, if any) _____

**LOCATION OF PROJECT (MAJOR CROSS-STREETS): _____**

# of Tracts: _____ # of Lots: _____ # of Acres: _____

**PROPERTY OWNER: _____**
(Name) (Firm Name)

Address: _____ City: _____ Zip Code: _____

Phone: (____)_____ Fax: (____)_____ E-Mail: _____

**PRIMARY CONTACT: _____**
(Name) (Firm Name, if Applicable)

Address: _____ City: _____ Zip Code: _____

Phone: (____)_____ Fax: (____)_____ E-Mail: _____

Check One that Applies: ☐ Architect ☐ Planner ☐ Engineer ☐ Other. Please explain: _____

**********

**Fees:** **Calculation of Total Fees**

Prelim. Plat: $1600 + $40/Lot/Tract ( # of lots _____ x $40) + (# of tracts _____ x $40) + $1600 = _____
Final Plat: $1200 + $20/Lot/Tract ( # of lots _____ x $20) + (# of tracts _____ x $20) + $1200 = _____
Amended Final: 50% of original final plat fee =_____
Fire Plan Review Fee: $50 (unless paid under previous application) =_____
Final DRAINAGE Report:

1. Master Residential (≥500 lots) $1,200
2. Individual Parcel within a master residential $ 500
3. Major Residential (>10 lots) $ 300 + $25/acre
4. Minor Residential (1 to 10 lots) $ 500
5. Commercial Subdivision $ 500 + 25/acre
6. Individual Commercial $ 500
7. Coordination with MCFCD/PCFCD $ 800

**Total Fees: $_____**

**NOTE: ALL FEES ARE NON-REFUNDABLE**

---

☐ Fees paid ☐ Fees Outstanding: _____ ☐ Outstanding fees paid on _____

Staff Initials Staff Initials Staff Initials

**********

**Infrastructure Impact:**

1. Current Water Service sizing _____

2. Water Service Infrastructure needed to serve proposed project _____

3. Current Sewerage System _____

4. Sewerage System need to served proposed subject _____

   _____

5. Street System serving area _____

6. Anticipated street demand as a result of project:_____

---

I hereby certify that the above information is correct, and that I am authorized to file an application on said property, being either the owner or authorized agent to file on behalf of the owner. Anyone applying without authorization from the property owner(s) shall be subject to penalty under all applicable laws.

I understand that a complete submittal consists of the documents listed in the attached Planning Dept. Submittal Checklist and must accompany the submittal to be considered complete and to begin the submittal process.

_____ _____

Signature of Property Owner / Authorized Agent Signature of Applicant

_____ _____

Print Name of Property Owner / Authorized Agent Print Name of Applicant

_____ _____

Date Date

*Ordinance 269-03, Ordinance 357-06*

PROJECT NAME: _____ _____ _____ - _____

# Planning Department Submittal Requirements Checklist

_____ 20 copies of the Development Plan or Narrative

_____ 20 sets of Site Plans or Preliminary Plats

_____ 1 - 8 ½" x 11" reduction of Plat/Site Plan

_____ 3 sets of building elevations and Floor Plans*

_____ 1 - 8 ½" x 11" reduction of elevations and Floor Plans

_____ 6 sets of Landscape Plans*

_____ 1 - 8 ½" x 11" reduction of Landscape Plans

_____ 4 copies of the Drainage Report

_____ 4 copies of the Water Report

_____ 4 copies of the Wastewater Report

_____ 4 copies of the Traffic Study

_____ Phase I Environmental Survey

_____ Title Report (dated within six months prior to submittal date)

_____ 2 complete sets of Mailing labels pre-printed with names and addresses of all property owners within 900 ft. of the external boundaries of the property ($2.00 per label if not provided).

*Twenty (20) sets will be required for Planning Commission and Town Council hearings (11x17 size).

**PLEASE RETURN THIS FORM WITH YOUR SUBMITTAL. SUBMITTALS WITHOUT THE ABOVE INFORMATION ARE CONSIDERED INCOMPLETE AND <u>WILL NOT BE ACCEPTED</u>.**

Submitted by:_____ Date:_____

Received by:_____ Date:_____

## Please include the following details in your submittal:

A. Preliminary Drainage Report in a separate bound folder.

B. Preliminary Landscape Plan for all off-site, open space, trails, transition area, and retention area landscaping. This preliminary plan should include cross sections and plant palette. Twenty (20) blue or black line prints drawn at a scale of 1" – 40' to produce and overall drawing of 24" x 36" to be **FOLDED** to 9" x 12" for mailing and one 8 ½" x 11" PMT or JPEG format file.

C. Subdivision fencing detail depicting the type of fencing being proposed; including elevations and general locations.

D. Conceptual Residential Design Guidelines that narratively and graphically describe the character, site planning, architecture and landscaping that can be expected from the development.

E. Title Reported (dated within six months prior to submittal date)

F. Phase I Environmental Report -- The report shall include the following at a minimum:

1. Describe the site and identify uses or activities which might indicate the presence of disposed hazardous substances and;

2. The review of readily available information, including but not limited to engineering, regulatory, and historical records of the site, and through the interviewing of the current and any past owners of the site, tenants, and neighbors.

3. The review of the regional geology and hydrology of the site and the site's vicinity, available records of ground water contamination up/ and down gradient from the site, obtainable reports of compliance violations and/or containment discharges in the site's vicinity, and the proximity of the site to known environmental conditions or problems within approximately one mile of the site, and;

4. Reference the data, records and source of information.

5. The applicants Consultant shall:

   a. Manually observe the site surface closely for evidence of potential contamination such as soil stabilizing, discarded chemical containers, vegetative distress and;
   b. Interview the tenants on or adjacent to the site with respect to their use of hazardous substances on the site and;
   c. Investigate the registration status of any existing underground storage tanks or drywells on or adjacent to the site, and;
   d. Identify any adverse environmental impacts.

G. G. PRELIMINARY PLAT REQUIREMENTS (For all preliminary subdivision plats and preliminary site plans)

1. General. The preliminary plan shall be prepared by a licensed land surveyor at a convenient scale not more than one (1) inch equals one hundred (100) feet, may be prepared in pen or pencil, and the sheets shall be numbered in sequence if more than one (1) sheet is used and shall be of such size as is acceptable for filing in the office of the

County Recorder, but shall be thirty-four by forty-four (34 x 44) inches or larger. The map prepared for the preliminary plat may also be used for the final subdivision plat and, therefore, should be drawn on tracing cloth or reproducible mylar.

2. A title block shall be placed on the plan showing:

   a. Proposed name of the development
   b. Type of development
   c. Name and address of owner of record, developer and designer.
   d. Graphic and written scale and date of preparation.

3. The location of property with respect to surrounding property and streets, the names of all adjoining property owners of record, or the names of adjoining developments; the names of adjoining streets.

4. The location and dimensions of all boundary lines of the property to be expressed in feet and decimals of a foot.

5. Location of north, township and range, section lines, and other monuments, as well as a vicinity map of the site at a minimum scale of 1" = 2000'.

6. Surveyed boundary of the development giving location of and dimension to the nearest benchmark or monument, and total approximate acreage encompassed thereby. The names of all adjacent property owners shall be shown.

7. Topographic contour intervals of no greater than five (5) feet unless otherwise stipulated by the Department.

8. The location and dimensions of all buildings, whether existing or proposed. Building setback lines shall be included.

9. The location of existing public utility easements, railroads, power lines, culverts, drain pipes, drainage channels, flood channels, water bodies, streams, swaps, parks, cemeteries, bridges, irrigation ditches, areas where ground water rises periodically to within five feet of the surface of the ground, and areas which would be covered in the event of 100 year floods.

10. The location of all entrances onto adjacent roadways, whether existing or proposed.

11. All roadway locations and dimensions, their names, numbers, and rights-of-way with profiles and cross sections of all proposed streets showing proposed cuts and fills.

12. Location and size of existing water and sewer mains together with intended water sources and sewage disposal sites.

13. Location of existing springs or public water supply.

14. Existing significant vegetative cover, including all healthy, desirable trees, shrubs or vegetation.

15. Proposed layout of development including power lines, bridges, utilities, utility easements, equestrian, pedestrian and bicycle trails, lots, and common space.

16. Location of proposed water and sewer lines.

17. Location of proposed fire hydrants.

18. Proposed irrigation system if separate from the domestic water system.

19. Proposed drainage system for both surface and flood water in conformance with the requirements of the Flood Control District.

20. The location, dimensions and surface type of all parking facilities including handicapped and loading area, whether existing or proposed.

21. Slope analysis of the proposed development site, showing slopes for the following percent of existing grades: 0-10%, 10-20%, 21-30%, 31-40%, and slopes exceeding 40%, including a tabulation of the number of acres in each slope percentage.

22. The location of all outdoor lighting fixtures including the manufacturer's specifications of the area to be lighted with such fixtures.

23. The location, dimensions, materials, and colors of signs, including the type of height of those signs.

24. Height of all buildings.

25. Location of solid waste containers including proposed design provisions for screening.

26. Tabulation of the number of acres in the proposed development, showing the total number of lots, area of open space, and proposed impervious coverages for the site including the following;

    a. Square footage of all buildings and structures, measured at their greatest extent so as to include areas overhung by eaves, balconies, decks, and other projecting features of the structure.
    b. Square footage of all paved or otherwise hard surfaced streets, parking facilities, including curb and gutters, walks, loading areas, and asphalt or concrete aprons for solid waste containers, signs or outdoor mechanical equipment.

27. The proposed treatment of the perimeter of the development, including materials and techniques used, such as screens, fences, walls and other landscaping.

28. A development phasing schedule including the sequence for each phase; approximate size in area of each phase; and, proposed phasing of construction of public improvements, recreation and common open space areas.

29. Location and size in acres of any public use proposed such as parks, school sites, and similar public agency uses.

30. A list of the names and addresses of all owners of record of real property within 1000 feet of the parcel of land proposed for development, including the names and addresses of the holders of any valid mineral leases on the property proposed for development.

31. Grading and Conservation Plan -- The following information and data is required:

    a. Grading plan (scaled 1' = 50' min. with 2' contour intervals) showing proposed cuts and fills required by the location of all building structures and streets and

roads. Phased site grading and stabilization or revegetation shall be included in the Grading and Conservation Plan. Proposed erosion control and conservation techniques shall also be shown.

b. The Conservation plan shall show the degree to which the proposed development will preserve existing features on the site. This shall include features such as healthy desirable trees, shrubs and other vegetation, waterways, vistas, and historic sites.
c. The Conservation plan shall indicate the length of time that will pass from the date ground cover on the site is first disturbed until new ground cover is established.
d. The Conservation plan shall show the possible area of land exposed at any one time during construction.
e. The Conservation plan shall show temporary vegetation or mulching used to protect critical areas exposed during development.
f. The Conservation plan shall show location, dimensions and maintenance of sediment basins, as necessary.
g. Calculations for soil loss during and after construction based on the Universal Soil Loss Equation.

32. Landscaping and Maintenance Plan -- The following information and data is required:

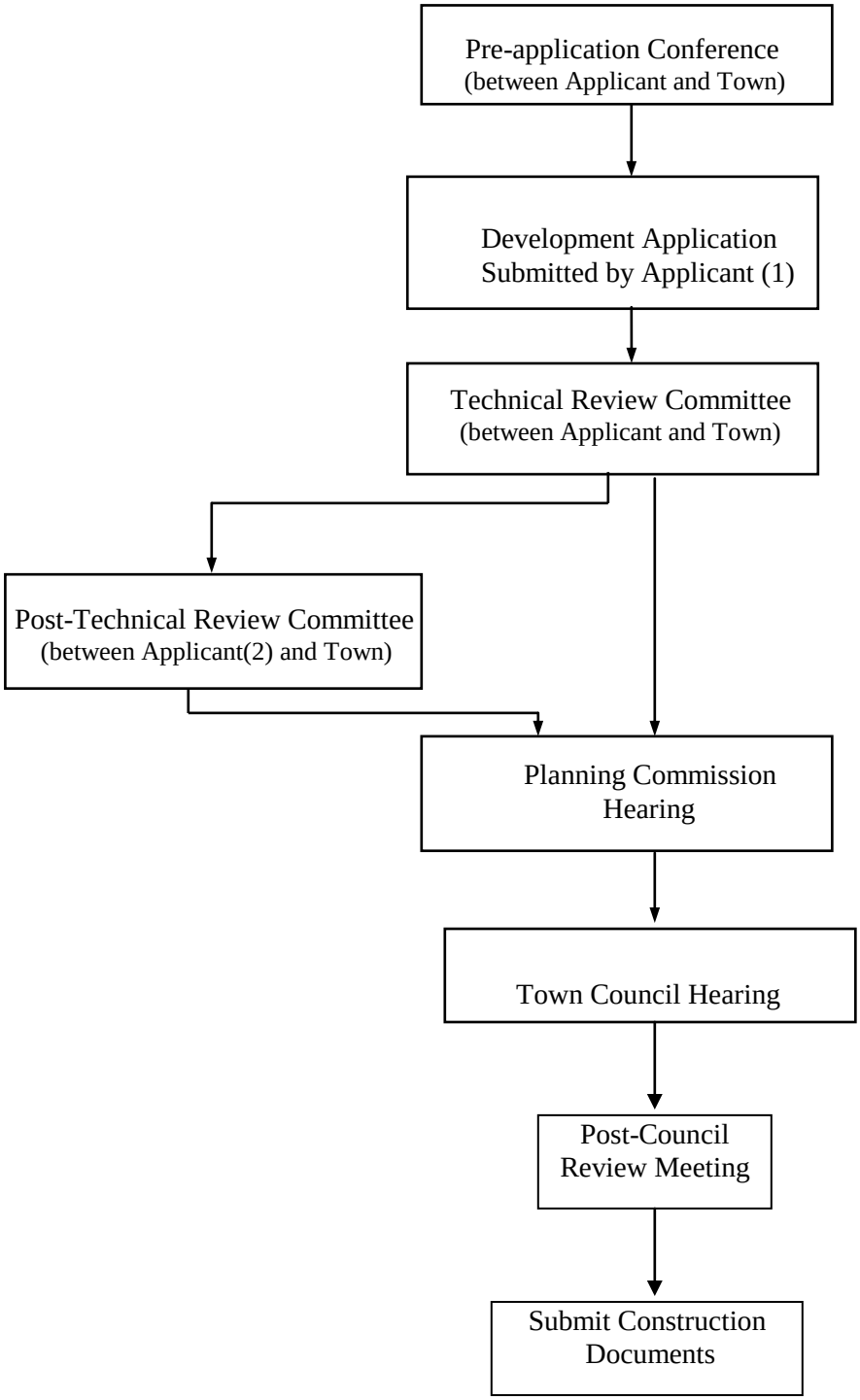
A general landscaping plan indicating the treatment of materials used for open space, landscaped buffers or common ownership consisting of:

a. Minimum scale of 1" - 5'.
b. Planting areas drawn to scale with a list of the name, number, and size of all plants designated for each area.
c. Location, name, and size of all existing trees and shrubs that are to be incorporated as part of the landscape plan.
d. Location and width of landscaped buffer strips, including height of berms.

33. A statement as to the proposed utility methods and supply including; sewerage, water, electric, gas, telephone, garbage, and cable. A statement of certification of an assured water supply issued by the Director of Water Resources shall appear on the preliminary plat.

NOTE: Failure to provide the above information where applicable can result in a submittal being rejected until such information and materials are provided.

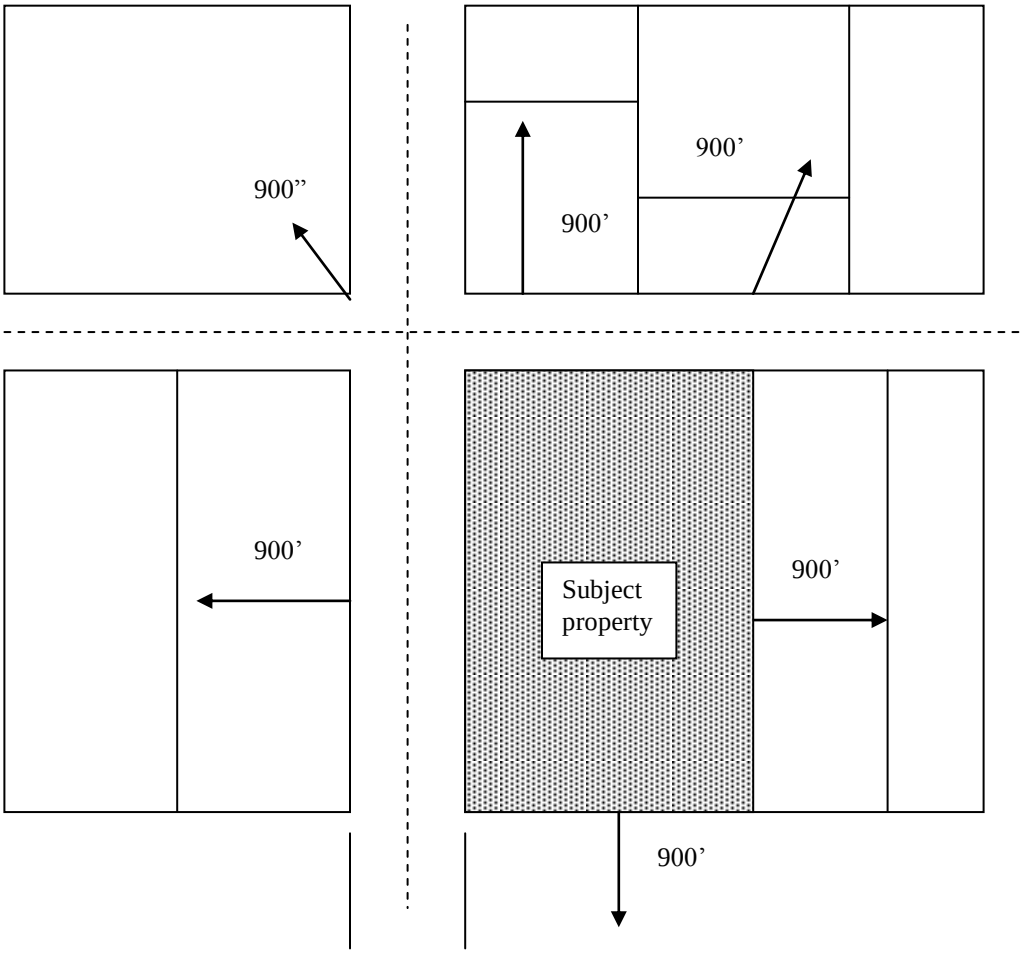
**Town of Queen Creek**
**Planning Department**
**Project Review and Approval Process**




**Notes: (1) Staff checks to determine the application submitted is complete. Incomplete applications will not be accepted.**

**(2) A Post - Technical Review Committee is required when the project plans that are resubmitted after the first Technical Review Committee do not adequately address committee comments. Post -Technical Review Committee meetings will result in the project being delayed and not being scheduled for the next available Planning Commission Hearing date.**

# How to Generate Mailing Labels




1. When adjacent to a road, state law requires measurement of the 900’ public notice line to start across the street from the subject property

2. Obtain the most recent list of property owners from Maricopa County Assessor’s Office.

**TOWN OF**
**QUEEN CREEK**

## NOTICE TO PROPERTY OWNER OF APPEAL RIGHTS UNDER A.R.S. § 9-500.12

A.R.S. **§** 9-500-12.A. Requires you, as a property owner, to be notified that if you have requested from the Town of Queen Creek approval for the use, improvement or development of real property and an official or an administrative agency of the Town has made a final determination that as a condition of your approval, you must either make a dedication or an exaction and you wish to appeal the required dedication or an exaction, there is a process in place for that appeal.

The Town of Queen Creek has retained Mr. Richard W. Garnett, 7272 East Indian School Road, Suite 109, Scottsdale, Arizona 85251, to serve as a hearing officer pursuant to A.R.S. **§** 9-500-12A.

This right of appeal of a dedication or exaction required does not apply to those dedications or exaction's required in a legislative act of the Town Council that does not give discretion to an administrative agency or an official to determine the nature or extent of the dedication or exaction.

The appeal must be in writing and signed by the property owner and should be mailed or filed with the hearing officer within thirty days after the final determination is made. There is no charge for filing the appeal.

The hearing officer shall schedule a time for a hearing no later than thirty days after the receipt of the appeal. You as a property owner will be given at least ten days notice of the time for the hearing of the appeal and only you may agree to a shorter time period.

At the hearing, the Town of Queen Creek will have a burden to establish that here is an essential nexus between the dedication or exaction asked of you and a legitimate governmental interest. The Town will further have the burden to show that the proposed dedication or exaction is roughly proportional to the impact of the proposed use, improvement or development of your parcel or parcels of land.

The hearing officer shall decide the appeal within five working days after your appeal is heard.

If the hearing officer either modifies or affirms the requirement of the dedication or exaction and you as the property owner are aggrieved by the decision, you may file, within thirty days after the hearing officer has rendered a decision, a complaint for a trail de novo in Superior Court on the facts and law regarding the issue of the condition or requirement of the dedication or exaction.

At the Superior Court, the Judge has the authority to award reasonable attorney fees incurred in the appeal and the trial to the prevailing party. The Court may also award damages as are deemed appropriate to the land owner to compensate for direct and actual delay damages but only upon a finding that the Town of Queen Creek acted in bad faith in requiring the dedication or exaction.

A.R.S. **§** 9-500-12. Contain legal rights that are for the benefit of property owners and this sheet should not be relied upon as any thing more than a notice that Statute exists and that you, as a property owner, have rights. For a further and detail explanation of your rights, you should contact your own attorney. The Town staff has been specifically directed not to answer any questions regarding the appeal process or the trail in Superior Court. You may, however, obtain at no charge a copy of nay of the written material necessary for you to pursue your right under this Statute including, but not limited to, a copy of all staff reports concerning your property and minutes of any meeting of the Board of Adjustment, the Planning & Zoning Commission or the Mayor and Council concerning your property.

Please complete this form, sign and return to the Town of Queen Creek's Community Development Department.

Permit/Case Number _____

Name _____ Phone Number _____

Address _____

_____

I _____ have received a copy of Notice **to Property Owner of**

**Appeal Rights** on this _____day of _____, 20____.

# Memorandum

**To:** Engineering Staff

**CC:** Tom Condit, Community Development Director

**From:** Jim Leubner, Engineering Manager

**Date:**

**Re:** Procedure for Insurances of an "At Risk Grading Permit" (Revised 7-16-06)

---

There have been various "At Risk" Grading Permits issued in previous years, and while this in not a process the Town favors; the Engineering Division will continue to issue "At Risk" Grading Permits until notified otherwise. However, it is at the discretion of the Engineering Manager whether a permit will be issued. Please remember to follow the "At Risk" Grading Permit guidelines as listed below:

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**These Items need to be Approved and Completed prior to issuance of an "At Risk Grading Permit".**

1. Any required Project Development Agreement shall be approved by the Town Staff (Town Attorney, Planning & Engineering Managers, etc.) & Town Council.
2. Case Engineer to assure that all improvement plans including the Grading Plans and Drainage Report are substantially complete with no major outstanding issues to resolve.
3. Require the certified engineer's project quantities (Total Project) – approved by Town Engineering Staff. Only grading quantities shall be used to calculate the permit fee.
4. Require the certified engineer's cost estimate (Total Project) – approved by Town Engineering Staff. The cost estimate shall be used for the Construction Assurance amount.
5. Provide the required monetary construction assurance document for the project improvements per items # 3 & 4 above. (Cash, Bond, or Irrevocable letter of Credit).
6. Provide all required Maricopa County Permits (dust control, etc.)
7. Two (2) copies of the approved SWPPP plans and documents.
8. Two (2) copy bond sets of the Grading / Drainage plans.

Please note that this will be the **only permit issued** prior to the approval of all improvement plans and the recording of the Final Plat.

**TOWN OF QUEEN CREEK**
Community Development Department
Engineering Division
22350 S. Ellsworth Road
Queen Creek, Arizona 85242

**DESIGN STANDARD**

TO: Development Community
Consulting Engineers
Town Staff

FROM: Michael Pacelli, P.E., Traffic Engineer
Lester Godsey, Information Technology Division Manager

DATE: March 19, 2007

RE: **Telecommunication Conduit Standards**

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The Town Council adopted general guidelines establishing telecommunication conduit standards on September 20, 2006. This memo provides the additional design details needed to implement the concept approved by the Council. As with all design guidelines, the standards described herein are subject to change at any time, without notice, as deemed necessary in the best interests of the Town.

Furthermore, it must be emphasized that these guidelines represent the *typical* design for the telecommunication conduit, but the inclusion or exclusion of telecommunication conduit along a given roadway, the number of conduits, trench configurations, and all other installation details are subject to modification by the Town on a case-by-case basis. Final approval of conduit types, routing, pull box types and locations, and installation details shall be at the discretion of the Traffic Engineer or IT Manager.

The Council-approved concept established two typical conduit standards: Municipal Use Standard and Q-Street Standard. Each is briefly described below, followed by General Installation Details, which apply to both conduit standards.

**MUNICIPAL USE STANDARD**

The Municipal Use Standard (commonly referred to as "traffic signal interconnect") provides conduit capacity for various municipal uses, and shall generally be installed on all section-line roads, as well as key non-section-line roads needed to reach traffic signals or other Town-owned facilities, including Rittenhouse Rd and Cloud Rd. The exact conduit routing shall be determined through the Telecommunication Master Plan and ITS Master Plan development process.

This standard shall consist of four (4) three-inch PVC Schedule 40 conduits, and shall generally be installed as two separate trenches with two (2) three-inch conduits located behind the outer curb along each side of the roadway, allowing for construction of a single two-conduit trench with half-street improvements. One conduit in each trench shall be reserved for the Public Works Department for traffic signal interconnect and intelligent transportation systems, and the other for use by the Information Technology Division for various other municipal uses.

The conduit shall be installed between the back of curb and right-of-way line, and shall generally be located under sidewalk to the greatest extent possible (when installed prior to sidewalk construction). Pull boxes shall not be installed in the sidewalk whenever possible, and shall be located where meandering sidewalk allows the box to be installed without notably sweeping the conduit from its path.

Pull boxes shall be provided as follows:

- No. 9 pull boxes shall be installed as near as practical to the corner at intersections which have or are likely to have traffic signals. At a minimum, this includes all existing section-line and half-section intersections.
- No. 9 pull boxes shall be installed so as to intercept crossing conduit runs whenever a Municipal Use trench crosses another Municipal Use or Q-Street trench.
- No. 7 (with one extension) pull boxes shall be located as needed along the conduit run to facilitate cable pulling.
- Pull boxes shall be approximately evenly spaced where practical, but in no case shall the distance between adjacent pull boxes exceed 1,000 feet.

**Q-STREET STANDARD**

The Q-Street Standard provides conduit capacity for various municipal uses, as well as providing limited additional capacity in a common trench for other governmental agencies and third-party telecom service providers in order to reduce the need to excavate key roadways in the future. The exact locations for the Q-Street routing shall be determined through the Telecommunication Master Plan development process. At present, the only defined Q-Street corridor is Ellsworth Rd / Ellsworth Loop Rd from Germann Rd to Empire Blvd, although several others are anticipated.

This standard shall consist of four (4) three-inch PVC Schedule 40 conduits for municipal use and four (4) four-inch PVC Schedule 40 conduits for future third party use. Two three-inch conduits in the municipal cluster shall be reserved for the Public Works Department for traffic signal interconnect and intelligent transportation systems, and the other two three-inch conduits shall be for use by the Information Technology Division for various other municipal uses.

If practical, the preference shall be for the single conduit bank to be installed in the median of divided arterials, with pull boxes located within raised landscaped areas. Except in extraordinary situations, pull boxes shall not be installed in paved areas.

The locations of all access points shall be determined in coordination with the Traffic Engineer and IT Manager, and shall generally be as follows:

- Access points shall be provided at distances not to exceed 1,000 feet, and shall consist of two No. 9 pull boxes per location.
- The boxes shall be located in close proximity to each other, but shall be staggered both along the run and laterally to ensure that clear access is provided to all sides of each box.
- The three-inch municipal conduits shall be swept into one pull box, and the four-inch third party conduits shall be swept into the other.
- Two (2) three-inch conduit shall also be provided between the two pull boxes for future cross-connections.
- At each access point, two (2) three-inch conduits shall be provided, perpendicular to the roadway, from the municipal box on the median to a No. 7 (with one extension) pull box behind the curb on each side of the roadway for future connections to municipal facilities.
- A single three-inch conduit shall be provided for traffic signal interconnect from the curbside No. 7 to another No. 7 (with one extension) located in close proximity to the controller cabinet at existing or planned signalized locations. If the location of the controller cabinet is not known, the location of the signal interconnect shall be determined in coordination with the Traffic Engineer.

## GENERAL INSTALLATION DETAILS

The conduits and pull boxes shall be installed in accordance with the most recent standard details of the Maricopa County Department of Transportation (MCDOT), except as noted below. The standard detail drawings are available on the web at www.mcdot.maricopa.gov/manuals/.

1. Conduit shall be installed per MCDOT Det. 4801, modified as follows:
    a. The number and size of conduits shall be as described in this guideline.
    b. The configuration of conduit within the trench may be adjusted as determined by the Engineer, and may be modified by written request of the Contractor and approved, in writing, by the Town to account for site conditions, availability of equipment, etc. For example, the Q-Street conduits may be installed as a quad of four-inch conduits with a quad of three-inch conduits installed above in a narrow, deep trench, or, alternately, with the quads installed side-by-side in a wider, shallower trench, to suit soil conditions and the type of excavating equipment available.
    c. The depth of cover to the topmost conduit shall be a minimum of 36 inches.
    d. The depth of controlled low strength material (CLSM) from the topmost conduit shall be 18 inches.
    e. The warning tape shall be located at a depth of 18 inches from finished grade.
    f. Street lighting conduit may be located in a common trench, if approved by SRP, and provided a minimum of 12 inches of vertical separation is maintained between the electrical conduit and communications conduit.
    g. All conduits designated for Information Technology Division use in the above sections shall include MaxCell brand or approved equivalent textile innerduct (3" 3-cell configuration) with individual non-detectable pull tapes. A detectable pull tape shall be included in the conduit, outside in the innerduct, per the MCDOT detail.
2. No. 7 (with one extension) pull boxes and entering conduits shall be installed per MCDOT Det. 4810, modified as follows:
    a. The depth of cover to the topmost conduit shall be a minimum of 36 inches.
    b. The warning tape shall be located at a depth of 18 inches from finished grade.
    c. The title cast on the pull box cover shall read "TOQC COMMUNICATION".
3. No. 9 pull boxes and entering conduits shall be installed per MCDOT Det. 4811, modified as follows:
    a. The depth of cover to the topmost conduit shall be a minimum of 36 inches.
    b. The warning tape shall be located at a depth of 18 inches from finished grade.
4. No. 9 pull boxes shall be constructed per MCDOT Det. 4820, modified as follows:
    a. The title embossed on the lid of municipal use pull boxes shall read "TOQC COMMUNICATION".
    b. The title embossed on the lid of third-party use pull boxes shall read "Q-STREET COMMUNICATION".
5. Connections between Municipal Use conduit runs and existing or future signalized intersections shall generally be configured per MCDOT Det. 4717.

## QUESTIONS / PROJECT COORDINATION

Questions regarding these standards or requests for coordination with private development projects should be directed to:

**Michael Pacelli, P.E.**
Traffic Engineer
(480) 358-3065
michael.pacelli@queencreek.org

**Lester Godsey**
Information Technology Division Manager
(480) 358-3261
lester.godsey@queencreek.org

**WHEN RECORDED RETURN TO:**

**Town of Queen Creek**
**Development Services Department**
**22350 S. Ellsworth Rd.**
**Queen Creek, AZ 85242**

## COVENANT AND AGREEMENT TO HOLD PROPERTY AS ONE PARCEL (Individual)

The undersigned hereby certify that we are the owners of the hereinafter legally described real property located in the Town of Queen Creek, County of Maricopa, state of Arizona.

**LEGAL DESCRIPTION:**

As recorded in Book _____, Page _____, Records of Maricopa County, which property is located and known as_____(Address), and for the purpose of:

_____

_____

as regulated by Section ____of the Queen Creek Town Code, we do hereby covenant and agree with said Town that the above legally described land shall be held as one parcel and no portion shall be sold separately.

This Covenant and Agreement shall run with the land and shall be binding upon ourselves, all future owners, encumbrancers, their successors, heirs and assignees; and shall continue in effect until such time that the Queen Creek Town Code unconditionally permits the use or purpose herein above referred to or unless otherwise released by authority of the Community Development Director of Community Development Department of the Town of Queen Creek in accordance with the Code.

Dated this _____ day of _____, 20____.

_____.
(Signed)

_____
(Signed)

STATE OF ARIZONA
County of Maricopa

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by

_____.
Notary Public

My commission expires _____

FOR DEPARTMENTAL USE ONLY

Approved by_____
Community Development Department

Date _____

**DATE**

**APPLICANT NAME**
**APPLICANT COMPANY NAME**
**APPLICANT ADDRESS**
**APPLICANT CITY, STATE, ZIP**

RE: **PROJECT NAME AND CASE NUMBER**

Dear **APPLICANT**,

The Town of Queen Creek has performed the final inspection for the above named project on **DATE OF INSPECTION**.

In accordance with the subdivision ordinance section 7.7 D, in order to secure acceptance of the public improvements and begin the one-year warranty period, and in addition to public improvements passing the final inspection, the following documents are required:

- A 10% one-year warranty bond in the amount of **AMOUNT OF BOND**
- One (1) set of mylar as-built drawings
- One (1) CD of as-built drawings (pdf format)

Please submit all three items together when bringing them to the Development Services Building.

Upon the Town's receipt, review and approval of these documents, Town staff will present written recommendations to the Town Engineer to accept the public improvements. In addition, we will process the return or release of your construction letter of assurance or surety bond for the above mentioned project.

Upon the Town Engineer's acceptance of the improvements, you will be notified and the one-year warranty period will begin on the date of acceptance. During the warranty period the developer will be responsible for repair work of any of the public improvements. The Town will periodically inspect the public improvements and will notify the developer of necessary repair work. The developer will be responsible for having the repair work completed prior to the end of the warranty period. Upon completion of the warranty period and successful repair of any necessary warranty items, the remainder of the assurances retained by the Town will be released.

Sincerely,

Engineering Manager
Town of Queen Creek

# Street Naming and Addressing Procedures for the Town of Queen Creek

**Street Naming and Addressing Procedures**
**for the**
**Town of Queen Creek**

Table of Contents

# Chapter 1 - General Provisions

**Purpose**
The Town of Queen Creek is experiencing rapid development which makes it essential to establish uniform and consistent guidelines for street naming and addressing within the Town. Street naming and addressing procedures are established for the following purposes:

1. To guide and regulate a uniform and consistent street naming and property numbering system to enable emergency response personnel as well as the general public to readily locate a street address.

2. To ensure that the process of street naming and addressing compliments the development of the Town of Queen Creek.

3. To clearly identify a north-south, east-west point of reference for a street naming and property numbering system.

4. To assist the postal service with the efficient delivery of mail by eliminating the incorrect use of street names and addresses.

**Authority**
In order to implement these regulations, the GIS Department or designated employee shall have the following responsibilities:

1. Assign all addresses in Queen Creek in accordance with these regulations:

    a. Addresses shall normally only be assigned as part of the subdivision or building permit process. When determined necessary and appropriate by the GIS Department, an address may be assigned to a vacant parcel of land.

2. Change existing assigned addresses to conform to these regulations.

    a. The GIS Department may change existing addresses to conform with these adopted rules when, in a particular instance, a limited number (less than 10) of existing addresses would need to be changed. Any such changes shall not be subject to any fees by the Town.

    b. When, in a particular instance, more than a limited number of addresses need changed to conform to these regulations, the GIS Department shall only make such changes after approval has been granted by the Town Council to make such changes. Any such changes shall not be subject to any fees by the Town.

3. Develop and maintain a street name and street address database.

4. Adopt written directives which:
    a. Clarify and/or further define these regulations, when needed;

b. Identify procedures to implement these regulations;
c. Adopt procedures to implement these regulations; and/or
d. Adopt forms to implement these regulations.

**Appeals**

Any person aggrieved by the action of the GIS Department in the administration of these procedures may seek review of such action from the Queen Creek Town Council.

A written request shall be submitted to the GIS Department, who will place the item on the agenda of the next regularly scheduled Town Council hearing.

The GIS Department shall submit all of the original documents and materials, or true copies of, constituting the record upon which the appealed action was taken to the Town Council for review.

A decision on whether to approve or deny the GIS Department's action will be made within 60 days of the request for appeal.

An appeal of the GIS Department's decision to the Town Council shall stay all proceeding pending the results of the appeal.

# Chapter 2 - Street Naming

## General Requirements

1. All proposed public and private street names/types shall be approved by the GIS Department or authorized staff prior to approval of the final plat.

2. Streets separated by natural or manmade physical barriers shall retain the present street name of each segment.

3. Once a name has been used, it may only be used again within the same alignment.

4. When a street changes its alignment by 150 feet or changes direction by 90 degrees, it shall assume the name of the new alignment, or take a new name if no alignment exists. Exceptions are circles and loops.

5. One direction shall be assigned to each primary street name and shall be designated as South or East. Additionally, each street shall contain only one suffix throughout its entirety except in the case of a cul-de-sac, which shall be identified as a Court.

6. The following constitutes a list of suffixes to be used within the Town of Queen Creek:

| | |
|---|---|
| Avenue | Ave (only for east-west streets) |
| Boulevard | Blvd |
| Circle | Cir |
| Court | Ct |
| Drive | Dr (only for east-west streets) |
| Lane | Ln (only for east-west streets) |
| Loop | Lp |
| Parkway | Pkwy |
| Place | Pl |
| Road | Rd |
| Street | St |
| Trail | Tr |
| Way | Way |

## Existing Alignments

1. All street names shall be assigned based on existing street alignments within the Town of Queen Creek Planning Area or areas within one mile outside of the Town's boundaries.

2. Existing mile and half-mile streets shall remain fixed.

3. Extension of any mile or half-mile streets on the same alignment whether adjacent or several miles away shall carry the same street name.

## Assignment of New Street Names

1. For streets not within existing alignments, new names may be proposed by the developer but are subject to approval by staff. Proposed names should be appropriate for the area, such as names that reflect the geographic, historical, or cultural aspects of the town.

2. Any objection by emergency service providers to a proposed street name shall result in a denial of that name.

3. Street names shall be pleasant sounding, easy to read and pronounce.

4. Street names that are the same or are pronounced the same or similarly but with different spellings shall be used only once, i.e. Sanokai or Sanoque, Crimson or Crismon.

5. Directional names (South North Street) frivolous, complicated or undesirable names shall not be used.

6. North-south streets shall be numbered streets, unless otherwise approved. Numbered streets shall have street types assigned by Street, Place, and Way in an easterly direction with every 1/8 of a mile being a street.

7. Street names shall be limited to 15 characters including spaces.

## Offset Alignments

1. A street offset in alignment by more than 150 feet in any direction shall receive the name of that street nearest in alignment; however such offset may not progress in the same direction as subsequent segments but rather must reverse direction to return to or toward the original alignment prior to establishing new offset in either direction. Any street existing beyond the 150 feet will be considered out of alignment and will receive its own alignment.

2. When two or more streets are within the 150 feet alignment of the original street, that street closest to the original alignment will receive the name of the original alignment.

   An exception to this rule may be made for arterial streets where a more distant street provides traffic and addressing continuity, provided such street does not exceed the 150-foot alignment offset

## Straight Streets

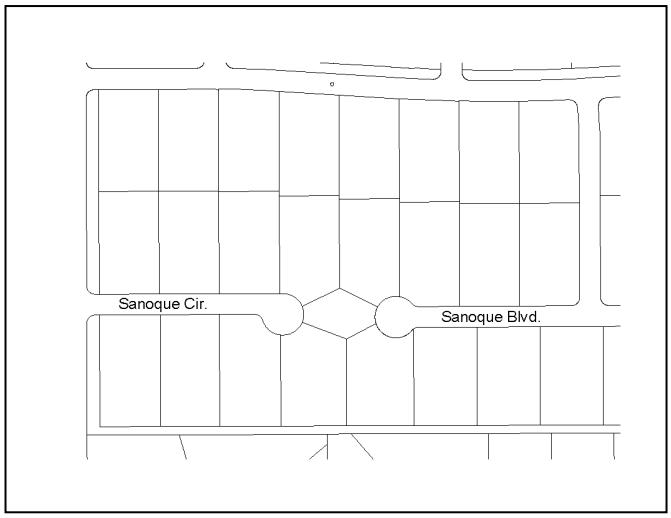
1. Any street which is in alignment or an extension of an existing street shall not receive a separate name.

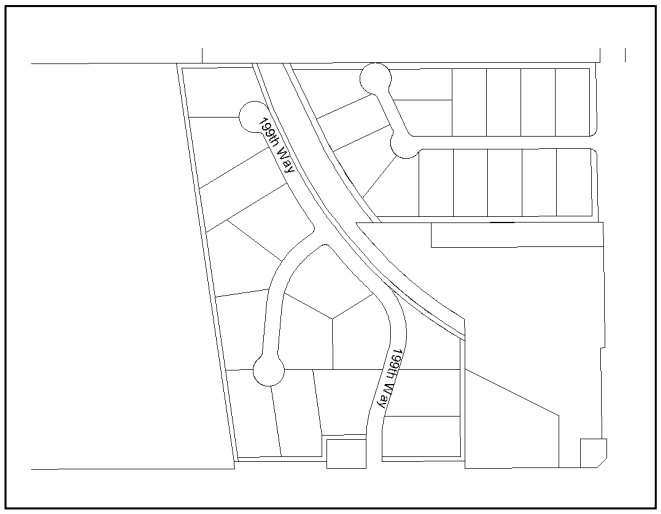
2. An existing street name shall be considered one alignment and may not be assigned to any other alignment.

3. A newly developed street shall assume the name of the street on which it aligns. This will hold true even if it is developed in an undeveloped area, when on the extended line of an existing street at any distance whether interrupted by natural or man-made barriers such as freeways, reservoirs, railroad tracks, open space, etc.

**Cul-de-sacs**

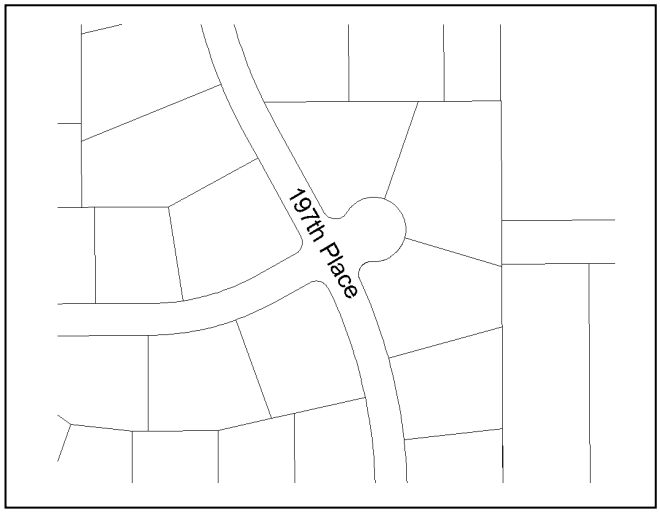
1. When a cul-de-sac exists or is constructed at the end of an existing street right-of-way or alignment, it shall assume the name of that street. This is also the case when the street adjoining the cul-de-sac curves, arcs or meanders from its straight alignment.




2. When a cul-de-sac is constructed within an extension of an existing street right-of-way or alignment which is not developed in its entirety, it will assume the name of that street as if it were constructed.

3. When a cul-de-sac is less than 100 feet in length, it retains the name of that street which it adjoins. Changes in this policy may be approved by the GIS Department where necessary.




**Curvilinear Streets**

1. Loops will contain one name along their entire length, unless during the length of the loop it is intersected by a side street, whereby the loop street will change its name to reflect its new alignment. This policy may be changed or modified if approved by the GIS Department.

2. All streets should have one name for their entire length, regardless of directional change. If a street makes a 90-degree turn or more, a new street name may be justified. The final decision on whether a bend in the road justifies a new street name rests with the GIS Department.

3. A street which leaves its alignment by more than 150 feet to assume a new alignment shall assume a new name at the point where it leaves its original alignment **if** the original alignment could be extended at a later date. Exceptions to this may be allowed when the street returns to its original alignment, and therefore allows both addressing continuity and traffic flow. An intersecting street which assumes the original alignment as said street may assume the original street name.

# Chapter 3 – Addressing Guidelines and Procedures

**General Guidelines:**

1. The GIS Department shall assign all situs addresses for the Town of Queen Creek.

2. All situs addresses shall be placed in the Street Register and recorded in the Map Address Book.

3. A situs address shall not be assigned to a single-family residence until the subdivision plat has been recorded with the appropriate County Recorder's Office.

4. A permanent situs address shall not be assigned to a multi-family, commercial, or industrial development unless building plans are submitted to the Building Department of the Town of Queen Creek.

5. Situs addresses may be assigned to water/electric meters and sprinkler timer control boxes with the submittal of a site/vicinity plan or plat and the "Application for Building Permit."

6. Odd numbered addresses will be assigned on the East and South sides of the street, and even numbered addresses will be assigned on the North and West sides of the street.

7. For corner lots where both street frontages are within 15 feet of each other and do not have platted front yard setbacks, addresses shall be assigned for both frontages. Once it has been identified which street the structure will face, the appropriate number shall be assigned. The number not used shall be deleted from the plat.

8. For that portion of Queen Creek located in Maricopa County, addressing shall be based on the Maricopa County addressing system, where the reference point or point of origin is the intersection of Central Avenue and Washington Street.

    a. North/South streets shall be numbered with 100 block numbering to occur every 1/16 of a mile (330 feet) as measured from the centerline of the baseline street.

    b. East/West streets shall be numbered with 100 block numbering occurring every 1/8 of a mile (660 feet) as measured from the centerline of the baseline street.

9. For that portion of Queen Creek located in Pinal County, addressing shall follow the Pinal County addressing system.

10. Properties along Power Road shall use the addressing system used by the Town of Gilbert. Addresses shall be obtained from the Town of Gilbert.

**Addressing**

1. **Curvilinear Streets:** In subdivisions where streets vary from the house-numbering grid, addresses will be taken from the baseline most nearly at a right angle to the principle direction of the street.

2. **Circles and Loops:**
   a. Address numbers shall correspond with the numbering on the street from which the circle originated.

   b. On circular streets having only on ingress/egress location, the first number will be assigned to the first property on the right a one enters the street. Successive numbers will be assigned as one continues in a counter clockwise direction.

   c. On circle and loop streets, the longer side of said street shall determine what the numbers will be for each side of the street. Even numbered addresses shall be located on the outside of the loop with odd numbered addresses on the inside of the loop.

3. **Cul-de-Sacs:**
   a. Any cul-de-sac which is less than one hundred feet (100') in length as measured along the centerline of the cul-de-sac from the nearest right-of-way line of the intersecting street to the point of radius at the end of the cul-de-sac (see exhibit), shall contain the same name as the principal street it intersects, and therefore corresponds to the addressing scheme of the principal street.

   b. Any cul-de-sac which exceeds one hundred feet (100') in length will be identified by a different name and addressed as a separate street.

4. **Streets originating from different points on the same cross street**. When a thoroughfare does not begin at the same location as a parallel thoroughfare, the numbers shall begin with the same number measured from the baseline as on the parallel thoroughfare. Buildings facing thoroughfares that do not extend to the baseline at present are assigned numbers as if they were extended.

5. **Diagonal streets**. Intersection numbers on diagonal cross thoroughfares shall be calculated to begin with the same number measured from the baseline according to the frontage number scale designated for that area to ensure that the frontage numbers are uniformly measured from one thoroughfare to the next where they intersect the cross thoroughfare. Numbers assigned along a diagonal thoroughfare shall be measured as true north-south and east-west distances from the dedicated reference thoroughfares to which the diagonal thoroughfares intersects and not along the diagonal.

6. **Streets Changing Directions Between Intersections**. If a street changes direction and is contained entirely within a subdivision or area, the frontage numbers may continue sequentially as in one direction.

7. **Apartments and Condominiums**

a. Apartments and Condominiums projects with one main entrance with interior thoroughfares, whether dedicated or undedicated, shall be assigned one situs address on the dedicated thoroughfare on which the main entrance fronts. On a case-by-case basis, a high-density development with multiple entrances may be assigned more than one situs address.

b. Regardless of the number of assigned situs addresses, unit numbering shall remain consecutive throughout the entire development to avoid duplication of numbers.

c. Based on the size of the development, an identifying number, i.e. 1, 2,3 may be assigned to each building within the project and included as part of the official address.

d. As a general policy, a sub-structure suffix shall be assigned to each unit in a counterclockwise direction, beginning at right of the main, addressed entrance, as follows. The sub-structure suffix shall be included as part of the official address of each unit:

99 units or less, single story: 101-199

100 units or more, single story: 1001-1999

99 units or less, multi-story:
First floor: 101-199
Second floor: 200-299
Third floor: 300-399

100 units or more, multi-story:
First floor: 1001-1999
Second floor: 2000-2999
Third floor: 3000-3999

8. **Townhomes**: An individual situs address shall be assigned to each unit within the town home development if internal thoroughfares are to be named.

If internal thoroughfares are unnamed, Section 7.d of these procedures shall apply. Wherever possible, the legal description of each lot shall correspond with the sub-structure number. In addition, sub-structure numbers assigned to each unit shall correspond with those on the opposite side of the unnamed thoroughfare.

9. **Mobile Home Parks**

a. The property of a mobile home park shall be assigned one situs address on the dedicated thoroughfare on which the main entrance fronts. In addition to the general situs address, each mobile home shall receive a numerical designation, i.e.

Space 1, Lot 1, etc. Space/lot numbers shall be assigned consecutively throughout the mobile home park, beginning at the right of the main entrance.

b. If the development is a mobile home subdivision following normal subdivision regulations, the properties shall be treated as individual residences.

10. **Duplexes, Rear Houses, and Multiple Buildings on Interior Lots**

a. Fractions of numbers or the designation "front" or "rear" to duplexes, rear houses, and structures on interior lots shall not be allowed.

b. Situs addresses for duplexes, rear houses, and structures on interior lots shall be assigned by using numerical freedom as follows:

11. **Business Districts**- Each business unit within a commercial strip shall be assigned a situs address using a separate frontage number and the alphabetic name for the street that the commercial structure fronts upon.

12. **Commercial Malls, Centers, Villages, and Squares**

a. A temporary situs address designated by the letter "T" after the frontage number may be assigned for temporary office facilities during initial construction.

b. A separate frontage number shall be assigned to each structure/pad located in a commercial mall, center, village, or square. On a case-by-case basis, major tenants within a single structure may receive a separate frontage number. Frontage numbers shall be assigned by the street closest to the building.

c. Based on the size of the development and placement of structures, an identifying letter (A,B,C, etc.) ~~or number (1,2,3, etc.)~~ may be assigned to each building within the project and included as part of the official address.

d. As a normal practice, suite numbers for single story structures shall be limited to numbers 1-99; for multi-story structures, suite numbers shall be assigned beginning with 101 through 199 for the first floor, 201 through 299 for the second floor, etc. In special circumstances, it may be necessary to determine suite numbering using consecutive numbers that may exceed 99 for single story structures.

# Chapter 4 –Posting of Addresses

**Responsibility**
It shall be the responsibility of the subdivider/owner to clearly display the group of assigned numbers to each building and/or unit in accordance with the standards set forth by this policy.

**Color/Style**
The color of numbers and background shall contrast. The style of the numbers is optional, provided the numbers are easily readable.

**Placement of Address on Structure**

1. The address shall be mounted in a permanent, stationary and durable manor unobstructed at all times by anything that would tend to hide or obscure the number.

2. If a building or interior buildings are not viewable from the street frontage, a lawn stake or similar permanent fixture with the address should be placed in a conspicuous place, or permanently on a curbside postal mailbox.

3. Each principle building shall display the number assigned to the frontage on which the front entrance is located. On a corner lot, the address shall face the street named in the address.

4. For single family residential dwellings, the minimum address number height shall be 3" (three inches).

5. Commercial, industrial and multi-family residential:
    a. A principle building occupied by more than one business or residential dwelling unit shall have an identification number displayed at each separate entrance.

    b. The address shall be displayed on a monument sign or screen wall near the entrance(s) of the site, and be clearly visible from the street. The height of the numbers shall be a minimum of 6" (six inches).

    c. Individual building numbers shall be displayed on two sides of the building, with at least one facing the entrance, fire lane or perimeter parking area. The height of the numbers shall be a minimum of 12" (twelve inches).

    d. Unit numbers per floor shall be displayed near the major entrances into each building. The minimum height of the numbers shall be 6" (six inches).

    e. Suite numbers shall be displayed on or near the front and rear doors. The minimum height of the numbers shall be 3" (three inches).

    f. Any numbers on a building shall be displayed approximately 8' (eight feet) to 10' (ten feet) above finish grade.

6. The condition of the address will be kept so that the numbers are always readable. In the event that the address becomes unreadable, it will be the responsibility of the property owner to perform such maintenance so that the address is returned to a readable state.

# Chapter 5-Amendment Procedures

**Statement of Policy**
It is the intent of the Town of Queen Creek that these procedures have been established for the purpose of promoting sound and desirable street naming and addressing practices for maintaining accurate and concise street naming and addressing records. In harmony with this purpose, these procedures shall not be amended except to (1) correct an error or oversight in the procedures, or (2) to correct/change the name of an existing street name/type in the Town of Queen Creek. In conformity with this statement of policy, the GIS Department may initiate amendments in the manner set forth.

**Street Name Changes**

1. **Town Initiated Changes.** The Queen Creek Town Council may, by resolution, initiate a street name change. A public hearing shall be scheduled notifying all interested citizens of the proposed street name change. In addition, all citizens who may be affected by the street name change shall be notified in advance and in writing of the public hearing. Once the resolution for the name change has been approved, the resolution shall be recorded with the Maricopa or Pinal County Recorder's Office.

2. **Street name changes.** Persons may petition the Town of Queen Creek to change, by resolution, the name of either a public or private street which fronts upon lots and land parcels which they own by submitting an application to the GIS Department. The application shall include:

    - Date of application
    - Current street name
    - Proposed street name
    - Justification for the change
    - Property owner's name, address, and telephone number
    - Signature of property owner
    - application fee

**Recommendation**
The GIS Department shall review the request in accordance with these procedures and based on, but not limited to the following criteria for renaming existing streets:

1. The number and types of residences/buildings which will require a situs address change.

2. Approval/disapproval of homeowners in the neighborhood.

3. The length of time the street name has been in use.

4. The length of the existing street and the amount of traffic generated.

5. Compatibility with adjacent streets.

6. Impact on emergency response.

7. Impact on the neighborhood; consensus of the homeowners for the street name change.

8. Is the street name change necessary.

The GIS Department shall then forward a recommendation to the Town Council for the approval/denial of the request.

Procedures to change a petitioned street name shall follow with a resolution by Town Council to initiate the change.

**Address Number Changes**

Address number changes may only be requested by the property owner. All requests for address number changes shall be submitted to the GIS Department for consideration. The application shall include:

- Date of application
- Current address number
- Proposed address number
- Justification for the change
- Property owner's name, address, and telephone number
- Signature of property owner
- application fee

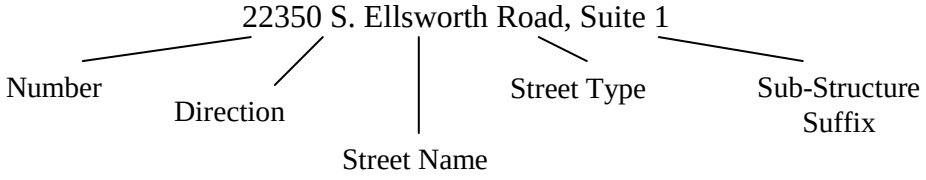
# Chapter 6 – Fees

The GIS Department shall charge the following fees for addressing. Fees will not be charged for items such as utility meters that require an address.

# Chapter 7-Definitions

**Address**: A unique alphanumeric descriptor which identifies the property location of a parcel of land, a building, or other structure located within the Town of Queen Creek (e.g. 22350 S. Ellsworth Road).

**Address Format**: The order of assemblage and structure of the five standardized components used in a legal address (number, direction, street name, suffix, sub-structure).




**Alignment**: The arrangement, positioning, adjustment, or formation of a line, road, or street with another line, road, street or extension of the line.

**Avenue**: A designated suffix identification of a north-south or east-west thoroughfare.

**Block**: Minimum length for one block is 600 feet; maximum length is 1200 feet.

**Boulevard**: A major street connecting two baselines, usually divided by a landscaped center island, or with landscaping within the right-of-way.

**Circle**: Short streets in a platted subdivision that return to themselves; a secondary street that begins and circles back to the point of beginning.

**Court**: A suffix identification of a cul-de-sac.

**Cul-de-sac**: A minor street having one open end and being permanently terminated at the other by a vehicular turn around.

**Directional (Prefix)**: The compass direction of the address abbreviated with the single letter equivalent for its compass direction, (i.e. N, S, E, W).

**Drive**: A suffix identification of a north-south or east-west thoroughfare.

**Frontage Number**: Prefix component of the legal address which is numerically sequenced and assigned to a structure or a parcel along a street according to its relative distance perpendicular to the baseline or meridian axis of the county grid.

**Gridlines**: Mile thoroughfares which divide the Town into identifiable mile squares to indicate address divisions whereby no more than 800 addresses will be allowed between two gridlines.

**Intersection**: The point at which two or more streets cross one another.

**Lane**: A suffix identification of a north-south or east-west thoroughfare.

**Loop**: A suffix identification for a street that begins and ends on the same half-mile or mile street.

**Parkway**: A special scenic route or park drive designated by a name.

**Place**: Cul-de-sac or permanent dead-end street greater than 400 feet, unless in an extended alignment.

**Prefix (Directional)**: The compass direction of the address abbreviated with the single letter equivalent for its compass direction, (i.e. N, S, E, W).

**Private Streets**: Thoroughfares which are retained and maintained under the ownership of private individual(s) and/or associations and are intended for private and/or public use.

**Public Rights-of-ways**: Streets which are dedicated for perpetual public use and are retained and maintained by the Town of Queen Creek, Maricopa County, the State of Arizona or the United States Government.

**Reference Point**:

**Road**: A continuous thoroughfare running north-south or east-west, a minimum 1320 feet in length.

**Street**: A suffix identification of a north-south or east-west thoroughfare.

**Street Name**: The component of the address which is given to both public and private rights-of-way to distinguish the location of one street from another. Street names shall not be abbreviated. There shall not be any directional or suffixes within the name itself.

**Street Suffix**: The component of the address which modifies the name to distinguish specific functional and/or characteristics of the street to which the address is assigned (i.e. place, court, street, etc.)

**Sub-Structure Suffix**: The component of the address which is an alphanumeric code to identify suites, apartments and condominium units within commercial or residential developments.

**Way**: A north-south or east-west thoroughfare.

# Traffic Impact Analysis Guidelines

Town of Queen Creek

January 2016

## 1. INTRODUCTION

The purpose of this document is to outline the procedures and requirements for preparing a Transportation Impact Analysis (TIA) study and report for the Town of Queen Creek. In addition, this document includes driveway guidelines for new or modified development. The TIA may be required for new development or redevelopment depending on the Town's review of the Initial Traffic Impact Statement (TIS). The TIA will assist the Town in determining needed modifications to the existing and planned transportation system as a result of the proposed development.

One of the Town of Queen Creek's primary objectives is to operate and maintain a safe and efficient transportation system. The review and management of development generated traffic is an integral part of that objective. The TIA guidelines as outlined in this document have been established for this purpose. The TIA guidelines establish a range of traffic impact study categories based on the characteristics of development and estimated peak hour traffic volumes. The TIA guidelines also outline the analysis approach and methods. The TIA identifies existing and projected traffic volumes and conditions, site generated traffic, and their combined impacts on the existing and planned roadway system.

The TIA provides an opportunity for the Town and the developer to share information and jointly address traffic related problems. It provides a means of balancing development needs with the functional integrity of the roadways that serve both the development and the surrounding transportation system. The need for the TIA should be assessed as early as possible in the development process when there is maximum flexibility for mitigating traffic-related problems. The consultant preparing the TIA should contact the Town Traffic Engineer to request a pre-TIA scoping discussion to establish the TIA requirements, and base assumptions for the development.

The guidelines contained herein are provided to:

- assist developers through the approval process by outlining the requirements and level of detail of traffic analysis that will be required
- standardize the types and details of analysis required in the assessment of traffic impacts for developments with similar levels of size and intensity
- ensure consistency in the preparation and review of the TIA through standardization of the reports

The TIA will address the following:

- The current transportation system and operational characteristics in the vicinity of the site
- The interface between on-site circulation and adjacent circulation system
- The intensity and character of the development
- Trip generation
- Trip distribution and assignment estimates
- Impacts of the development on the existing and planned transportation system

All level of service/capacity analysis shall be completed using the most current Synchro software (version 8) developed by Trafficware.

The TIA is to be prepared by a professional engineer registered in the State of Arizona and the final TIA report shall be signed and sealed by the engineer.

The first step for any TIA is to determine the size and scope of study required for the site.

**2. INITIAL TIA ASSESSMENT**

An initial traffic impact statement is required for all proposed development regardless of size. A form is included in this document for the developer/consultant to use. Basic information regarding location, type, and size of development will provide an initial estimate of the number of peak hour trips expected. The Town of Queen Creek Traffic Engineer will review the initial traffic impact statement and determine the level of study required for the proposed development. Although the peak hour trips is the primary factor to determine the level of study; other factors such as location and existing traffic conditions may require a more detailed study than the trip generation would indicate. The Town Traffic Engineer will make the final decision.

The traffic impact study categories based on trip generation are described below.

A. **TRAFFIC IMPACT STATEMENT (TIS):** Required for all developments so that the level of further study required can be determined. If the peak hour trips are less than 100 with no other negative factors, this will serve as the only traffic impact study document. It shall include at a minimum: the site location and access points, and expected trip generation. The following factors may require additional traffic analysis even if the development generates less than 100 peak hour trips.
   - Traffic concerns that currently exist and could be aggravated by the proposed development
   - Public concerns regarding the development
   - Negative impact on adjacent neighborhoods
   - Proximity of site driveways to existing driveways or intersections
   - Other local issues that may be present

B. **CATEGORY B:** Developments which generate between 100 and 500 trips during the morning or afternoon peak hour.

C. **CATEGORY C**: Developments which generate between 500 and 1,250 trips during the morning or afternoon peak hour.

D. **CATEGORY D**: Developments which generate more than 1,250 trips during the morning or afternoon peak hour.

The developer must first estimate the number of vehicle trips generated by the proposed development using the procedure(s) outlined in this document. The developer must obtain the concurrence of the Town Traffic Engineer or a designated representative on the number of trips generated by the development, and the appropriate analysis category.

## 3. ANALYSIS APPROACH AND METHODS

The traffic analysis approach and methods are presented below.

### A. STUDY AREA

The minimum study area will be determined by project type and size in accordance with the criteria in Table 1. The Town Traffic Engineer may require expansion of the study area when the minimum study area identified in Table 1 does not provide sufficient information to meet the intent of these guidelines.

### B. STUDY HORIZON YEARS

The study horizon year is the future year that should be studied for the development. The existing background traffic shall be adjusted to provide a reasonable estimation of future traffic without the site in the horizon year. For small developments, the base future traffic can be estimated using a growth factor; and for larger developments, a traffic model may be required. The horizon years are determined by the project type and size in accordance with the criteria in Table 1.

**TABLE 1**

| Analysis Category | Trip Generation | Study Horizon | Minimum Study Area |
|---|---|---|---|
| **Initial Statement** | Required for all development<br><br>Only requirement if <100 peak hour trips[1] | NA | 1. Site access drives |
| **B** | 100-500 peak hour trips | Opening year<br><br>5 years after opening | Site access drives<br><br>2. All signal controlled intersections within ½ mile and major street intersections without signal control within ½ mile[2] |
| **C** | 500-1,250 peak hour trips | Opening year<br><br>10 years after opening | Site access drives<br><br>2. All signal controlled intersections within 1 mile and major street intersections without signal control within ½ mile[2] |
| **D** | >1250 peak hour trips | Opening year<br><br>10 years after opening | Site access drives<br><br>2. All signal controlled intersections within 2 miles and major street intersections without signal control within 1 mile[2] |

[1]unless otherwise directed by the Town Traffic Engineer

[2]at a minimum, one signalized intersection will be analyzed regardless of distance from the proposed development

Assume full occupancy and build-out for single-phase developments. Multi- phase developments may require assessment of more than one horizon year corresponding to key phases of development as determined by the Town Traffic Engineer.

### C. **ANALYSIS TIME PERIOD**

Both the AM and PM weekday peak hours based on existing traffic are to be analyzed.

If the peak traffic hour in the study area occurs during a time period other than the normal AM and PM peak traffic periods such as a weekend, or if the proposed project has unusual peaking characteristics, these peak hours must also be analyzed. For example, schools require an analysis of the peak period during the school arrival, and school dismissal. For banquet or church facilities, an analysis of evening and/or weekends may be required.

### D. **DATA COLLECTION REQUIREMENTS**

All data is to be collected in accordance with the latest edition of the ITE Manual of Transportation Engineering Studies or as directed by the Town Traffic Engineer if not specifically covered in the ITE reference.

- Turning movement counts shall be obtained for all existing cross-street intersections to be analyzed during the morning and evening peak periods. Available turning movement counts may be extrapolated a maximum of two years with concurrence of the Town Traffic Engineer.

- The current and projected daily traffic volumes shall be presented in the report. Available daily count data may be obtained from the Town and extrapolated a maximum of two years with the concurrence of the Town Traffic Engineer. Where daily count data are not available, mechanical counts may be required as directed by the Town Traffic Engineer.

- Roadway geometric information shall be obtained including roadway width, number of lanes, turning lanes, grade, and location of nearby driveways that are in the study area and included in the TIA analysis.

- The location and type of traffic controls shall be identified.

### E. **SEASONAL ADJUSTMENTS**

The traffic volumes for the analysis hours should be adjusted for the peak season if appropriate. The Town Traffic Engineer shall determine and approve use of seasonal adjustment factors. The intent is not to assess maximum peak hourly volumes, such as the day after Christmas for a retail development, but to address peak seasonal variations in traffic.

## F. TRIP GENERATION

The latest edition of ITE's Trip Generation shall be used for selecting trip generation rates. The guidelines contained in the Trip Generation shall be used to determine whether the average trip generation rate or the equations should be used.

Other rates may be used with the approval of the Town Traffic Engineer in cases where Trip Generation does not include trip rates for a specific land use category, or includes only limited data, or where local trip rates have been proven to differ from the ITE rates.

For a mixed-use development, it may be acceptable to assume that some trips are internal to the site and do not impact the external street system. If appropriate for the development, this should be discussed with the Town Traffic Engineer to agree on a percentage of internal trips.

## G. TRIP DISTRIBUTION

The directions from which traffic will access the site can vary depending on many factors, including:

- The type of proposed development and the area from which it will attract traffic
- The presence or absence of competing developments within the same area
- The size of the proposed development
- The conditions on the surrounding street system

The influence area of the development needs to be identified for the site. Ideally, the influence area should contain approximately 80% of the trip ends that will be attracted to the site. If a market study is available, it should be used in establishing the influence area. Otherwise, an influence area should be established based on a reasonable estimate.

The three most common methods for estimating trip distribution are by analogy, model, and surrogate data. In most cases, a surrogate data method can be utilized for developing the trip distribution. Utilizing this procedure involves using socioeconomic data to establish population or employment land use distributions around the site. In most cases, population can be used as the basis for estimating distribution of office, retail, and entertainment trips; employment can be the basis for estimating residential trips. The Town's General Plan should be used to establish future year land use.

## H. TRIP ASSIGNMENT

Based on the trip distribution percentages, site traffic should be assigned to the street network using reasonable traffic patterns and existing traffic volumes. If the site use is conducive to pass-by trips, the ITE methodology can be proposed to obtain concurrence from the Town Traffic Engineer. Pass-by trip reduction only applies to added external trips; the site driveway analysis will include all site generated trips.

## I. CAPACITY ANALYSIS

Level of service shall be computed for signal controlled and non-signal controlled intersections as identified in the Study Area in Table 1, in accordance with the latest edition of the Highway

Capacity Manual. Capacity analysis shall be performed for existing conditions, future base conditions for the study years and future with site for the study years. For existing signalized locations, the existing timing should be obtained from the Town. All level of service/capacity analysis shall be completed using the Synchro software (version 8) developed by Trafficware.

For signal-controlled intersections, operational analyses shall be performed for time horizons up to 5 years. Operational analyses shall also be performed for street or intersection sizing. The operational analysis method can be used for horizons beyond five years; however, the planning method will be acceptable and is also acceptable for Traffic Impact Analysis prepared at the Development Master Plan level, unless used for street sizing.

### J. **TRAFFIC SIGNAL NEEDS**

A traffic signal needs study shall be conducted for all arterial/arterial and arterial/collector intersections within the Study Area for the opening year. If the warrants are not met for the opening year, they should be evaluated for a 5-year horizon for Categories B, C and D.

Traffic Signal needs studies shall be conducted per the MUTCD.

### K. **QUEUING ANALYSIS**

A queuing analysis shall be conducted for all turn lanes, and median openings within the study area. Queuing analysis should be supported by HCM methodologies and represent 95$^{th}$ percentile conditions with the exception of school site as outlined herein. Examples for estimating queue lengths for signal controlled and non-signal controlled intersections are given below.

For signalized intersections, the peak number of vehicles arriving at the intersection during one cycle shall be determined. A vehicle length of 25 feet shall be used to calculate queue length.

For non-signalized intersections, find the number of vehicles per average 2-minute period per the AASHTO Green Book. A vehicle length of 25 feet shall be used to calculate queue length.

### L. **SPEED CONSIDERATIONS**

Vehicle speed is used to estimate safe stopping and cross-corner sight distances. Sight distance shall conform to the American Association of State Highway and Transportation Officials (AASHTO) standards. The design speed used shall be ten miles/hour above the posted speed limit.

### M. **IMPROVEMENT ANALYSIS**

The roadways and intersections within the study area shall be analyzed with and without the proposed development to identify any projected impacts in regard to level of service and safety.

Where an intersection will operate at a level of service below D, E, or F, alternatives which

mitigate these impacts shall be evaluated and included as part of the study.

Where a street section will operate at a level of service below E or F, alternatives which mitigate these impacts shall be evaluated and included as part of the study.

Other factors to be considered in the analysis are:

- number and location of driveways
- on-site storage
- deceleration lanes
- internal circulation
- pedestrian, bicycle, and transit access

## N. OTHER ANALYSIS

Other analyses as requested by the Town of Queen Creek may be required due to the type and location of the proposed development, such as weaving analyses, parking analyses, on-site circulation and queuing, pick-up and drop-offs, and the number of accesses among others.

## O. ADDITIONAL CRITERIA FOR SCHOOL SITES

The study for any public, charter, or private school with students ranging in grades K-12 shall provide the following additional information:

### a) Student Enrollment

The maximum student enrollment at build out shall be indicated in the TIA Introduction and Summary. Partial student enrollment may be discussed for opening day conditions, but the final horizon year analysis will include maximum build-out and build-out conditions will be used for on-site queuing requirements.

### b) Minimum Required Parent Vehicle Queue Calculation

The site shall accommodate a minimum parent vehicle queue for student drop-off and pick-up.

1. The minimum number of parent vehicles to be accommodated shall be calculated by multiplying the school's maximum dismissal student enrollment by release time. A value of 0.10 shall be required for traditional public schools with walking and busing to school. A value of 0.15 shall be required for magnet, charter, and private schools that generate a greater number of parent vehicles trips than an average neighborhood school. The engineer may provide values based on observations of existing comparable school sites, subject to the Town Traffic Engineer's approval.

2. The minimum vehicle queue length shall be calculated by multiplying the number of parent vehicles by 25 feet.

    a) The entire vehicle queue should be contained within the school site and/or on

a consenting adjacent shared-use site.

b) The length of an adjacent right turn lane may be added to the minimum required queue if approved by the Town Traffic Engineer.

**c) School Traffic Circulation Overview**

A school traffic circulation overview with diagrams shall detail motor vehicle, bus, bicycle, and pedestrian circulation on site, including:

1. Direction of traffic flow and number of lanes throughout diagram;
2. Ingress and egress from the site;
3. Vehicular drop-off/pick-up locations;
4. Minimum required parent vehicle queue;
5. School bus loading areas; and
6. Pedestrians and bicycle routes that avoid crossing school driveways.
7. On-site and off-site school-related traffic control.

**4. TIA REPORT OUTLINE**

**1. INTRODUCTION AND SUMMARY**

a. Purpose of report and study objectives
b. Executive Summary
Site location and study area
Development description
Principal findings
Conclusions and Recommendations

**2. PROPOSED DEVELOPMENT**

a. Site location
b. Land use and intensity
c. Site plan
d. On-site circulation
e. Development phasing and timing

**3. STUDY AREA CONDITIONS**

a. Study area conditions
b. Existing Land use
c. Site accessibility

d. Existing and future roadway system

**4. ANALYSIS OF EXISTING CONDITIONS**

a. Physical characteristics
    Roadway characteristics (number of lanes, classification, etc.)
    Traffic control devices
    Transit service
    Pedestrian/bicycle facilities
    Nearby driveways
b. Traffic volumes
    Daily, morning and afternoon peak periods and others as required
c. Level of service
    Morning peak hour, afternoon peak hour, and others as required
d. Safety related deficiencies, crash experience

**5. PROJECTED TRAFFIC**

a. Site traffic (each horizon year)
    Trip generation
    Internal trips (if applicable)
    Mode split (if applicable)
    Pass-by traffic (if applicable)
    Trip distribution
    Trip assignment
b. Non-site traffic forecasts (each horizon year) and methodology
c. Total traffic (each horizon year)

**6. TRAFFIC ANALYSIS**

a. Site access
b. Level of service analysis
    Without project (including programmed improvements for each horizon year)
    With project (including programmed improvements for each horizon year)
    Improvements necessary to accommodate site traffic
d. Traffic safety
    Sight distance
    Location and design of site access
e. Pedestrian considerations
f. Traffic control needs

**7. FINDINGS / RECOMMENDATIONS**

**8. APPENDICES**

a. Traffic counts
b. Capacity analyses worksheets
c. Traffic signal needs studies

**9. EXHIBITS**

The following information shall be provided on clear and legible figures:

a. Site location
b. Site plan
c. Existing transportation system(s) (Number of lanes, traffic control, etc.)
d. Existing and future area development
e. Existing daily traffic volumes
f. Existing peak hour turning volumes
g. Estimated site traffic (AM and PM peak periods)
h. Directional distribution of site traffic (AM and PM peak periods)
i. Total traffic (peak periods)
J. Electronic File of the project Synchro Analysis

# APPENDIX A

# Initial TIS Form

## INITIAL TRAFFIC IMPACT STATEMENT

This initial traffic impact statement is required for all development proposed in the Town of Queen Creek. The purpose of this traffic impact statement is to provide preliminary trip generation information for the proposed development to determine the category of traffic impact study required. Based on the proposed development, Table 1 should be completed to provide preliminary trip generation data. The Town Traffic Engineer or designee will review the preliminary trip generation estimate provided by the developer and determine the category of traffic impact study required. Other factors in addition to trip generation can affect the impact of a development; and based on these guidelines, the Town of Queen Creek traffic engineer will determine the final scope for the traffic impact analysis.

Location of proposed development (location map can be attached)

_____

**TABLE 1: PRELIMINARY TRIP GENERATION ESTIMATE**

| Type of development (e.g. residential, retail) | Size | AM peak hour trips per unit* | PM peak hour trips per unit* |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| **TOTAL** | | | |

*The trip generation rates can obtained from the Institute of Transportation Engineers, Trip Generation, latest edition. Use of other rates must be justified and accepted by the Town Traffic Engineer.

Table 2 provides the criteria for each category of traffic impact analysis based on the estimated trip generation. This table is for information and guidance only – as noted above, the Town Traffic Engineer will make the final determine regarding the type of study.

**TABLE 2: REQUIREMENTS FOR TRAFFIC IMPACT STUDY**

| TYPE OF STUDY | PEAK HOUR TRIPS |
|---|---|
| Traffic Impact Statement | <100 |
| Category B | 100-500 |
| Category C | 500-1250 |
| Category D | >1250 |

# APPENDIX A

## Driveway Guidelines

# Driveway Guidelines

Town of Queen Creek

December 2015

## General

These guidelines have been prepared for use in determining access for newly developed commercial, industrial, and multi-family properties. Driveway location and design are closely tied to the site plan and specific conditions for a given development. It is recognized that there will be instances where it may be impractical to meet these guidelines. In such cases, careful judgment must be used in granting variances. Traffic Engineering must approve all variances.

These guidelines were developed primarily for access from major streets. It is important that the minimum design features of driveway type and width not be compromised. To do so would adversely affect traffic flow on the major street. In general, these guidelines also should be applied to lower volume streets, although more latitude and flexibility are possible on lower volume streets.

The guidelines generally provide minimum standards. They should not be used to discourage engineers, architects, and designers from proposing innovative design solutions that vary from the minimum standards described here. Nor should they be applied arbitrarily when specific site conditions warrant something different.

Any questions about these guidelines, driveway and site layout in general; or specific problems should be directed to Traffic Engineering.

Figure A attached hereto provides a graphical representation of driveway spacing and location.

## Number of Driveways

- At least one driveway per abutting street will be allowed.
- One additional driveway may be allowed for a site with continuous frontage of 600 feet or more.
- Two additional driveways may be allowed for a site with continuous frontage of 900 feet or more.
- An additional service type driveway may be allowed for a site with continuous frontage of 1000 feet or more, where the site layout is such that the service driveway is unlikely to be used by customers of the businesses on the site. For example, a large corner shopping center may have a service driveway near the property line for service truck access to the rear of the buildings.
- Driveway location must be evaluated with respect to the particular site layout and location.

Variations may be permitted where a traffic analysis justifies a departure from these guidelines.

### Driveway Location-Arterial Street

Driveways near a corner must be located with a minimum of 250 feet for a collector cross street and 350 feet for an arterial cross street between the driveway and the extension of the curb of the intersecting street. This may be reduced for unusual circumstance if approved by Traffic Engineering. Driveways shall be a minimum of 50 feet from the site property line. For sites that have frontage on two streets, primary access should be onto the minor street frontage.

### Driveway Location-Collector Street

Driveways near a corner must be located with a minimum of 150 feet for a collector cross street and 250 feet for an arterial cross street between the driveway and the extension of the curb of the intersecting street. This may be reduced for unusual circumstance if approved by Traffic Engineering. Driveways shall be a minimum of 25 feet from the site property line.

### Driveway Spacing

Minimum driveway spacing will generally conform to the following table. This minimum spacing applies to proposed site driveway separation as well as separation from existing or planned driveways on adjacent parcels.

| Street Type | Minimum Driveway Spacing |
|---|---|
| Collector | 100 feet |
| Arterial | 200 feet |

### Joint Use Driveways/Cross Access

The joint use of a single driveway to serve adjoining parcels should be encouraged wherever possible. An access easement shall be recorded when the parcels are developed. When larger corner sites are developed with small corner pads reserved for future construction, or vice versa, provision should be made for the corner pads to have access via the driveways for the larger development, and not require separate driveways for the pads.

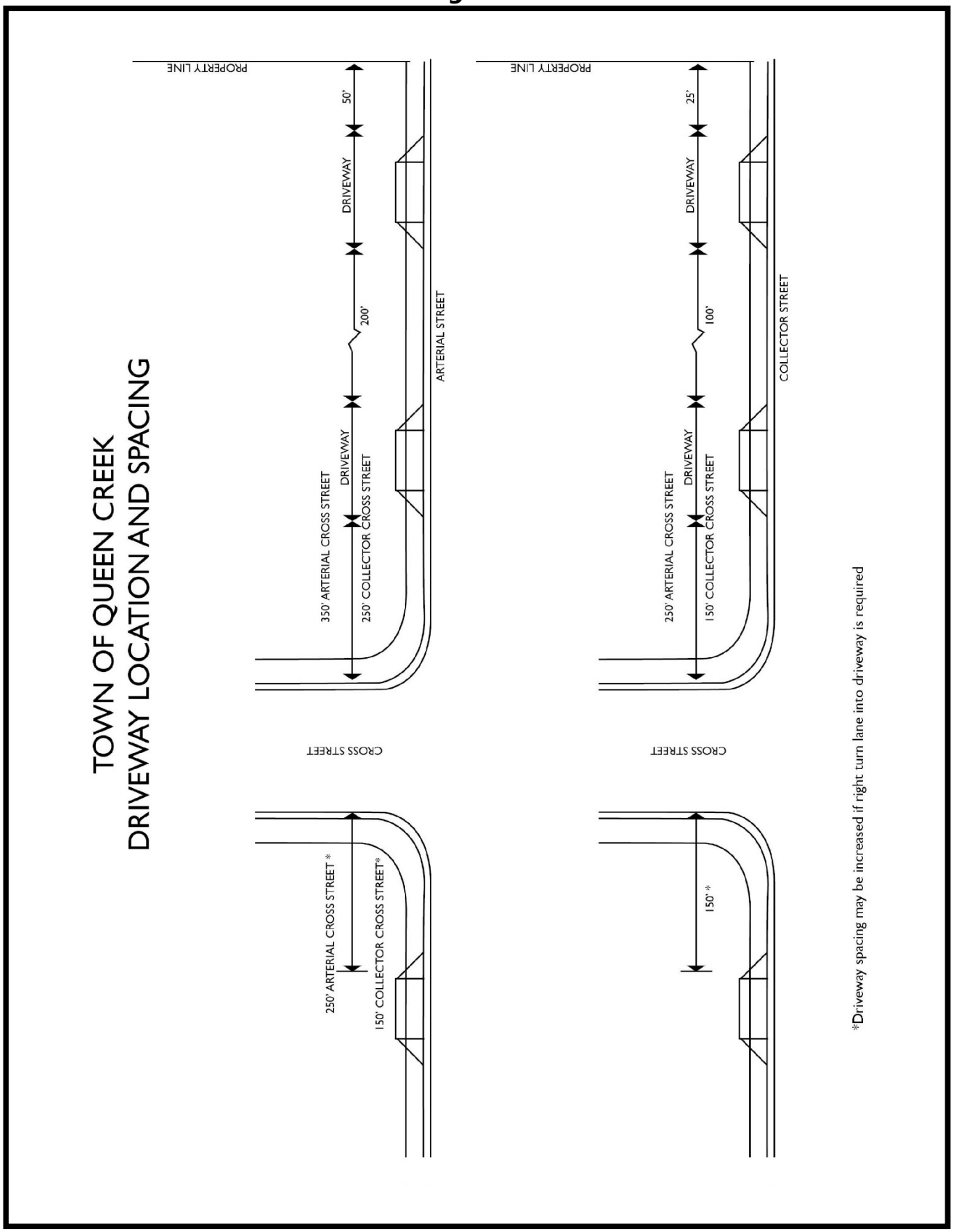
Where new development adjoins other similarly zoned property or compatible land uses, a cross access easement may be required to permit vehicular movement between the parcels and reduce the number of access points required onto the adjacent public street. This may be

required regardless of the development status of the adjoining property, unless the cross access is determined to be unfeasible by staff.

### Protection of Access

For proper control of driveway access, a vehicular non-access easement (V.N.E.) is to be granted to the Town, except at approved access points, along all collector and arterial streets when abutting property develops.

# Figure A


TOWN OF QUEEN CREEK
DRIVEWAY LOCATION AND SPACING
PROPERTY LINE
50'
DRIVEWAY
200'
350' ARTERIAL CROSS STREET
DRIVEWAY
250' COLLECTOR CROSS STREET
ARTERIAL STREET
CROSS STREET
250' ARTERIAL CROSS STREET *
150' COLLECTOR CROSS STREET*
PROPERTY LINE
25'
DRIVEWAY
100'
250' ARTERIAL CROSS STREET
DRIVEWAY
150' COLLECTOR CROSS STREET
COLLECTOR STREET
CROSS STREET
150' *
*Driveway spacing may be increased if right turn lane into driveway is required

# APPENDIX A
# GLOSSARY OF TERMS AND DEFINITIONS

**ABUTTING:** The condition of two adjoining properties having a common property line or boundary, including cases where two or more lots adjoin only at a corner or corners.

**ACCESSORY USE:** A use, building, structure, part of a building, or part of a structure which is subordinate to, and the use of which is incidental to, that of the main building, structure or use on the same lot, including a private garage. If a building otherwise qualified as an accessory building is attached to the main building by a common wall or roof, such building shall be considered part of the main building.

**ACRE:** An area of land containing 43,560 square feet

**ALLEY:** A public passageway affording a secondary means of access to abutting property and not intended for general traffic circulation.

**BASIN, DETENTION:** A storm water storage facility which temporarily stores surface runoff and releases it at a controlled rate through a positive outlet. A detention basin and park may be joined to serve both recreational needs and as a water storage facility.

**BASIN, DRAINAGE:** A geographical area which contributes surface runoff to a particular concentration point. The terms "drainage basin", "tributary area" and "watershed" are used interchangeably.

**BASIN, RETENTION:** A storm water storage facility which stores surface runoff. Stored water is infiltrated into the subsurface or released to the downstream drainage system or watercourse (via gravity outlet or pump), or evaporated after the storm event. A retention basin and park may be joined to serve both recreational needs and as a water storage facility.

**BERM:** An earthen mound, either natural or man-made.

**BICYCLE LANE:** A paved area located within a street right-of-way and between the curbs which is designated for bicycle or other non-motorized traffic.

**BICYCLE TRAIL:** A paved or improved surfaced trail, located outside of a street right-of-way, utilized for bicycle, pedestrian or other non-motorized traffic. Public utility maintenance vehicles may be permitted use if joint access is allowed.

**BICYCLE WAY:** A paved area located within a street right-of-way but not between curbs which is designated for bicycle or other non-motorized traffic.

**BLOCK:** A piece or parcel of land or group of lots entirely surrounded by public or private streets, streams, washes, parks, or a combination thereof of sufficient magnitude as to interrupt the continuity of development.

**BUILDABLE:** A lot or parcel that has the area, shape, slope, street frontage, or other attribute in order for a permitted use, based on the lot or parcel's Zoning District, to be developed, without the need for any variance from the Town Zoning Ordinance.

**BUILDING SETBACK LINE:** A line which separates the buildable area and area in which the primary building or structure, or portion thereof shall be erected, constructed or otherwise established.

**CHANNEL:** A depression designed to transfer water from one location to another. Channels may be either a component of the natural environment transferring water down stream or man-made to transfer storm water within a development to a storm water retention basin.

**CHORD:** A straight line joining two points on a curve.

**CLUSTER DEVELOPMENT:** A development pattern in which uses are grouped together rather than distributed evenly throughout a parcel as in conventional lot-by-lot development.

**CONCEPT PLAN:** A preliminary development plan or plat used to present an initial proposed development and initiate discussion about the proposal.

**COMMISSION:** The Planning Commission of the Town of Queen Creek.

**CONDITIONAL APPROVAL:** An affirmative action by the Commission or Council indicating that approval will be forthcoming with satisfaction of certain specified stipulations.

**CONDOMINIUM:** Real estate, portions of which are designated for separate ownership and the remainder of which is designated for common ownership solely by the owners of the separate portions. Real estate is not a condominium unless the undivided interests in the common elements are vested in the unit owners. (The term "condo" may be used in the ordinance.)

**CONSERVATION EASEMENT:** A conservation easement is an agreement for the protection of open space, historic buildings, archaeological sites, ecologically significant lands, scenic highways and/or hiking, biking and equestrian trails.

**CONVENTIONAL DEVELOPMENT:** Development other than a Planned Area Development.

**COUNCIL:** The Town Council of the Town of Queen Creek.

**COUNTY:** Maricopa County, Arizona and/or Pinal County, Arizona.

**DEPARTMENT:** The Community Development Department of the Town of Queen Creek which includes the Engineering, Planning Building Safety and Neighborhood Preservation Divisions.

**DEVELOPMENT:** The utilizations of land for public or private purpose.

**DEVELOPMENT MASTER PLAN:** A preliminary master plan for the development of large or complicated areas, the platting and development of which is expected in progressive stages. Development Master Plans shall be subject to Commission recommendation and Council approval.

**DIVISION:** The Planning Division of the Community Development Department of the Town of Queen Creek

**EASEMENT:** A grant by the owner of the use of land by the public, a corporation, or person for the specific uses and purposes designated.

**EASEMENT, AVIGATION:** A grant by a property owner of an easement for avigation purposes over and across the land in connection with flights of predetermined heights above the surface to an infinite height above the same, which easement shall hold the Town, public and airport harmless from any damage caused by noise, vibration, fumes, dust, fuel, fuel particles or other effects that may be caused by the operators of aircraft taking off, landing or operating above the predetermined minimum height not including the physical impact of aircraft or parts thereon.

**EASEMENT, CONTROLLED VEHICULAR ACCESS:** An easement limiting vehicular access to a site from a street to those controlled access points approved by the Town Council or Town Engineering Manager.

**EASEMENT, DRAINAGE:** An area designate and used for the conveyance or retention in which nothing can be placed which will impede, divert or cause the runoff to have an adverse affect on adjoining property.

**EASEMENT, PUBLIC UTILITY AND FACILITIES:** An easement for the installation of facilities, underground of overhead, furnished for the use of the public; including electricity, gas, communication, water, storm water, sewage, sidewalks, landscaping, traffic signals, street lights, flood control, etc. owned and operated by any person, firm, corporation, municipal department or board, duly authorized by State or municipal regulations. Utility and utilities as used herein may also refer to such persons, firms, corporations, departments or boards.

**EASEMENT, USE AND BENEFIT:** A grant to an adjacent lot for ingress and egress for the purpose of repair, maintenance, drainage and improvement of any of the abutting lot owner's property which is contiguous to the easement area. No structure and/or permanent improvement of any nature shall be placed, maintained or permitted to remain on or within the easement area.

**EASEMENT, VEHICULAR NON-ACCESS:** An easement prohibiting vehicular access from a street or between inappropriate uses (i.e. Zoning District boundaries.)

**ENGINEER:** The Engineering Manager of the Town of Queen Creek or his designated representative.

**ENGINEERING DIVISION:** The Engineering Division of the Community Development

Department of the Town of Queen Creek.

**EXCEPTION:** Any parcel of land which is not owned by the subdivider or not included in the recorded plat. All such exceptions must be noted on the final plat as "not a part of this subdivision".

**EXHIBIT:** Any graphic representation noted as "Exhibit" within this Ordinance that is used to illustrate and exemplify certain standards and regulations contained within the language of this Ordinance. If an exhibit and text of the Ordinance conflict, the written text of the Ordinance shall control.

**FINAL PLAT APPROVAL:** Approval of the final plat of a subdivision. Such final approval must be approved by the Engineering Manager and Planning Manager and certified on the plat by the signatures of the Mayor and attested by the Town Clerk.

**FLOODPLAIN:** As defined by the Maricopa County Flood Control District and as shown on Federal Emergency Management Act (FEMA) flood insurance maps or an approved flood control study.

**FLOOR AREA RATIO (FAR):** The ratio of gross building floor area to the net lot area of the building site.

**GENERAL PLAN:** A comprehensive plan, or parts thereof, providing for the future growth and improvement of the Town of Queen Creek and for the general location of street, schools and recreation areas, public buildings sites, and other physical development.

**GRADE:** The vertical difference (in feet) between two (2) points on the ground divided by the length of horizontal distance (in feet) between the same two (2) points, multiplied by one hundred (100). (Example 2'/100 =.02 x 100 = 2% grade)

**GRADING:** Any excavation, filling, or combination thereof, including the conditions resulting from any excavation or fill, involving changes to the natural topography or drainage pattern.

**HEALTH DEPARTMENT:** Maricopa and/or Pinal County Department of Health Services.

**IMPROVEMENTS:** Required installations, pursuant to this Ordinance and zoning stipulations , including but not limited to: grading, sewer, water, utilities, streets, curbs, gutters, sidewalks, trails, alleys, street lights, traffic control devices and landscaping; as a condition to the approval and signing of the final plat, precedent to recordation.

**IMPROVEMENT PLANS:** A set of plans setting forth the profiles, cross-sections, details, specifications, and instructions and procedures to be followed in the construction of public or private improvements in the Town of Queen Creek that are prepared and bear the seal of an Arizona - Registered Land Surveyor, Engineer, Architect or Landscape Architect in accordance with the approved preliminary plat, and zoning stipulations, and in compliance with standards of design and construction that are to be approved by the Engineering Manager, other Town Departments, the

County Departments, and all applicable utilities.

**IMPROVEMENTS STANDARDS:** A set of regulations and exhibits setting forth the details, specifications and instructions to be followed in the planning, design and construction of required improvements.

**IRRIGATION FACILITIES:** Includes laterals, ditches, conduits, pipes, gates, pumps and allied equipment necessary for the supply, delivery and drainage of irrigation water and the construction, operation and maintenance of such.

**LAND SPLITS:** The division of improved or unimproved land, whose area is two and one-half acres or less, into two or three parcels of land for the purpose of sale, lease, or conveyance.

**LOT:** A single piece of property located in a recorded subdivision, having frontage on a publicly dedicated and accepted street or a private road approved by the Town, which is described and denoted as such.

**LOT AREA:** The area of a horizontal plane within the lot lines of a lot.

**LOT, CORNER:** The intersection of two or more lot lines, or angle point or change in direction of a lot line.

**LOT COVERAGE:** The percentage of the area of a lot which is occupied by all buildings or other covered structures using the roof outline for all outer dimensions.

**LOT DEPTH:** The horizontal length of a straight line connecting the midpoints of the front and rear lot lines; and for triangular shaped lots, the shortest horizontal distance between the front lot line and a line within the lot, parallel to and at a maximum distance from the front lot line, having a length of not less than ten (10) feet.

**LOT, IMPROVEMENT:** Any building, structure, place, work of art or other object or improvement of the land on which they are situated constituting a physical betterment of real property.

**LOT, INTERIOR:** A lot other than a corner lot.

**LOT, KEY:** A lot adjacent to a corner lot having its side lot line in common with the rear lot line of the corner lot and fronting on the street which forms the side boundary of the corner lot.

**LOT LINE:** Any line bounding a lot.

**LOT LINE, FRONT:** In the case of an interior lot, a line separating the lot from the street right-of-way. In the case of a corner lot, the narrower of the two lot lines adjoining a street right-of-way.

**LOT LINE, REAR:** A lot line which is opposite and most distant from, the front lot line; except that in the absence of a rear lot line as is the case of the triangular shaped lot, the rear lot line may be

considered as a line within the lot, parallel to and at a maximum distance from the front lot line, having a length of not less than ten (10) feet.

**LOT LINE, SIDE:** The boundary of a lot which is not a front lot line or a rear lot line.

**LOT, THROUGH:** A lot having a part of opposite lot lines abutting two (2) streets, and which is not a corner lot, (Also known as a "double frontage lot"). On such lot, both lot lines are front, except that where a non-access easement has been established on such a lot, the front lot line shall be considered as that lot line most distant front the lot line containing the non-access easement.

**LOT WIDTH:** For rectangular lots, lots having side lot lines not parallel, and lots on the outside of the curve of a street, the distance between side lot lines measured at the required minimum front yard line on a line parallel to the street or street chord; and for lots on the inside of the curve of a street, the distance between side lot lines measured 30 feet behind the required minimum front yard line on a line parallel to the street or street chord.

**McDOT:** Maricopa County Department of Transportation

**NAOS:** Natural Area Open Space

**OFF SITE:** Not located within the area of the property to be subdivided, whether or not in the same ownership of the applicant for subdivision approval.

**OPEN SPACE:** Any parcel or area of land unimproved or improved and set aside, dedicated, designated, or reserved for the public or private use and enjoyment.

**OPEN SPACE, COMMON:** Open space usable by all people within a certain development and such area is owned in common by all property owners in that development.

**OPEN SPACE, PUBLIC:** An open space area conveyed or otherwise dedicated to a municipality, municipal agency, school district, state or county agency, or other public body for recreational or conservational uses.

**OPEN SPACE, USABLE:** Land which can be enjoyed by people. This could include landscaped or hardscaped plazas, paseo and promenades, fountains and sitting areas meant to provide an open park like atmosphere. Also playgrounds, golf courses, bicycle trails (but not bike lanes), pedestrian trails (only those sidewalks detached from the curb - creating a "boulevard strip"), and equestrian tracts or easements, and trail heads. Usable open space does not include parking areas and vacant or undeveloped lots.

**OWNER:** The person or persons holding title by deed to land, or holding title as vendor under a land contract, or holding any other title of record.

**PATHWAY:** Path; course; route; track; footway; and equestrian trail.

**PEAK:** The point of maximum elevation on a mountain or hill as indicted on a USGS topographic

map or survey of the property.

**PEDESTRIAN WAY:** A public walk dedicated entirely through a block from street to street and/or providing access to a school, park, recreation area, trail system, or shopping area.

**PLANNED AREA DEVELOPMENT (PAD):** A development of 40 or more acres, in which flexibility can be permitted in the zoning standards, in order to encourage more creativity and sustainable design, thereby providing usable open spaces within and about the development and enhancing the rural character of the Town.

**PLAT:** A map which provides for changes in land use or ownership.

1. **Preliminary Plat:** A tentative map, including supporting data, indicating a proposed subdivision design, prepared by a registered civil engineer, or a registered land surveyor, in accordance with this ordinance and the Arizona Revised Statues. A preliminary site plan for a condominium development shall be considered a preliminary plat.

2. **Final Plat:** A final map of all of a subdivision, including supporting data, in substantial conformance to an approved preliminary plat, prepared by a registered land surveyor, in accordance with this Ordinance and the Arizona Revised Statutes.

3. **Recorded Plat:** A final plat bearing all certificates of approval required by this Ordinance and the Arizona Revised Statues and duly recorded in the Maricopa County Recorder's Office and/or the Pinal County Recorder's Office.

4. **Reversionary Plat:**

    a. A map for the purpose of reverting previously subdivided acreage to unsubdivided acreage, or;

    b. A map for the purpose of vacating rights of way previously dedicated to the public and abandoned under procedures prescribed by the Town Code, or:

    c. A map for the purpose of vacating or redescribing lot or parcel boundaries previously recorded.

**PRE-APPLICATION CONFERENCE:** An initial meeting between subdivider and municipal representatives which affords subdivider the opportunity to present their proposals informally and discuss the project and address any items of controversy or requirements before the preliminary plat is submitted.

**PRELIMINARY APPROVAL:** Affirmative action on a preliminary plat, noted upon prints of the plat, indicating that approval of a final plat will be forthcoming upon satisfaction of specified stipulations; and which constitutes authorization to submit final engineering plans and the final plat.

**PRIVATE ACCESS WAY:** Any private street or private way of access dedicated as a tract to one or more lots or air spaces which is owned an maintained by an individual or group of individuals and has been improved in accordance with Town standards and plans approved by the Engineering Manager. A private access way is intended to apply where its use is logically consistent with a desire for neighborhood identification and control of access, and where special design concepts may be involved, such as within planned area developments, hillside areas and condominiums.

**RECORDER:** The Recorder of Maricopa County and/or Pinal County.

**RETAINING WALL:** A wall or terraced combination of walls used solely to retain more than 18" of earth, but not to support or provide footing for a structure.

**RIDGE:** The defined topographical line connecting a series of major or minor hills or peaks.

**RIDGE LINE:** A ground line located at the highest elevation of the ridge running parallel to the long axis of the ridge.

**RIGHT-OF-WAY:** Any public or private access way required for ingress or egress, including any area required for public use pursuant to any official plan; rights-of-way may consist of fee title dedications or easements.

**ROADWAY EASEMENT:** A recorded conveyance to the public over a described area for roadway related uses.

**SKETCH PLAN:** A preliminary presentation of a proposed subdivision or site plan of sufficient accuracy to be used for discussion purposes and identification of any items of controversy or issues of concern.

**SERVICE EASEMENT:** An area provided for in the subdivision design at the rear of retail, commercial or multi-family dwelling use of sufficient size and accessibility to facilitate the provision of necessary services.

**STORM WATER RETENTION:** Provision for storage of storm water during and after a flood or storm and the controlled release of such runoff after a storm or flood.

**STREET, ARTERIAL:** Major and section line streets, state highways, county highways, or roads of regional significance providing a system for town-wide through traffic movement. The locations of the Town's arterial streets are designated in the Queen Creek General Plan.

**STREET, COLLECTOR:** Major, urban, and suburban/rural collector streets provide for traffic movement between the neighborhoods of the Town, and the arterial streets. The locations of the Town's collector streets are designated in the Queen Creek General Plan.

**STREET, CUL-DE-SAC:** A local street having one end permanently terminated in a vehicular turnaround, or an equally convenient form of turning, and backing areas as may be recommended by

the Engineering Manager.

**STREET, FRONTAGE:** A local street parallel to an arterial or collector road which intercepts the residential traffic and controls access to the arterial and collector roads (See Exhibit 21).

**STREET, LOCAL:** Provides for direct access to residential or other abutting land; primarily for local traffic movement with connections to collector and/or major streets.

**SUBDIVIDER:** A person, firm, corporation, partnership, association, syndicate, trust, or other legal entity that files the application and initiates proceedings for a subdivision in accordance with the provisions of this ordinance and statutes of the State of Arizona, except that an individual serving as agent for such legal entity is not a subdivider; and said subdivider need not be the owner of the property as defined by this Ordinance. The Town Council may itself prepare or have prepared a plat for the subdivision of land under municipal ownership.

**SUBDIVISION**

A. Improved or unimproved land or lands divided for the purpose of financing, sale, lease, or conveyance whether immediate or future, into four or more lots, tracts or parcels of land; or, if a new street is involved, any such property which is divided into two or more lots, tracts or parcels of land, or, any such property, the boundaries of which have been fixed by a recorded plat, which is divided into two or more parts. "Subdivision" also includes any condominium, cooperative, community apartment, townhouse, patio home, or similar project containing four (4) or more parcels, in which an undivided interest in the land is coupled with the right of exclusive occupancy of any unit located thereon.

B. "Subdivision" does not include the following:

1. The sale or exchange of parcels of land between adjoining property owners if such sale or exchange does not create additional lots.

2. The partitioning of land in accordance with other statutes regulating the partitioning of land held in common ownership.

3. The leasing of apartments, offices, stores or similar space within a building or trailer park, nor to mineral, oil, or gas leases.

**SUBDIVISION ORDINANCE:** The Town of Queen Creek Subdivision Ordinance

**TECHNICAL REVIEW:** The detailed review of proposed preliminary plats for compliance with Town Codes, Ordinances, Engineering Standards, Design Standards, or conditions of approval by the Commission or Town Council. Other utilities and public agencies are invited to review the plat as it relates to their conditions of service or need.

**TECHNICAL REVIEW COMMITTEE:** The selected group of technically qualified individuals

made up of Town staff and other public or private agency's and utility's responsible to insure compliance with ordinances, codes, regulations, etc. as they relate to the subdivision process.

**TOWN:** The Town of Queen Creek, Arizona.

**USABLE LOT AREA:** That portion of a lot usable for, or adaptable to, the normal uses made of property, excluding any areas which may be covered by water, are excessively steep, or are included in certain types of easements. Areas covered by water shall include areas within the defined flood plain, or are within the perimeter of a given pond of water which will remain after the development is completed.

**U.S.C. & G.S.:** United States Coast and Geodetic Survey.

**UTILITY SERVICES:** Service to the public of water, sewer, gas, electricity, telephone and cable television. The foregoing shall be deemed to include facilities and appurtenances to the above uses but shall not include public utility treatment and generating plants or offices.

**VIEW FENCING:** Any fencing or wall which is adjacent to a designated open space area, public trail, or transition area except when adjacent to an arterial or collector shall be constructed in such a manner as to achieve 50% openness overall. Any fencing or wall which is adjacent to an arterial or collector road, whether public or private, shall be constructed in such a manner as to achieve 33% openness overall.

**WATER SUPPLY ASSURANCE (100 YEARS):** Subdivision proposal must include evidence of meeting Arizona Department of Water Resources requirements for 100 year assured supply.

**YARD:** A minimum required open area adjacent to a lot line to be free from any structure, except as provided in the Town of Queen Creek Zoning Ordinance.

**YARD, FRONT:** A yard extending across the front of a lot, parcel or tract.

**YARD, REAR:** A yard extending across the rear of a lot, yard or tract.

**YARD, SIDE:** Any yard that lies between a front and a rear yard.

**ZONE:** A district classification established by The Town of Queen Creek Zoning Ordinance which limits or permits various and specific uses.

**ZONING CLEARANCE:** The approval by the Planning Manager of a plan that is in conformance with the Town of Queen Creek Zoning Ordinance.

**ZONING DISTRICT:** A zone area in which the same zoning regulations apply throughout the district.

**ZONING ORDINANCE:** The Town of Queen Creek Zoning Ordinance.